Glenair®

SERIES 89

NANOMINIATURE CONNECTORS

FOR MISSION CRITICAL APPLICATIONS

OCTOBER 2016

SERIES 89 NANO MINIATURE

HIGH DENSITY NANOMINIATURE

Commercial and Mil qualified circular and rectangular solutions

Now available from Glenair: Nanominiature circular and rectangular connectors. The smallest and lightest mil-spec connector in the business. These MIL-DTL-32139 qualified connectors for mission-critical board-to-wire applications, offer superior mating and unmating performance and environmental resistance. TwistPin equipped Nanominiature connectors are set on .025 inch contact spacing, rated for 1 AMP. Shells are precision machined from aluminum, titanium or stainless steel and built to withstand the high shock/vibe, high temperature conditions typically encountered by down hole, space and mil aero appllications. Designed to accomodate size #30 and #32 gauge wire, both rectangular and circular versions are available in insulated wire , uninsulated wire, printed circuit board, back-to-back cables and flex configurations. Rectangular and circular connectors are available in front and rear panel mount styles and circular connectors offer breakaway or threaded interfaces.

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SERIES 89 NANOMINIATURE CONNECTORS

Circular and Rectangular Connectors

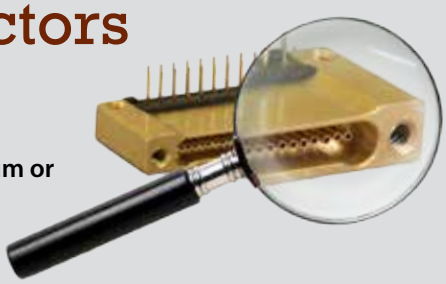
Table of Contents

A B C D E Index

Dimensions in Inches (millimeters) are subject to change without notice.

A

Series 89 Nanominiature Connectors



Key Features

- 1 AMP Current Rating
- .025 Inch (0.64 mm.) Contact Spacing
- #30 and #32 Gage Wire Accommodation
- Single and Double Row
- Metal Shell, Aluminum, Titanium or Stainless Steel
- TwistPin Contact System
- Gold Alloy Contact, Unplated
- Thru-Hole and Surface Mount PCB Versions

Nanominiature Connectors at a Glance

Nanominiature connectors are high reliability ultraminiature interconnects intended for critical applications where size and weight restrictions will not allow the use of larger connectors.

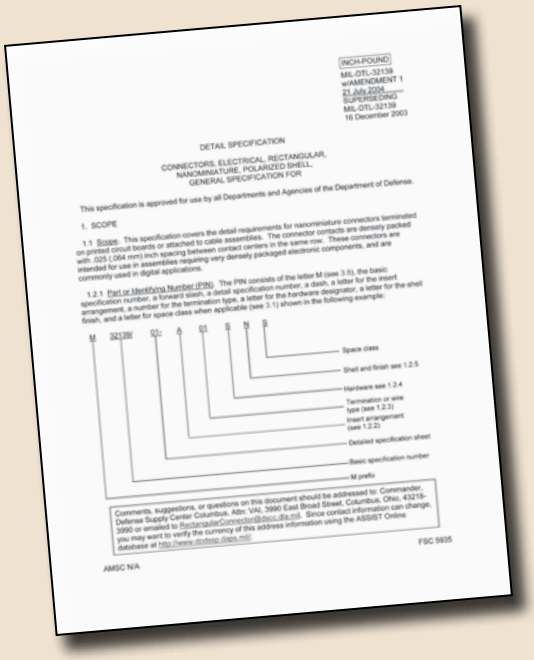
Typical applications include miniaturized electronics boxes used in UAV's, satellites, missile systems, and geophysical instruments. Contact spacing of 0.025 inches combined with a rugged contact system allow these nano connectors to be used in demanding environments where commercial-grade connectors should not be used.

How Small Are They?

D-Subminiature Connector
Contacts on 0.109 Inch Spacing

Micro-D Connector
Contacts on 0.050 Inch Spacing

Nano Connector
Contacts on 0.025 Inch Spacing

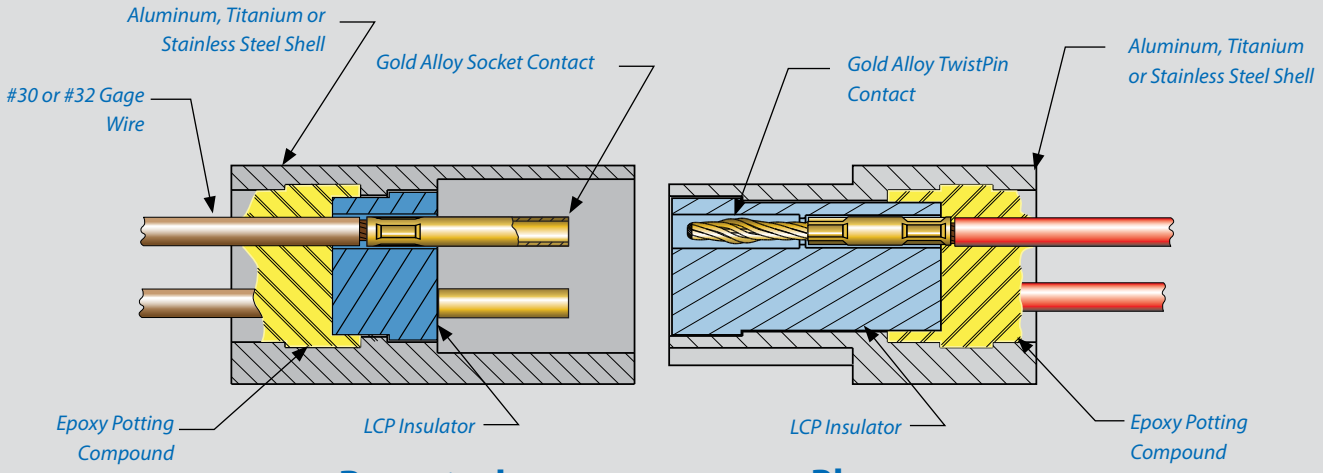


DETAIL SPECIFICATION
CONNECTORS, ELECTRICAL, RECTANGULAR, NANOMINIATURE, POLARIZED SHELL, GENERAL SPECIFICATION FOR

MIL-DTL-32139 At-A-Glance

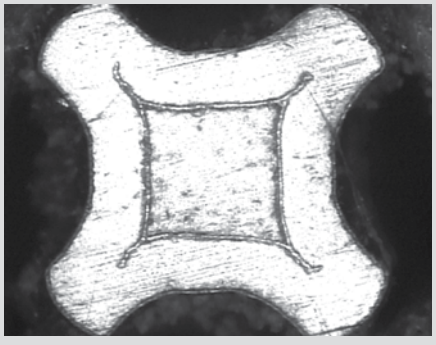
High reliability nanominiature connectors are covered by millitary specification MIL-DTL-32139. This document assures intermateability and interchangeability. The specification covers pre-wired single and double row metal shell connectors—manufactured and qualified by Glenair. The Glenair Series 89 products in this catalog also meet the electrical, mechanical and interface requirements of the military specification, but offer options not specifically covered in the mil-spec.

Series 89 Cutaway View



The Nano TwistPin Advantage

MIL-DTL-32139 defines the minimum acceptable performance levels for Nanominiature connectors. Manufacturers are given considerable leeway when it comes to contact design, wire termination, contact finish and material selection. Stamped and formed contacts, for example, are used in nanominiature connectors due to their low-cost and ease of manufacture. But independent testing clearly shows that TwistPin style contacts provide superior performance in hostile environments. If you have already made the decision to use a Nano sized connector, then you owe it to yourself to understand the very real differences between stamped pins and the Glenair TwistPin Contact System.



Transverse Cross-Section of a TwistPin Contact Crimped to Solid Wire

Three Reasons to Choose TwistPins

1 Gas-Tight Crimp Joint

TwistPin contacts assure gas-tight crimp joints for stable resistance after years of environmental exposure. The photograph at left demonstrates the superiority of a gas-tight, void-free 4-indent crimp.

2 Better Shock and Vibration Performance

The nanominiature TwistPin contact is made from six strands of wire.The five outer strands provide multiple points of contact with the mating socket contact for superior shock and vibration performance.

3 Corrosion-Proof Contact Alloy

Both the TwistPin contact and the mating socket contact are made from a special alloy consisting of 71% gold, 8% platinum and 5% silver alloyed with copper and zinc.

A

Glenair's 0.025 Inch Contact Spacing for Series 89 Nanominiature Connectors

The latest evolution in rectangular shaped connectors for board-level I/O applications. Featuring gold alloy TwistPin contacts and aluminum, titanium or stainless steel shells, the Nanominiature is the smallest, yet remarkably robust, connector we make. Glenair is one of the first interconnect manufacturers to qualify to the new MIL-DTL-32139 Nanominiature Mil-Spec for these precision-machined connectors that deliver both ultra high density and maximum weight and space savings. These high reliability ultra miniature interconnects are ideal for critical applications where size and weight restrictions preclude the use of larger connectors such as M24308 D-Sub-miniatures. Ideal for military applications of all types, the rugged contact system allows Glenair's Nano connectors to be used in the most demanding miniaturized applications. The Glenair Nano contact system consists of a TwistPin (a miniaturized version of the Glenair Micro-D TwistPin) and a tubular socket providing excellent durability and superior resistance to shock and vibration. Accommodating #30 or #32 AWG wire, Nano TwistPin contacts handle 1 AMP current rating.

Series 89 Nanominiature Connector Performance Summary	
Contact Spacing	.025" (0.64) Contact Centers
Wire Accommodation	#30-#32 AWG
Current Rating	1 AMP Maximum tested per EIA-364-70
Voltage Rating (DWV)	250 VAC RMS Sea Level, 100 VAC RMS 70,000 Feet per EIA-364 Procedure 20
Insulation Resistance	5000 Megohms Minimum Test voltage 100 VDC, per EIA-364 Procedure 21
Operating Temperature	-55° C. to +125° C.
Optional High Operating Temperature	Mod Code 534 rated up to 200° C.
Contact Resistance	71 Millivolt Drop Maximum, 1 AMP Current, any catalog supported wire type
Vibration	20 g's, IAW EIA-364-28, Condition IV
Shock	100 g's, IAW EIA-364-27, Condition G
Durability	200 Mating Cycles per Test Procedure EIA-364-09
Corrosion Resistance	48 Hours Salt Spray IAW EIA-364-26, Condition B
Humidity	240 hours, IAW EIA-364-31, Test Condition B
Contact Engaging/Separation Force	5 Ounce Maximum, 0.4 Ounce Minimum
Thermal Vacuum Outgassing	Total Mass Loss (TML) 1.0% Max., Volatile Condensible Material (VCM) 0.1% Max. IAW ASTM E595

Materials and Finishes	
Connector Shell	Aluminum Alloy, Cadmium Plated per SAE-AMS-QQ-P-416 Type II Class 1. Aluminum Alloy, Electroless Nickel Plated Per SAE-AMS-2404, Class 3 or 4, Grade B Titanium Alloy per MIL-T-81556, Unplated 300 Series Stainless Steel per ASTM A276, Passivated IAW SAE AMS 2700
Insulator	Liquid Crystal Polymer (LCP), per MIL-M-24519 GLCP-30F, 30% Glass-Filled
Pin Contact	Gold Alloy, Unplated
Socket Contact	Gold Alloy, Unplated
Hardware	Passivated, 300 Series Stainless Steel. Recommended Torque for Nano Jackscrews is 0.5 - 1.0 In/Lb for #0-80, 1.0 - 2.0 In/Lb for #2-56. Jackscrew hex drive for #0-80 is .050", #2-56 is 1/16". Ball end wrenches are not recommended.
PCB Trays	Liquid Crystal Polymer (LCP), per MIL-M-24519 GLP-30F, 30% Glass-Filled
Encapsulant	Epoxy

1 SCOPE

1.1 **Scope**. This specification covers performance requirements for Glenair nanominiature connectors manufactured in accordance with MIL-DTL-32139.

1.2 **Description**. Metal shell nanominiature connectors on .025 inch (0.64 mm) centers, with TwistPin contacts.

2 ORDER OF PRECEDENCE

2.1 **Order of Precedence**. In the event of a conflict between the requirements of this specification and the references cited herein, this document takes precedence. The requirements set forth in customer specifications and Glenair detail drawings shall take precedence over this document.

3.1 ELECTRICAL REQUIREMENTS

3.1.1 **Insulation Resistance**. 5,000 megohms minimum between any pair of contacts and any contact and the shell when tested in accordance with EIA-364 Procedure 21. Test voltage 100 volts DC ±5%.

3.1.2 **Dielectric Withstanding Voltage**.

3.1.2.1 **Dielectric Withstanding Voltage (sea level)**. 250 volts ac, rms 60 Hz. Connectors shall show no evidence of breakdown or flashover when subjected to the DWV test of EIA-364 Procedure 20, test condition I.

3.1.2.2 **Dielectric Withstanding Voltage (70,000 feet).** 100 volts ac, rms 60 Hz. Connectors shall show no evidence of breakdown or flashover when subjected to the DWV test of EIA-364 Procedure 20, test condition IV.

3.1.3 **Contact Resistance**

3.1.3.1 **Contact Resistance**. The voltage drop of a mated pair of contacts attached to wires shall not exceed 71 millivolt drop maximum using a 1 ampere test current, when tested in accordance with EAI-364-06, using any catalog supported wire types.

3.1.4 **Low Signal Level Contact Resistance**. When tested with a micro-ohmeter using a test current of 10 milliamperes maximum, the resistance of a mated pair of contacts shall be 71 milliohms maximum using any catalog supported wire types. Test procedure shall be in accordance with EIA-364-23.

3.1.5 **Contact Current Capability**. Contacts shall be capable of carrying 1.0 ampere in continuous duty operation from -55° C to +125° C when tested in accordance with EIA-364-70.

3.1.6 **Magnetic Permeability**. Magnetic permeability, when tested in accordance with ASTM A342/A342M, shall not exceed 2 mu.

3.2 MECHANICAL REQUIREMENTS

3.2.1 **Contact Engaging and Separation Force**. Maximum engaging force shall be 5.0 ounces when tested in accordance with MIL-DTL-32139. Minimum separation force shall be 0.4 ounces.

3.2.2 **Connector Mating and Unmating Force**. The maximum mating and unmating force shall not exceed a value equal to 7 ounces times the number of contacts, when tested per MIL-DTL-32139. Mate connectors three times

before initial measurements are taken.

3.2.3 **Contact Retention**. Contacts, when tested in accordance with EIA-364-29, shall withstand a 2 pound axial load for a minimum of 5 seconds.

3.2.4 **Crimp Tensile Strength**. Wire shall not break or pull out of crimp joints at an applied force of less than 1.0 pound (0.44 kg) for 30 AWG wire, when tested in accordance with EIA-364-08. Wire breakage other than at the crimp shall not constitute failure.

3.2.5 **Resistance to Soldering Heat.** There shall be no degradation of the plastic, bonding adhesives, or sealing elastomers. Connector insulators shall also be capable of withstanding solder heat without evidence of deteriorating, deforming, or change of physical dimensions in accordance with EIA-364-56.

3.2.6 **Solderability**. Printed circuit terminals shall meet the solderability requirements of MIL-STD-202 Method 208.

3.2. **Durability**. 200 mating and unmating cycles in accordance with test procedure EIA-364-09. Connectors shall show no mechanical or electrical defects detrimental to the operation of the connector and shall subsequently pass Low Level Contact Resistance, Shock, Vibration, Low Level Contact Resistance, and DWV in sequence

3.3 ENVIRONMENTAL REQUIREMENTS

3.3.1 **Salt Spray (corrosion)**. Nickel-plated aluminum connectors shall show no exposure of base metal due to corrosion when subjected to the salt spray test of EIA-364-26, condition B, with a 48 hour duration. In addition, connectors shall meet, low signal level contact resistance and mating/unmating force requirements.

3.3.2 **Fluid Immersion**. Connectors shall meet mating force requirements following 20 hours immersion in synthetic lubricating oil MIL-PRF-7808, 2 hours in Perchloroethylene cleaning solvent ASTM D4376, and 1 hour immersion in coolant MIL-PRF-87252, when tested in accordance with MIL-DTL-32139. There shall be no degradation of the plastic, bonding adhesives, or elastomers.

3.3.3 **Thermal Vacuum Outgassing**. Connector shall not exceed 1.0% total mass loss (TML) or 0.1% total volatile condensible materials (VCM) when tested in accordance with ASTM E595.

Outgassing Properties of Nanominiature Components

Component	Material	Brand Name	% Total Mass Loss (TML)	% Collected Volatile Condensable Material (VCM)	Test Report
Thermoplastic Insulators and PCB Trays	Liquid Crystal Polymer	Vectra® C-130	0.03	0.00	NASA Test #GSC17478
Potting Compound	Epoxy	Hysol C9-4215	0.48	0.01	Glenair Test
Wire	Tefzel®	Tefzel®	0.22	0.01	NASA Test #GSC19998

3.3.4 **Thermal Shock**. Unmated connectors shall withstand 5 cycles of thermal shock with a minimum temperature of -55° C and a maximum temperature of 125° C when tested in accordance with EIA-364-32, Condition I. Connectors shall not exhibit any detrimental damage or degradation of electrical performance.

3.3.5 **Humidity**. Wired, mated connectors shall be subjected to humidity conditioning in accordance with EIA-364-31, Test Condition B (240 hours)(excluding steps 7a and 7b). On completion of step 6 of the final cycle, connectors shall be removed from the chamber, unmated and surface moisture removed. Connectors shall pass a DWV test of 100 volts (RMS 60 Hertz AC). Within 1 to 2 hours after removal of surface moisture, connectors shall meet 1 megohm insulation resistance. Following 24 hour conditioning, connectors shall meet 1000 megohm insulation resistance.

3.3.6 **Vibration (sine)**. Connectors, when mated, wired in series and fixtured in accordance with MIL-DTL-32139, shall exhibit no disruption of continuity, which lasts longer than 1 microsecond, in accordance with test procedure EIA-364-28, Condition IV. Connectors shall not be damaged and no loosening of parts shall occur. Peak level 20 g.

3.3.7 **Shock**. Connectors, when mated, wired in series and fixtured in accordance with MIL-DTL-32139, shall not exhibit any discontinuity longer than 1 microsecond when tested in accordance with EIA-364-27, Test Condition G with 100+/-20 milliampere test current. Connectors shall not be damaged and no loosening of parts shall occur. Peak acceleration 100 g's.

3.3.8 **Marking Permanency**. Connector marking shall meet the requirements of MIL-STD-202, Method 215.

3.3.9 **Fungus Resistance**. Materials used in the construction of these connectors shall be fungus inert in accordance with ASTM G21.

A

Six things you should know about Nano connectors for space flight:

1 Outgassing: What is outgassing, why is it important, and how does it affect connector selection? Is special processing required to meet outgassing requirements?

2 Screening: What is NASA screening and what level of screening is required?

3 Magnetic Permeability: Are nonmagnetic connectors required?

4 Cryogenic Exposure: Are Nano connectors suitable for -200° C. exposure?

5 Materials: Nano connectors offer a variety of materials and plating finishes. Which ones are recommended for space flight?

6 Wire Corrosion: M22759/33 irradiated Tefzel® wire is preferred for space applications. What about corrosion problems caused by this wire?

Save Time and Trouble with Mod Code 429 Space Grade Nanominiature Connectors

M32139 Class S Nanominiature connectors are DSCC approved for space programs. NASA EEE-INST-002 provides guidance on additional screening for Nano connectors. Glenair Mod Code 429 upgrades inspection and screening to NASA requirements without the need for a customer Statement of Work or Specification Control Drawing. This section explains Glenair Mod Code 429 ordering, and provides valuable information on outgassing and other space flight topics.

How To Order Space Grade Nano Connectors

Step 1: Find a Standard Nano Part Number
Titanium shells, nickel-plated aluminum shells and stainless steel shells are suitable for use in vacuum environments. Cadmium plating is prohibited for space flight.

Step 2: Select a NASA Screening Level
The term "Screening Level" refers to the final inspection procedure.
Level 1 for mission-critical highest reliability
Level 2 for high reliability
Level 3 for standard reliability

Step 3: Outgassing Processing
Glenair Nano connectors are certified to meet NASA outgassing requirements without special processing. However, if additional outgassing processing is required, choose the appropriate suffix code from the table below.

Step 4: Select the Mod Code 429 that Matches the Desired Level of Screening and Outgassing
Use the following table to choose the right Mod code. Add the Mod Code to the connector part number.
Example: 891-002-9ST-0A1-12J-429J

NASA Screening Level	Special Screening Only	Special Screening and Outgassing	
		48 Hour Oven Bake at 125°C	Thermal Vacuum Outgassing 24 Hours at 125°C
Level 1 Highest Reliability	Mod 429B	Mod 429J	Mod 429C
Level 2 High Reliability	Mod 429	Mod 429K	Mod 429A
Level 3 Standard Reliability	Use standard part number	Mod 186S	Mod 186M

Space Grade Application Guidelines

1 Outgassing: What is outgassing and how does it affect connector selection? Is special processing required to meet outgassing requirements?

What is Outgassing?

Plastic and rubber materials give off gaseous molecules. For example, the smell inside a new car is caused by polymer outgassing. Heat and vacuum increase the rate of diffusion. In a spacecraft the gases coming off polymers can contaminate optical surfaces and instruments. The result is degraded performance.

How is Outgassing Measured?

The space industry has adopted a standardized test procedure, ASTM E 595, to evaluate out-gassing properties of polymers. Small samples of material are heated to 125° C. at a vacuum of 5 X 10^{-5} torr for 24 hours. Then the sample is weighed to calculate the Total Mass Loss (TML). The TML cannot exceed 1.00% of the total initial mass. During the test, outgassed matter condenses on a cooled collector plate. The quantity of outgassed matter is calculated to determine the Collected Volatile Condensable Material (CVCM). The CVCM cannot exceed 0.10% of the original specimen mass.

Do Nano Connectors Require Special Outgassing Processing?

No. Nano connectors meet NASA outgassing requirements without special processing.

2 Screening: What is NASA screening and what level of screening is required?

What is NASA Screening?

NASA specification EEE-INST-002 provides instructions on selecting, screening and qualifying parts for use on NASA GSFC space flight projects. Table 2J in the NASA spec contains specific inspection instructions for Nanominiature connectors. These screening requirements exceed the standard mil spec inspection levels.

What Screening Level is Required for Space Applications?

NASA defines three levels of screening: level 1 for highest reliability, level 2 for high reliability, and level 3 for standard reliability.

Is Glenair NASA Certified?

Yes. Meeting NASA requirements means not only inspecting per EEE-INST-002, but also building parts in accordance with NASA Technical Standard NASA-STD-8739.4 "Crimping, Interconnecting Cables, Harnesses, and Wiring". Glenair fully meets these requirements and has obtained NASA certification. Our extra inspection steps reflect the fact that pre-wired connectors not only require best practices on the assembly floor, but also require thorough final electrical and mechanical testing. For more information on Glenair's NASA qualifications and certifications, please contact our Micro-D and Nanominiature connector product manager.

Table 2: NASA Screening Requirements

Inspection/ Test	NASA Level 1	NASA Level 2
Visual Inspection	100%	100%
Mechanical	2 pcs.	2 pcs.
Voltage (DWV)	100%	2 pcs.
Insulation Resistance	2 pcs.	2pcs.
Temperature Cycling	2 pcs.	2 pcs.
Low Level Contact Resistance	2 pcs.	2 pcs.
Mating and Unmating Force	2 pcs.	N/A
Solderability/Resistance to Soldering Heat	2 pcs.	N/A

Notes: 1. NASA screening requirements from Table 2J of EEE-INST-002.
2. Prior to NASA screening parts are subjected to 100% DWV, insulation resistance, and continuity testing

3 Magnetic Permeability: Are nonmagnetic connectors required?

Spacecraft designers generally avoid the use of ferromagnetic materials, which can become magnetized and can interfere with sensitive instruments. Nano connectors have a maximum permeability of 2 mu.

4 Cryogenic Exposure: Are Nano connectors suitable for use at temperatures approaching -200° C.?

Nano connectors are rated to -55° C. Glenair has not performed testing below this temperature. EEE-INST-002 states "...experience has proven it is possible for (non-certified) connector types to be used successfully at cryogenic temperatures. It is recommended that connector samples should be subjected to five cycles of cryogenic temperature...(followed by examination for cracks and DWV)".

5 Materials: Which materials are recommended for space flight?

Cadmium plated shells are prohibited from space programs. Other Nano materials are acceptable.

6 Wire Corrosion: M22759/33 irradiated Tefzel® wire is preferred for space applications. What about corrosion problems caused by this wire?

Does M22759/33 Wire Have an Outgassing Problem?

Irradiated Tefzel® wire is known to cause tarnishing and corrosion of metal parts in close proximity, usually in sealed bags. Both MIL-DTL-32139 and NASA EEE-INST-002 contain cautionary notes regarding this problem. Wire manufacturers have not been able to eliminate this problem. This corrosion problem is referred to as "wire outgassing", which has led to confusion over the term outgassing. This problem has nothing to do with the ability of the wire to meet the TML and CVCM outgassing requirements of ASTM E595. M22759/33 irradiated Tefzel wire continues to be the wire of choice for spacecraft. This wire complies with outgassing requirements.

Nano connectors with M22759/33 wire should not be stored in sealed bags for extended periods.

New Unit Pack Minimizes Corrosion

Glenair has adopted an innovative new packaging system to protect the connector from performance hindering corrosion. Metal shell connectors supplied wtih M22759/33 wire are now packaged as follows: the connector is wrapped in Teflon® tape and placed in a ventilated sulfur-free paper envelope to ensure that your mission-critical component arrives in perfect order.

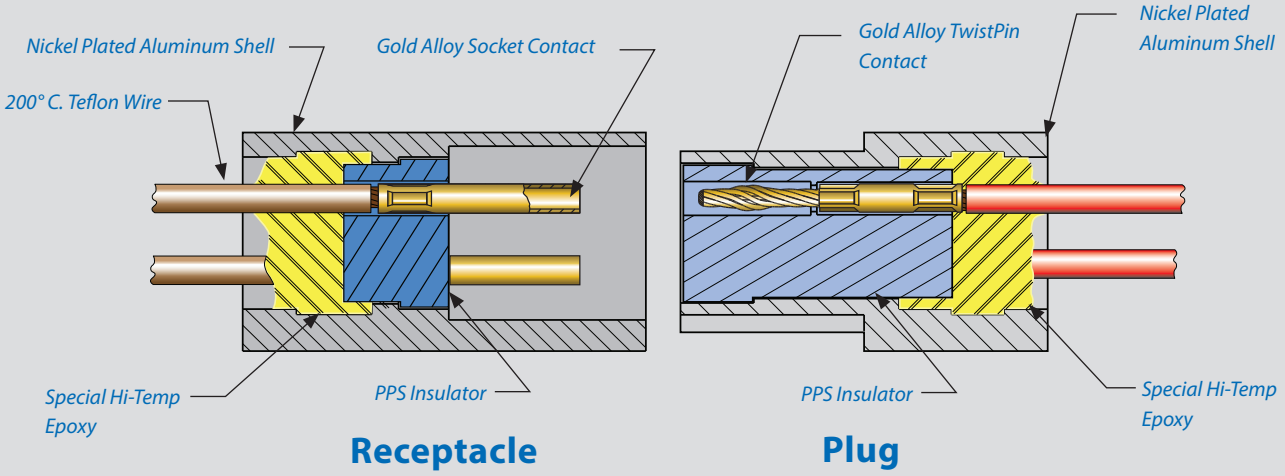
Outgassing Properties of Nano Connectors

Component	Material	Brand Name	% Total Mass Loss	% Collected Volatile Condensable Material	Test Report
Thermoplastic Insulators and PCB Trays	Liquid Crystal Polymer	Vectra® C-130	0.03	0.00	NASA Test #GSC17478
Potting Compound	Epoxy	Hysol C9-4215	0.48	0.01	Glenair Test
Wire	Tefzel®	Tefzel®	0.22	0.01	NASA Test #GSC19998

Upgrade to 200° Celcius with Mod Code 534 High-Temperature Epoxy

The search for oil and gas has led to deeper reservoirs where extreme temperatures and pressures test the limits of electronics design. Oil well logging instruments must be able to withstand temperatures beyond the limits of standard connectors.

Nano connectors are made from temperature-resistant materials. The polyphenylene Sulfide (PPS) glass-filled thermoplastic insulators easily withstand 200° C. The TwistPin contacts and aluminum shells also are rated for continuous exposure to 200° C. The epoxy potting compound is the only component not rated for high-temperature. Mod Code 534 upgrades the standard epoxy with a special 315° C. epoxy.



How to Order Nano Connectors with Mod Code 534 Hi Temp	
Step 1: Find a standard Nano part number. Mod 534 is available on all standard metal shell Nanominiature connectors, including pre-wired and printed circuit board versions.	Example: 891-001-25PA2-0B7-12J 1. Metal shell only 2. Nickel-plated aluminum or stainless steel shells only.
Step 2: Add the Mod Code to the Part Number	Example: 891-001-25PA2-0B7-12J-534

Notes

Shell Material & Finish:
Electroless nickel plated aluminum is commonly used for high-temperature connectors. Cadmium plated aluminum is not recommended for temperatures exceeding 175° C. because of discoloration and breakdown of the chromate seal applied to the cadmium. Stainless steel shells provide the best resistance to temperature and corrosive environments, but at the expense of weight and cost.

Potting Compound:
315° C. Rated Epoxy

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TwistPin Connectors and RoHS Compliance

European Union Directive 2011/65/EU, with amendment 2015/863, on Restriction of the use of certain Hazardous Substances ("RoHS") states that certain types of equipment (primarily consumer electronic products such as personal computers) shall not contain lead, mercury, cadmium, hexavalent chromium, PBB, PBDE, DEHP, BBP, DBP, or DIBP. For the record, Glenair does not produce any OEM products of this type. Furthermore, our interconnect components are either free of the substances RoHS controls, or specifically intended for use in military-aerospace applications that are exempt. Please contact the factory to verify all components meet RoHS compliance regulations.

Are Nano Connectors RoHS compliant?

The products in this catalog can be ordered with various plating finishes. Some finishes for example cadmium along with solder-dipping, do not comply with the RoHS directive.

Why doesn't Glenair eliminate non-RoHS products?

Glenair products are typically used in defense and aerospace equipment exempt from RoHS requirements. Glenair continues to offer cadmium and chromate finishes in accordance with DoD and aerospace specifications. Our part numbers contain a broad range of finish and component options. RoHS compliant finishes can easily be requested if desired.

Examples of products that do not comply with RoHS regulations:

1 Cadmium plating. is available on metal shell connectors in this catalog. Note that cadmium plating does not currently comply with RoHS rules.

2 Tin-lead solder dipped printed circuit board tails. Board mount M32139 Nanos and other products are normally solder dipped in 63% tin 37% lead or 60% tin 40% lead molten solder. RoHS compliance for consumer products requires elimination of solder coatings containing lead.

Examples of RoHS materials for easy selection

1 Specify electroless nickel plating on the connector shell. Or, choose stainless steel shells for maximum corrosion protection and RoHS compliance.

2 Use Mod Code 513 on Nano board mount connectors. Board mount Nanominiatures and other products normally solder dipped in 63% tin 37% or 60% tin 40% lead molten solder. Any solder-dipped part can be supplied with RoHS compliant gold-plating instead, by simply adding Mod Code 513 as a suffix to the standard part number.

Nano Connector Plating Codes: RoHS Compliance

Nano Plating Code	Plating Type	RoHS	Notes
A1	Cadmium with yellow chromate conversion coating over electroless nickel	No	Electroless nickel is the preferred alternate.
A2	Electroless nickel	RoHS	First choice for RoHS compliance. Good corrosion resistance, excellent conductivity, M32139 approved, always in stock.
S	Stainless steel shell, passivated	RoHS	Higher cost but unsurpassed corrosion resistance, not conductive enough for typical EMI needs. Build-to-order.
T	Titanium, unplated	RoHS	Higher cost but unsurpassed corrosion resistance, not conductive enough for typical EMI needs. Build-to-order.

Nano Connector RoHS Material Examples

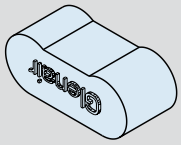
Part Number	Problem	Solution	RoHS Compliant Part Number
891-001-25PA1-125	Plating code A1 specifies cadmium plating.	Change to electroless nickel plating (plating code A2).	891-001-25P**A2**-125
891-008-25PA2-BRTIT	PCB connectors are solder-dipped in tin-lead.	Add Mod Code 513 to change the PC tail finish to gold plating.	891-008-25PA2-BRTIT-**513**
891-008-25PA1-BRTIT	Cadmium plated shell and solder-dipped contacts.	Change to nickel plating and gold contacts	891-008-25P**A2**-BRTIT-**513**

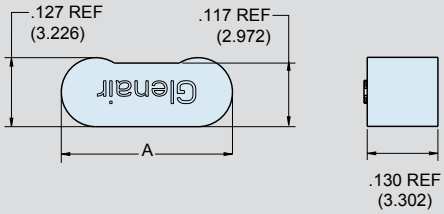
Anti-Static Dust Caps

Anti-Static Dust Caps offer protection to Nano connectors for storage and handling. Molded in black thermoplastic LDPE, these caps meet the anti-static decay rate specified in MIL-PRF-81705D. **UL 94-V0** rated, self-extinguishing

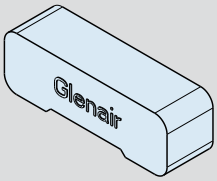
Metal Shells			
890 Single Row		A Ref.	
Part Number	Layout	In.	mm.
000-01-05-174	5P	.215	5.461
000-01-09-174	9P	.315	8.001
000-01-15-174	15P	.465	11.811
000-01-21-174	21P	.615	15.621
000-01-25-174	25P	.715	18.161
000-01-31-174	31P	.865	21.971
000-01-37-174	37P	1.015	25.781
000-01-51-174	51P	1.365	34.671
000-01-05-175	5S	.431	10.947
000-01-09-175	9S	.531	13.487
000-01-15-175	15S	.681	17.297
000-01-21-175	21S	.831	21.107
000-01-25-175	25S	.931	23.647
000-01-31-175	31S	1.081	27.457
000-01-37-175	37S	1.231	31.267
000-01-51-175	51S	1.581	40.157
891 Dual Row		A Ref.	
000-01-09-176	9P	.191	4.851
000-01-15-176	15P	.266	6.756
000-01-21-176	21P	.341	8.661
000-01-25-176	25P	.391	9.931
000-01-31-176	31P	.466	11.836
000-01-37-176	37P	.541	13.741
000-01-41-176	41P	.591	15.011
000-01-51-176	51P	.716	18.186
000-01-65-176	65P	.891	22.631
000-01-69-176	69P	.941	23.901
000-01-85-176	85P	1.141	28.981
000-01-09-177	9S	.406	10.312
000-01-15-177	15S	.481	12.217
000-01-21-177	21S	.556	14.122
000-01-25-177	25S	.606	15.392
000-01-31-177	31S	.681	17.297
000-01-37-177	37S	.756	19.202
000-01-41-177	41S	.806	20.472
000-01-51-177	51S	.931	23.647
000-01-65-177	65S	1.106	28.092
000-01-69-177	69S	1.156	29.362
000-01-85-177	85S	1.408	35.763

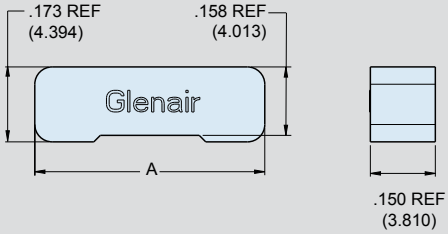
000-01-00-174 Single Row Plug



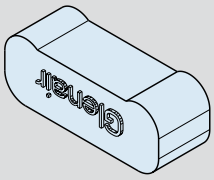


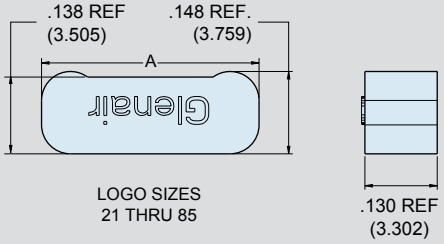
000-01-00-175 Single Row Receptacle



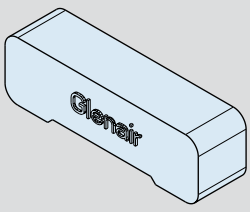


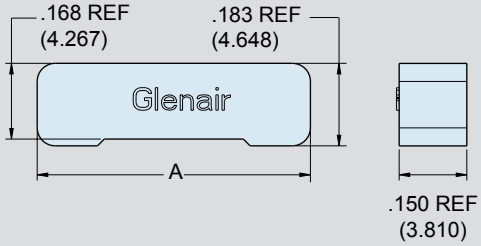
000-01-00-176 Dual Row Plug





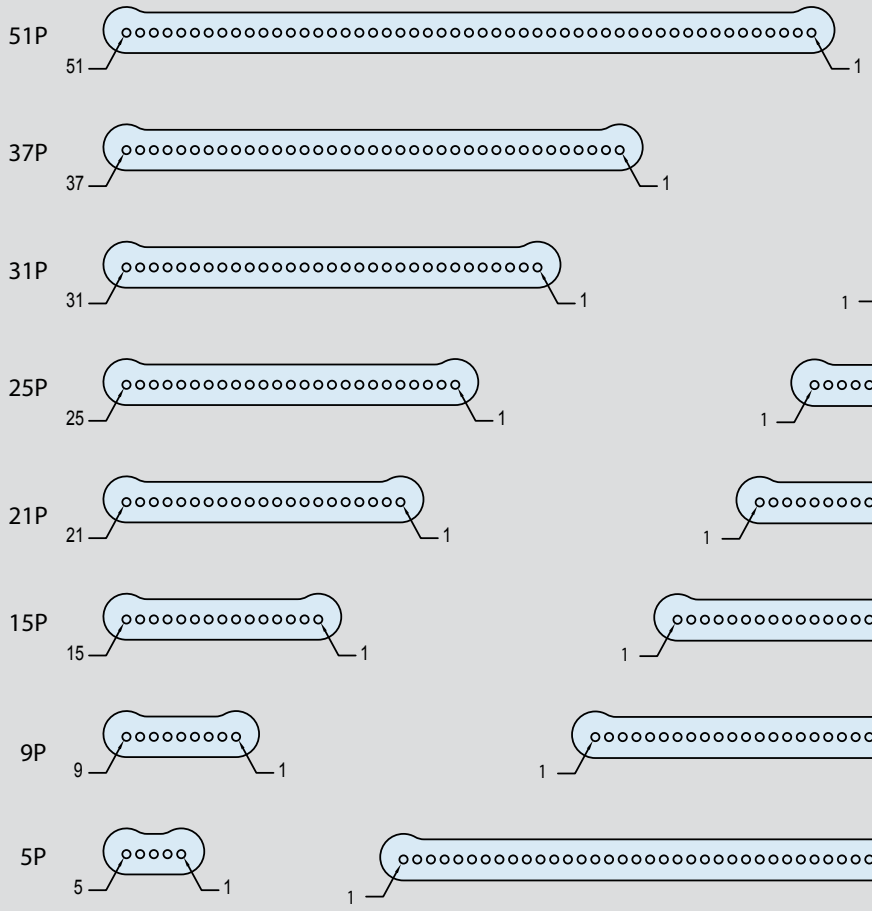
000-01-00-177 Dual Row Receptacle



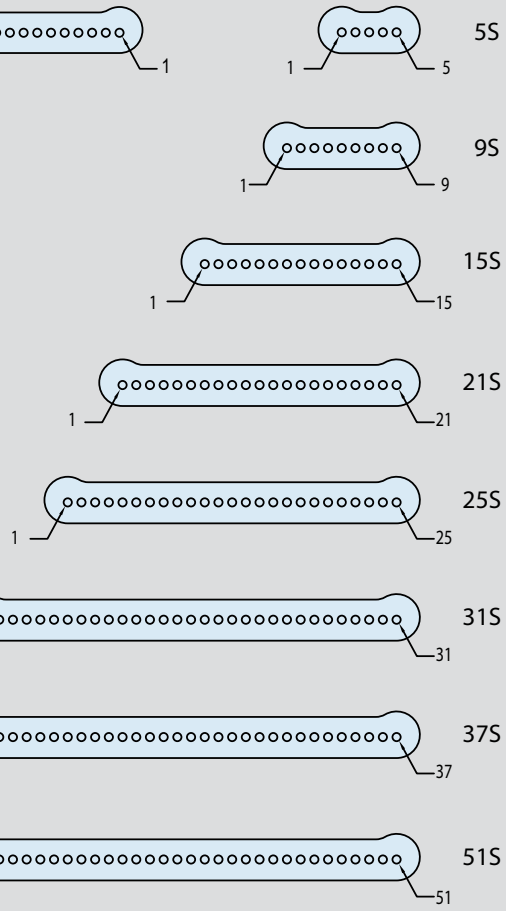


Single Row Contact Arrangements

Single Row Plugs (Pins)

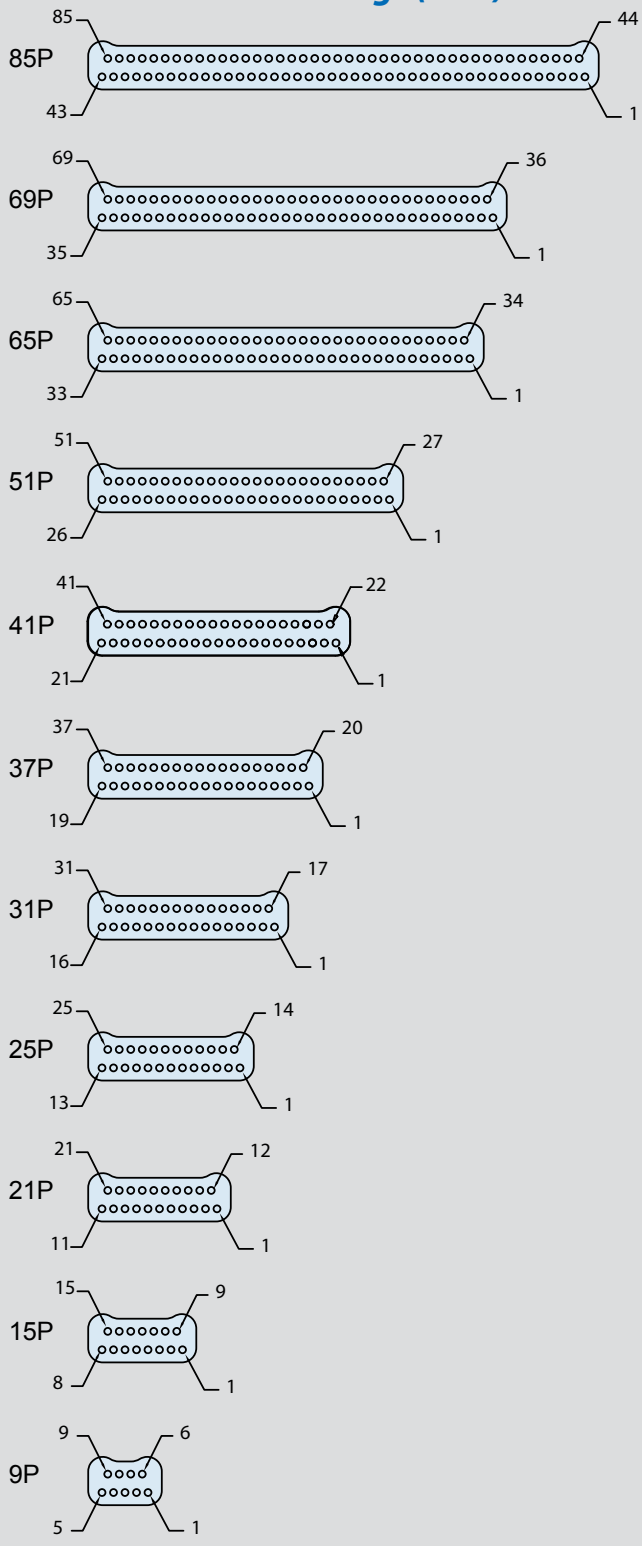


Single Row Receptacles (Sockets)

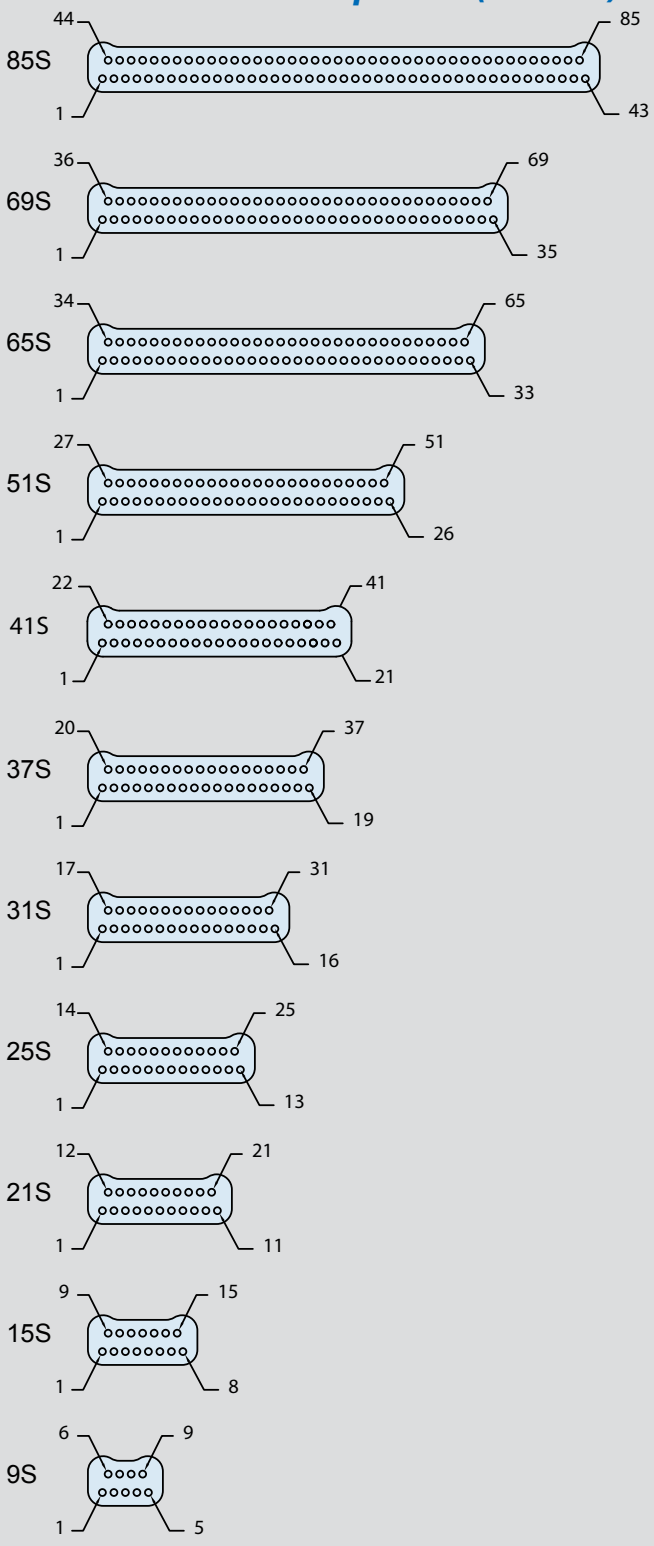


Dual Row Contact Arrangements

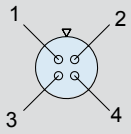
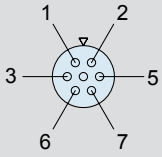
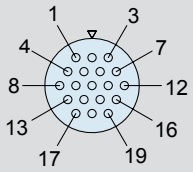
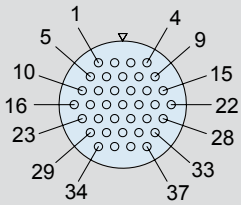
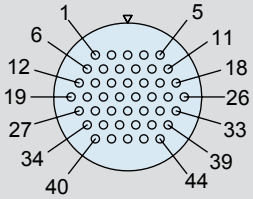
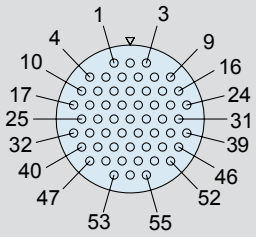
Dual Row Plugs (Pins)



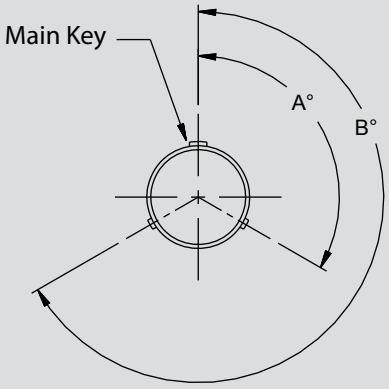
Dual Row Receptacles (Sockets)



Circular Shell Size/Contact Arrangements and Keying Positions

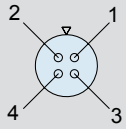
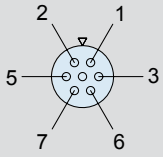
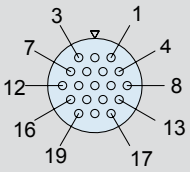
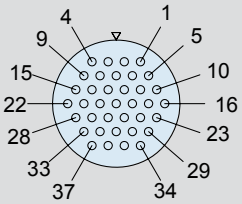
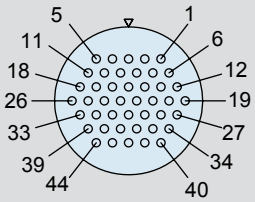
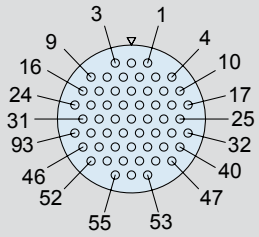
Circular Plug Mating Face Views		
Size 1-4, 4 Contacts	Size 1-7, 7 Contacts	Size 2-19, 19 Contacts
		
Size 3-37, 37 Contacts	Size 4-44, 44 Contacts	Size 4-55, 55 Contacts
		

Position identifications are for reference only and do not exist on actual connector



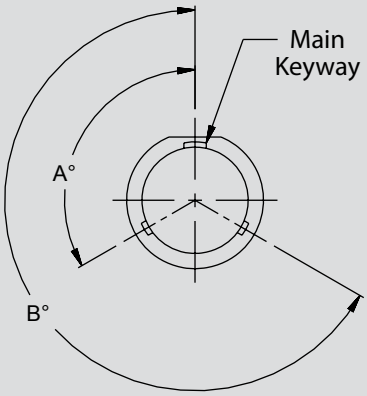
Key Positions			
Size	Polarization	A°	B°
1-4	N	150	210
	A	75	210
1-7	N	95	230
	A	140	275
2-19	N	150	210
	A	75	210
3-37	N	150	210
	A	75	210
4-44	N	150	210
	A	75	210
4-55	N	95	230
	A	140	275

Circular Shell Size/Contact Arrangements and Keying Positions

Circular Receptacle Mating Face Views		
Size 1-4, 4 Contacts	Size 1-7, 7 Contacts	Size 2-19, 19 Contacts
		
Size 3-37, 37 Contacts	Size 4-44, 44 Contacts	Size 4-55, 55 Contacts
		

Position identifications are for reference only and do not exist on actual connector

Key Positions			
Size	Polarization	A°	B°
1-4	N	150	210
	A	75	210
1-7	N	95	230
	A	140	275
2-19	N	150	210
	A	75	210
3-37	N	150	210
	A	75	210
4-44	N	150	210
	A	75	210
4-55	N	95	230
	A	140	275



SERIES 89
NANOMINIATURE CIRCULAR

CIRCULAR CONNECTORS

Hi-performance, small form factor, weight saving connectors

nano miniature™

Glenair Hi-performance Nanominiature connectors feature TwistPin contacts providing performance advantages over stamped and formed contacts. These benefits include a gas-tight crimp joint and corrosion-proof alloy construction for superior reliability over long term environmental exposure while the multi-point contact design provide inherently better shock and vibration performance benefits. Circular breakaway and threaded connectors are available in 6 shell size/contact arrangements with 4 to 55 contacts. Available with three wire type options including: Ultra lightweight XLETFE insulation with silver coated high strength copper; extruded PTFE insulation with silver coated copper; and cross link modified ETFE insulation with high strength silver coated copper. Connector shell styles available include front panel mount, rear panel mount and inline for plugs and receptacles. Accessory options include connector with or without backshell and/or optional pre-installed overmolded backshell. Applications include down-hole electronics, missile systems, launch vehicles and satellites.

Glenair®

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Glendale, CA 91201-2497
818-247-6000
sales@glenair.com
www.glenair.com

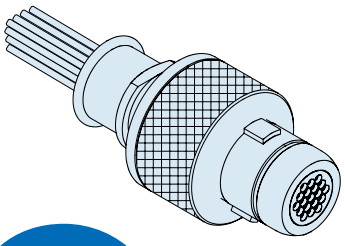
SERIES 89

Circular Connectors

Product Selection Guide

B

Breakaway Plug Connector with Insulated Wire
How to Order



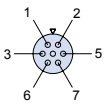
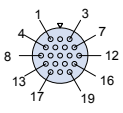
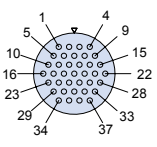
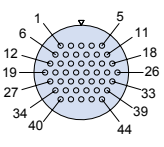
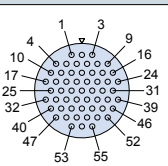
MATES WITH 892-000, 892-002, 892-004, 893-008, 893-010

Glenair Breakaway Plug Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with or without backshell. Backshell option available with shrink boot or overmolding.

Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with 892-000, 892-002, 892-004, 893-008, and 893-010 breakaway receptacle connectors.

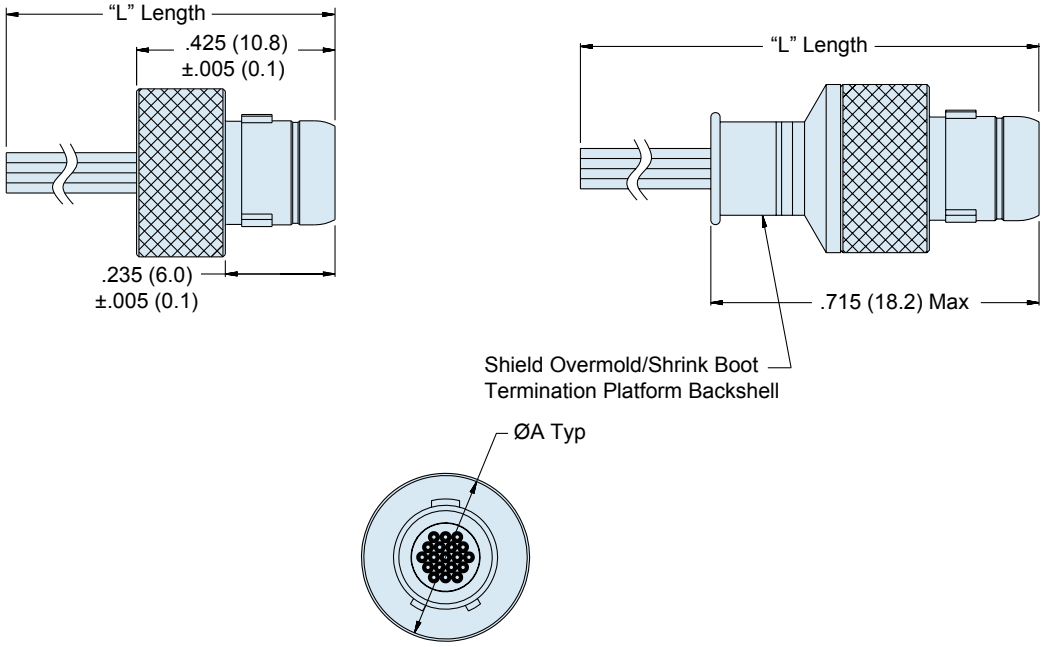
B

How To Order										
Sample Part Number	**892**	**-007**	**-02**	**1-7**	**N**	**A2**	**-0**	**A**	**7**	**-12**
Series	**892** = Nano Circular with Insulated Wire									
Shell Style	**007** = Breakaway Plug									
Accessory	**01** = No Backshell **02** = With Backshell **03** = Overmolded **04** = Shrink Boot									
Shell Size/Contact Arrangement	**1-4** = Shell Size 1 with 4 contacts **3-37** = Shell Size 3 with 37 contacts **1-7** = Shell Size 1 with 7 contacts **4-44** = Shell Size 4 with 44 contacts **2-19** = Shell Size 2 wih 19 contacts **4-55** = Shell Size 4 with 55 contacts See Plug Mating Face View and Contact Layout Table									
Polarization	**N** = Normal **A** = Alternate									
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **A5** = Aluminum/Gold Over Nickel **S2** = Stainless Steel/Passivated									
Wire Gauge	**0** = 30 AWG **2** = 32 AWG									
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)									
Wire Color	**1** = White **2** = Yellow **7** = 10 Color Repeating (Wire type A is striped, types B and C are solid colors)									
Wire Length (Inches)	**12** = 12.00 + 1.00 Inches; as required in one inch increments.									

Plug Mating Face View and Contact Layout					
Size 1-4 4 Contacts	**Size 1-7 7 Contacts**	**Size 2-19 19 Contacts**	**Size 3-37 37 Contacts**	**Size 4-44 44 Contacts**	**Size 4-55 55 Contacts**
					

Breakaway Plug Connector with Insulated Wire Dimensions

Dimensions	
892-007-01 Without Termination Platform	892-007-02 With Termination Platform

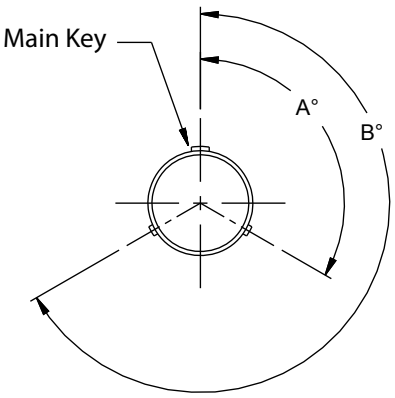


Size	Ø A ±-.005
1-4	.310 (7.9)
1-7	.310 (7.9)
2-19	.360 (9.1)
3-37	.411 (10.4)
4-44	.443 (11.3)
4-55	.443 (11.3)

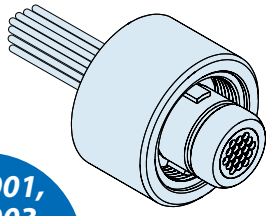
NOTES

1. Material/Finish:
   - Shell/backshell - see part number breakdown
   - Insulator - LCP/na
   - Pin contacts - gold alloy

Key Positions			
Size	Polarization	A°	B°
1-4	N	150	210
	A	75	210
1-7	N	95	230
	A	140	275
2-19	N	150	210
	A	75	210
3-37	N	150	210
	A	75	210
4-44	N	150	210
	A	75	210
4-55	N	95	230
	A	140	275



Threaded Plug Connector with Insulated Wire
How to Order



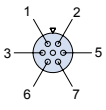
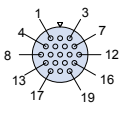
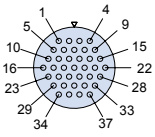
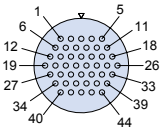
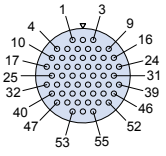
MATES WITH 892-001, 892-003, 892-005, 893-009, 893-011

Glenair Threaded Coupling Plug Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with or without backshell. Backshell option available with shrink boot or overmolding.

Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with 892-001, 892-003, 892-005, 893-009, and 893-011 threaded coupling receptacle connectors.

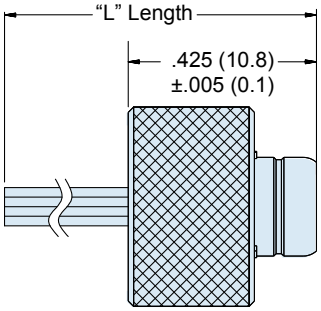
B

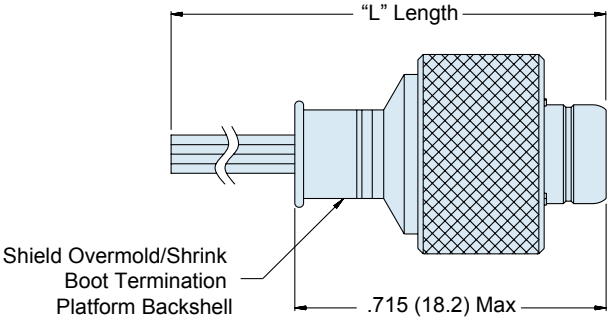
How To Order										
Sample Part Number	**892**	**-006**	**-02**	**1-7**	**N**	**A2**	**-0**	**A**	**7**	**-12**
Series	**892** = Nano Circular with Insulated Wire									
Shell Style	**006** = Threaded Coupling Plug									
Accessory	**01** = No Backshell **02** = With Backshell **03** = Overmolded **04** = Shrink Boot									
Shell Size/Contact Arrangement	**1-4** = Shell Size 1 with 4 contacts **3-37** = Shell Size 3 with 37 contacts **1-7** = Shell Size 1 with 7 contacts **4-44** = Shell Size 4 with 44 contacts **2-19** = Shell Size 2 with 19 contacts **4-55** = Shell Size 4 with 55 contacts See Plug Mating Face View and Contact Layout Table									
Polarization	**N** = Normal **A** = Alternate									
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **A5** = Aluminum/Gold Over Nickel **S2** = Stainless Steel/Passivated									
Wire Gauge	**0** = 30 AWG **2** = 32 AWG									
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)									
Wire Color	**1** = White **2** = Yellow **7** = 10 Color repeating (Wire type A is striped, types B and C are solid colors)									
Wire Length (Inches)	**12** = 12.00 + 1.00 Inches; as required in one inch increments.									

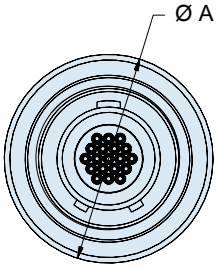
Plug Mating Face View and Contact Layout					
Size 1-4 4 Contacts	**Size 1-7 7 Contacts**	**Size 2-19 19 Contacts**	**Size 3-37 37 Contacts**	**Size 4-44 44 Contacts**	**Size 4-55 55 Contacts**
					

Threaded Plug Connector with Insulated Wire Dimensions

Dimensions	
892-006-01 without Termination Platform	892-006-02 with Termination Platform





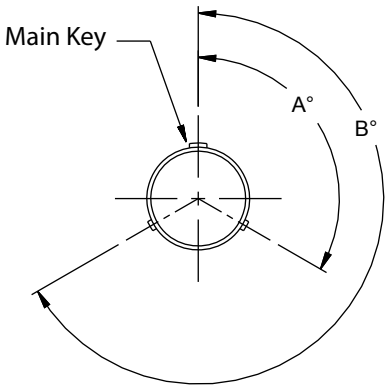


Size	Ø A ±.005
1-4	.425 (10.8)
1-7	.425 (10.8)
2-19	.475 (12.1)
3-37	.526 (13.4)
4-44	.558 (14.2)
4-55	.558 (14.2)

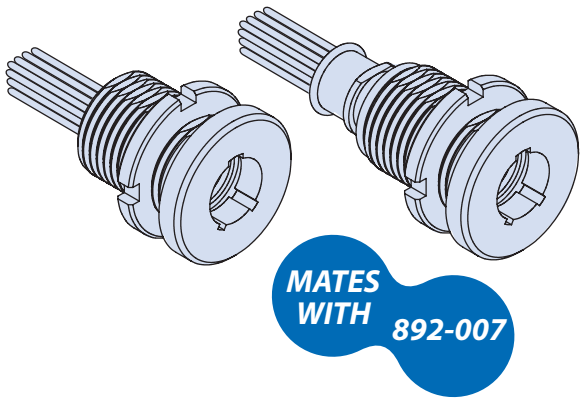
NOTES

1. Material/Finish:
   - Shell/coupling ring/backshell - see part number breakdown
   - Insulator - LCP/na
   - Pin contacts - gold alloy
   - Snap ring - stainless steel/passivated

Key Positions			
Size	Polarization	A°	B°
1-4	N	150	210
	A	75	210
1-7	N	95	230
	A	140	275
2-19	N	150	210
	A	75	210
3-37	N	150	210
	A	75	210
4-44	N	150	210
	A	75	210
4-55	N	95	230
	A	140	275



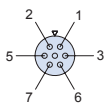
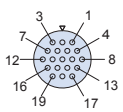
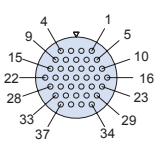
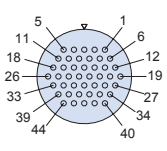
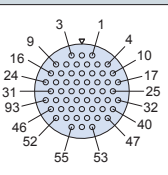
Front Panel Mount, Breakaway Receptacle with Insulated Wire - How to Order



Glenair Front Panel Mount Breakaway Receptacle Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with or without backshell. Backshell option available with shrink boot or overmolding.

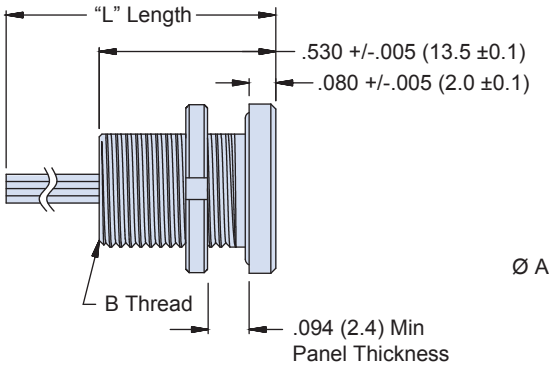
Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with nanominiature plug connectors 892-007.

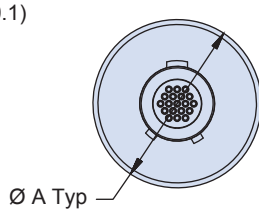
How To Order										
Sample Part Number	**892**	**-000**	**-02**	**1-7**	**N**	**A2**	**-0**	**A**	**7**	**-12**
Series	**892** = Nano Circular with Insulated Wire									
Shell Style		**000** = Front Panel Mount Breakaway Receptacle								
Accessory			**01** = No Backshell **02** = With Backshell **03** = Overmolded **04** = Shrink Boot							
Shell Size/ Contact Arrangement				**1-4** = Shell Size 1 with 4 contacts **3-37** = Shell Size 3 with 37 contacts **1-7** = Shell Size 1 with 7 contacts **4-44** = Shell Size 4 with 44 contacts **2-19** = Shell Size 2 wih 19 contacts **4-55** = Shell Size 4 with 55 contacts See Receptacle Mating Face View and Contact Layout Table					
Polarization					**N** = Normal **A** = Alternate					
Shell Material/Finish						**A2** = Aluminum/Electroless Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **A5** = Aluminum/Gold Over Nickel **S2** = Stainless Steel/Passivated				
Wire Gauge							**0** = 30 AWG **2** = 32 AWG			
Wire Type								**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)		
Wire Color									**1** = White **2** = Yellow **7** = 10 Color Repeating (Wire Type A is striped, Types B and C are solid colors)	
Wire Length (Inches)										**12** = 12.00 + 1.00 Inches; as required in one inch increments.

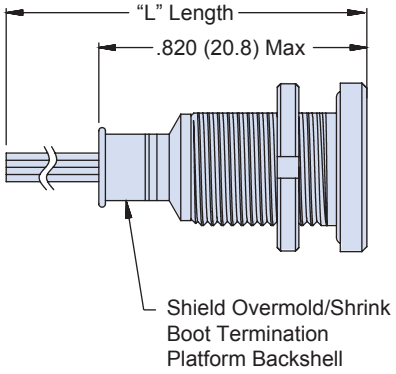
Circular Receptacle Mating Face View and Contact Layout					
Size 1-4 4 Contacts	**Size 1-7 7 Contacts**	**Size 2-19 19 Contacts**	**Size 3-37 37 Contacts**	**Size 4-44 44 Contacts**	**Size 4-55 55 Contacts**
					

Front Panel Mount, Breakaway Receptacle with Insulated Wire - Dimensions

Dimensions	
892-000-01 Without Termination Platform	892-000-02 With Termination Platform

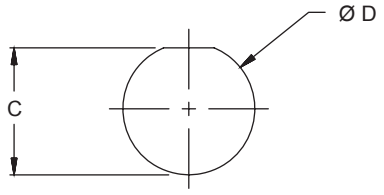






Size	Ø A +/-.005	B Thread
1-4	.489 (12.5)	M8.5 X 0.75-6g
1-7	.489 (12.5)	M8.5 X 0.75-6g
2-19	.528 (13.5)	M9.5 X 0.75-6g
3-37	.567 (14.5)	M10.5 X 0.75-6g
4-44	.627 (16.0)	M12.0 X 0.75-6g
4-55	.627 (16.0)	M12.0 X 0.75-6g

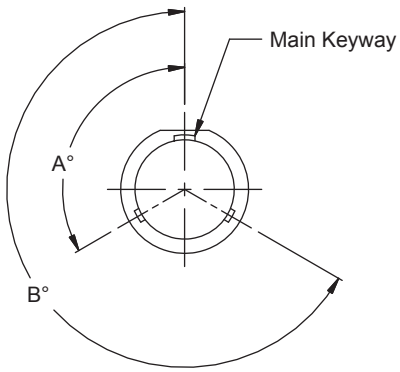
Front Panel Mount Panel Cut-Out		
Size	C +.002 / -.001	ØD +.002 / -.001
1-4	.320 (8.2)	.340 (8.6)
1-7	.320 (8.2)	.340 (8.6)
2-19	.359 (9.2)	.380 (9.7)
3-37	.399 (10.2)	.420 (10.7)
4-44	.457 (11.7)	.479 (12.2)
4-55	.457 (11.7)	.479 (12.2)



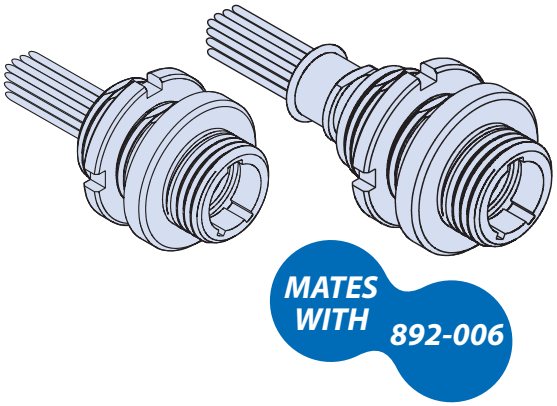
NOTES:

1. Material/finish
   - Shell/spanner nut/backshell - see part number breakdown
   - Insulator - LCP/na
   - Socket contacts - gold alloy
   - O-rings - fluorosilicone/na
   - Internal latching spring - stainless steel/ gold plate

Keyway Positions			
Size	Polarization	A°	B°
1-4	N	150	210
	A	75	210
1-7	N	95	230
	A	140	275
2-19	N	150	210
	A	75	210
3-37	N	150	210
	A	75	210
4-44	N	150	210
	A	75	210
4-55	N	95	230
	A	140	275



Front Panel Mount, Threaded Receptacle with Insulated Wire - How to Order



Glenair Front Panel Mount Threaded Coupling Receptacle Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with or without backshell. Backshell option available with shrink boot or overmolding.

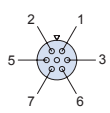
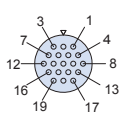
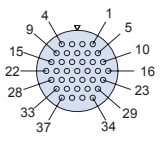
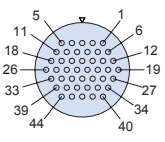
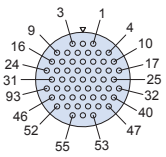
Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with nanominiature plug connectors 892-006.

B

How To Order										
Sample Part Number	**892**	**-001**	**-02**	**1-7**	**N**	**A2**	**-0**	**A**	**7**	**-12**

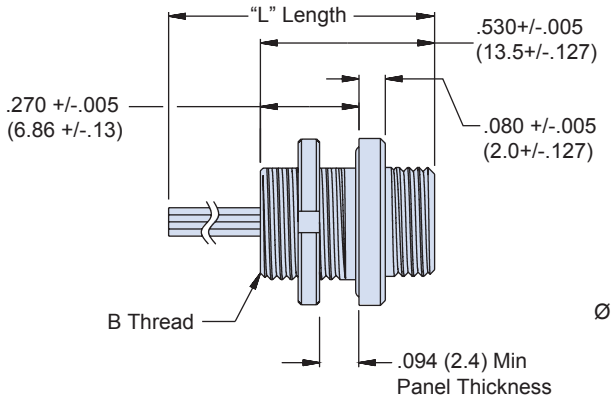
Series	**892** = Nano Circular with Insulated Wire
Shell Style	**001** = Front Panel Mount Threaded Coupling Receptacle
Accessory	**01** = No Backshell **02** = With Backshell **03** = Overmolded **04** = Shrink Boot
Shell Size/Contact Arrangement	**1-4** - Shell Size 1 with 4 contacts **3-37** - Shell Size 3 with 37 contacts **1-7** - Shell Size 1 with 7 contacts **4-44** - Shell Size 4 with 44 contacts **2-19** - Shell Size 2 wih 19 contacts **4-55** - Shell Size 4 with 55 contacts See Receptacle Mating Face View and Contact Layout Table
Polarization	**N** = Normal **A** = Alternate
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **A5** = Aluminum/Gold Over Nickel **S2** = Stainless Steel/Passivated
Wire Gauge	**0** = 30 AWG **2** = 32 AWG
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)
Wire Color	**1** = White **2** = Yellow **7** = 10 Color repeating (Wire type A is striped, types B and C are solid colors)
Wire Length (Inches)	**12** = 12.00 + 1.00 Inches; as required in one inch increments.

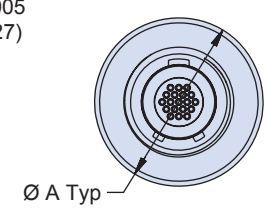
Receptacle Mating Face View and Contact Layout

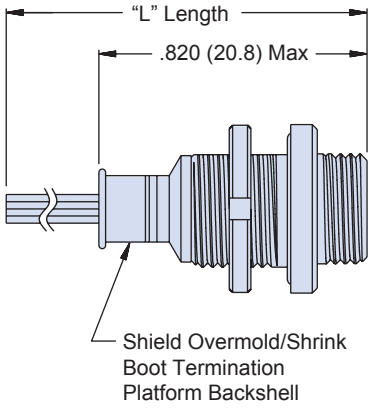
Size 1-4 4 Contacts	Size 1-7 7 Contacts	Size 2-19 19 Contacts	Size 3-37 37 Contacts	Size 4-44 44 Contacts	Size 4-55 55 Contacts
					

Front Panel Mount, Threaded Receptacle with Insulated Wire - Dimensions

Dimensions	
892-001-01 Without Termination Platform	892-001-02 With Termination Platform

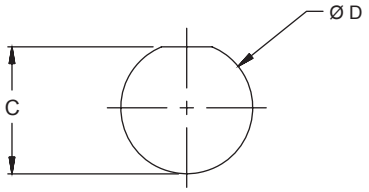






Size	Ø A +/-.005	B Thread
1-4	.489 (12.5)	M8.5 X 0.75-6g
1-7	.489 (12.5)	M8.5 X 0.75-6g
2-19	.528 (13.5)	M9.5 X 0.75-6g
3-37	.567 (14.5)	M10.5 X 0.75-6g
4-44	.627 (16.0)	M12.0 X 0.75-6g
4-55	.627 (16.0)	M12.0 X 0.75-6g

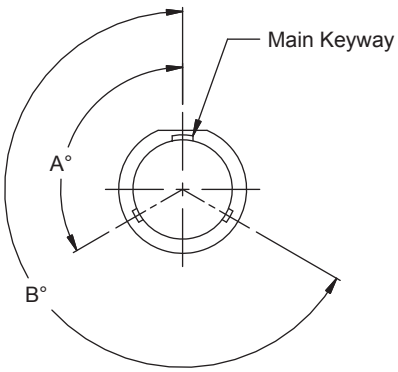
Front Panel Mount Panel Cut-Out		
Size	C +.002 / -.001	ØD +.002 / -.001
1-4	.320 (8.2)	.340 (8.6)
1-7	.320 (8.2)	.340 (8.6)
2-19	.359 (9.2)	.380 (9.7)
3-37	.399 (10.2)	.420 (10.7)
4-44	.457 (11.7)	.479 (12.2)
4-55	.457 (11.7)	.479 (12.2)



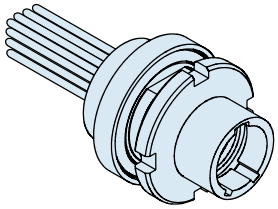
NOTES:

1. Material/finish
   - Shell/spanner nut/backshell - see part number breakdown
   - Insulator - LCP/na
   - Socket contacts - gold alloy
   - O-rings - fluorosilicone/na
   - Internal latching spring - stainless steel/ gold plate

Keyway Positions			
Size	Polarization	A°	B°
1-4	N	150	210
	A	75	210
1-7	N	95	230
	A	140	275
2-19	N	150	210
	A	75	210
3-37	N	150	210
	A	75	210
4-44	N	150	210
	A	75	210
4-55	N	95	230
	A	140	275



Rear Panel Mount, Breakaway Receptacle with Insulated Wire - How to Order



MATES WITH 892-007

Glenair Rear Panel Mount Breakaway Receptacle Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with or without backshell. Backshell option available with shrink boot or overmolding.

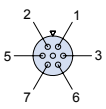
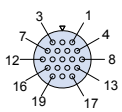
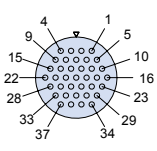
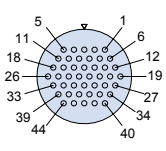
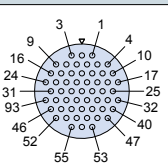
Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with nanominiature plug connectors 892-007.

How To Order

Sample Part Number	892	-002	-02	1-7	N	A2	-0	A	7	-12

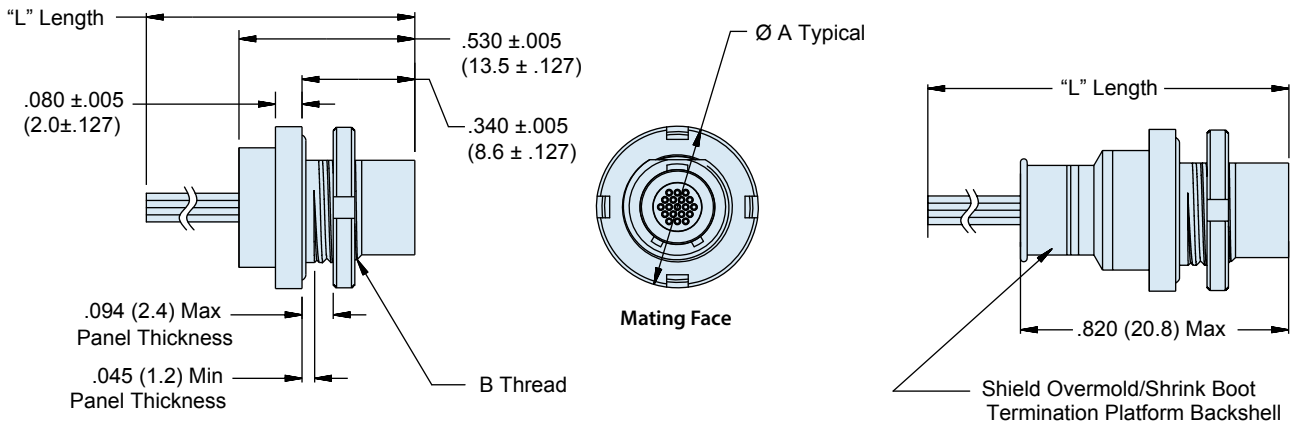
Series	**892** = Nano Circular with Insulated Wire
Shell Style	**002** = Rear Panel Mount Breakaway Receptacle
Accessory	**01** = No Backshell **02** = With Backshell **03** = Overmolded **04** = Shrink Boot
Shell Size/Contact Arrangement	**1-4** - Shell Size 1 with 4 contacts **3-37** - Shell Size 3 with 37 contacts **1-7** - Shell Size 1 with 7 contacts **4-44** - Shell Size 4 with 44 contacts **2-19** - Shell Size 2 wih 19 contacts **4-55** - Shell Size 4 with 55 contacts See Receptacle Mating Face View and Contact Layout Table
Polarization	**N** = Normal **A** = Alternate
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **A5** = Aluminum/Gold Over Nickel **S2** = Stainless Steel/Passivated
Wire Gauge	**0** = 30 AWG **2** - 32 AWG
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)
Wire Color	**1** = White **2** = Yellow **7** = 10 Color repeating (Wire type A is striped, types B and C are solid colors)
Wire Length (Inches)	**12** = 12.00 + 1.00 Inches; as required in one inch increments.

Receptacle Mating Face View and Contact Layout

Size 1-4 4 Contacts	Size 1-7 7 Contacts	Size 2-19 19 Contacts	Size 3-37 37 Contacts	Size 4-44 44 Contacts	Size 4-55 55 Contacts
					

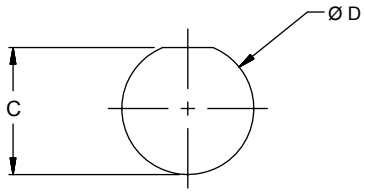
Rear Panel Mount, Breakaway Receptacle with Insulated Wire - Dimensions

Dimensions	
892-002-01 Without Termination Platform	892-002-02 With Termination Platform



Size	Ø A +/-.005	B Thread
1-4	.429 (10.9)	M7.0 X 0.75-6g
1-7	.429 (10.9)	M7.0 X 0.75-6g
2-19	.488 (12.4)	M8.5 X 0.75-6g
3-37	.528 (13.4)	M9.5 X 0.75-6g
4-44	.567 (14.4)	M10.5 X 0.75-6g
4-55	.567 (14.4)	M10.5 X 0.75-6g

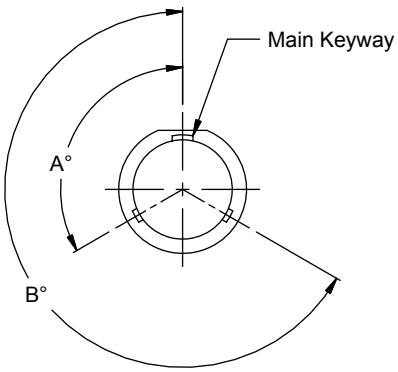
Rear Panel Mount Panel Cut-Out		
Size	C +.002 / -.001	ØD +.002 / -.001
1-4	.260 (6.6)	.280 (7.1)
1-7	.260 (6.6)	.280 (7.1)
2-19	.318 (8.1)	.340 (8.6)
3-37	.361 (9.2)	.378 (9.6)
4-44	.401 (10.2)	.420 (10.7)
4-55	.401 (10.2)	.420 (10.7)



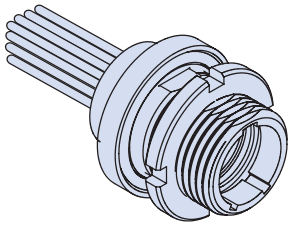
NOTES:

1. Material/finish
   - Shell/spanner nut/backshell - see part number breakdown
   - Insulator - LCP/na
   - Socket contacts - gold alloy
   - O-rings - fluorosilicone/na
   - Internal latching spring - stainless steel/ gold plate

Keyway Positions			
Size	Polarization	A°	B°
1-4	N	150	210
	A	75	210
1-7	N	95	230
	A	140	275
2-19	N	150	210
	A	75	210
3-37	N	150	210
	A	75	210
4-44	N	150	210
	A	75	210
4-55	N	95	230
	A	140	275



Rear Panel Mount, Threaded Receptacle with Insulated Wire - How to Order



Glenair Rear Panel Mount Threaded Coupling Receptacle Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with or without backshell. Backshell option available with shrink boot or overmolding.

Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with nanominiature plug connectors 892-006.

MATES WITH 892-006

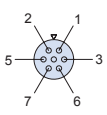
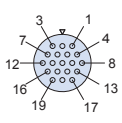
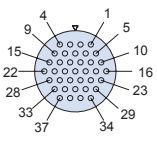
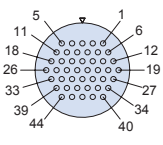
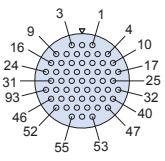
B

How To Order

Sample Part Number	892	-003	-02	1-7	N	A2	-0	A	7	-12

Series	**892** = Nano Circular with Insulated Wire
Shell Style	**003** = Rear Panel Mount Threaded Coupling Receptacle
Accessory	**01** = No Backshell **02** = With Backshell **03** = Overmolded **04** = Shrink Boot
Shell Size/Contact Arrangement	**1-4** = Shell Size 1 with 4 contacts **3-37** = Shell Size 3 with 37 contacts **1-7** = Shell Size 1 with 7 contacts **4-44** = Shell Size 4 with 44 contacts **2-19** = Shell Size 2 wih 19 contacts **4-55** = Shell Size 4 with 55 contacts See Receptacle Mating Face View and Contact Layout Table
Polarization	**N** = Normal **A** = Alternate
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **A5** = Aluminum/Gold Over Nickel **S2** = Stainless Steel/Passivated
Wire Gauge	**0** = 30 AWG **2** = 32 AWG
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)
Wire Color	**1** = White **2** = Yellow **7** = 10 Color Repeating (Wire type A is striped, types B and C are solid colors)
Wire Length (Inches)	**12** = 12.00 + 1.00 Inches; as required in one inch increments.

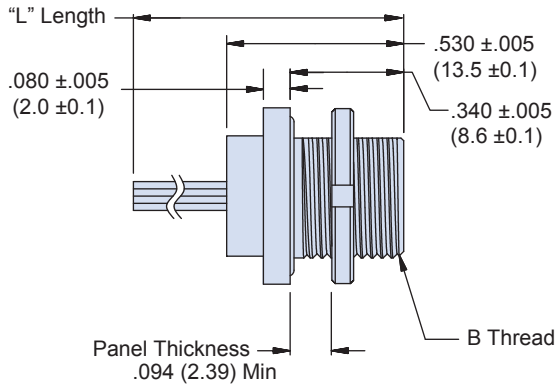
Receptacle Mating Face View and Contact Layout

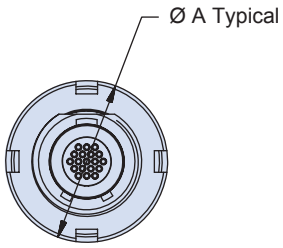
Size 1-4 4 Contacts	Size 1-7 7 Contacts	Size 2-19 19 Contacts	Size 3-37 37 Contacts	Size 4-44 44 Contacts	Size 4-55 55 Contacts
					

Rear Panel Mount, Threaded Receptacle with Insulated Wire - Dimensions

Dimensions

892-003-01 Without Termination Platform



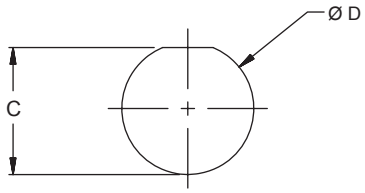


892-003-02 With Termination Platform

Size	Ø A +/-.005	B Thread
1-4	.429 (10.9)	M7.0 X 0.75-6g
1-7	.429 (10.9)	M7.0 X 0.75-6g
2-19	.488 (12.4)	M8.5 X 0.75-6g
3-37	.528 (13.4)	M9.5 X 0.75-6g
4-44	.567 (14.4)	M10.5 X 0.75-6g
4-55	.567 (14.4)	M10.5 X 0.75-6g

Rear Panel Mount Panel Cut-Out

Size	C +.002 / -.001	ØD +.002 / -.001
1-4	.260 (6.6)	.280 (7.1)
1-7	.260 (6.6)	.280 (7.1)
2-19	.318 (8.1)	.340 (8.6)
3-37	.361 (9.2)	.378 (9.6)
4-44	.401 (10.2)	.420 (10.7)
4-55	.401 (10.2)	.420 (10.7)

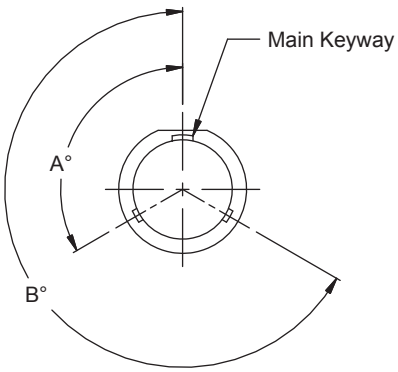


NOTES:

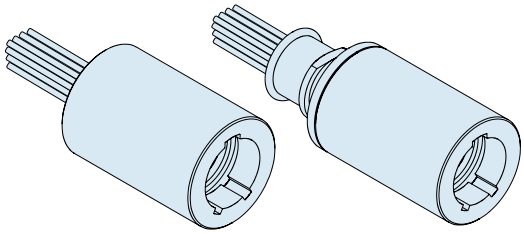
1. Material/finish
   - Shell/spanner nut/backshell - see part number breakdown
   - Insulator - LCP/na
   - Socket contacts - gold alloy
   - O-rings - fluorosilicone/na
   - Internal latching spring - stainless steel/ gold plate

Keyway Positions

Size	Polarization	A°	B°
1-4	N	150	210
	A	75	210
1-7	N	95	230
	A	140	275
2-19	N	150	210
	A	75	210
3-37	N	150	210
	A	75	210
4-44	N	150	210
	A	75	210
4-55	N	95	230
	A	140	275



Inline, Breakaway Receptacle with Insulated Wire
How to Order

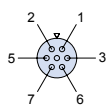
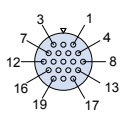
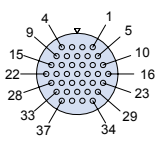
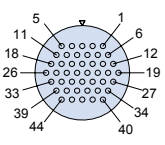
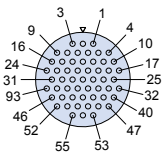


MATES WITH 892-007

Glenair Inline Breakaway Receptacle Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with or without backshell. Backshell option available with shrink boot or overmolding.

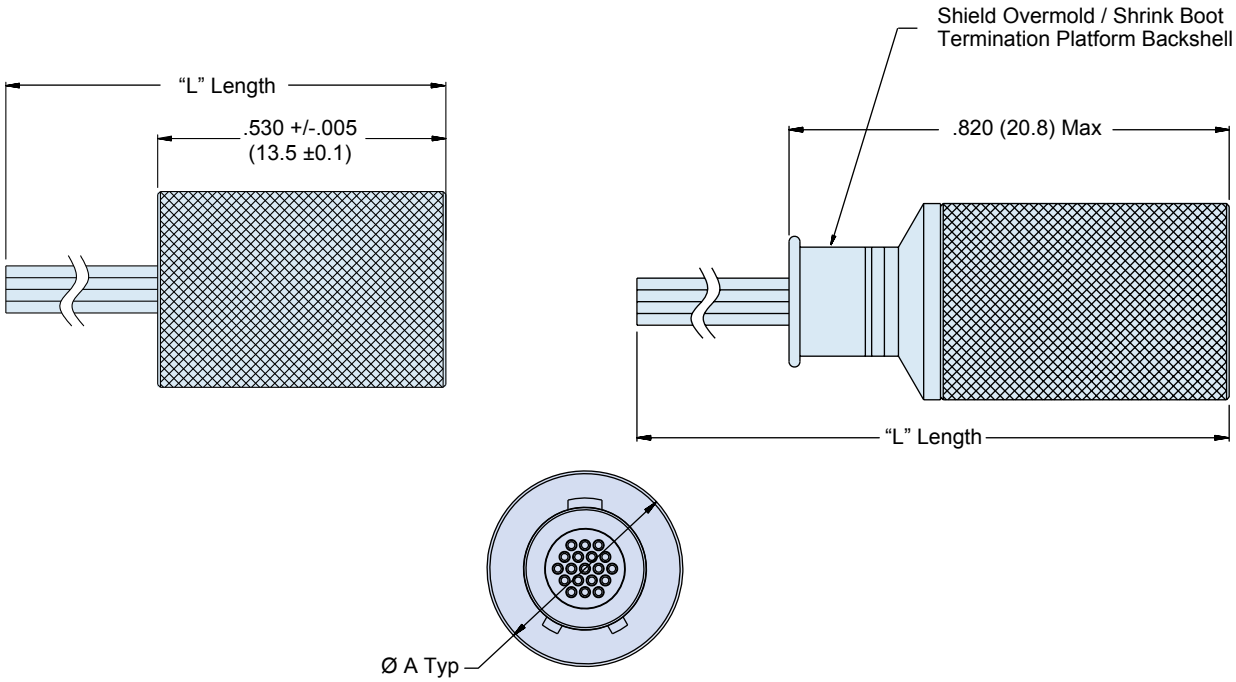
Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with nanominiature plug connectors 892-007.

How To Order										
Sample Part Number	892	-004	-02	1-7	N	A2	-0	A	7	-12
Series	**892** = Nano Circular with Insulated Wire									
Shell Style	**004** = In-Line Breakaway Receptacle									
Accessory	**01** = No Backshell **02** = With Backshell **03** = Overmolded **04** = Shrink Boot									
Shell Size/Contact Arrangement	**1-4** = Shell Size 1 with 4 contacts **3-37** = Shell Size 3 with 37 contacts **1-7** = Shell Size 1 with 7 contacts **4-44** = Shell Size 4 with 44 contacts **2-19** = Shell Size 2 wih 19 contacts **4-55** = Shell Size 4 with 55 contacts See Receptacle Mating Face View and Contact Layout Table									
Polarization	**N** = Normal **A** = Alternate									
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **A5** = Aluminum/Gold Over Nickel **S2** = Stainless Steel/Passivated									
Wire Gauge	**0** = 30 AWG **2** = 32 AWG									
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)									
Wire Color	**1** = White **2** = Yellow **7** = 10 Color repeating (Wire type A is striped, types B and C are solid colors)									
Wire Length (Inches)	**12** = 12.00 + 1.00 Inches; as required in one inch increments.									

Receptacle Mating Face View and Contact Layout					
Size 1-4 4 Contacts	**Size 1-7 7 Contacts**	**Size 2-19 19 Contacts**	**Size 3-37 37 Contacts**	**Size 4-44 44 Contacts**	**Size 4-55 55 Contacts**
					

Inline, Breakaway Receptacle with Insulated Wire Dimensions

Dimensions	
892-004-01 Without Termination Platform	892-004-02 With Termination Platform

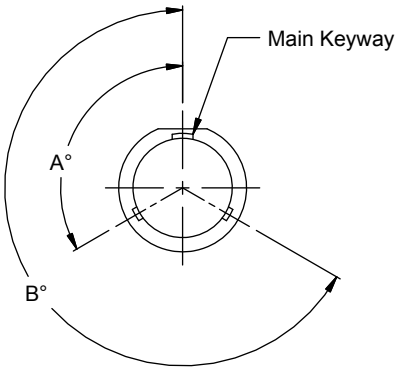


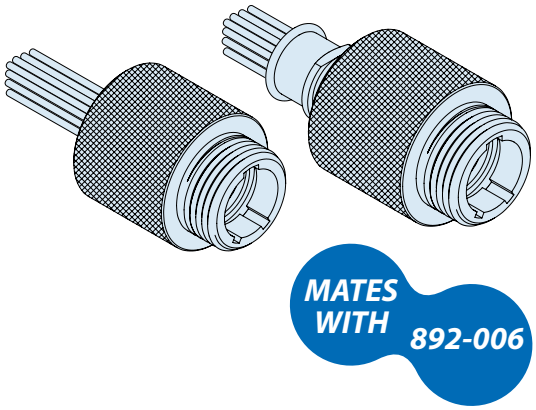
Size	Ø A +/-.005
1-4	.310 (7.9)
1-7	.310 (7.9)
2-19	.360 (9.1)
3-37	.411 (10.4)
4-44	.443 (11.3)
4-55	.443 (11.3)

NOTES:

1. Material/finish
   - Shell/spanner nut/backshell - see part number breakdown
   - Insulator - LCP/na
   - Socket contacts - gold alloy
   - O-rings - fluorosilicone/na
   - Internal latching spring - stainless steel/ gold plate

Keyway Positions			
Size	Polarization	A°	B°
1-4	N	150	210
	A	75	210
1-7	N	95	230
	A	140	275
2-19	N	150	210
	A	75	210
3-37	N	150	210
	A	75	210
4-44	N	150	210
	A	75	210
4-55	N	95	230
	A	140	275



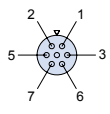
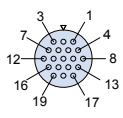
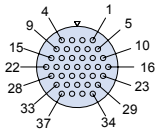
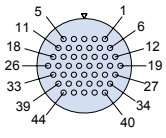
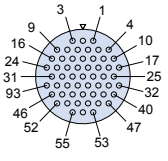


Glenair Inline Threaded Coupling Receptacle Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with or without backshell. Backshell option available with shrink boot or overmolding.

Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with nanominiature plug connectors 892-006.

B

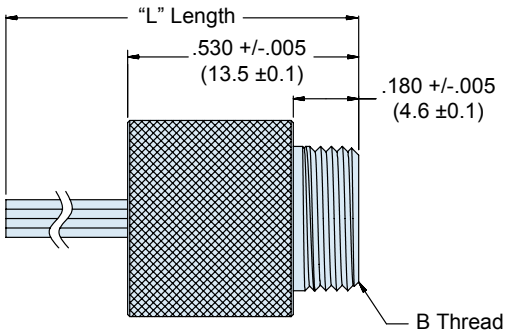
How To Order										
Sample Part Number	**892**	**-005**	**-02**	**1-7**	**N**	**A2**	**-0**	**A**	**7**	**-12**
Series	**892** = Nano Circular with Insulated Wire									
Shell Style	**005** = In-Line Threaded Coupling Receptacle									
Accessory	**01** = No Backshell **02** = With Backshell **03** = Overmolded **04** = Shrink Boot									
Shell Size/Contact Arrangement	**1-4** = Shell Size 1 with 4 contacts **3-37** = Shell Size 3 with 37 contacts **1-7** = Shell Size 1 with 7 contacts **4-44** = Shell Size 4 with 44 contacts **2-19** = Shell Size 2 wih 19 contacts **4-55** = Shell Size 4 with 55 contacts See Receptacle Mating Face View and Contact Layout Table									
Polarization	**N** = Normal **A** = Alternate									
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **A5**= Aluminum/Gold Over Nickel **S2** = Stainless Steel/Passivated									
Wire Gauge	**0** = 30 AWG **2** = 32 AWG									
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)									
Wire Color	**1** = White **2** = Yellow **7** = 10 Color repeating (Wire type A is striped, types B and C are solid colors)									
Wire Length (Inches)	**12** = 12.00 + 1.00 Inches; as required in one inch increments.									

Receptacle Mating Face View and Contact Layout					
Size 1-4 4 Contacts	**Size 1-7 7 Contacts**	**Size 2-19 19 Contacts**	**Size 3-37 37 Contacts**	**Size 4-44 44 Contacts**	**Size 4-55 55 Contacts**
					

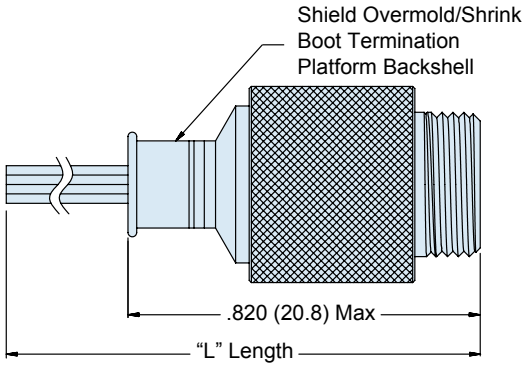
Inline Threaded Receptacle with Insulated Wire Dimensions

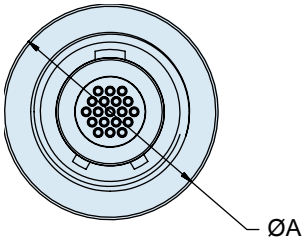
Dimensions

892-005-01 Without Termination Platform



892-005-02 With Termination Platform



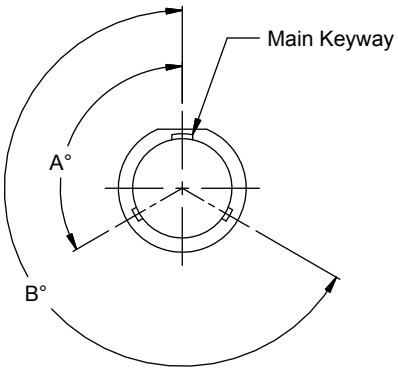


Size	Ø A +/-.005	B Thread
1-4	.425 (10.8)	M7.0 x 0.75 - 6g
1-7	.425 (10.2)	M7.0 x 0.75 - 6g
2-19	.475 (12.1)	M8.5 x 0.75 - 6g
3-37	.526 (13.4)	M9.5 x 0.75 - 6g
4-44	.558 (14.2)	M10.5 x 0.75 - 6g
4-55	.558 (14.2)	M10.5 x 0.75 - 6g

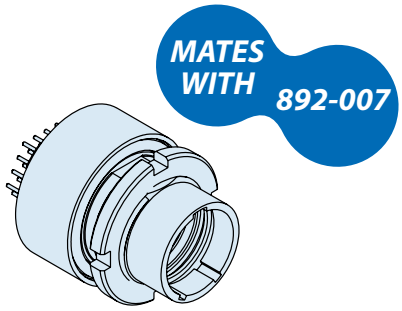
NOTES:

1. Material/finish
   - Shell/spanner nut/backshell - see part number breakdown
   - Insulator - LCP/na
   - Socket contacts - gold alloy
   - O-rings - fluorosilicone/na
   - Internal latching spring - stainless steel/ gold plate

Keyway Positions			
Size	Polarization	A°	B°
1-4	N	150	210
	A	75	210
1-7	N	95	230
	A	140	275
2-19	N	150	210
	A	75	210
3-37	N	150	210
	A	75	210
4-44	N	150	210
	A	75	210
4-55	N	95	230
	A	140	275



Rear Panel Mount, Breakaway Receptacle with PC Tails
How to Order



Glenair Rear Panel Mount Breakaway Receptacle Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications.

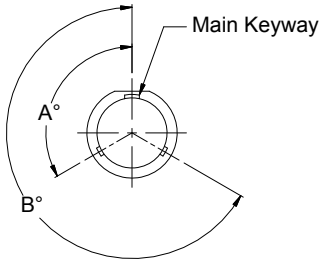
Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. Connector intermateable with nanominiature 892-007 plug connector.

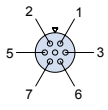
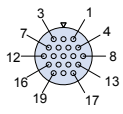
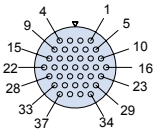
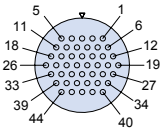
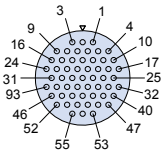
Pre-Tinned PC Tails coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

B

How To Order								
Sample Part Number	**893**	**-008**	**-1-7**	**N**	**A2**	**-0**	**D3**	**-S1**
Series	**893** = Nano Circular with PC Tails							
Shell Style	**008** = Rear Panel Mount Breakaway Receptacle							
Shell Size/Contact Arrangement	**1-4** = Shell Size 1 with 4 contacts **3-37** = Shell Size 3 with 37 contacts **1-7** = Shell Size 1 with 7 contacts **4-44** = Shell Size 4 with 44 contacts **2-19** = Shell Size 2 wih 19 contacts **4-55** = Shell Size 4 with 55 contacts See Receptacle Mating Face View and Contact Layout Table							
Polarization	**N** = Normal **A** = Alternate							
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **A5**= Aluminum/Gold Over Nickel **S2** = Stainless Steel/Passivated							
Wire Gauge	**0** = 30 AWG							
Wire Type	**D3** = Single Strand Copper Alloy Wire Uninsulated, Pre-tinned							
PC Tail Length (inches)	**S1** = .080" Straight Lead **S2** = .110" Straight Lead **S3** = .140" Straight Lead **S4** = .170" Straight Lead							

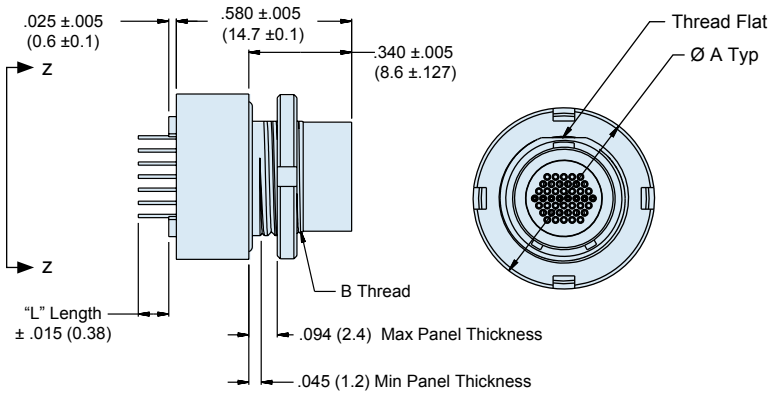
Keyway Positions							
Size	**Polarization**	**A°**	**B°**	**Size**	**Polarization**	**A°**	**B°**
1-4	N	150	210	3-37	N	150	210
	A	75	210		A	75	210
1-7	N	95	230	4-44	N	150	210
	A	140	275		A	75	210
2-19	N	150	210	4-55	N	95	230
	A	75	210		A	140	275



Receptacle Mating Face View and Contact Layout					
Size 1-4 4 Contacts	**Size 1-7 7 Contacts**	**Size 2-19 19 Contacts**	**Size 3-37 37 Contacts**	**Size 4-44 44 Contacts**	**Size 4-55 55 Contacts**
					

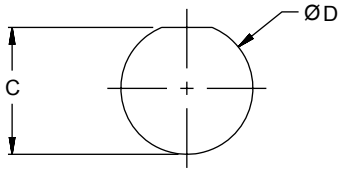
Rear Panel Mount, Breakaway Receptacle with PC Tails Dimensions and PCB Footprints

Dimensions



Size	Ø A ±.005	B Thread
1-4	.429 (10.9)	M7.0 x 0.75 - 6g
1-7	.429 (10.9)	M7.0 x 0.75 - 6g
2-19	.488 (12.4)	M8.5 x 0.75 - 6g
3-37	.528 (13.4)	M9.5 x 0.75 - 6g
4-44	.567 (14.4)	M10.5 x 0.75 - 6g
4-55	.567 (14.4)	M10.5 x 0.75 - 6g

Rear Panel Mount Panel Cut-Out



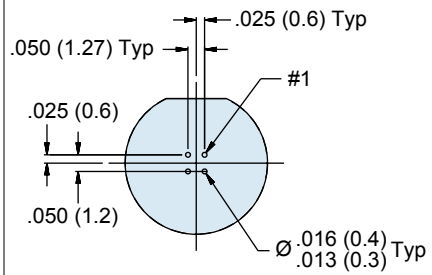
Size	C +.002/-.001	Ø D +.002/-.001
1-4	.260 (6.6)	.280 (7.1)
1-7	.260 (6.6)	.280 (7.1)
2-19	.318 (8.1)	.340 (8.6)
3-37	.361 (9.2)	.378 (9.6)
4-44	.401 (10.2)	.420 (10.7)
4-55	.401 (10.2)	.420 (10.7)

NOTES

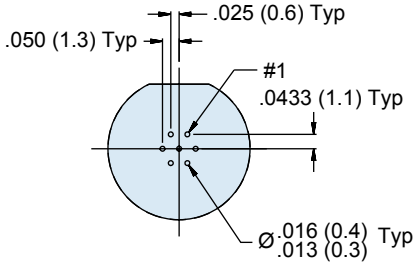
1. Material/Finish:
   - Shell/spanner nut: see part number breakdown
   - Insulator: LCP/na
   - Socket contacts: gold alloy
   - O-rings: fluorosilicone/na
   - Internal latching spring: stainless steel/ gold plated
   - PCB tray(s): LCP/na
   - PC tails: copper alloy/ pre-tinned Sn63/Pb37

Recommended PCB Footprints Per View Z ◄► Z

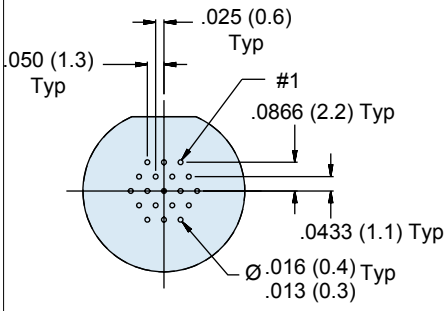
Size 1-4



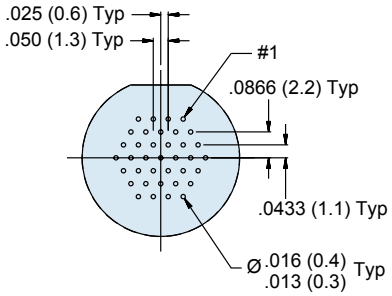
Size 1-7



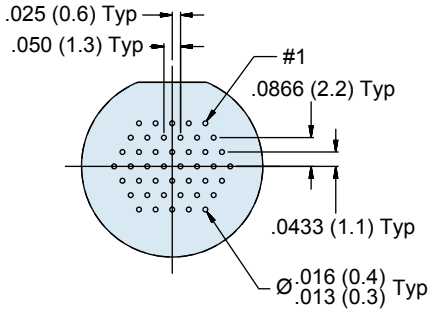
Size 2-19



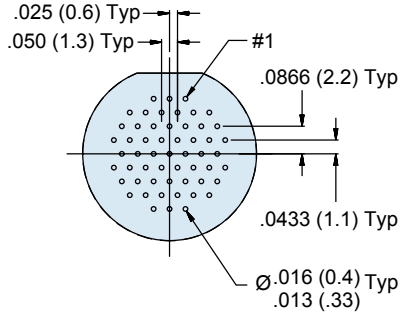
Size 3-37



Size 4-44

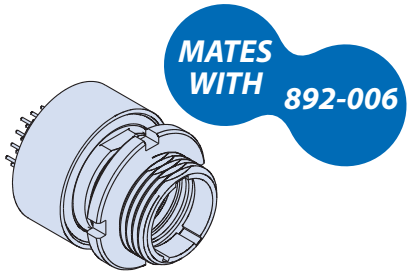


Size 4-55



B

Rear Panel Mount, Threaded Receptacle with PC Tails
How to Order



Glenair Rear Panel Mount Threaded Coupling Receptacle Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications.

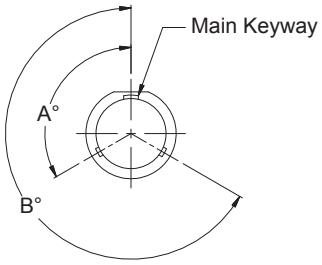
Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with nanominiature 892-006 plug connectors.

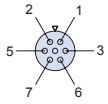
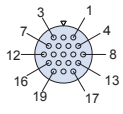
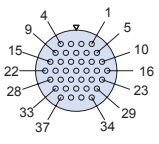
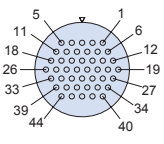
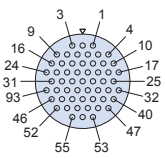
Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

B

How To Order								
Sample Part Number	**893**	**-009**	**-1-7**	**N**	**A2**	**-0**	**D3**	**-S1**
Series	**893** = Nano Circular with PC Tails							
Shell Style	**009** = Rear Panel Mount Threaded Coupling Receptacle							
Shell Size/Contact Arrangement	**1-4** = Shell Size 1 with 4 contacts; **1-7** = Shell Size 1 with 7 contacts; **2-19** = Shell Size 2 wih 19 contacts; **3-37** = Shell Size 3 with 37 contacts; **4-44** = Shell Size 4 with 44 contacts; **4-55** = Shell Size 4 with 55 contacts; See Receptacle Mating Face View and Contact Layout Table							
Polarization	**N** = Normal **A** = Alternate							
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel; **A5** = Aluminum/Gold Over Nickel; **S1** = Stainless Steel/Zinc Cobalt (Black); **S2** = Stainless Steel/Passivated							
Wire Gauge	**0** = 30 AWG							
Wire Type	**D3** = Single Strand Copper Alloy Wire Uninsulated, Pre-tinned							
PC Tail Length (inches)	**S1** = .080" Straight Lead **S2** = .110" Straight Lead **S3** = .140" Straight Lead **S4** = .170" Straight Lead							

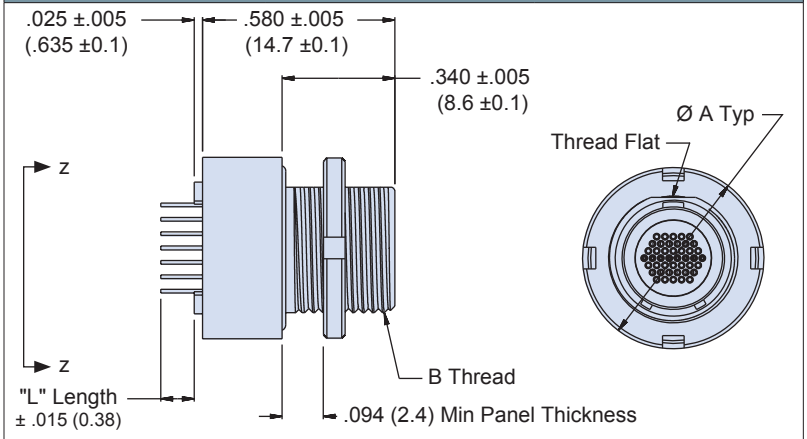
Keyway Positions							
Size	**Polarization**	**A°**	**B°**	**Size**	**Polarization**	**A°**	**B°**
1-4	N	150	210	3-37	N	150	210
	A	75	210		A	75	210
1-7	N	95	230	4-44	N	150	210
	A	140	275		A	75	210
2-19	N	150	210	4-55	N	95	230
	A	75	210		A	140	275



Receptacle Mating Face View and Contact Layout					
Size 1-4 4 Contacts	**Size 1-7 7 Contacts**	**Size 2-19 19 Contacts**	**Size 3-37 37 Contacts**	**Size 4-44 44 Contacts**	**Size 4-55 55 Contacts**
					

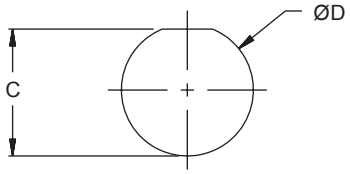
Rear Panel Mount, Threaded Receptacle with PC Tails Dimensions and PCB Footprints

Dimensions



Size	Ø A ±.005	B Thread
1-4	.429 (10.9)	M7.0 x 0.75 - 6g
1-7	.429 (10.9)	M7.0 x 0.75 - 6g
2-19	.488 (12.4)	M8.5 x 0.75 - 6g
3-37	.528 (13.4)	M9.5 x 0.75 - 6g
4-44	.567 (14.4)	M10.5 x 0.75 - 6g
4-55	.567 (14.4)	M10.5 x 0.75 - 6g

Rear Panel Mount Panel Cut-Out



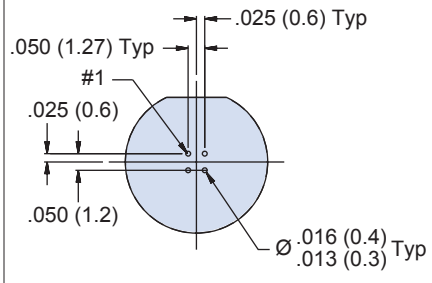
Size	C +.002 / -.001	Ø D +.002 / -.001
1-4	.260 (6.6)	.280 (7.1)
1-7	.260 (6.6)	.280 (7.1)
2-19	.318 (8.1)	.340 (8.6)
3-37	.361 (9.2)	.378 (9.6)
4-44	.401 (10.2)	.420 (10.7)
4-55	.401 (10.2)	.420 (10.7)

NOTES

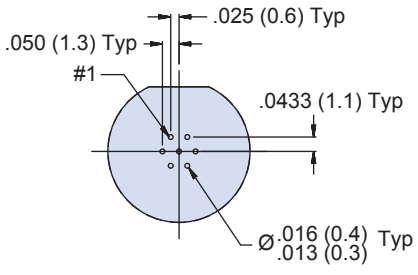
1. Material/Finish:
   - Shell/spanner nut - see part number breakdown
   - Insulator - LCP/na
   - Socket contacts - gold alloy
   - O-rings - fluorosilicone/na
   - Internal latching spring - stainless steel/ gold plated
   - PCB tray(s) - LCP/na
   - PC tails - copper alloy/ pre-tinned Sn63/Pb37

Recommended PCB Footprints Per View Z ◄► Z

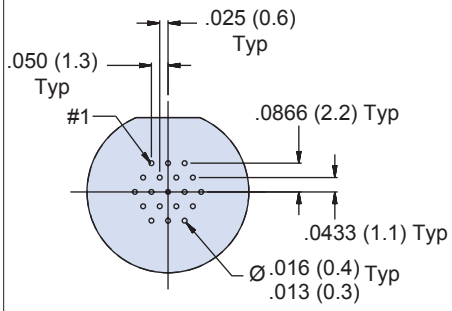
Size 1-4



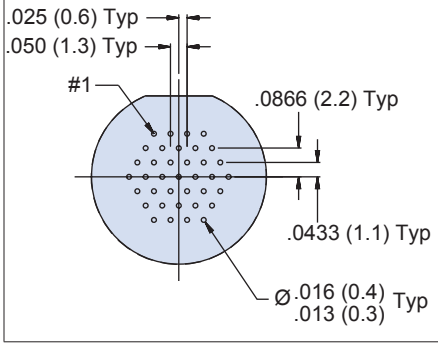
Size 1-7



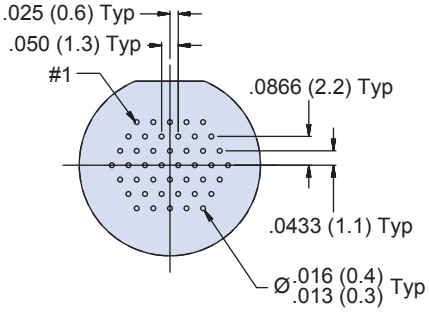
Size 2-19



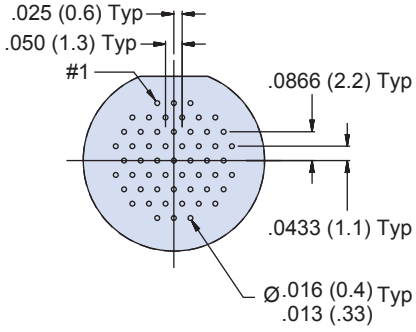
Size 3-37



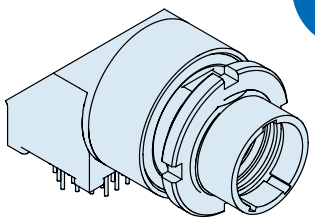
Size 4-44



Size 4-55



Rear Panel Mount, Breakaway Receptacle with Right Angle PC Tails – How to Order



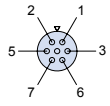
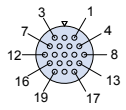
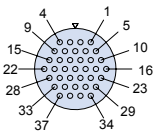
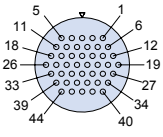
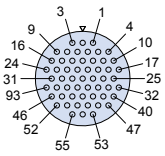
Glenair Rear Panel Mount Breakaway Right Angle PCB Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications.

Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with nanominiature 892-007 plug connectors.

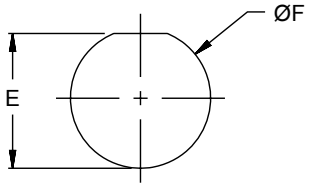
Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

B

How To Order								
Sample Part Number	**893**	**-010**	**-1-7**	**N**	**A2**	**-0**	**D3**	**-T1**
Series	**893** = Nano Circular with PC Tails							
Shell Style	**010** = Rear Panel Mount Breakaway Receptacle							
Shell Size/Contact Arrangement	**1-4** = Shell Size 1 with 4 contacts **1-7** = Shell Size 1 with 7 contacts **2-19** = Shell Size 2 wih 19 contacts **3-37** = Shell Size 3 with 37 contacts **4-44** = Shell Size 4 with 44 contacts **4-55** = Shell Size 4 with 55 contacts See Receptacle Mating Face View and Contact Layout Table							
Polarization	**N** = Normal **A** = Alternate							
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **A5** = Aluminum/Gold Over Nickel **S2** = Stainless Steel/Passivated							
Wire Gauge	**0** = 30 AWG							
Wire Type	**D3** = Single Strand Copper Alloy Wire Uninsulated, Pre-tinned							
PC Tail Length (inches)	**T1** = .080 Lead Top **T3** = .140 Lead Top **B1** = .080 Lead Bottom **B3** = .140 Lead Bottom **T2** = .110 Lead Top **T4** = .170 Lead Top **B2** = .110 Lead Bottom **B4** = .170 Lead Bottom							

Receptacle Mating Face View and Contact Layout					
Size 1-4 4 Contacts	**Size 1-7 7 Contacts**	**Size 2-19 19 Contacts**	**Size 3-37 37 Contacts**	**Size 4-44 44 Contacts**	**Size 4-55 55 Contacts**
					

Rear Panel Mount Panel Cut-Out		
Size	**E +.002 / -.001**	**Ø F +.002 / -.001**
1-4	.260 (6.6)	.280 (7.1)
1-7	.260 (6.6)	.280 (7.1)
2-19	.318 (8.1)	.340 (8.6)
3-37	.361 (9.2)	.378 (9.6)
4-44	.401 (10.2)	.420 (10.7)
4-55	.401 (10.2)	.420 (10.7)

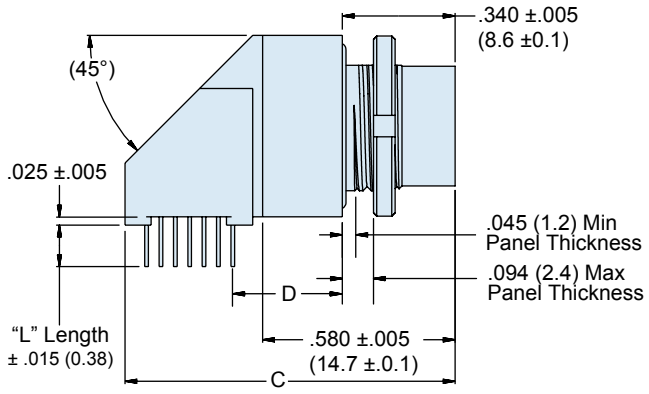


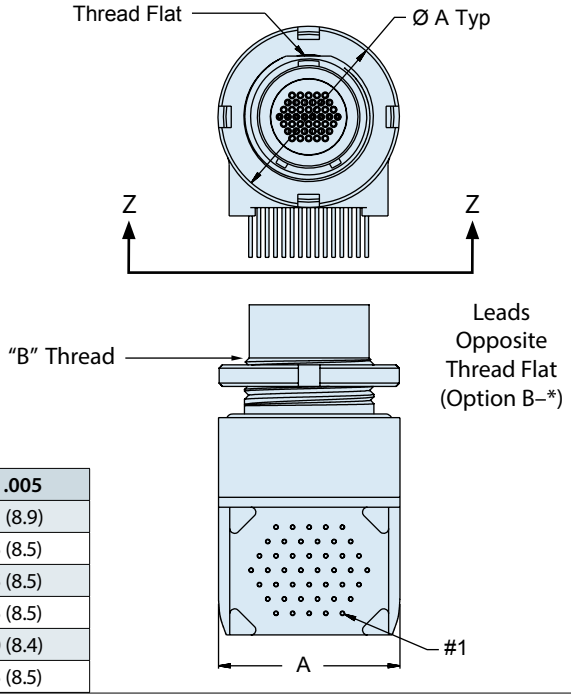
NOTES

1. Material/Finish:
   - Shell/spanner nut - see part number breakdown
   - Insulator - LCP/na
   - Socket contacts - gold alloy
   - O-rings - fluorosilicone/na
   - Internal latching spring - stainless steel/gold plated
   - PCB tray(s) - LCP/na
   - PC tails - copper alloy/pre-tinned Sn63/Pb37

Rear Panel Mount, Breakaway Receptacle with Right Angle PC Tails – Dimensions and PCB Footprints

Right Angle Bottom Lead Dimensions

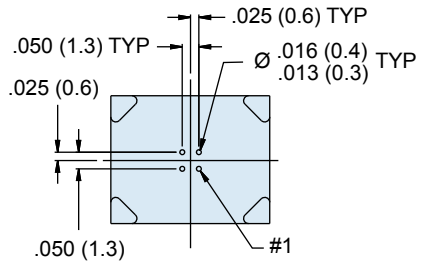




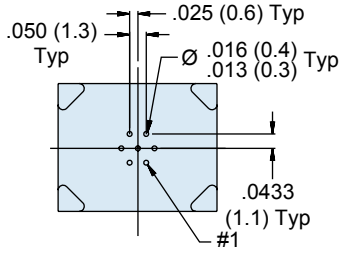
Size	Ø A +/-.005	B Thread	C +/- .020	D ± .005
1-4	.429 (10.9)	M7.0 x 0.75 - 6g	.832 (21.1)	.350 (8.9)
1-7	.429 (10.9)	M7.0 x 0.75 - 6g	.832 (21.1)	.335 (8.5)
2-19	.488 (12.4)	M8.5 x 0.75 - 6g	.918 (23.3)	.335 (8.5)
3-37	.528 (13.4)	M9.5 x 0.75 - 6g	1.005 (25.5)	.335 (8.5)
4-44	.567 (14.4)	M10.5 x 0.75 - 6g	1.005 (25.5)	.330 (8.4)
4-55	.567 (14.4)	M10.5 x 0.75 - 6g	1.092 (27.7)	.335 (8.5)

Recommended PCB Footprints View Per View Z ◄► Z

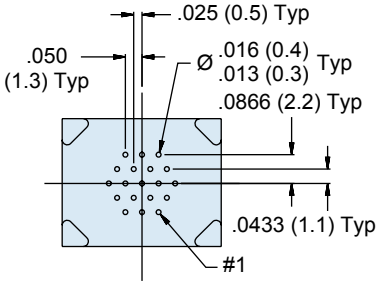
Size 1-4



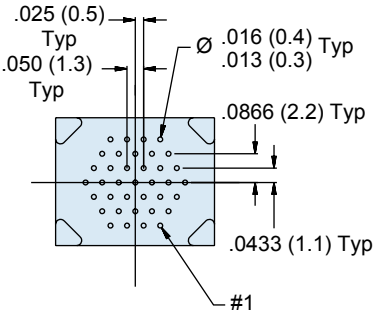
Size 1-7



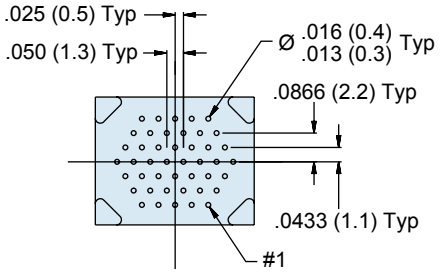
Size 2-19



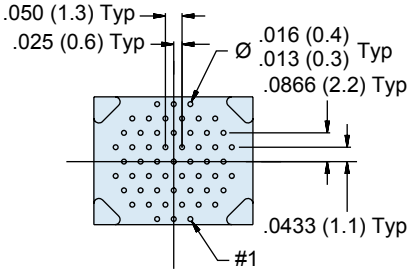
Size 3-37



Size 4-44



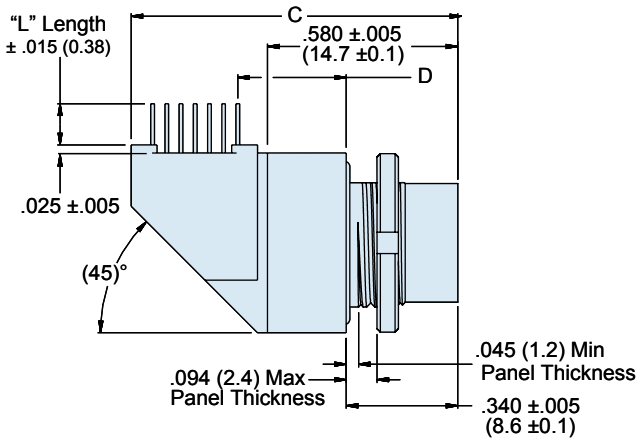
Size 4-55

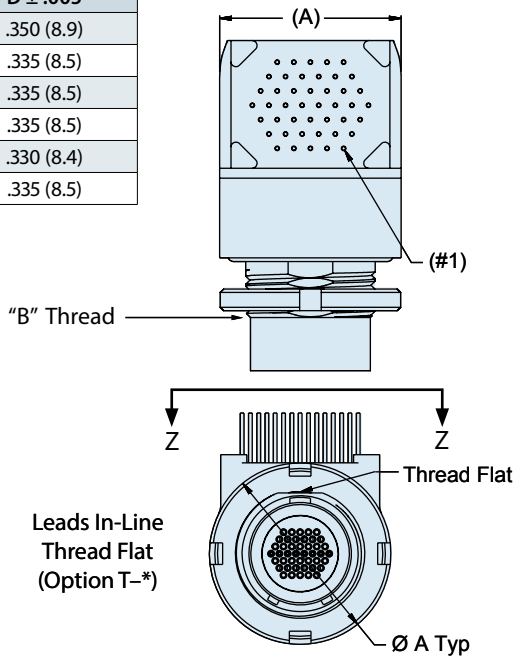


Rear Panel Mount, Breakaway Receptacle with Right Angle PC Tails – Dimensions and PCB Footprints

Right Angle Top Lead Dimensions

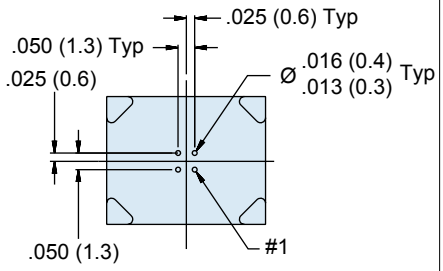
Size	Ø A +/-.005		B Thread	C +/- .020	D ± .005
1-4	.429	(10.9)	M7.0 x 0.75 - 6g	.832 (21.1)	.350 (8.9)
1-7	.429	(10.9)	M7.0 x 0.75 - 6g	.832 (21.1)	.335 (8.5)
2-19	.488	(12.4)	M8.5 x 0.75 - 6g	.918 (23.3)	.335 (8.5)
3-37	.528	(13.4)	M9.5 x 0.75 - 6g	1.005 (25.5)	.335 (8.5)
4-44	.567	(14.4)	M10.5 x 0.75 - 6g	1.005 (25.5)	.330 (8.4)
4-55	.567	(14.4)	M10.5 x 0.75 - 6g	1.092 (27.7)	.335 (8.5)



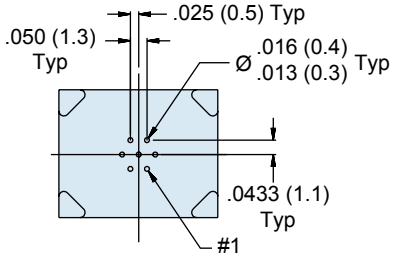


Recommended PCB Footprints Per View Z ◄► Z

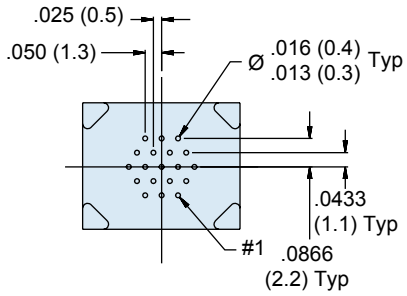
Size 1-4



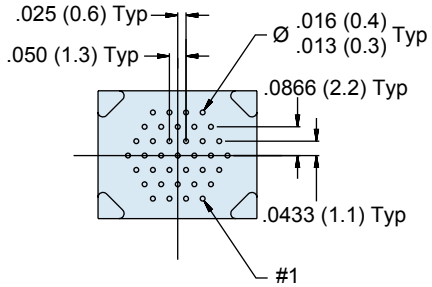
Size 1-7



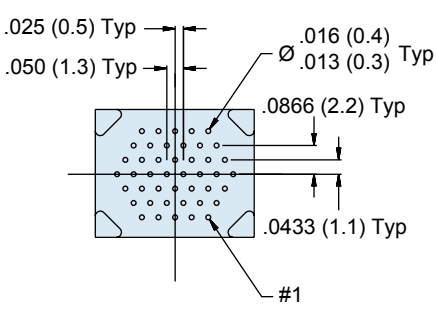
Size 2-19



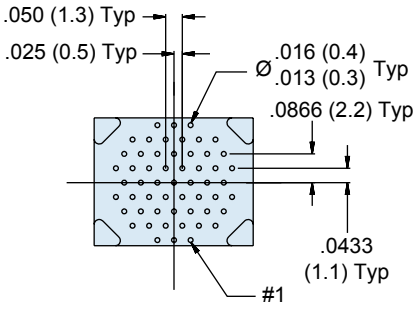
Size 3-37



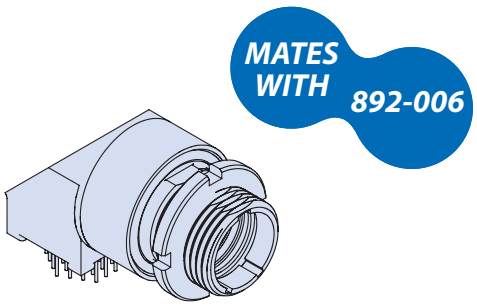
Size 4-44



Size 4-55



Rear Panel Mount, Threaded Receptacle with Right Angle PC Tails – How to Order



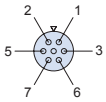
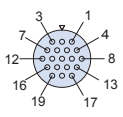
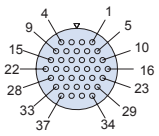
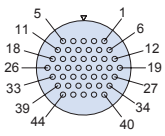
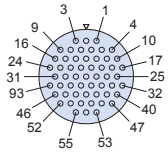
Glenair Rear Panel Mount Threaded Right Angle PCB Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications.

Choose Aluminum or Stainless Steel Shells in 6 layouts from 4 to 55 contacts. These connectors are intermateable with nanominiature 892-006 plug connectors.

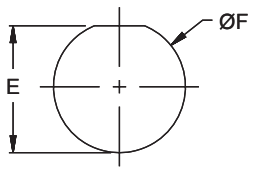
Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

B

How To Order								
Sample Part Number	**893**	**-011**	**-1-7**	**N**	**A2**	**-0**	**D3**	**-T1**
Series	**893** = Nano Circular with PC Tails							
Shell Style	**011** = Rear Panel Mount Threaded Coupling Receptacle							
Shell Size/Contact Arrangement	**1-4** = Shell Size 1 with 4 contacts **1-7** = Shell Size 1 with 7 contacts **2-19** = Shell Size 2 wih 19 contacts **3-37** = Shell Size 3 with 37 contacts **4-44** = Shell Size 4 with 44 contacts **4-55** = Shell Size 4 with 55 contacts See Receptacle Mating Face View and Contact Layout Table							
Polarization	**N** = Normal **A** - Alternate							
Shell Material/Finish	**A2** = Aluminum/Electroless Nickel **A5** = Aluminum/Gold Over Nickel **S1** = Stainless Steel/Zinc Cobalt (Black) **S2** = Stainless Steel/Passivated							
Wire Gauge	**0** = 30 AWG							
Wire Type	**D3** = Single Strand Copper Alloy Wire Uninsulated, Pre-tinned							
PC Tail Length (inches)	**T1** = .080″ Lead Top **T2** = .110′ Lead Top **T3** = .140″ Lead Top **T4** = .170″ Lead Top **B1** = .080″ Lead Bottom **B2** = .110″ Lead Bottom **B3** = .140″ Lead Bottom **B4** = .170″ Lead Bottom							

Receptacle Mating Face View and Contact Layout					
Size 1-4 4 Contacts	**Size 1-7 7 Contacts**	**Size 2-19 19 Contacts**	**Size 3-37 37 Contacts**	**Size 4-44 44 Contacts**	**Size 4-55 55 Contacts**
					

Rear Panel Mount Panel Cut-out		
Size	**E +.002 / -.001**	**Ø F + .002/ -.001**
1-4	.260 (6.6)	.280 (7.1)
1-7	.260 (6.6)	.280 (7.1)
2-19	.318 (8.1)	.340 (8.6)
3-37	.361 (9.2)	.378 (9.6)
4-44	.401 (10.2)	.420 (10.7)
4-55	.401 (10.2)	.420 (10.7)

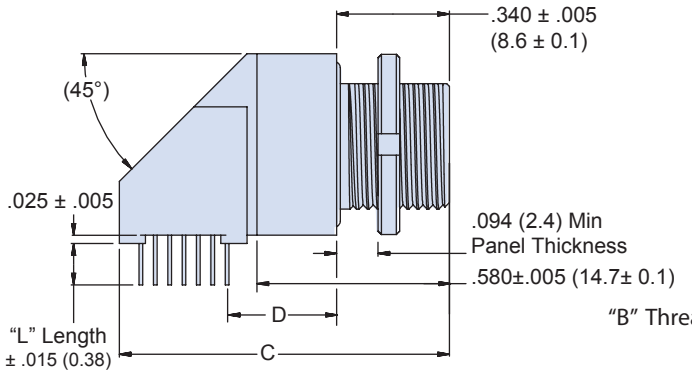


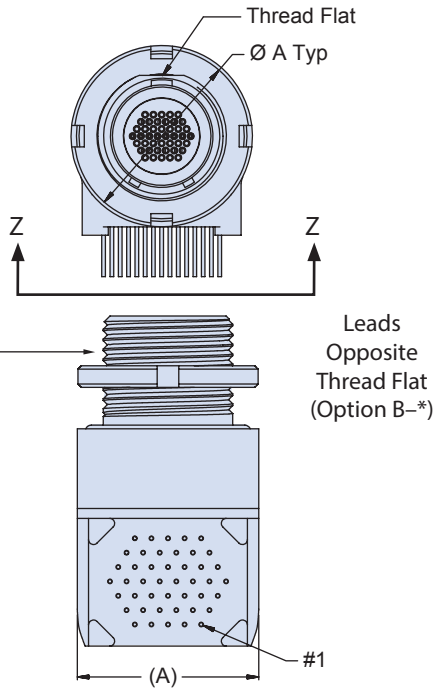
NOTES

1. Material/Finish:
   - Shell/spanner nut - see part number breakdown
   - Insulator - LCP/na
   - Socket contacts - gold alloy
   - O-rings - fluorosilicone/na
   - Internal latching spring - stainless steel/gold plated
   - PCB tray(s) - LCP/na
   - PC tails - copper alloy/pre-tinned Sn63-Pb37 or Sn60Pb40

Rear Panel Mount, Threaded Receptacle with Right Angle PC Tails – Dimensions and Footprints

Dimensions for Bottom Lead Configuration

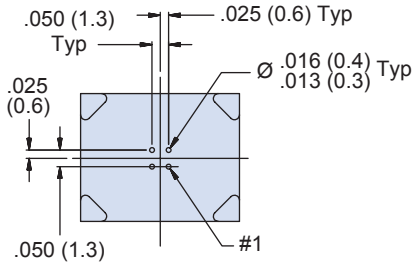




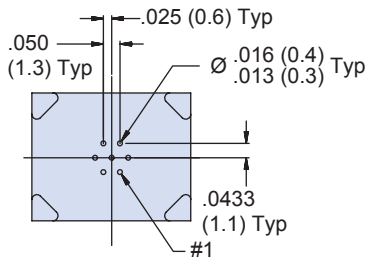
Size	ØA ±.005		B Thread	C ± .020	D ± .005
1-4	.429	(10.9)	M7.0 x 0.75 - 6g	.832(21.1)	.350 (8.9)
1-7	.429	(10.9)	M7.0 x 0.75 - 6g	.832 (21.1)	.335 (8.5)
2-19	.488	(12.4)	M8.5 x 0.75 - 6g	.918 (23.3)	.335 (8.5)
3-37	.528	(13.4)	M9.5 x 0.75 - 6g	1.005 (25.5)	.335 (8.5)
4-44	.567	(14.4)	M10.5 x 0.75 - 6g	1.005 (25.5)	.330 (8.4)
4-55	.567	(14.4)	M10.5 x 0.75 - 6g	1.092 (27.7)	.335 (8.5)

Recommended PCB Footprints Per View Z ◄► Z

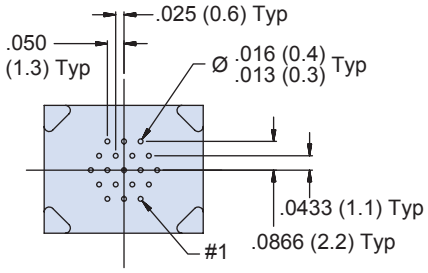
Size 1-4



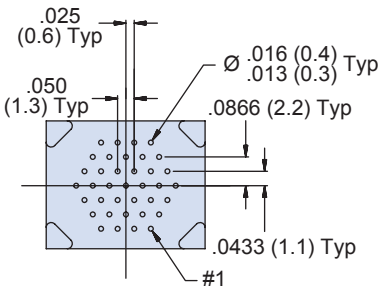
Size 1-7



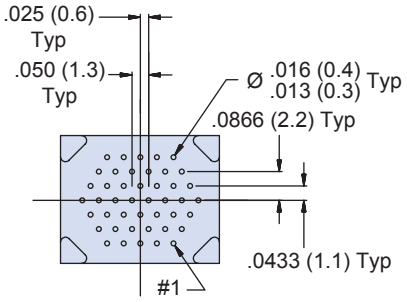
Size 2-19



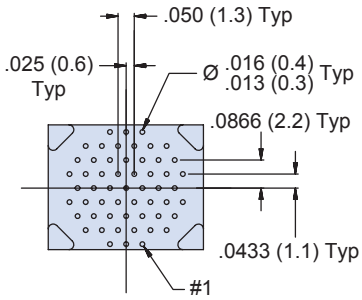
Size 3-37



Size 4-44



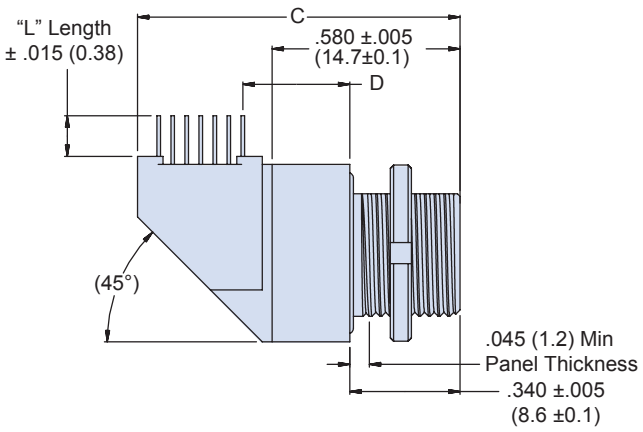
Size 4-55

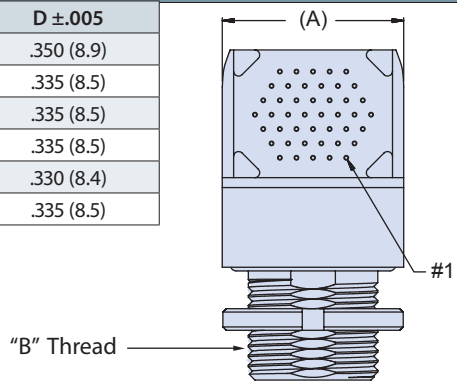


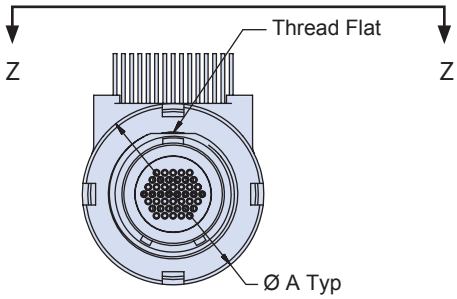
Rear Panel Mount, Threaded Receptacle with Right Angle PC Tails – Dimensions and Footprints

Top Lead Dimensions

Size	Ø A ±.005	B Thread	C ± .020	D ±.005
1-4	.429 (10.9)	M7.0 x 0.75 - 6g	.832 (21.1)	.350 (8.9)
1-7	.429 (10.9)	M7.0 x 0.75 - 6g	.832 (21.1)	.335 (8.5)
2-19	.488 (12.4)	M8.5 x 0.75 - 6g	.918 (23.3)	.335 (8.5)
3-37	.528 (13.4)	M9.5 x 0.75 - 6g	1.005 (25.5)	.335 (8.5)
4-44	.567 (14.4)	M10.5 x 0.75 - 6g	1.005 (25.5)	.330 (8.4)
4-55	.567 (14.4)	M10.5 x 0.75 - 6g	1.092 (27.7)	.335 (8.5)

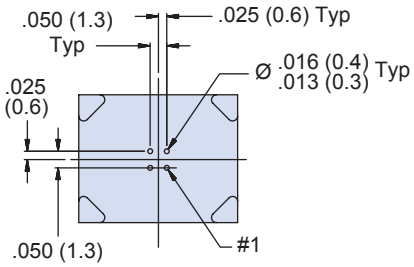




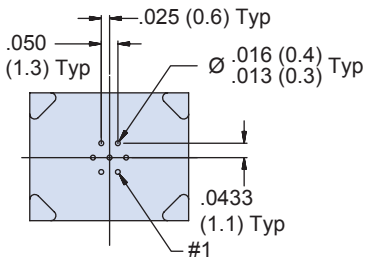


Recommended PCB Footprints Per View Z ◄► Z

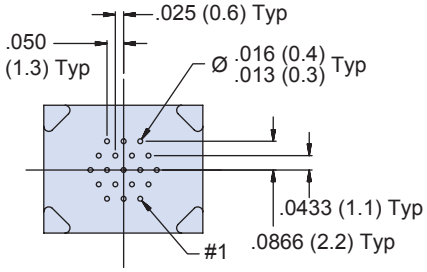
Size 1-4



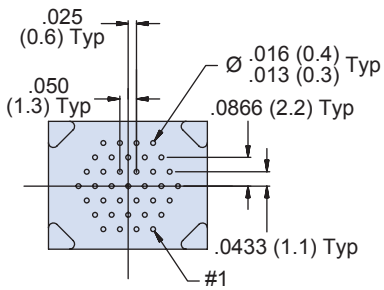
Size 1-7



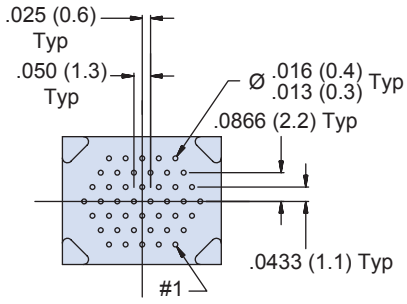
Size 2-19



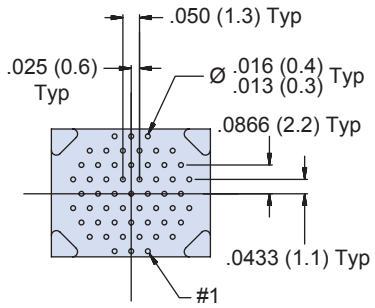
Size 3-37



Size 4-44



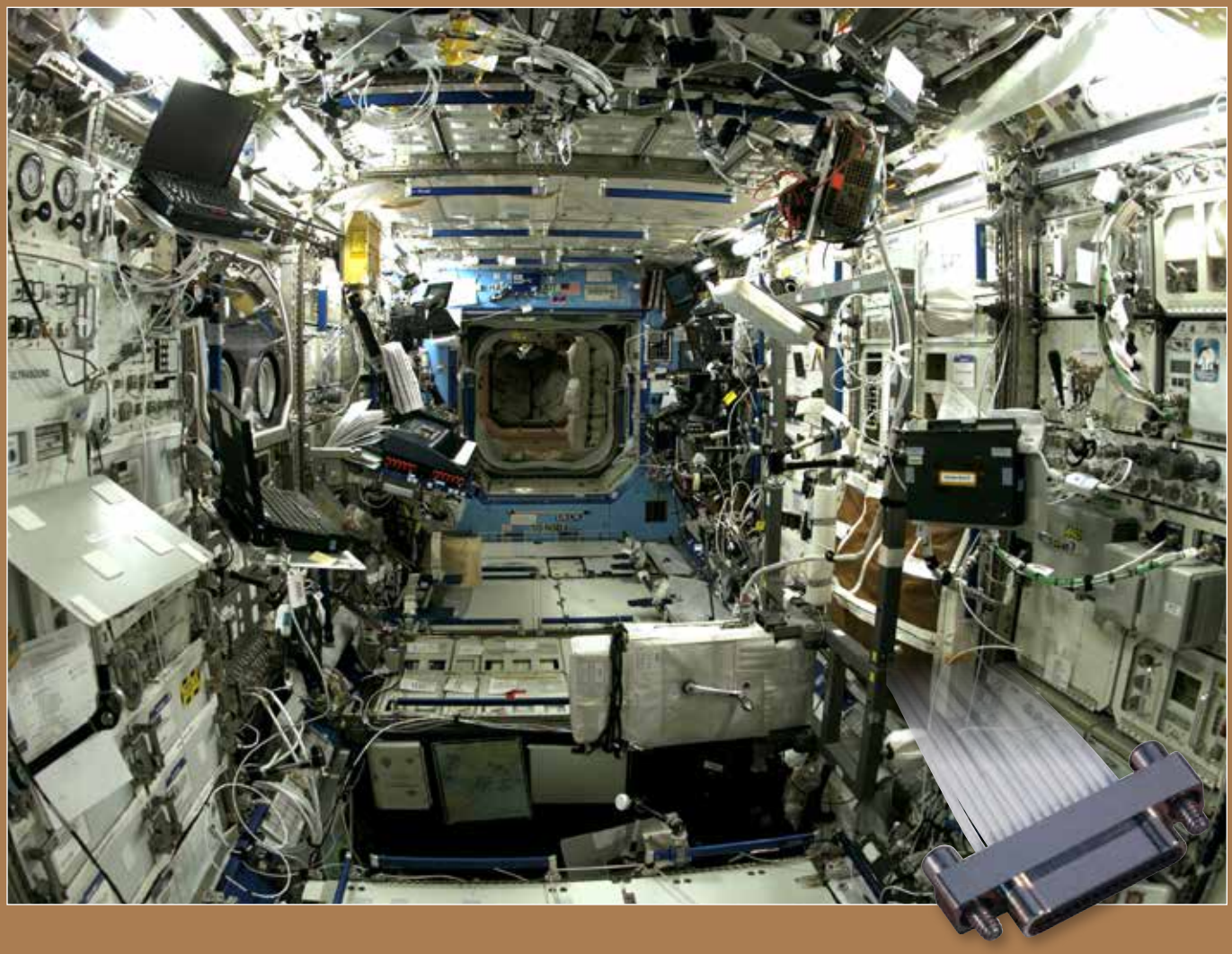
Size 4-55



SERIES 89
NANOMINIATURE

HI-PERFORMANCE CONNECTORS

MIL-DTL-32139 Type, pre-wired and PCB rectangular TwistPin nanominiature connectors



Glenair Nanominiature connectors provide hi-performance mission critical reliability for demanding applications. Nanominiature pre-wired, single-row plug and receptacle connectors are offered in titanium, stainless steel or aluminum shells. Connectors are configured with .025 inch contact spacing and DWV rating of 250 volts AC. Up to eight contact layouts are available with three wire type options including: Ultra lightweight XLETFE insulation with silver coated high strength copper; extruded PTFE insulation with silver coated copper; and cross link modified ETFE insulation with high strength silver coated copper. Connector hardware includes jackscrew or female threaded shells. Applications include down-hole electronics, missile systems, launch vehicles and satellites.

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nano miniature™

SERIES 89

Single Row Connectors

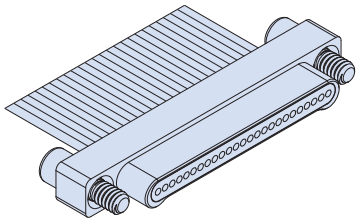
Product Selection Guide

Glenair®

C

Single Row Connectors

Plug and Receptacle Connectors with Insulated Wire
How to Order



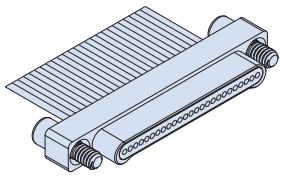
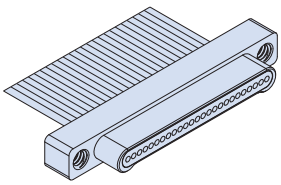
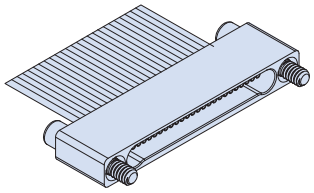
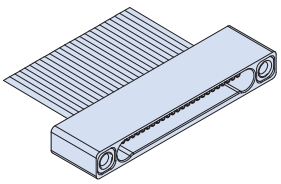
Glenair Insulated Wire Nano Connectors feature gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. These nanomimiature connectors offer premium performance and reliability for demanding applications, available in 8 arrangements. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. Wire gages #30 and #32 AWG.

TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

C

How To Order								
Sample Part Number	**890-002**	**-25S**	**A2**	**-0**	**B**	**7**	**-12**	**T**
Series	**890-001** = Plug, Pin Contacts, Single Row Nanominiature **890-002** = Receptacle, Socket Contacts, Single Row Nanominiature							
Insert Arrangement/ Contact Type	Plugs (890-001): **5P, 9P, 15P, 21P, 25P, 31P, 37P, 51P** Receptacles (890-002): **5S, 9S, 15S, 21S, 25S, 31S, 37S, 51S**							
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **S** = Stainless Steel Shell, Passivated **T** = Titanium Shell, Unplated							
Wire Gage	**0** = #30 AWG **2** = #32 AWG							
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)							
Wire Color Code	**1** = White **2** = Yellow **7** = 10 Color Repeating (wire type A is striped, types B and C are solid colors)							
Wire Length	**12** = 12.00 + 1.00 Inches; as required in one inch increments.							
Hardware	**J** = Hex Head Jackscrew, #0-80 UNF-2A **T** = Female Thread, #0-80 UNF-2B Female threads are available on plug connectors only if the shell material is titanium or stainless steel.							

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option

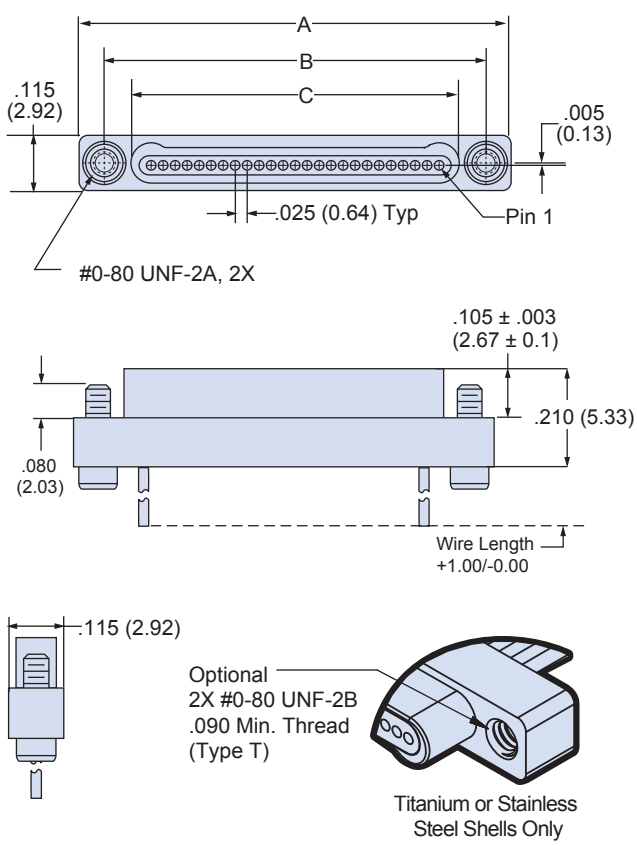
NOTES

1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: gold alloy/unplated
   - Wire: see part number breakdown
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/1 & MIL-DTL-32139/2

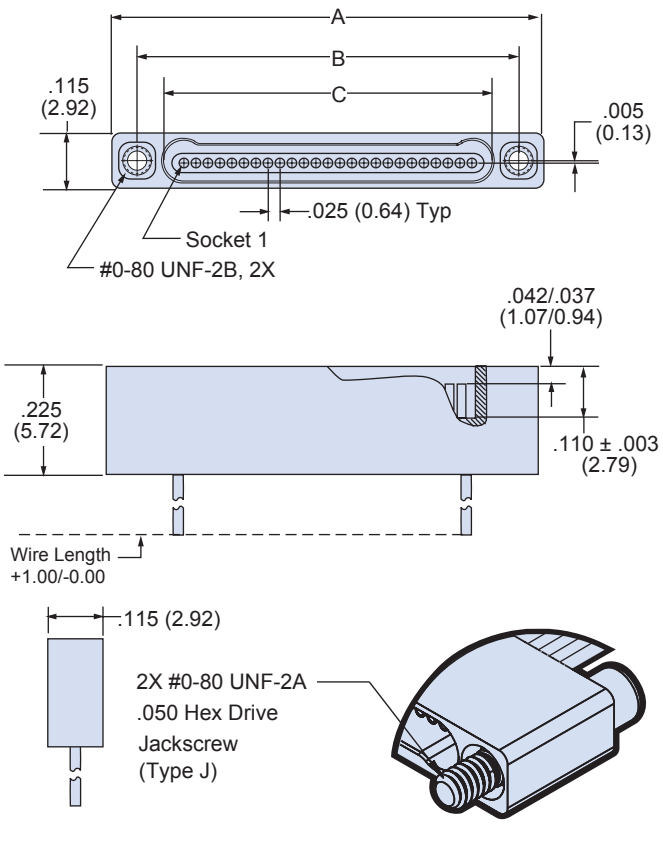
Plug and Receptacle Connectors with Insulated Wire Dimensions

Dimensions

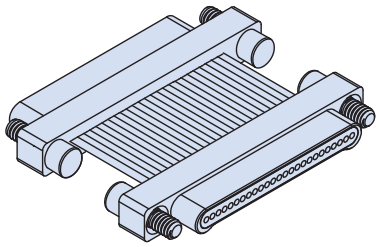
890-001 Plug (Pin) Connector



890-002 Receptacle (Socket) Connector



Layout	A		B BSC.		C BSC.	
	In.	mm.	In.	mm.	In.	mm.
5P	.400	10.16	.295	7.49	.184	4.67
5S	.400	10.16	.295	7.49	.185	4.70
9P	.500	12.70	.395	10.03	.284	7.21
9S	.500	12.70	.395	10.03	.285	7.24
15P	.650	16.51	.545	13.84	.434	11.02
15S	.650	16.51	.545	13.84	.435	11.05
21P	.800	20.32	.695	17.65	.584	14.83
21S	.800	20.32	.695	17.65	.585	14.86
25P	.900	22.86	.795	20.19	.684	17.37
25S	.900	22.86	.795	20.19	.685	17.40
31P	1.050	26.67	.945	24.00	.834	21.18
31S	1.050	26.67	.945	24.00	.835	21.21
37P	1.200	30.48	1.095	27.81	.984	24.99
37S	1.200	30.48	1.095	27.81	.985	25.02
51P	1.550	39.37	1.445	36.70	1.334	33.88
51S	1.550	39.37	1.445	36.70	1.335	33.91



Glenair Back-To-Back Cable Assemblies feature gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. These nanomimiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. Wire gages #30 and #32 AWG.

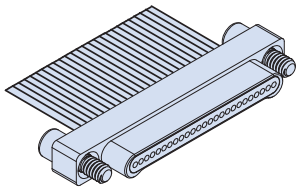
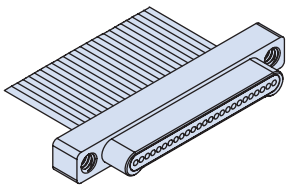
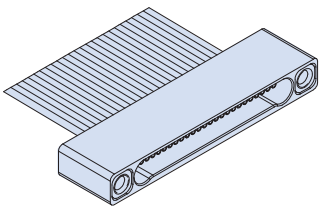
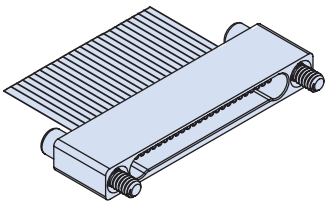
TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

C

How to Order

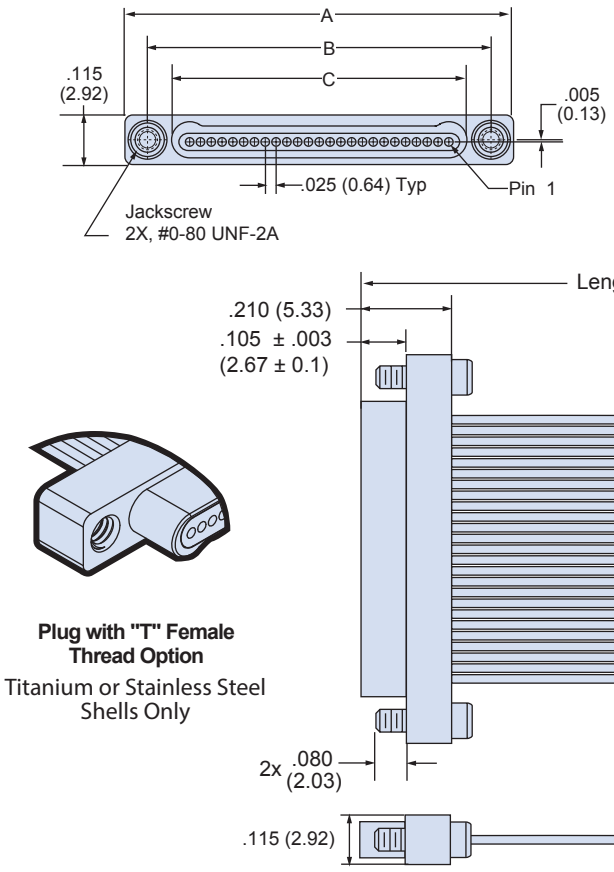
Sample Part Number	890-005	-25	CS	A2	-0	B	7	-12	JT

Series	**890-005** = Back-To-Back Cables, Single Row, Nanominiature
Number of Contacts	**5, 9, 15, 21, 25, 31, 37, 51**
Connector Type	**GP** = Plug (Pin) Connector on Both Ends **GS** = Receptacle (Socket) Connector on Both Ends **CS** = Plug (Pin) On One End, Receptacle On The Other End
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **S** = Stainless Steel Shell, Passivated **T** = Titanium Shell, Unplated
Wire Gage	**0** = #30 AWG **2** = #32 AWG
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)
Wire Color Code	**1** = White **2** = Yellow **7** = 10 Color Repeating (wire type A is striped, types B and C are solid colors)
Overall Length	Overall Length In Inches Including Connectors; Example: "12" specifies 12 inches OAL
Hardware	**JJ** = Jackscrews on both ends (GP, GS, CS) **JT** = Jackscrews on plug, threaded holes on receptacle (CS) **JP** = Jackscrews on plug, threaded holes on plug (GP) (*See Note at Right) **TJ** = Jackscrews on receptacle, threaded holes on plug (CS) (*See Note at Right) **JR** = Jackscrews on receptacle, threaded holes on receptacle (GS) **TT** = Threaded holes both ends (GP, GS, CS) (*See Note at Right) * Female threads are available on plug connectors only if the shell material is titanium or stainless steel.

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	T - Female Thread Option	J - Jackscrew Option

Dimensions

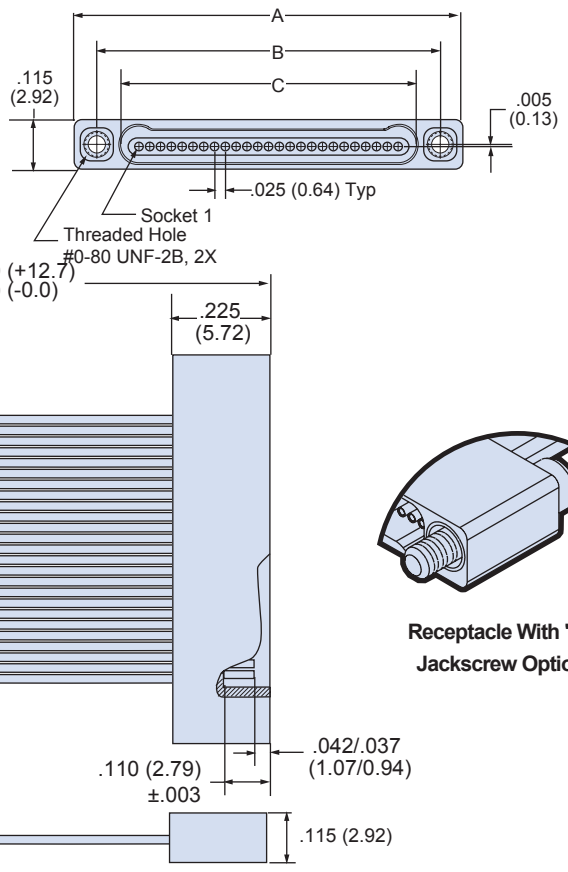
Plug (Pin) Connectors



Plug with "T" Female Thread Option

Titanium or Stainless Steel Shells Only

Receptacle (Socket) Connectors



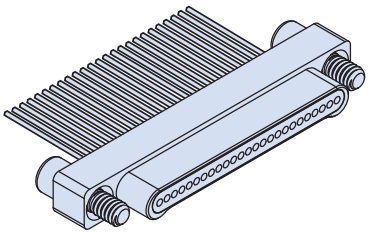
Receptacle With "J" Jackscrew Option

Layout	A		B BSC.		C BSC.	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.
5P	.400	10.16	.295	7.49	.184	4.67
5S	.400	10.16	.295	7.49	.185	4.70
9P	.500	12.70	.395	10.03	.284	7.21
9S	.500	12.70	.395	10.03	.285	7.24
15P	.650	16.51	.545	13.84	.434	11.02
15S	.650	16.51	.545	13.84	.435	11.05
21P	.800	20.32	.695	17.65	.584	14.83
21S	.800	20.32	.695	17.65	.585	14.86
25P	.900	22.86	.795	20.19	.684	17.37
25S	.900	22.86	.795	20.19	.685	17.40
31P	1.050	26.67	.945	24.00	.834	21.18
31S	1.050	26.67	.945	24.00	.835	21.21
37P	1.200	30.48	1.095	27.81	.984	24.99
37S	1.200	30.48	1.095	27.81	.985	25.02
51P	1.550	39.37	1.445	36.70	1.334	33.88
51S	1.550	39.37	1.445	36.70	1.335	33.91

Single Row Connectors

Plug and Receptacle Connectors with Uninsulated Wire

How to Order

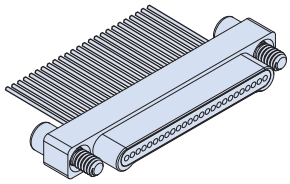
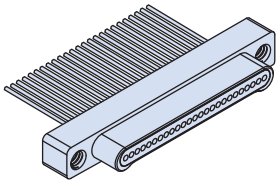
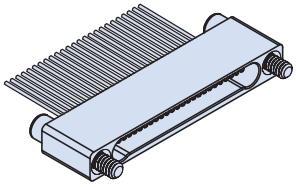
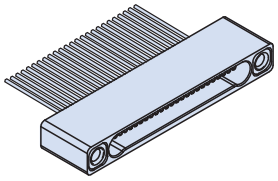


Glenair Uninsulated Wire Nano Connectors feature gold alloy TwistPin contacts. Contacts are precision-crimped to solid wire. These nanomimiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. Wire gages #30 and #32 AWG.

TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

How to Order							
Sample Part Number	**890-003**	**-31P**	**A2**	**-0**	**D3**	**-.250**	**J**
Series	**890-003** = Plug, Pin Contacts, Single Row Nanominiature **890-004** = Receptacle, Socket Contacts, Single Row Nanominiature						
Insert Arrangement/ Contact Type	Plugs (890-003): **5P, 9P, 15P, 21P, 25P, 31P, 37P, 51P** Receptacles (890-004): **5S, 9S, 15S, 21S, 25S, 31S, 37S, 51S**						
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **S** = Stainless Steel Shell, Passivated **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated						
Wire Gage	**0** = #30 AWG **2** = #32 AWG						
Wire Type	**D3** = Single Strand Copper Wire, Uninsulated, with Gold Plating						
Lead Length	**.125, .250, .375, .500**						
Hardware	**J** = Hex Head Jackscrew, #0-80 **T** = Female Thread, #0-80 Female threads are available on plug connectors only if the shell material is titanium or stainless steel.						

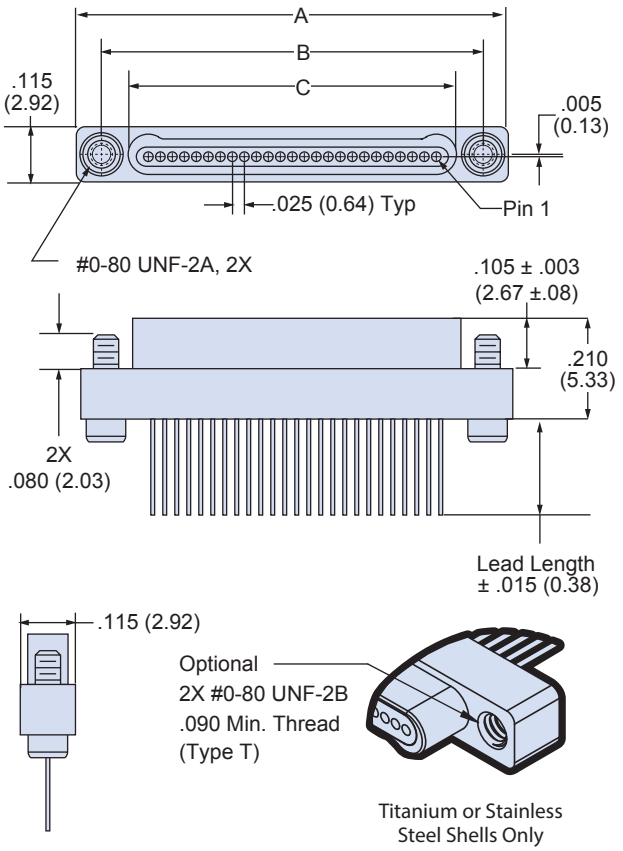
Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option

NOTES

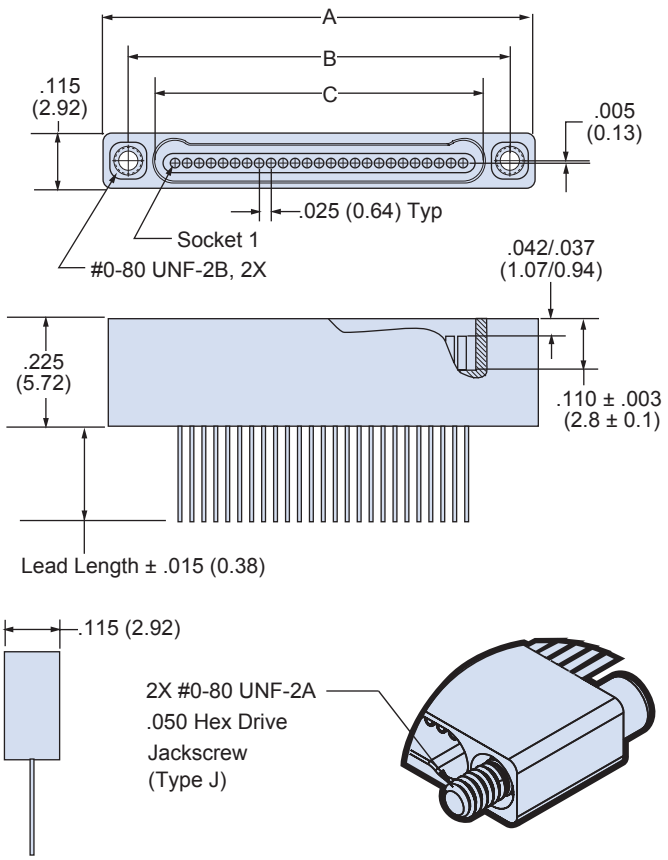
1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP/nA
   - Contacts: gold alloy / unplated
   - Wire: see part number breakdown
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/1 and MIL-DTL-32139/2

Dimensions

890-003 Plug (Pin) Connector



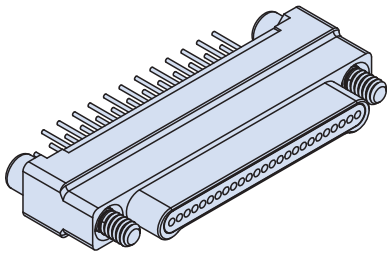
890-004 Receptacle (Socket) Connector



Layout	A		B BSC.		C BSC.	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.
5P	.400	10.16	.295	7.49	.184	4.67
5S	.400	10.16	.295	7.49	.185	4.70
9P	.500	12.70	.395	10.03	.284	7.21
9S	.500	12.70	.395	10.03	.285	7.24
15P	.650	16.51	.545	13.84	.434	11.02
15S	.650	16.51	.545	13.84	.435	11.05
21P	.800	20.32	.695	17.65	.584	14.83
21S	.800	20.32	.695	17.65	.585	14.86
25P	.900	22.86	.795	20.19	.684	17.37
25S	.900	22.86	.795	20.19	.685	17.40
31P	1.050	26.67	.945	24.00	.834	21.18
31S	1.050	26.67	.945	24.00	.835	21.21
37P	1.200	30.48	1.095	27.81	.984	24.99
37S	1.200	30.48	1.095	27.81	.985	25.02
51P	1.550	39.37	1.445	36.70	1.334	33.88
51S	1.550	39.37	1.445	36.70	1.335	33.91

PCB Single Row Connectors

Vertical Mount Thru Hole PCB Connectors
How to Order



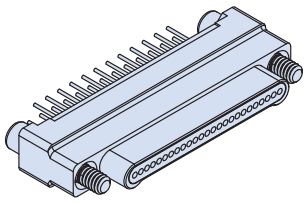
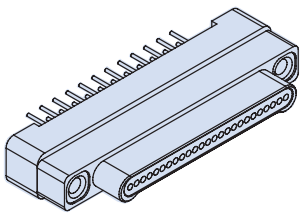
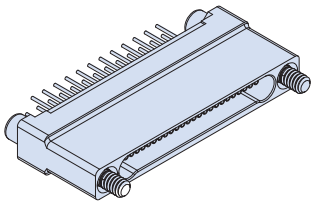
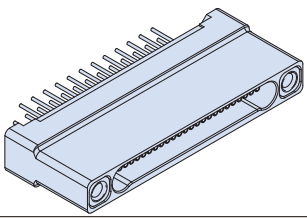
Vertical Mount Thru Hole PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with #0-80 female threads, or with jackscrews for use with flexible circuits.

Pre-Tinned PC Tails are coated with Sn60Pb40 or Sn63Pb37 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eight layouts from 5 to 51 contacts. Complies to the requirements of MIL-DTL-32139. These connectors are intermateable with any corresponding Glenair Series 890 single row metal shell nanominiature connector.

C

How to Order							
Sample Part Number		**890-007**	**-25S**	**A2**	**-BST**	**1**	**T**
Series	**890-006** = Plug, Pin Contacts, Single Row, Vertical Mount PCB **890-007** = Receptacle, Socket Contacts, Single Row, Vertical Mount PCB						
Insert Arrangement/ Contact Type	Plugs (890-006): **5P**, **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **51P** Receptacles (890-007): **5S**, **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **51S**						
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated						
Termination Type	**BST** = Board Straight Thru-Hole						
PC Tail Length	**1** = .110 (2.79) **2** = .172 (4.37) **3** = .140 (3.56)						
Hardware	**J** = Hex Head Jackscrew, #0-80 **T** = Female Thread, #0-80						

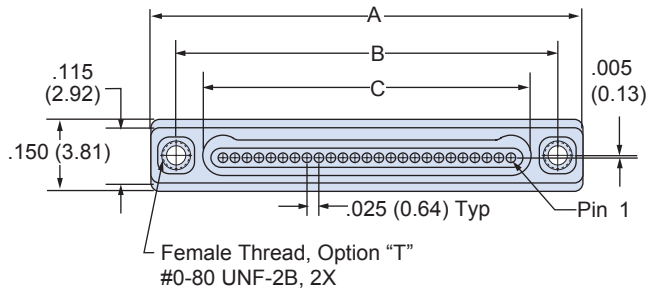
Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option

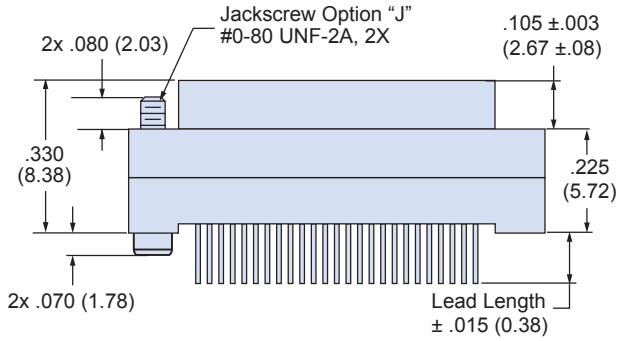
NOTES

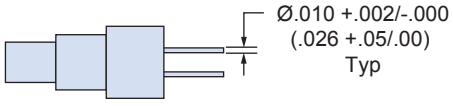
1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: gold alloy/unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/5 and MIL-DTL-32139/6

Dimensions

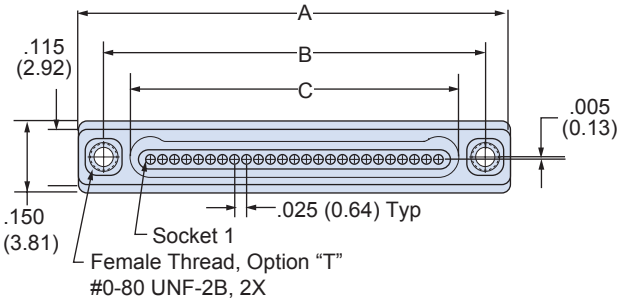
890-006 Plug (Pin) Connectors

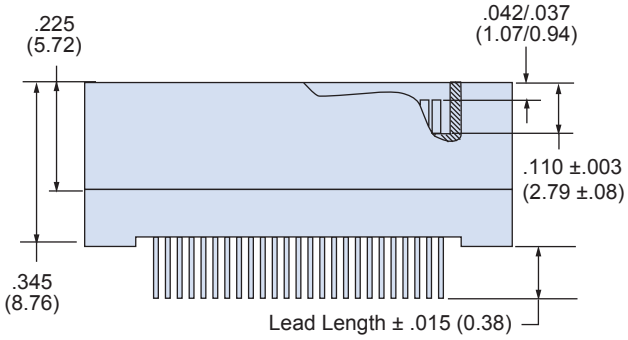


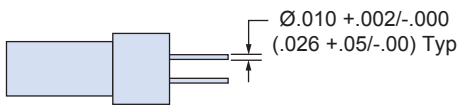




890-007 Receptacle (Socket) Connectors

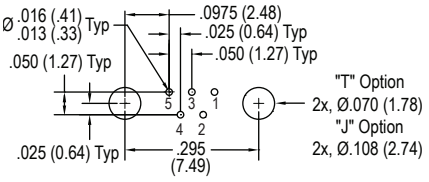




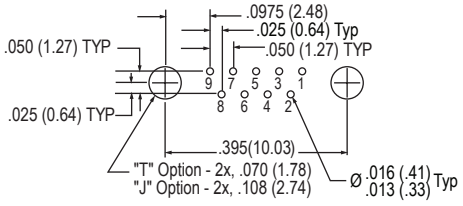


Layout	A		B BSC.		C BSC.	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.
5P	.400	10.16	.295	7.49	.184	4.67
5S	.400	10.16	.295	7.49	.185	4.70
9P	.500	12.70	.395	10.03	.284	7.21
9S	.500	12.70	.395	10.03	.285	7.24
15P	.650	16.51	.545	13.84	.434	11.02
15S	.650	16.51	.545	13.84	.435	11.05
21P	.800	20.32	.695	17.65	.584	14.83
21S	.800	20.32	.695	17.65	.585	14.86
25P	.900	22.86	.795	20.19	.684	17.37
25S	.900	22.86	.795	20.19	.685	17.40
31P	1.050	26.67	.945	24.00	.834	21.18
31S	1.050	26.67	.945	24.00	.835	21.21
37P	1.200	30.48	1.095	27.81	.984	24.99
37S	1.200	30.48	1.095	27.81	.985	25.02
51P	1.550	39.37	1.445	36.70	1.334	33.88
51S	1.550	39.37	1.445	36.70	1.335	33.91

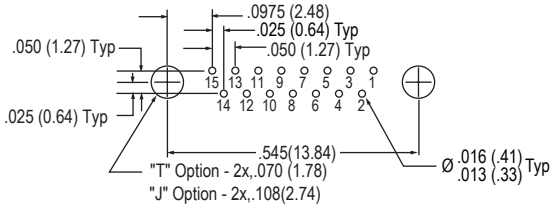
5 Contacts

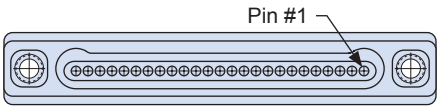


9 Contacts



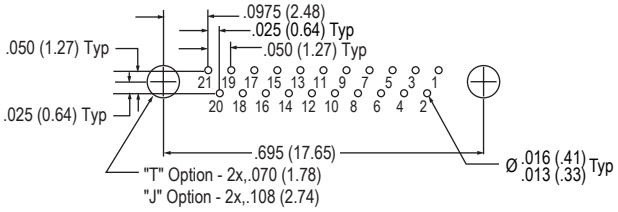
15 Contacts



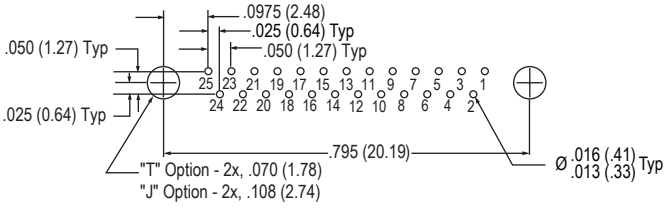


Connector Mating Face

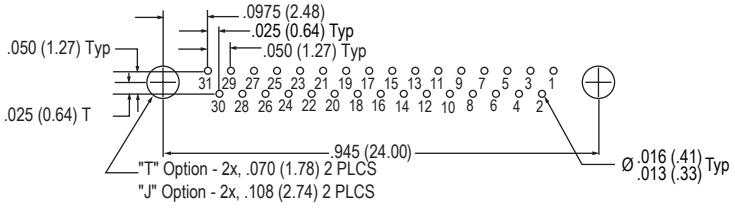
21 Contacts



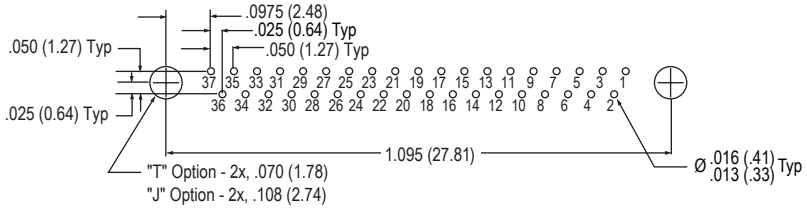
25 Contacts



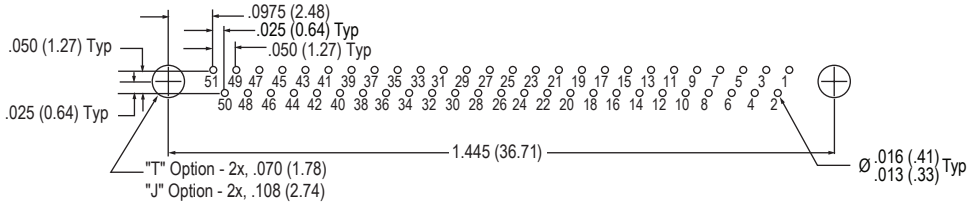
31 Contacts



37 Contacts

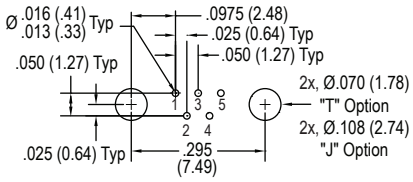


51 Contacts

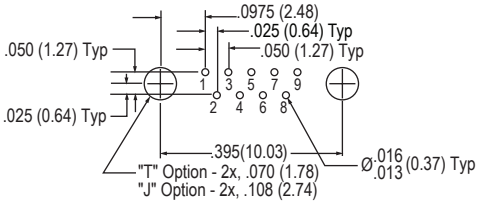


Layouts shown are for connector mounting side of PC Board.

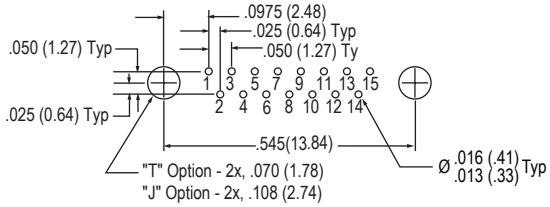
5 Contacts

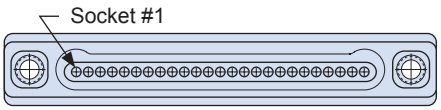


9 Contacts



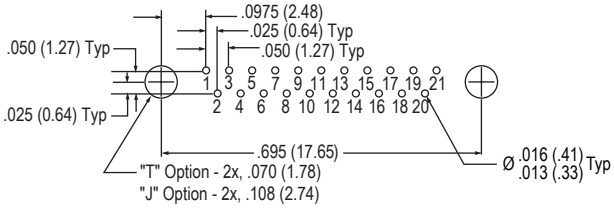
15 Contacts



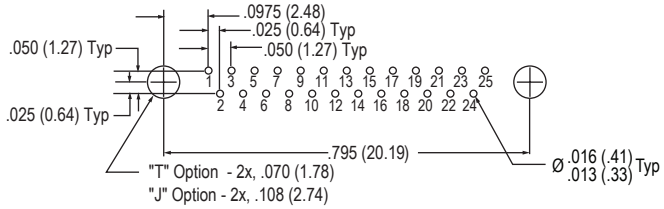


Connector Mating Face

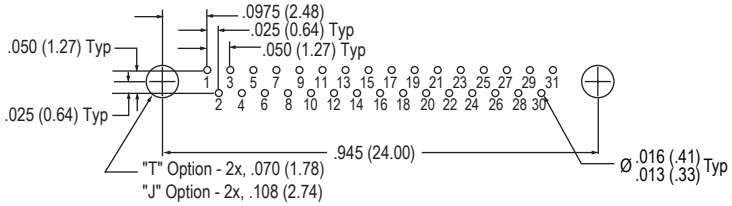
21 Contacts



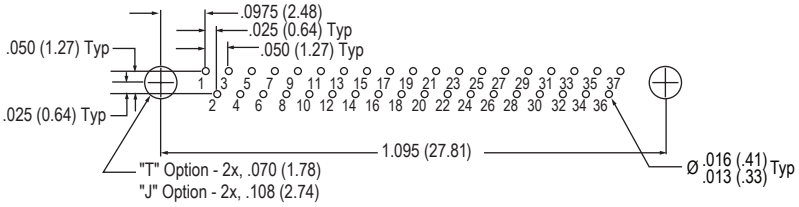
25 Contacts



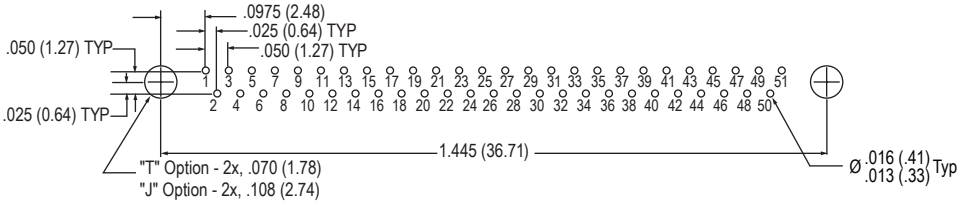
31 Contacts



37 Contacts



51 Contacts

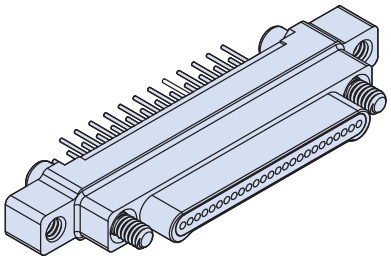


Layouts shown are for connector mounting side of PC Board.

C

PCB Single Row Connectors

Vertical Mount Thru Hole PCB Connectors with Mounting Ears - How to Order

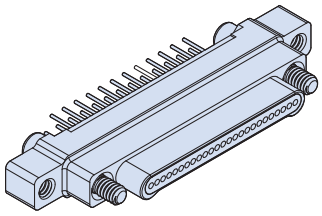
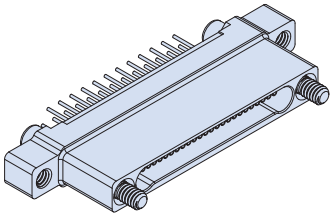


Vertical Mount Thru Hole PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with #0-80 female threads and #0-80 jackscrew threads.

Pre-Tinned PC Tails are coated with Sn60Pb40 or Sn63Pb37 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eight layouts from 5 to 51 contacts. These connectors are intermateable with any corresponding Glenair Series 890 single row metal shell nanominiature connector.

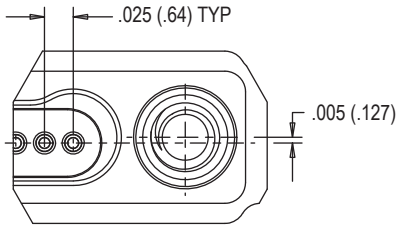
How to Order						
Sample Part Number	**890-039**	**-25P**	**A2**	**-BST**	**1**	**J**
Series	**890-039** = Verticle Mount, Thru Hole PCB Plug **890-040** = Verticle Mount, Thru Hole PCB Receptacle					
Insert Arrangement/ Contact Type	Plugs (890-039): **5P, 9P, 15P, 21P, 25P, 31P, 37P, 51P,** Receptacles (890-040): **5S, 9S, 15S, 21S, 25S, 31S, 37S, 51S**					
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **S** = Stainless Steel Shell, Passivated **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated					
Termination Type	**BST** - Board Straight Thru Hole					
PC Tail Length	**1** = .110 (2.79) **2** = .172 (4.37) **3** = .140 (3.56)					
Hardware	**J** = Hex Head Jackscrew					

Plug (Pin) Connector	Receptacle (Socket) Connector
	
J - Jackscrew	J - Jackscrew

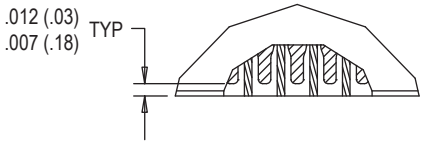
NOTES

1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: gold alloy/unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/5 and MIL-DTL-32139/6

DETAIL A



DETAIL B

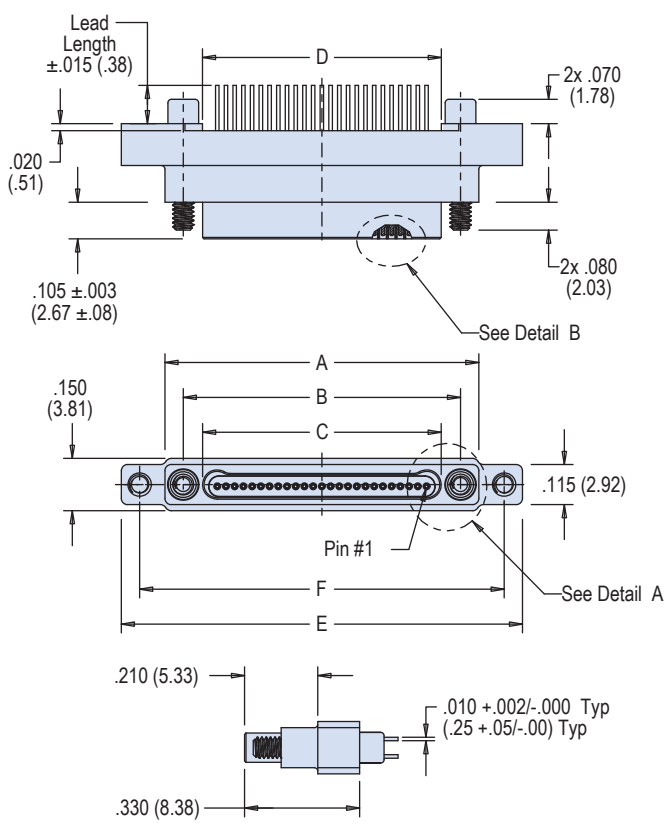


PCB Single Row Connectors

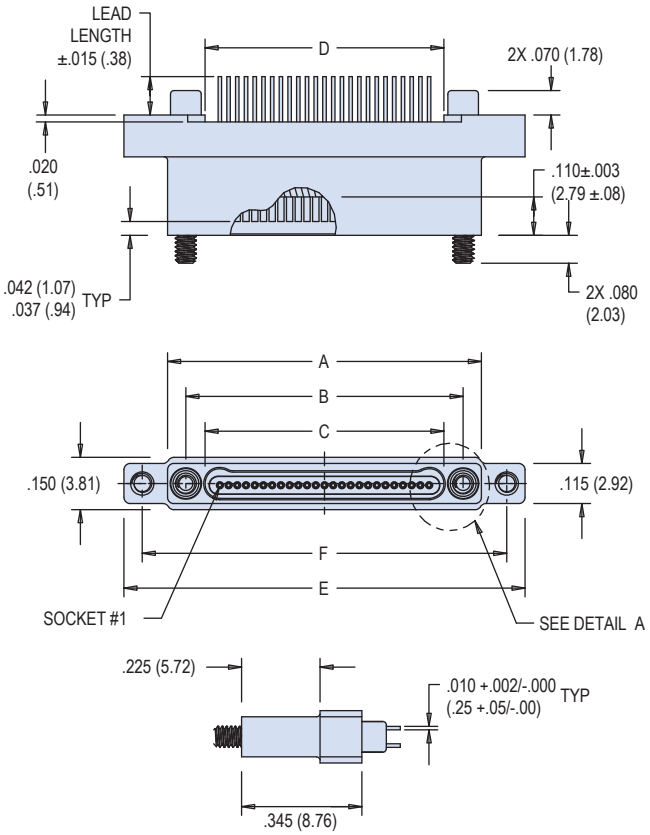
Vertical Mount Thru Hole PCB Connectors with Mounting Ears - Dimensions

Dimensions

890-039 Plug (Pin) Connectors



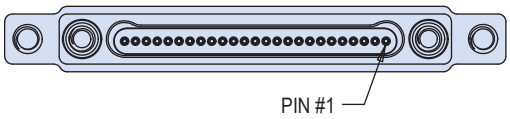
890-040 Receptacle (Socket) Connectors



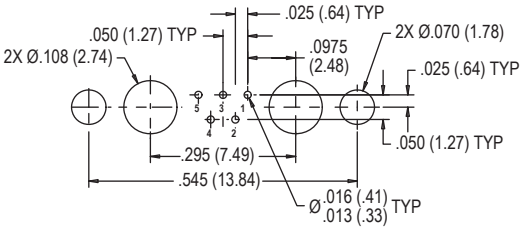
Layout	A		B BSC.		C BSC.		D BSC		E		F	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.	In	mm	In	mm	In	mm
5P	.400	10.16	.295	7.49	.184	4.67	.185	4.70	.650	16.51	.545	13.84
5S	.400	10.16	.295	7.49	.185	4.70	.185	4.70	.650	16.51	.545	13.84
9P	.500	12.70	.395	10.03	.284	7.21	.285	7.24	.750	19.05	.645	16.38
9S	.500	12.70	.395	10.03	.285	7.24	.285	7.24	.750	19.05	.645	16.38
15P	.650	16.51	.545	13.84	.434	11.02	.435	11.05	.900	22.86	.795	20.19
15S	.650	16.51	.545	13.84	.435	11.05	.435	11.05	.900	22.86	.795	20.19
21P	.800	20.32	.695	17.65	.584	14.83	.585	14.86	1.050	26.67	.945	24.00
21S	.800	20.32	.695	17.65	.585	14.86	.585	14.86	1.050	26.67	.945	24.00
25P	.900	22.86	.795	20.19	.684	17.37	.685	17.40	1.150	29.21	1.045	26.54
25S	.900	22.86	.795	20.19	.685	17.40	.685	17.40	1.150	29.21	1.045	26.54
31P	1.050	26.67	.945	24.00	.834	21.18	.835	21.21	1.300	33.02	1.195	30.35
31S	1.050	26.67	.945	24.00	.835	21.21	.835	21.21	1.300	33.02	1.195	30.35
37P	1.200	30.48	1.095	27.81	.984	24.99	.985	25.02	1.450	36.83	1.345	34.16
37S	1.200	30.48	1.095	27.81	.985	25.02	.985	25.02	1.450	36.83	1.345	34.16
51P	1.550	39.37	1.445	36.70	1.334	33.88	1.335	33.91	1.800	45.72	1.695	43.05
51S	1.550	39.37	1.445	36.70	1.335	33.91	1.335	33.91	1.800	45.72	1.695	43.05

Vertical Mount Thru Hole PCB Connectors with Mounting Ears - Plug Footprints

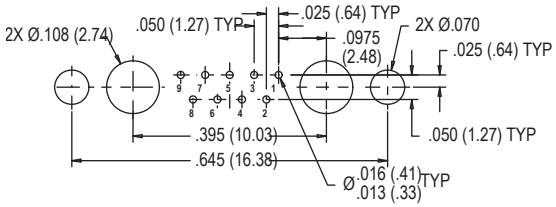
Vertical PCB plug (pin) connector layout patterns shown are for the connector mounting side of PC board



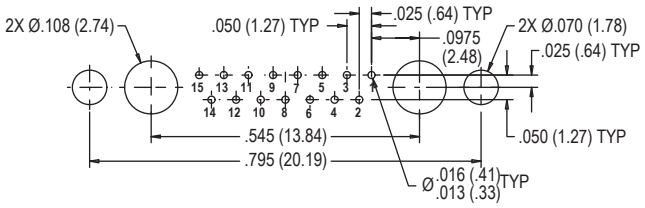
5 Contacts



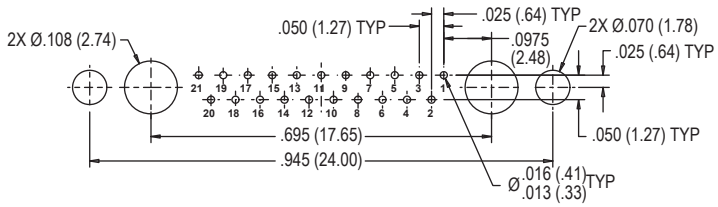
9 Contacts



15 Contacts



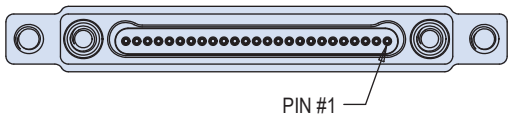
21 Contacts



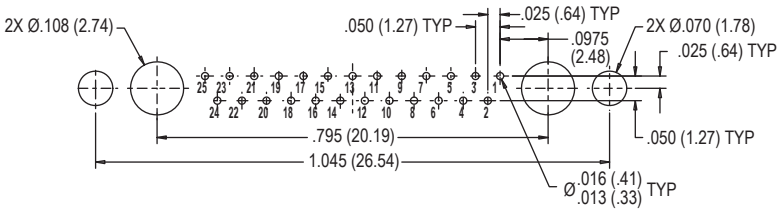
PCB Single Row Connectors

Vertical Mount Thru Hole PCB Connectors with Mounting Ears - Plug Footprints

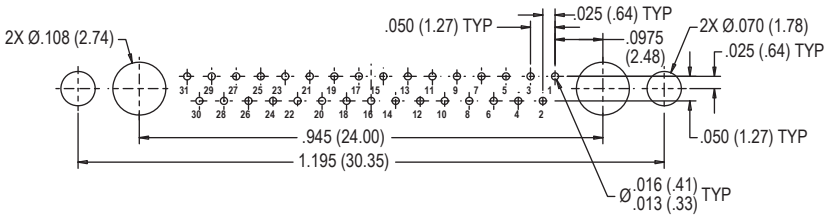
Vertical PCB plug (pin) connector layout patterns shown are for the connector mounting side of PC board



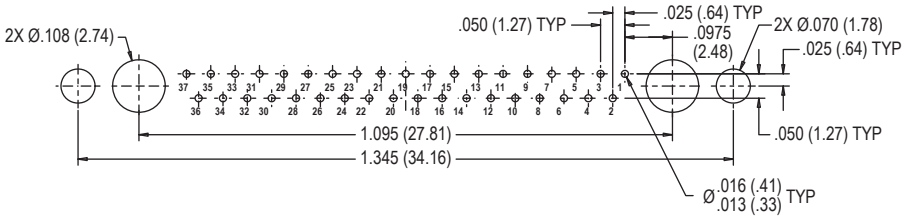
25 Contacts



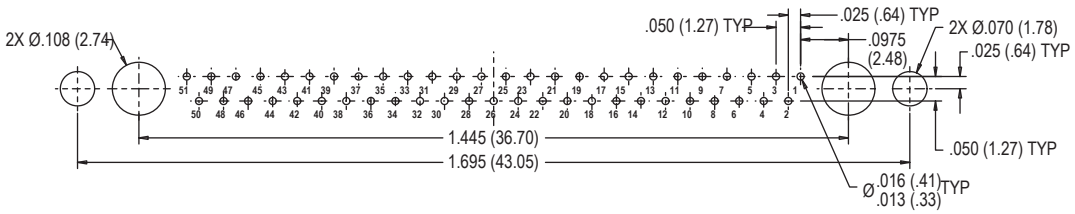
31 Contacts



37 Contacts



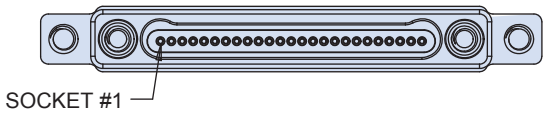
51 Contacts



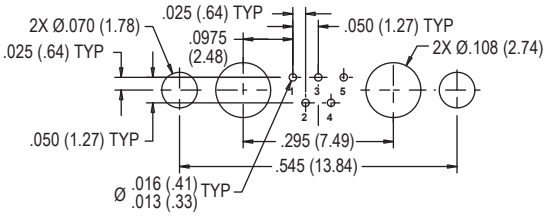
C

Vertical Mount Thru Hole PCB Connectors with Mounting Ears - Receptacle Footprints

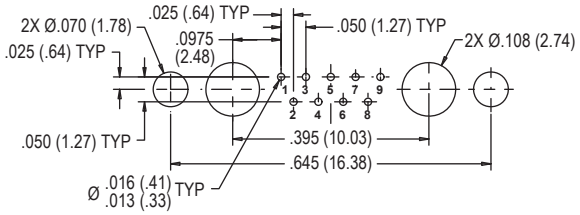
Vertical PCB Receptacle (socket) connector layout patterns shown are for the connector mounting side of PC board



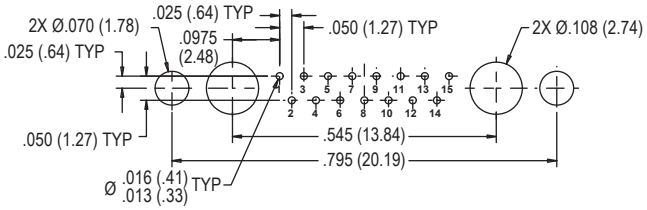
5 Contacts



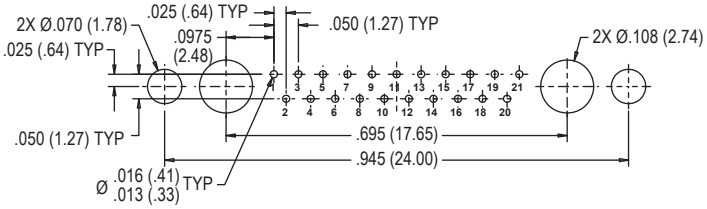
9 Contacts



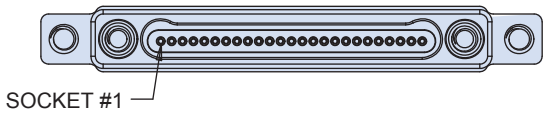
15 Contacts



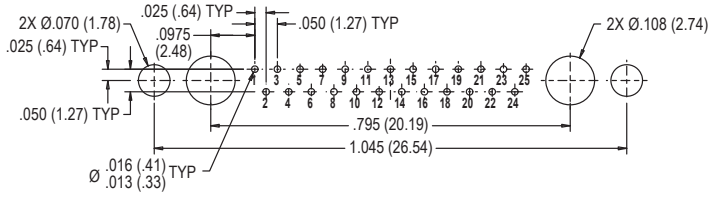
21 Contacts



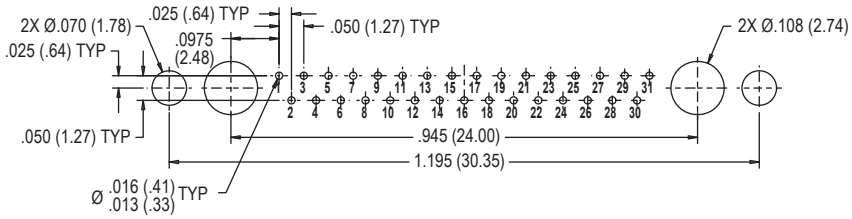
Vertical PCB Receptacle (socket) connector layout patterns shown are for the connector mounting side of PC board



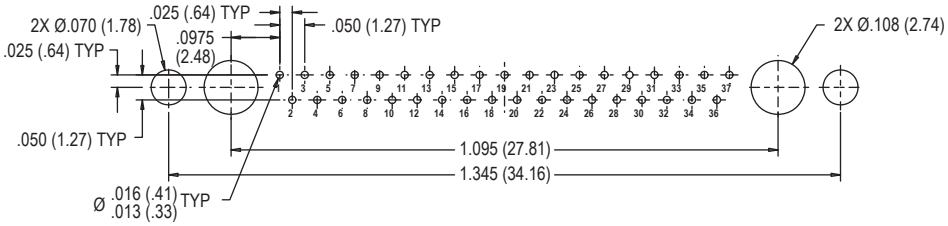
25 Contacts



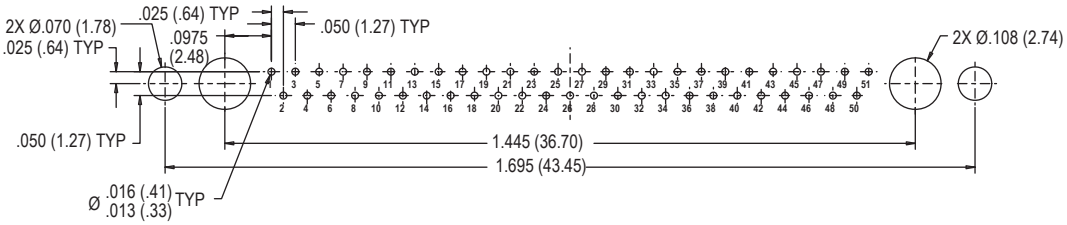
31 Contacts



37 Contacts



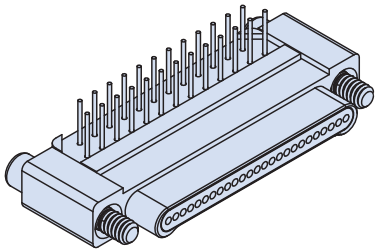
51 Contacts



C

PCB Single Row Connectors

Right Angle Mount Thru Hole PCB Connectors
How to Order

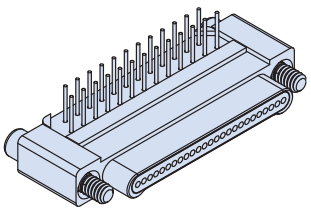
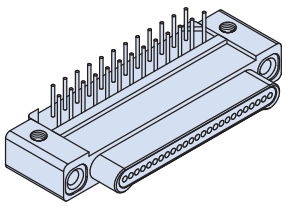
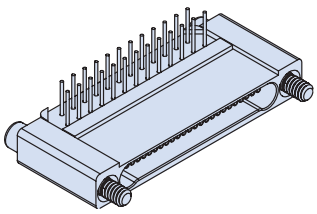
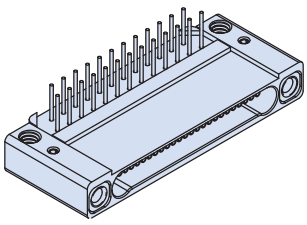


Right Angle Thru Hole PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with #0-80 female threads, or #0-80 jackscrews.

Pre-Tinned PC Tails are coated with Sn60Pb40 or Sn63Pb37 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eight layouts from 5 to 51 contacts. Complies to the requirements of MIL-DTL-32139. These connectors are intermateable with any corresponding Glenair Series 890 single row metal shell nanominiature connector.

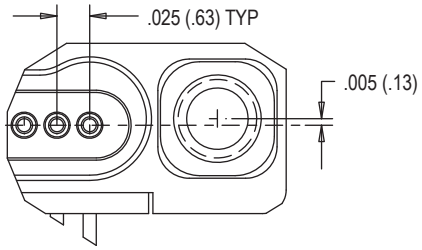
How To Order							
Sample Part Number	**890-008**	**-51P**	**A2**	**-BRT**	**1**	**T**	
Series	**890-008** = Plug, Pin Contacts, Single Row, Right Angle Mount PCB **890-009** = Receptacle, Socket Contacts, Single Row, Right Angle Mount PCB						
Insert Arrangement/ Contact Type	Plugs (890-008): **5P**, **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **51P** Receptacles (890-009): **5S**, **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **51S**						
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated						
Termination Type	**BRT** = Board Right Angle Thru-Hole						
PC Tail Length	**1** = .110 (2.79) **2** - .172 (4.37) **3** = .140 (3.56)						
Hardware	**J** = Hex Head Jackscrew, #0-80 **T** = Female Thread, #0-80						

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option

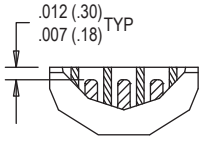
NOTES

1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: gold alloy/unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/7 and MIL-DTL-32139/8

DETAIL A

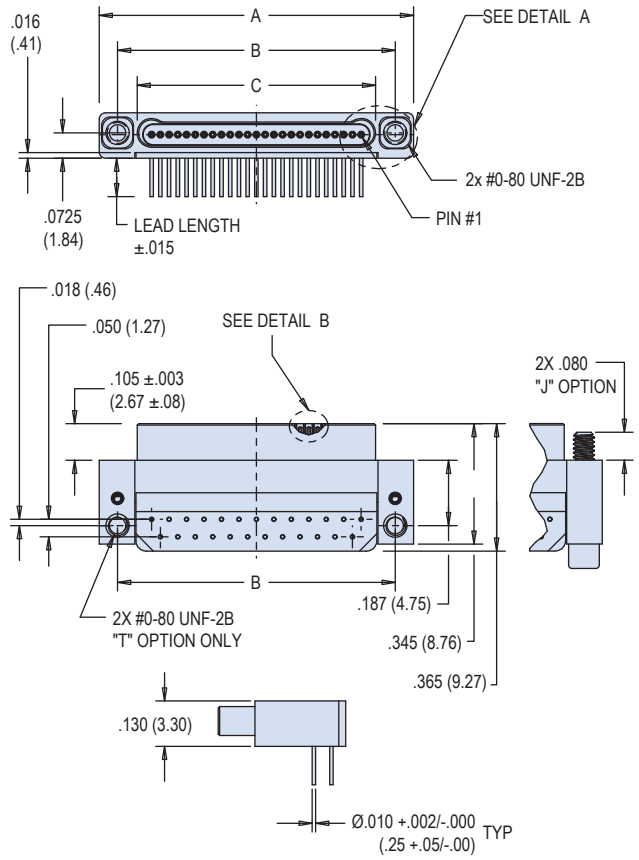


DETAIL B

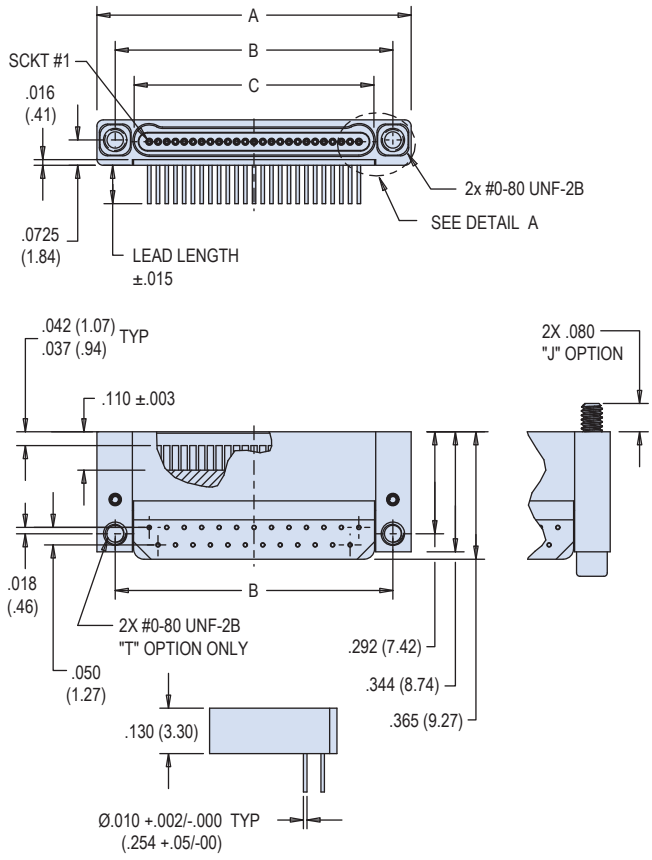


Dimensions

890-008 Plug (Pin) Connectors

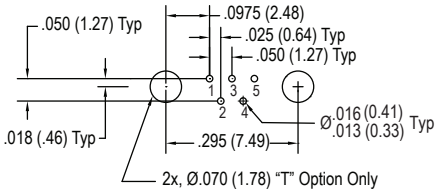


890-009 Receptacle (Socket) Connectors

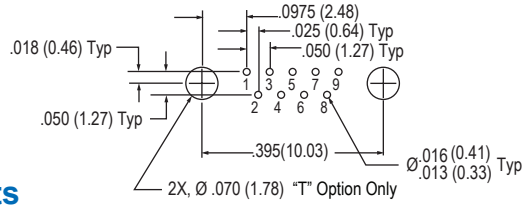


Layout	A		B BSC.		C BSC.	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.
5P	.400	10.16	.295	7.49	.184	4.67
5S	.400	10.16	.295	7.49	.185	4.70
9P	.500	12.70	.395	10.03	.284	7.21
9S	.500	12.70	.395	10.03	.285	7.24
15P	.650	16.51	.545	13.84	.434	11.02
15S	.650	16.51	.545	13.84	.435	11.05
21P	.800	20.32	.695	17.65	.584	14.83
21S	.800	20.32	.695	17.65	.585	14.86
25P	.900	22.86	.795	20.19	.684	17.37
25S	.900	22.86	.795	20.19	.685	17.40
31P	1.050	26.67	.945	24.00	.834	21.18
31S	1.050	26.67	.945	24.00	.835	21.21
37P	1.200	30.48	1.095	27.81	.984	24.99
37S	1.200	30.48	1.095	27.81	.985	25.02
51P	1.550	39.37	1.445	36.70	1.334	33.88
51S	1.550	39.37	1.445	36.70	1.335	33.91

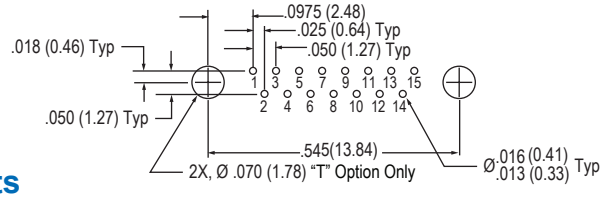
5 Contacts



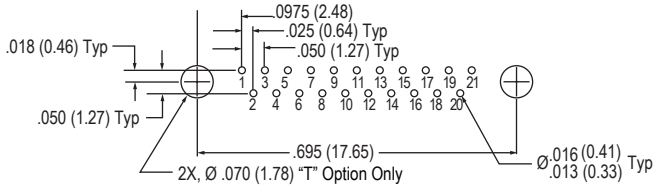
9 Contacts

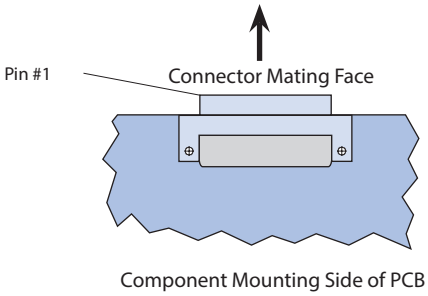


15 Contacts

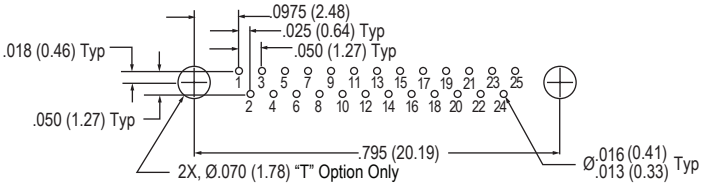


21 Contacts

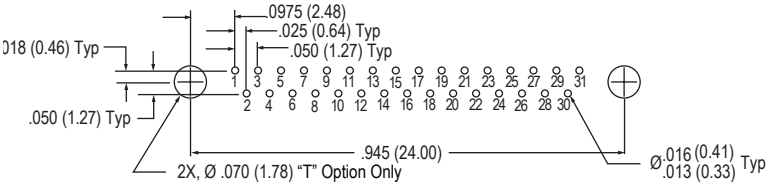




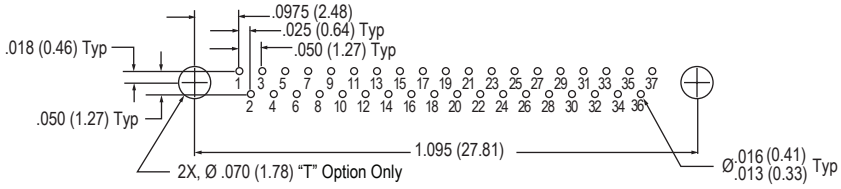
25 Contacts



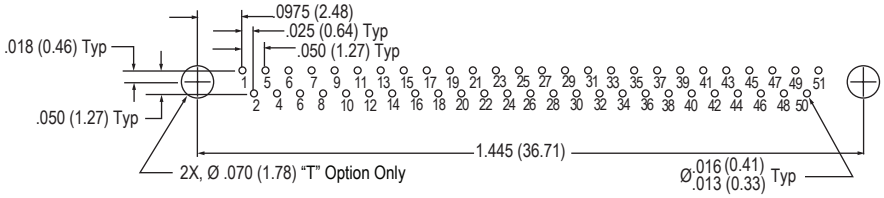
31 Contacts



37 Contacts

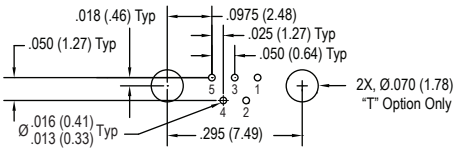


51 Contacts

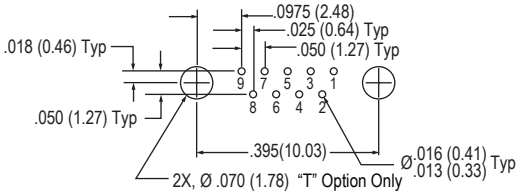


Layouts shown are for connector mounting side of PC Board.

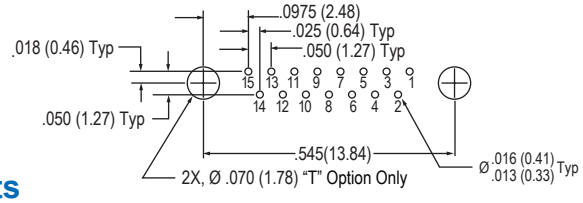
5 Contacts



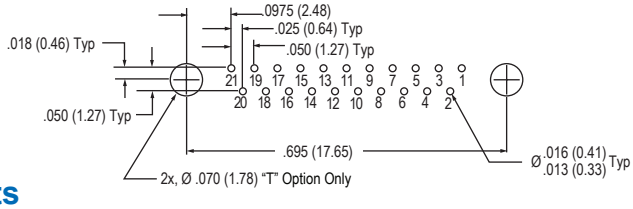
9 Contacts

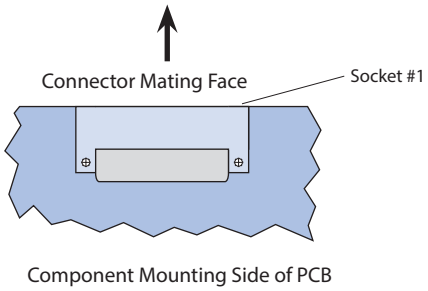


15 Contacts

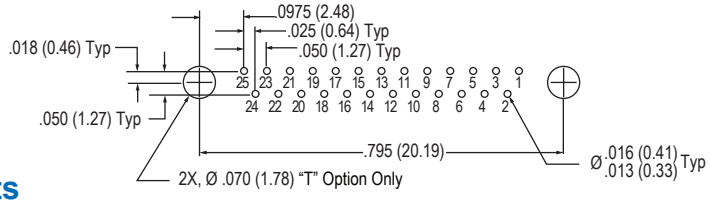


21 Contacts

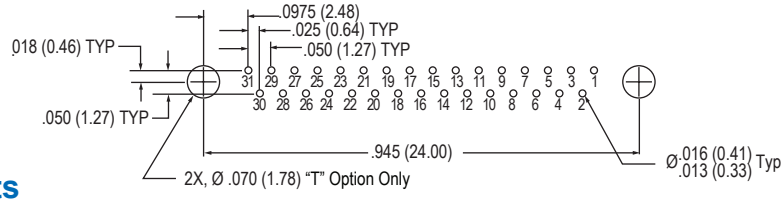




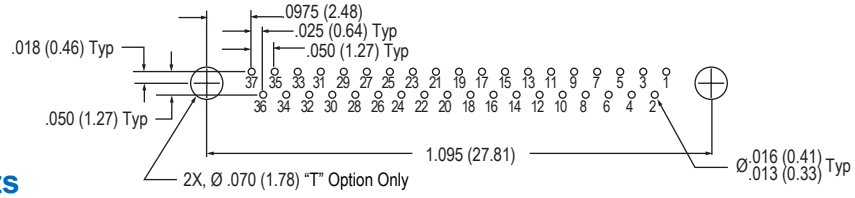
25 Contacts



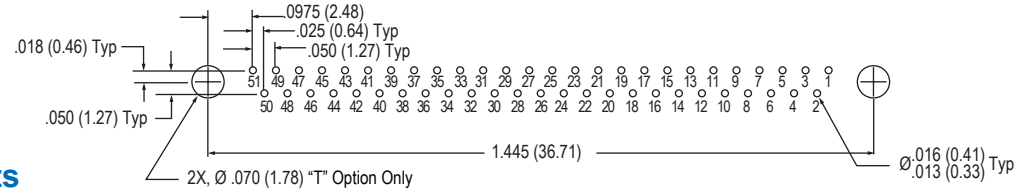
31 Contacts



37 Contacts



51 Contacts

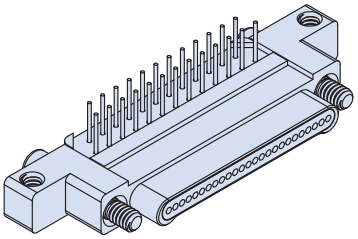


Layouts shown are for connector mounting side of PC Board.

C

PCB Single Row Connectors

Right Angle Mount Thru Hole PCB Connectors with Mounting Ears - How to Order



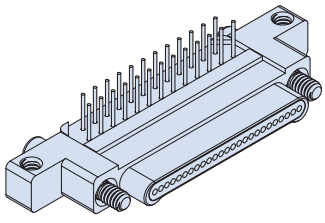
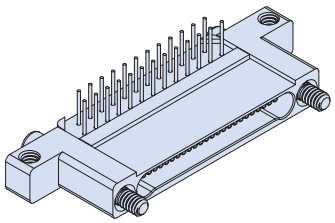
Right Angle Thru Hole PCB Nano Connectors with Mounting Ears feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Robust mounting ears allow for jackscrew hardware to be used, available with #0-80 female threads and #0-80 jackscrew threads.

Pre-Tinned PC Tails are coated with Sn60Pb40 or Sn63Pb37 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eight layouts from 5 to 51 contacts. These connectors are intermateable with any corresponding Glenair Series 890 single row metal shell nanominiature connector.

C

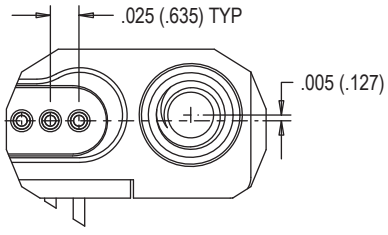
How to Order						
Sample Part Number	**890-043**	**-25P**	**A2**	**-BRT**	**1**	**J**
Series	**890-043** = Right Angle, Thru Hole PCB Plug **890-044** = Right Angle, Thru Hole PCB Receptacle					
Insert Arrangement/ Contact Type	Plugs (890-043): **5P, 9P, 15P, 21P, 25P, 31P, 37P, 51P,** Receptacles (890-044): **5S, 9S, 15S, 21S, 25S, 31S, 37S, 51S**					
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating		**S** = Stainless Steel Shell, Passivated **T** = Titanium Shell, Unplated			
Termination Type	**BRT** = Board Right Angle Thru Hole					
PC Tail Length	**1** = .110 (2.79) **2** = .172 (4.37) **3** = .140 (3.56)					
Hardware	**J** = Hex Head Jackscrew					

Plug (Pin) Connector	Receptacle (Socket) Connector
	
J - Jackscrew	J - Jackscrew

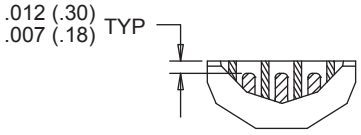
NOTES

1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: gold alloy/unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/7 and MIL-DTL-32139/8

DETAIL A



DETAIL B

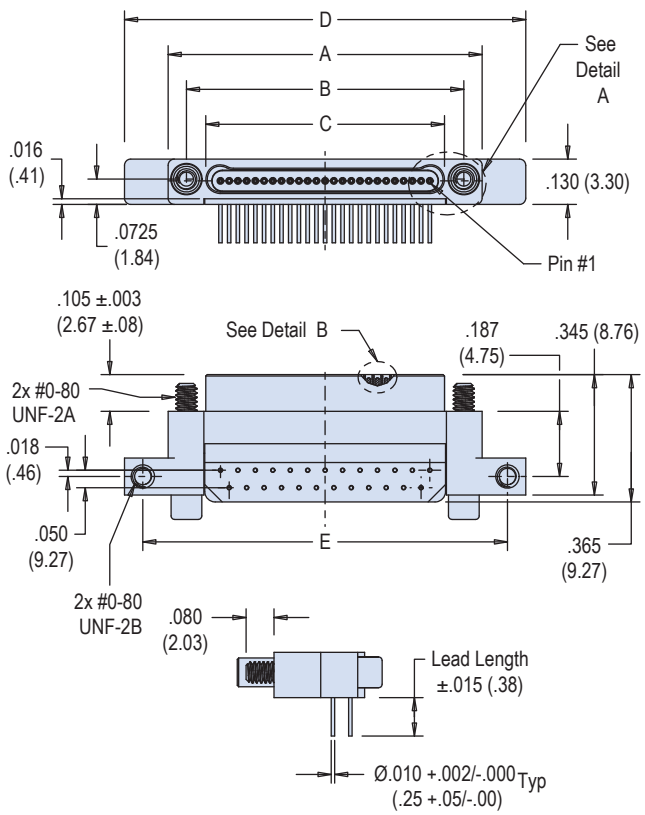


PCB Single Row Connectors

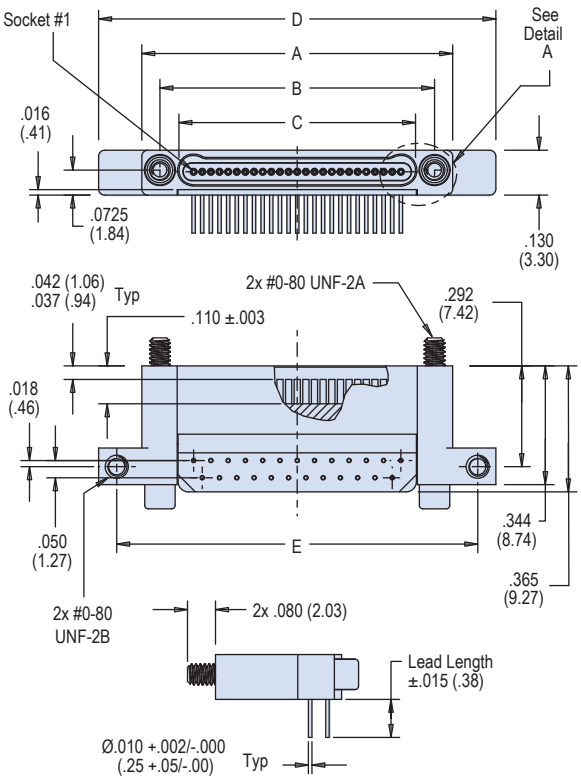
Right Angle Mount Thru Hole PCB Connectors with Mounting Ears - Dimensions

Dimensions

890-043 Plug (Pin) Connectors



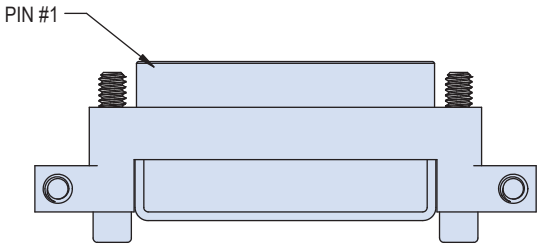
890-044 Receptacle (Socket) Connectors



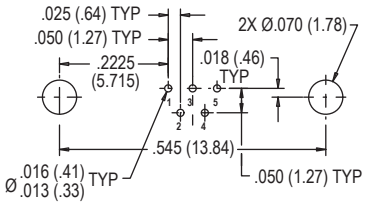
Layout	A		B BSC.		C BSC.		D		E BSC	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.	In	mm	In	mm
5P	.400	10.16	.295	7.49	.184	4.67	.650	16.51	.545	13.84
5S	.400	10.16	.295	7.49	.185	4.70	.650	16.51	.545	13.84
9P	.500	12.70	.395	10.03	.284	7.21	.750	19.05	.645	16.38
9S	.500	12.70	.395	10.03	.285	7.24	.750	19.05	.645	16.38
15P	.650	16.51	.545	13.84	.434	11.02	.900	22.86	.795	20.19
15S	.650	16.51	.545	13.84	.435	11.05	.900	22.86	.795	20.19
21P	.800	20.32	.695	17.65	.584	14.83	1.050	26.67	.945	24.00
21S	.800	20.32	.695	17.65	.585	14.86	1.050	26.67	.945	24.00
25P	.900	22.86	.795	20.19	.684	17.37	1.150	29.21	1.045	26.54
25S	.900	22.86	.795	20.19	.685	17.40	1.150	29.21	1.045	26.54
31P	1.050	26.67	.945	24.00	.834	21.18	1.300	33.02	1.195	30.35
31S	1.050	26.67	.945	24.00	.835	21.21	1.300	33.02	1.195	30.35
37P	1.200	30.48	1.095	27.81	.984	24.99	1.450	36.83	1.345	34.16
37S	1.200	30.48	1.095	27.81	.985	25.02	1.450	36.83	1.345	34.16
51P	1.550	39.37	1.445	36.70	1.334	33.88	1.800	45.72	1.695	43.05
51S	1.550	39.37	1.445	36.70	1.335	33.91	1.800	45.72	1.695	43.05

Right Angle Mount Thru Hole PCB Connectors with Mounting Ears - Plug Footprints

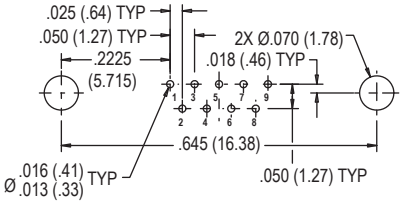
Right angle PCB plug (pin) connector layout patterns shown are for the connector mounting side of PC board



5 Contacts



9 Contacts



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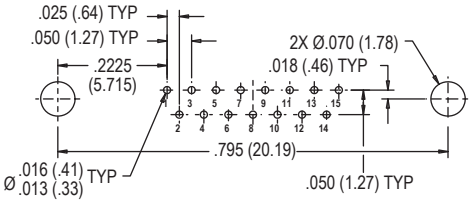
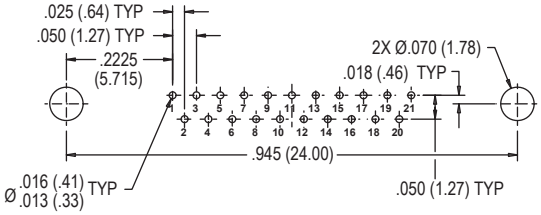


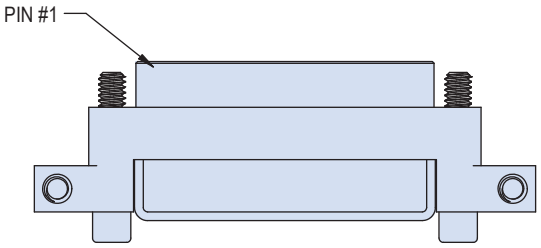
21 Contacts



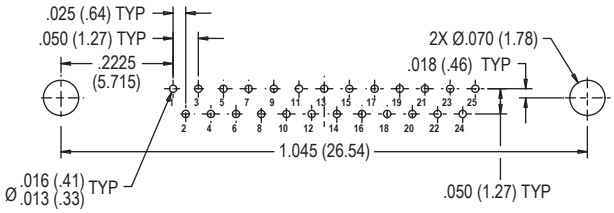
PCB Single Row Connectors

Right Angle Mount Thru Hole PCB Connectors with Mounting Ears - Plug Footprints

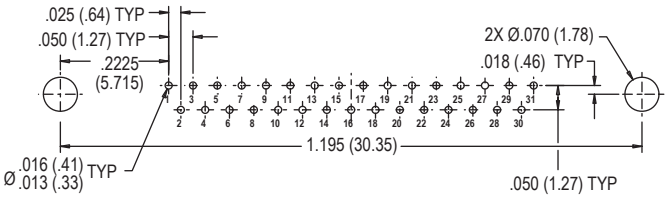
Right angle PCB plug (pin) connector layout patterns shown are for the connector mounting side of PC board



25 Contacts



31 Contacts



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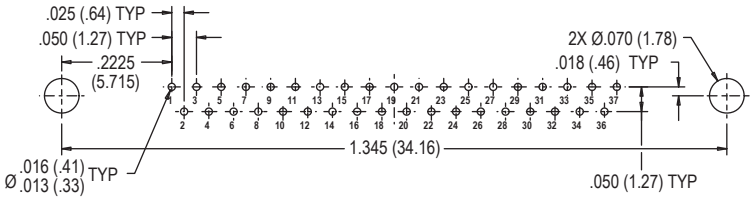

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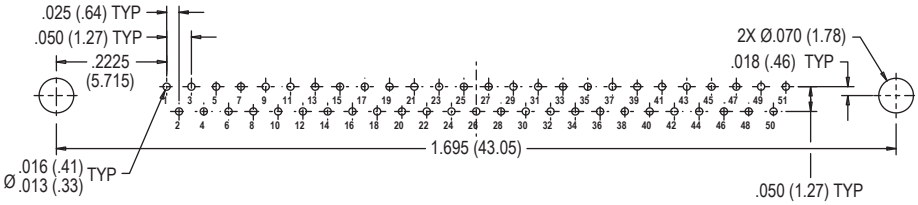
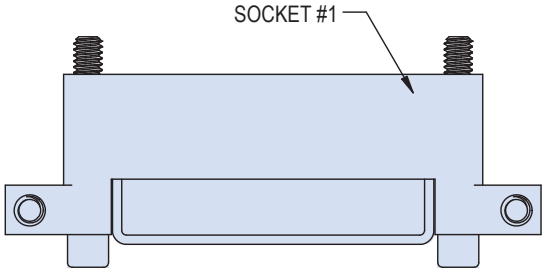
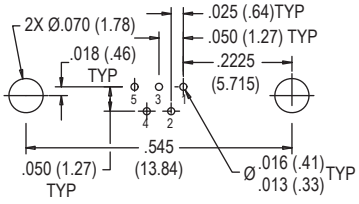


C

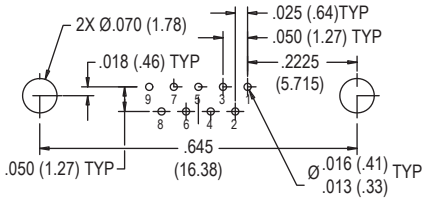
Right angle PCB receptacle (socket) connector layout patterns shown are for the connector mounting side of PC board



5 Contacts



9 Contacts



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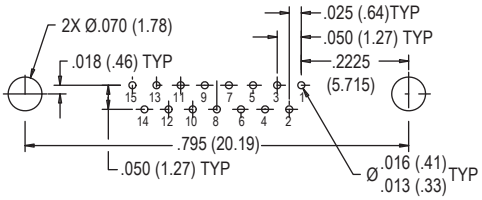
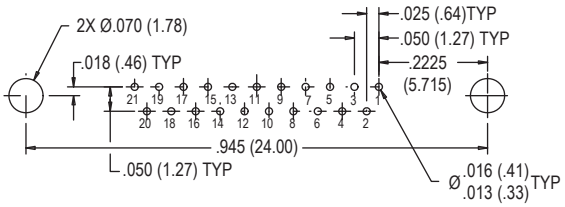
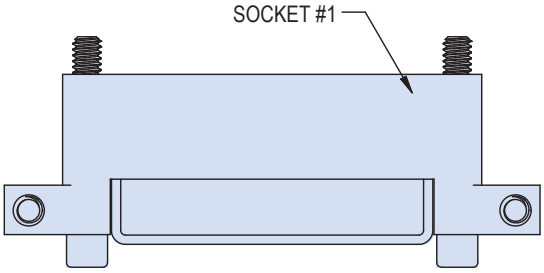


21 Contacts

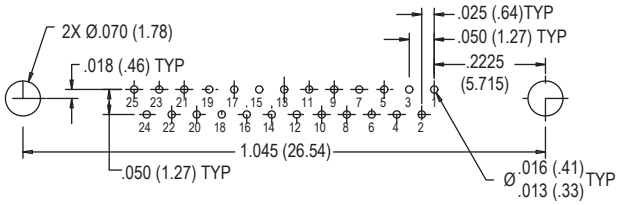


Right Angle Mount Thru Hole PCB Connectors with Mounting Ears - Receptacle Footprints

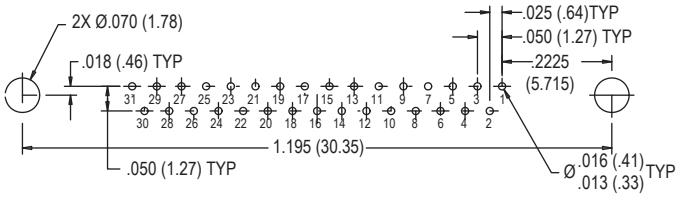
Right angle PCB receptacle (socket) connector layout patterns shown are for the connector mounting side of PC board



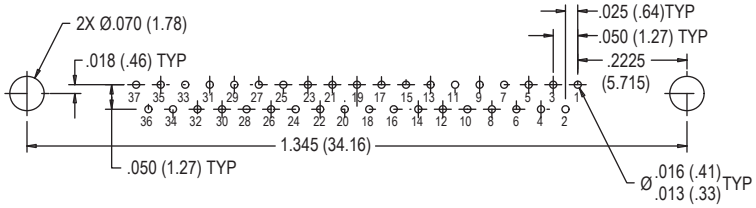
25 Contacts



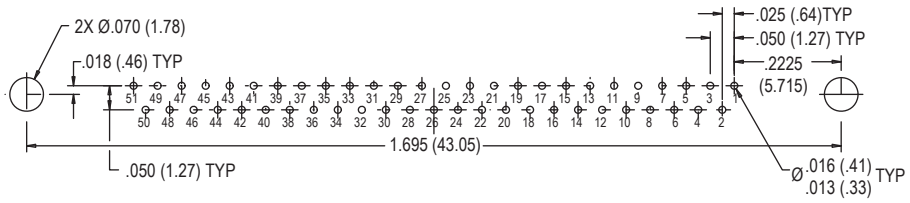
31 Contacts



37 Contacts



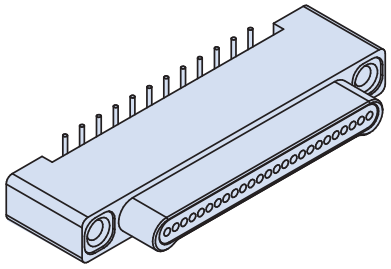
51 Contacts



C

PCB Single Row Connectors

Vertical Surface Mount PCB Connectors
How to Order



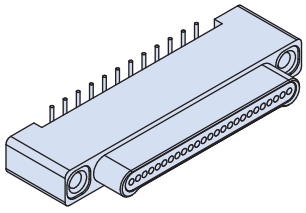
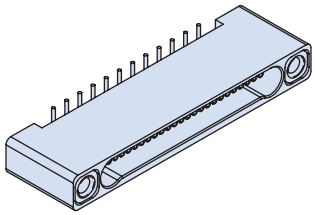
Vertical Surface Mount PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with #0-80 female threads.

Pre-Tinned PC Tails are coated with Sn60Pb40 or Sn63Pb37 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eight layouts from 5 to 51 contacts. Complies to the requirements of MIL-DTL-32139. These connectors are intermateable with any corresponding Glenair Series 890 single row metal shell nanominiature connector.

C

How To Order						
Sample Part Number		**890-010**	**-37P**	**A1**	**-BSS**	**T**
Series	**890-010** = Plug, Pin Contacts, Single Row, Vertical SMT Nanominiature **890-011** = Receptacle, Socket Contacts, Single Row, Vertical SMT Nanominiature					
Insert Arrangement/ Contact Type	Plugs (890-010): **5P**, **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **51P** Receptacles (890-011): **5S**, **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **51S**					
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated					
Termination Type	**BSS** = Board Straight Surface Mount					
Hardware	**T** = Female Thread, #0-80					

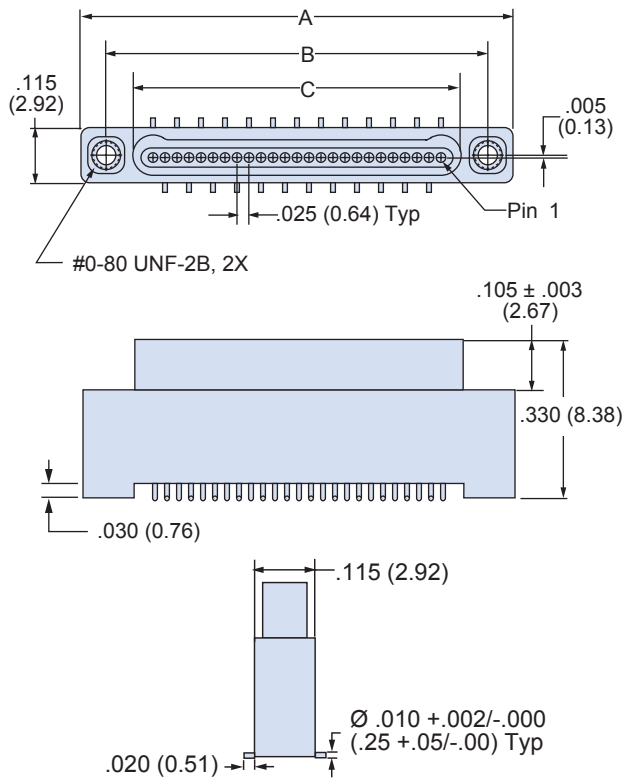
Plug (Pin) Connector	Receptacle (Socket) Connector
	
T - Female Thread	T - Female Thread

NOTES

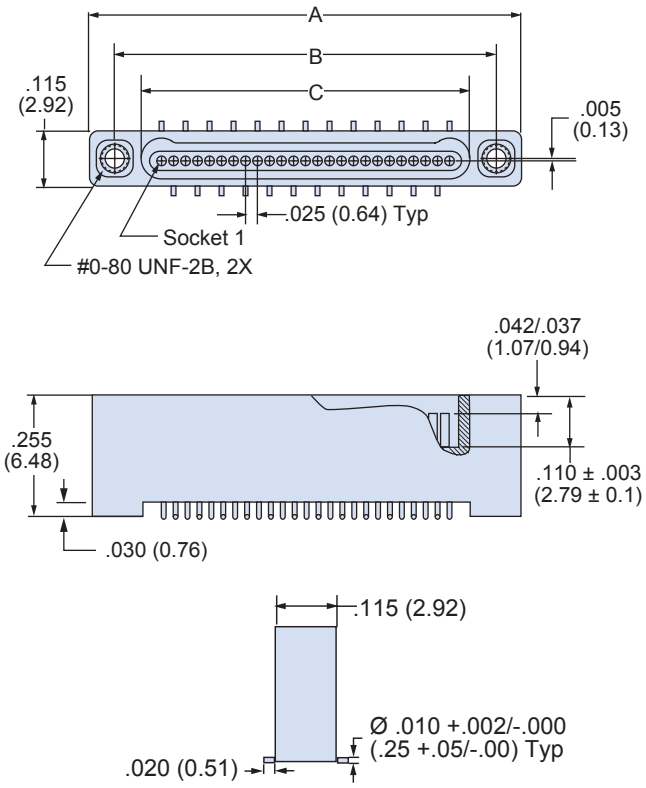
1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: gold alloy/unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/1 and MIL-DTL-32139/2

Dimensions

890-010 Plug (Pin) Connectors

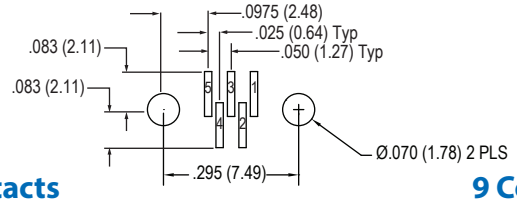


890-011 Receptacle (Socket) Connectors

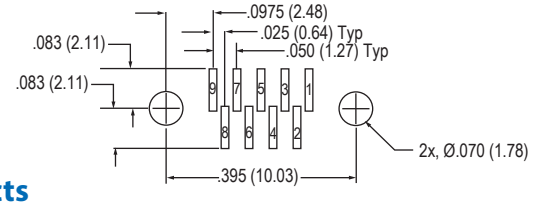


Layout	A		B BSC.		C BSC.	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.
5P	.400	10.16	.295	7.49	.184	4.67
5S	.400	10.16	.295	7.49	.185	4.70
9P	.500	12.70	.395	10.03	.284	7.21
9S	.500	12.70	.395	10.03	.285	7.24
15P	.650	16.51	.545	13.84	.434	11.02
15S	.650	16.51	.545	13.84	.435	11.05
21P	.800	20.32	.695	17.65	.584	14.83
21S	.800	20.32	.695	17.65	.585	14.86
25P	.900	22.86	.795	20.19	.684	17.37
25S	.900	22.86	.795	20.19	.685	17.40
31P	1.050	26.67	.945	24.00	.834	21.18
31S	1.050	26.67	.945	24.00	.835	21.21
37P	1.200	30.48	1.095	27.81	.984	24.99
37S	1.200	30.48	1.095	27.81	.985	25.02
51P	1.550	39.37	1.445	36.70	1.334	33.88
51S	1.550	39.37	1.445	36.70	1.335	33.91

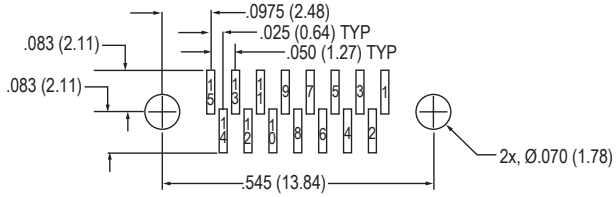
5 Contacts

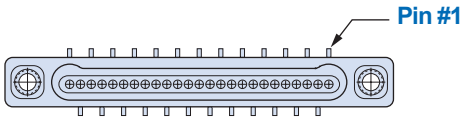


9 Contacts

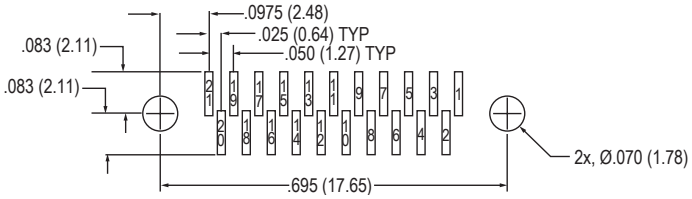


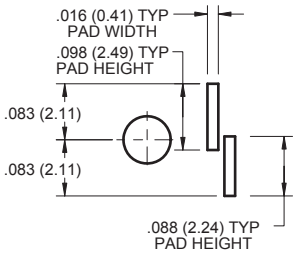
15 Contacts





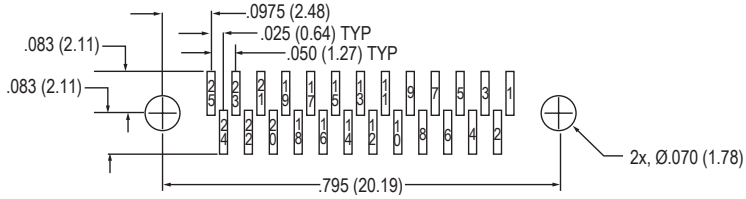
21 Contacts



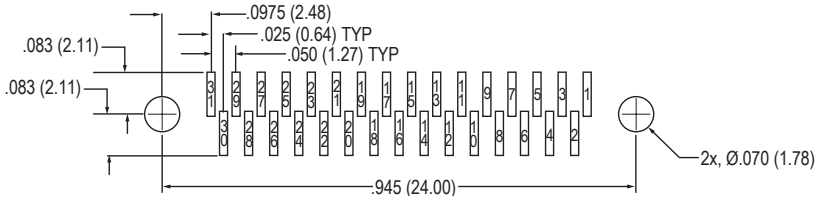


Pad Footprint Detail

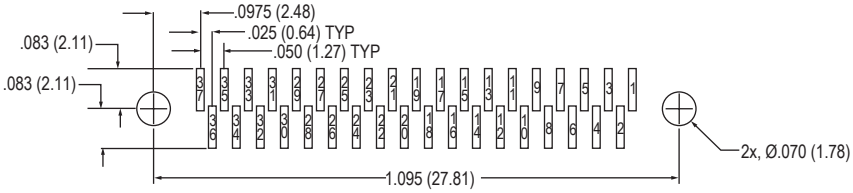
25 Contacts



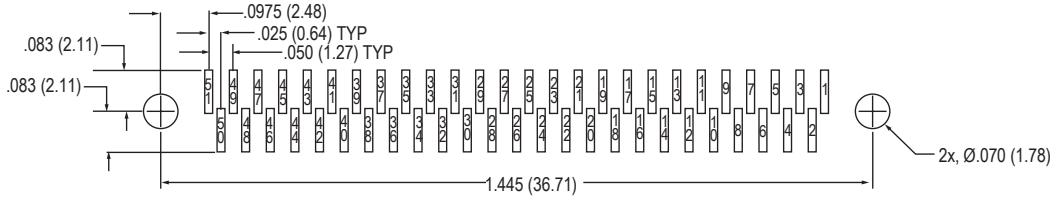
31 Contacts



37 Contacts

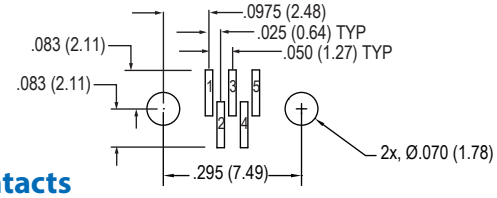


51 Contacts

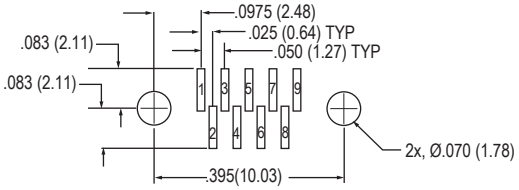


Layouts shown are for connector mounting side of PC Board.

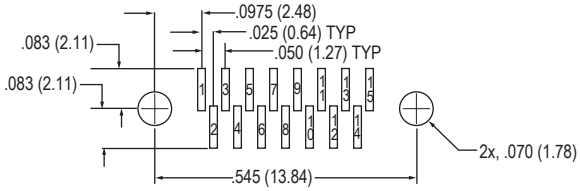
5 Contacts

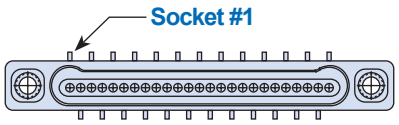


9 Contacts

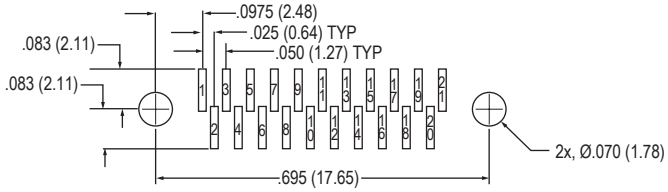


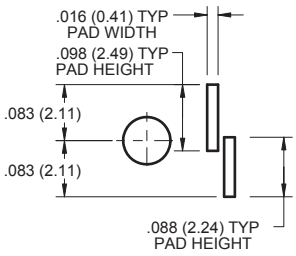
15 Contacts





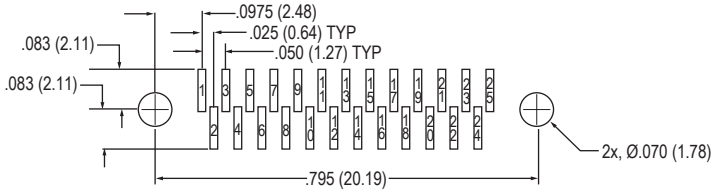
21 Contacts



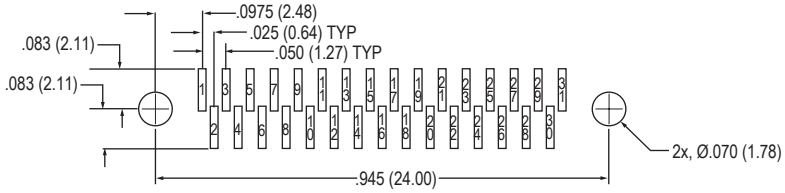


Pad Footprint Detail

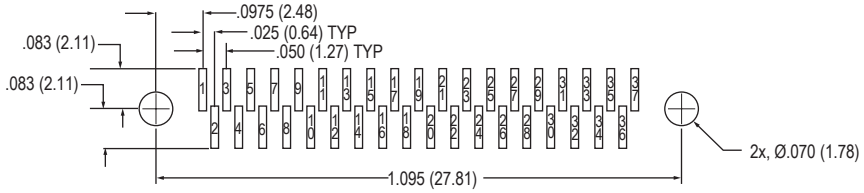
25 Contacts



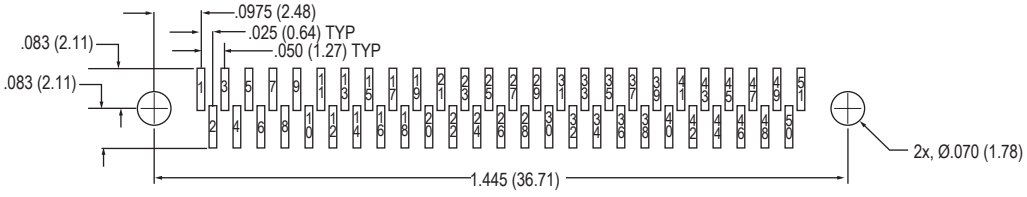
31 Contacts



37 Contacts



51 Contacts

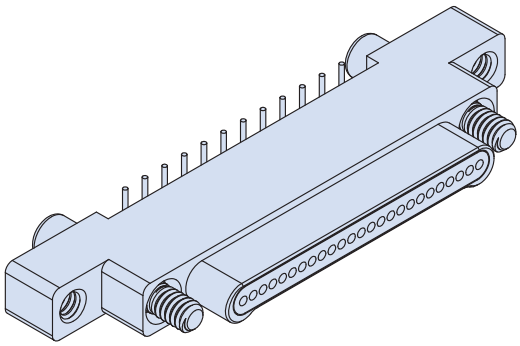


Layouts shown are for connector mounting side of PC Board.

C

PCB Single Row Connectors

Vertical Surface Mount PCB Connectors with Jackscrews
How to Order



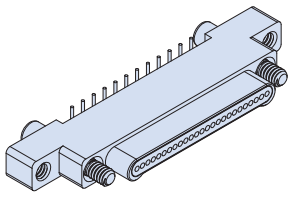
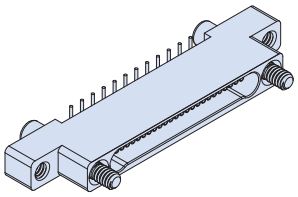
Vertical Surface Mount PCB Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with #0-80 female threads and #0-80 jackscrew threads.

Pre-Tinned PC Tails are coated with Sn60Pb40 or Sn63Pb37 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eight layouts from 5 to 51 contacts. These connectors are intermateable with any corresponding Glenair Series 890 single row metal shell nanominiature connector.

C

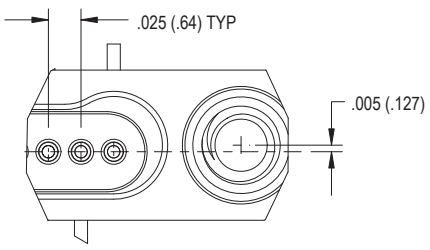
How to Order						
Sample Part Number		**890-017**	**-25P**	**A2**	**-BSS**	**J**
Series	**890-017** = Vertical, Surface Mount PCB Plug **890-018** = Vertical, Surface Mount PCB Receptacle					
Insert Arrangement/ Contact Type	Plugs (890-017): **5P, 9P, 15P, 21P, 25P, 31P, 37P, 51P,** Receptacles (890-018): **5S, 9S, 15S, 21S, 25S, 31S, 37S, 51S**					
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **S** = Stainless Steel Shell, Passivated **T** = Titanium Shell, Unplated					
Termination Type	**BSS** = Board Straight Surface Mount					
Hardware	**J** = Hex Head Jackscrew					

Plug (Pin) Connector	Receptacle (Socket) Connector
	
J - Jackscrew	J - Jackscrew

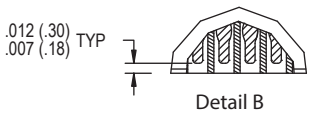
NOTES

1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: gold alloy/unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/1 and MIL-DTL-32139/2

DETAIL A

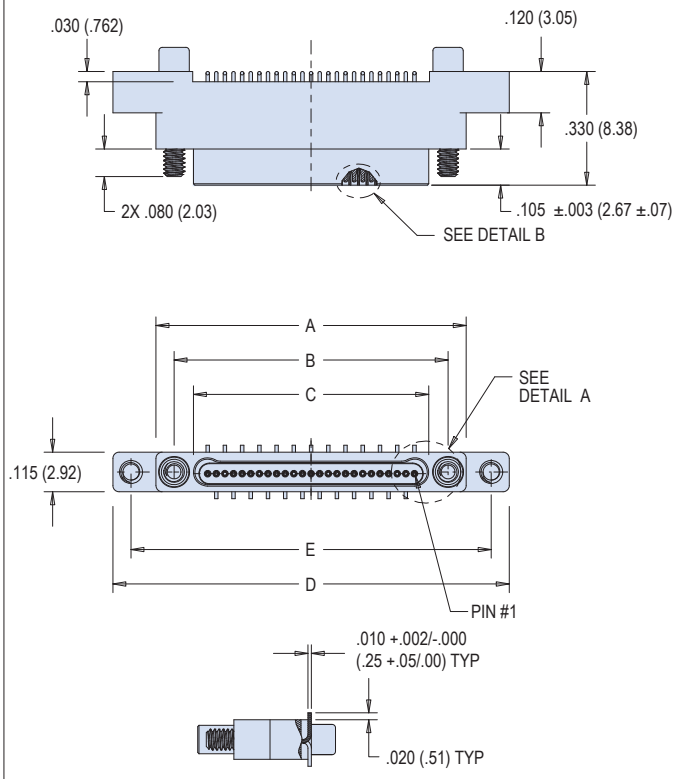


DETAIL B

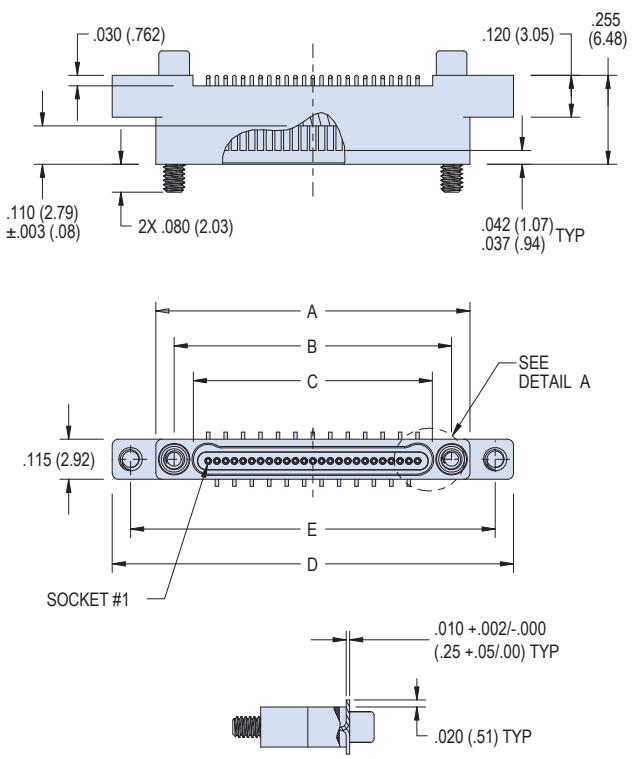


Dimensions

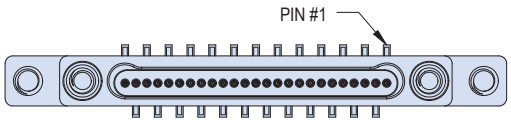
890-017 Plug (Pin) Connectors

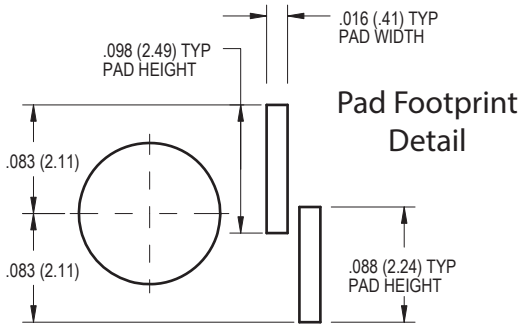


890-018 Receptacle (Socket) Connectors

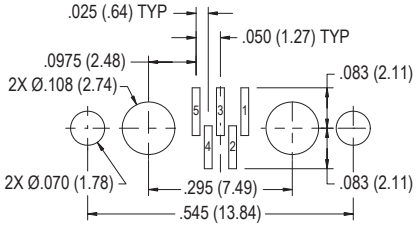


Layout	A		B BSC.		C BSC.		D		E BSC.	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.	In	mm	In	mm
5P	.400	10.16	.295	7.49	.184	4.67	.650	16.51	.545	13.84
5S	.400	10.16	.295	7.49	.185	4.70	.650	16.51	.545	13.84
9P	.500	12.70	.395	10.03	.284	7.21	.750	19.05	.645	16.38
9S	.500	12.70	.395	10.03	.285	7.24	.750	19.05	.645	16.38
15P	.650	16.51	.545	13.84	.434	11.02	.900	22.86	.795	20.19
15S	.650	16.51	.545	13.84	.435	11.05	.900	22.86	.795	20.19
21P	.800	20.32	.695	17.65	.584	14.83	1.050	26.67	.945	24.00
21S	.800	20.32	.695	17.65	.585	14.86	1.050	26.67	.945	24.00
25P	.900	22.86	.795	20.19	.684	17.37	1.150	29.21	1.045	26.54
25S	.900	22.86	.795	20.19	.685	17.40	1.150	29.21	1.045	26.54
31P	1.050	26.67	.945	24.00	.834	21.18	1.300	33.02	1.195	30.35
31S	1.050	26.67	.945	24.00	.835	21.21	1.300	33.02	1.195	30.35
37P	1.200	30.48	1.095	27.81	.984	24.99	1.450	36.83	1.345	34.16
37S	1.200	30.48	1.095	27.81	.985	25.02	1.450	36.83	1.345	34.16
51P	1.550	39.37	1.445	36.70	1.334	33.88	1.800	45.72	1.695	43.05
51S	1.550	39.37	1.445	36.70	1.335	33.91	1.800	45.72	1.695	43.05

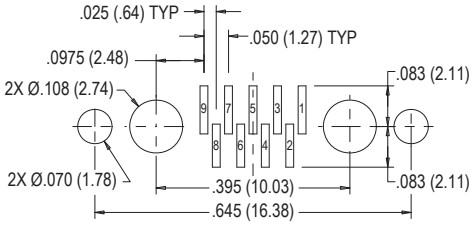




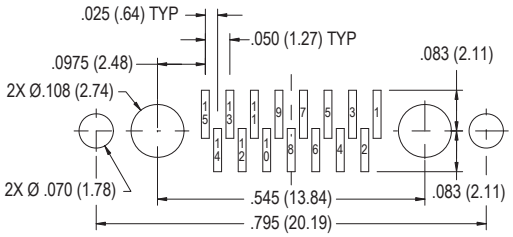
5 Contacts



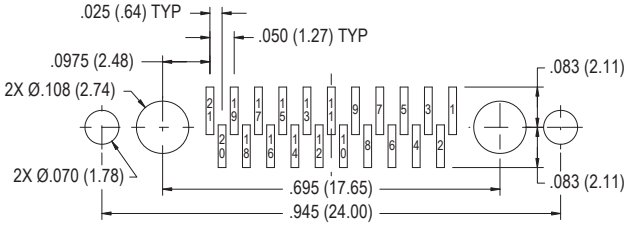
9 Contacts



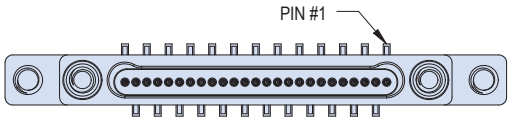
15 Contacts

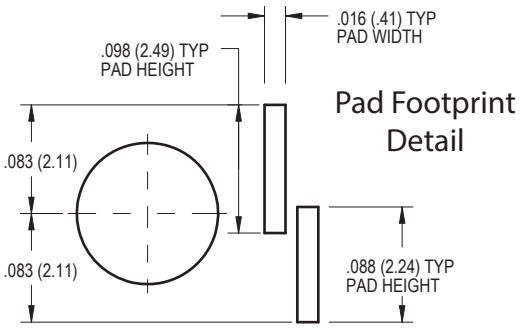


21 Contacts

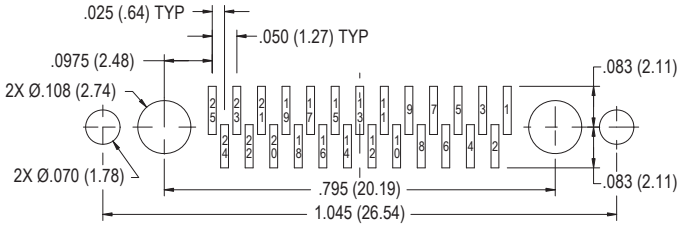


Layouts shown are for connector mounting side of PC Board.

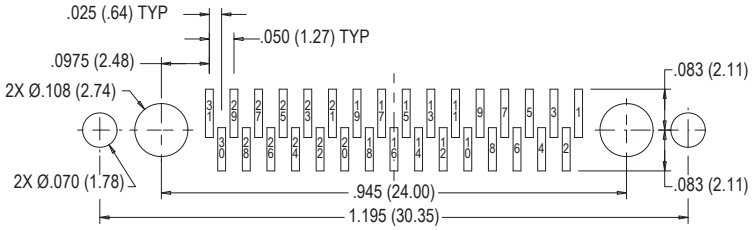




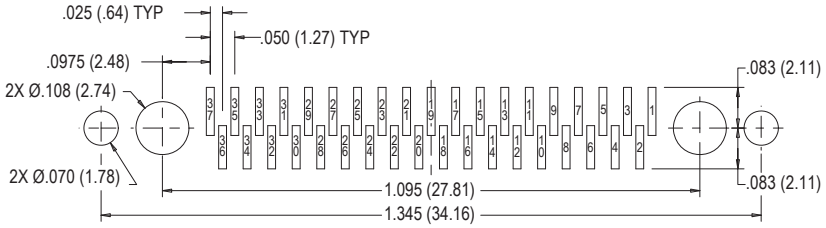
25 Contacts



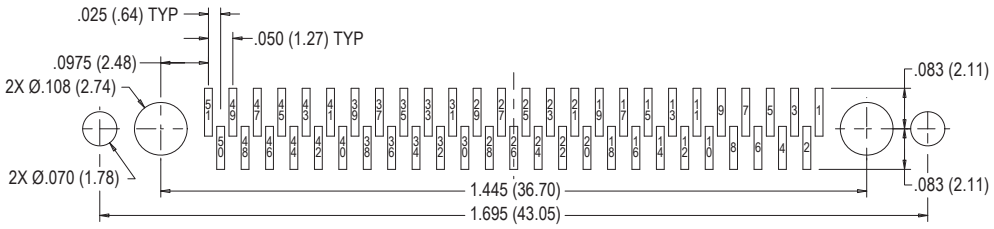
31 Contacts



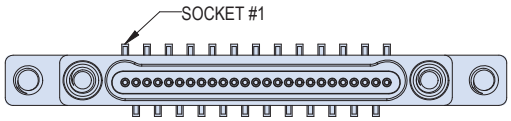
37 Contacts

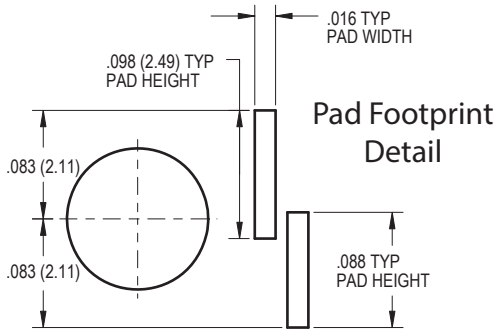


51 Contacts

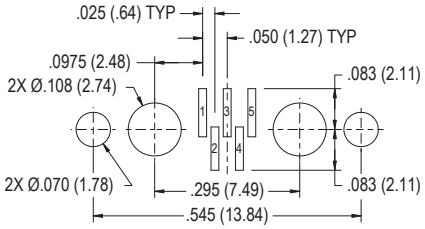


Layouts shown are for connector mounting side of PC Board.

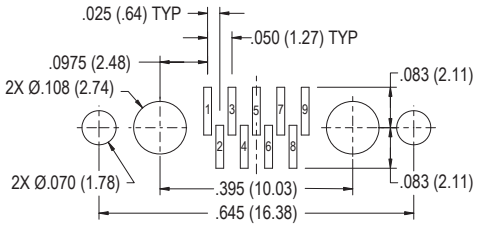




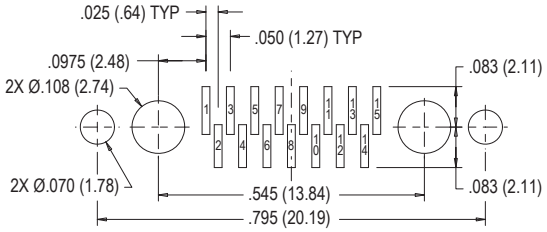
5 Contacts



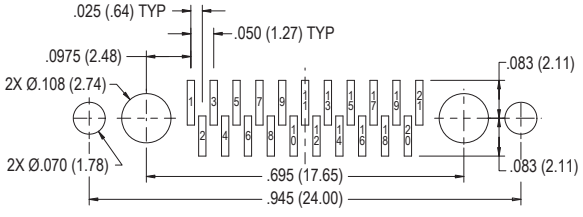
9 Contacts



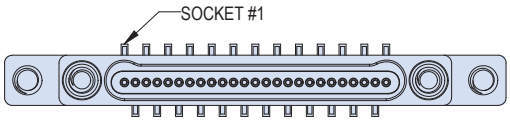
15 Contacts

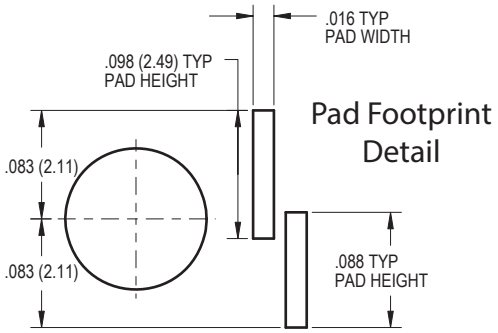


21 Contacts

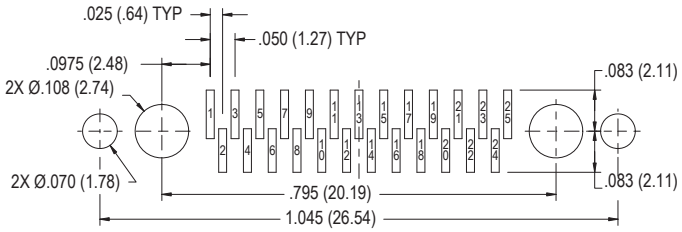


Layouts shown are for connector mounting side of PC Board.

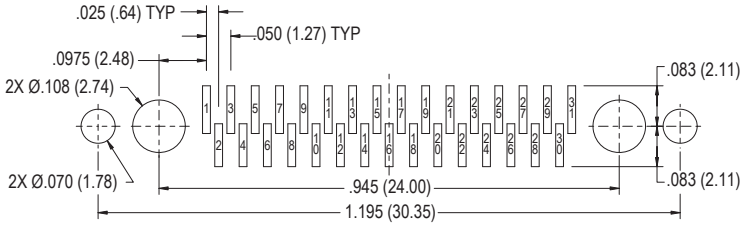




25 Contacts



31 Contacts



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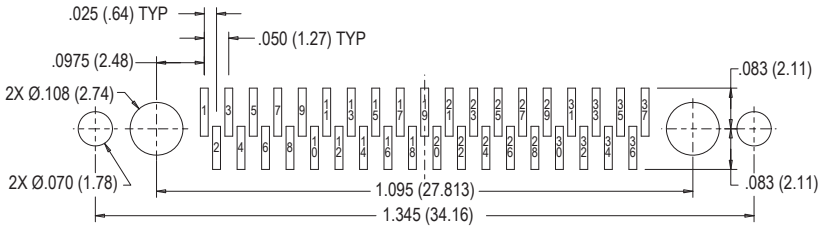
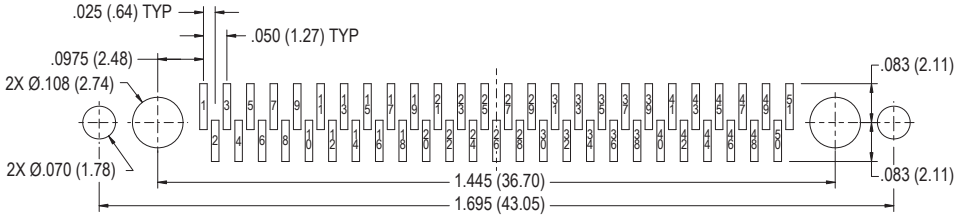


51 Contacts

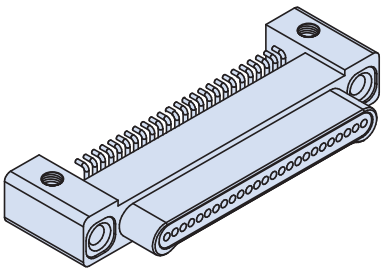


Layouts shown are for connector mounting side of PC Board.

C

PCB Single Row Connectors

Right Angle Surface Mount PCB Connectors
How to Order



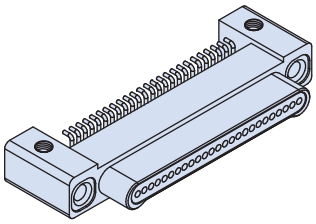
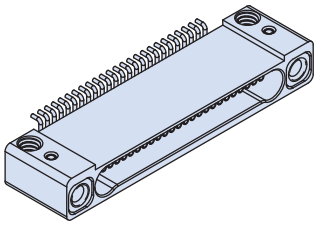
Right Angle SMT PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with #0-80 female threads.

Pre-Tinned PC Tails are coated with Sn60Pb40 or Sn63Pb37 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eight layouts from 5 to 51 contacts. Complies to the requirements of MIL-DTL-32139. These connectors are intermateable with any corresponding Glenair Series 890 single row metal shell nanominiature connector.

C

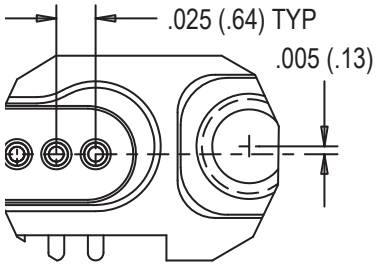
How to Order						
Sample Part Number		**890-012**	**-25P**	**A2**	**-BRS**	**T**
Series	**890-012** = Plug, Pin Contacts, Single Row, Right Angle SMT Nanominiature **890-013** = Receptacle, Socket Contacts, Single Row, Right Angle SMT Nanominiature					
Insert Arrangement/ Contact Type	Plugs (890-012): **5P, 9P, 15P, 21P, 25P, 31P, 37P, 51P,** Receptacles (890-013): **5S, 9S, 15S, 21S, 25S, 31S, 37S, 51S**					
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated					
Termination Type	**BRS** = Board Right Angle Surface Mount					
Hardware	**T** = Female Thread, #0-80					

Plug (Pin) Connector	Receptacle (Socket) Connector
	
T - Female Thread	T - Female Thread

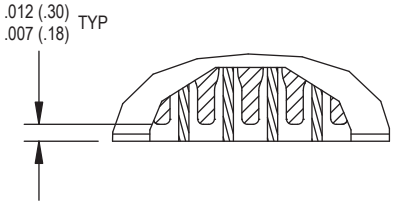
NOTES

1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: gold alloy/unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/1 and MIL-DTL-32139/2

DETAIL A

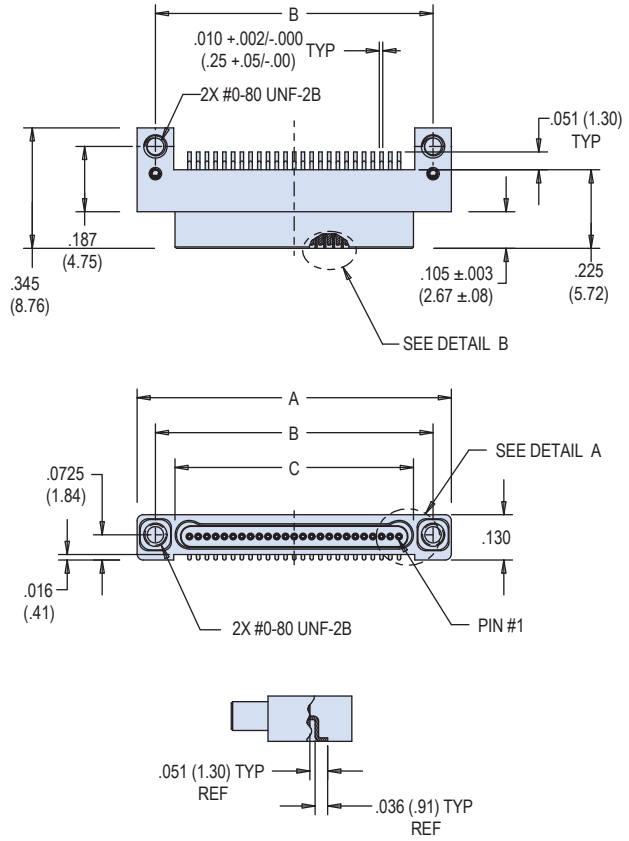


DETAIL B

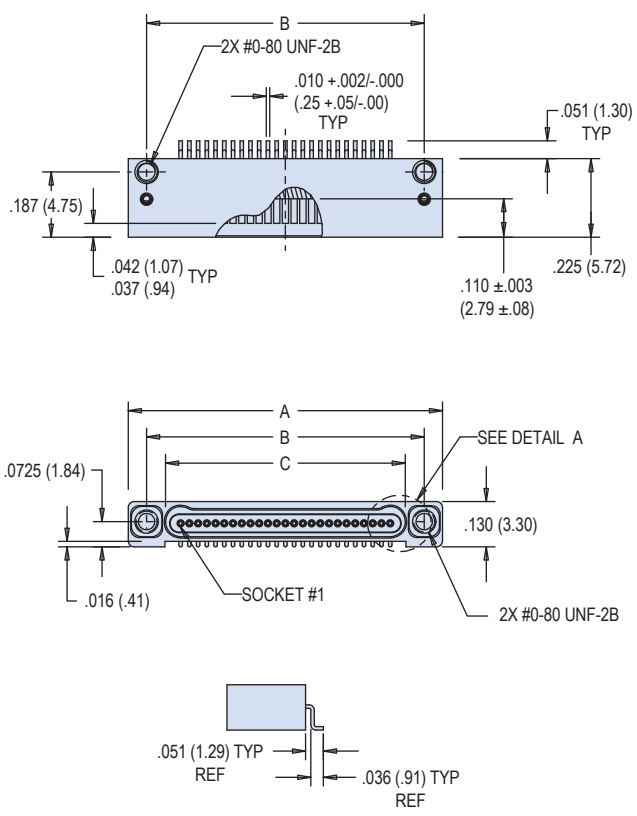


Dimensions

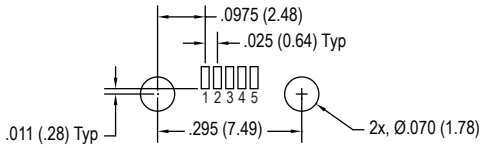
890-012 Plug (Pin) Connectors



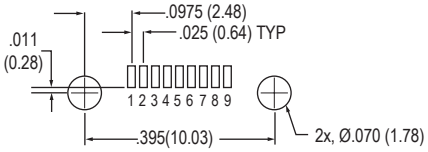
890-013 Receptacle (Socket) Connectors



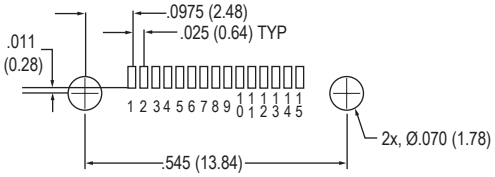
Layout	A		B BSC.		C BSC.	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.
5P	.400	10.16	.295	7.49	.184	4.67
5S	.400	10.16	.295	7.49	.185	4.70
9P	.500	12.70	.395	10.03	.284	7.21
9S	.500	12.70	.395	10.03	.285	7.24
15P	.650	16.51	.545	13.84	.434	11.02
15S	.650	16.51	.545	13.84	.435	11.05
21P	.800	20.32	.695	17.65	.584	14.83
21S	.800	20.32	.695	17.65	.585	14.86
25P	.900	22.86	.795	20.19	.684	17.37
25S	.900	22.86	.795	20.19	.685	17.40
31P	1.050	26.67	.945	24.00	.834	21.18
31S	1.050	26.67	.945	24.00	.835	21.21
37P	1.200	30.48	1.095	27.81	.984	24.99
37S	1.200	30.48	1.095	27.81	.985	25.02
51P	1.550	39.37	1.445	36.70	1.334	33.88
51S	1.550	39.37	1.445	36.70	1.335	33.91



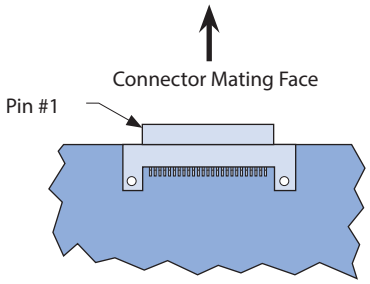
5 Contacts

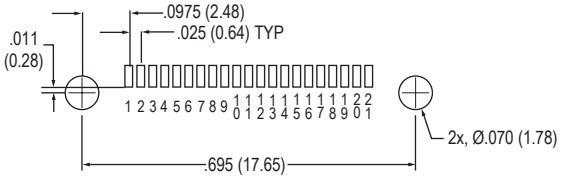


9 Contacts

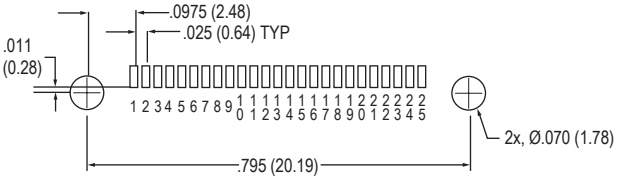


15 Contacts

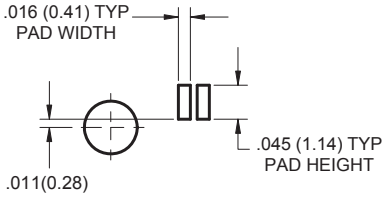




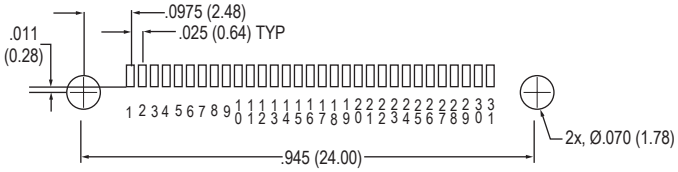
21 Contacts



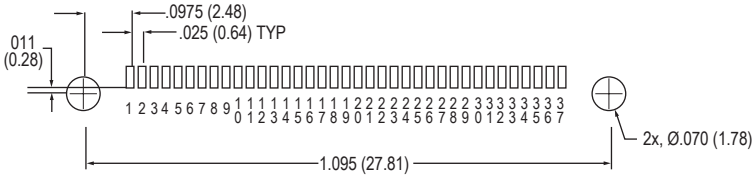
25 Contacts



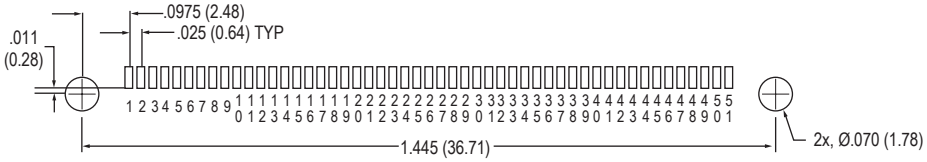
Pad Footprint
Detail



31 Contacts



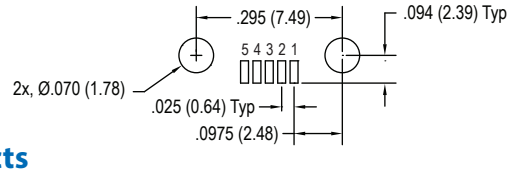
37 Contacts



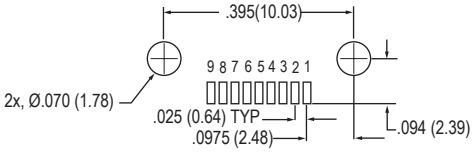
51 Contacts

Layouts shown are for connector mounting side of PC Board.

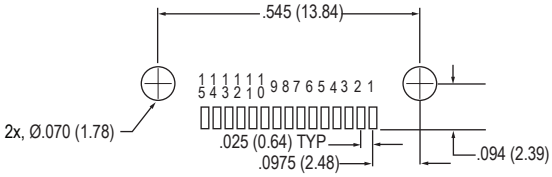
5 Contacts

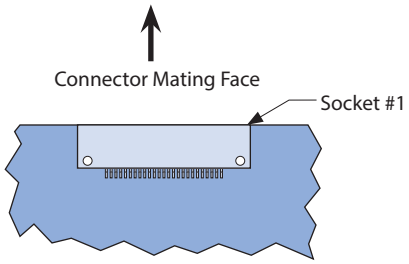


9 Contacts

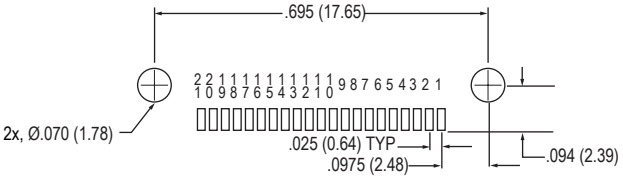


15 Contacts





21 Contacts



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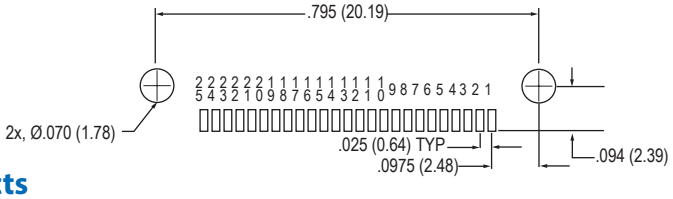
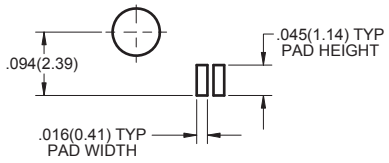
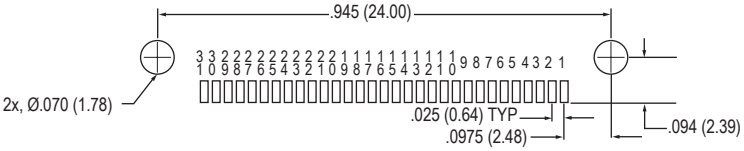




Pad Footprint
Detail

31 Contacts



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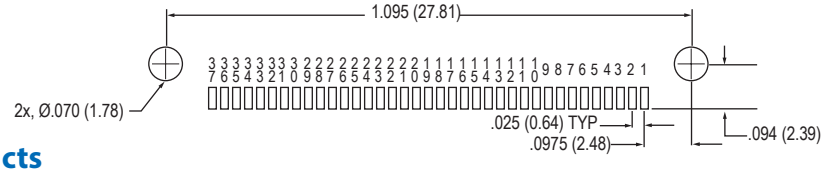

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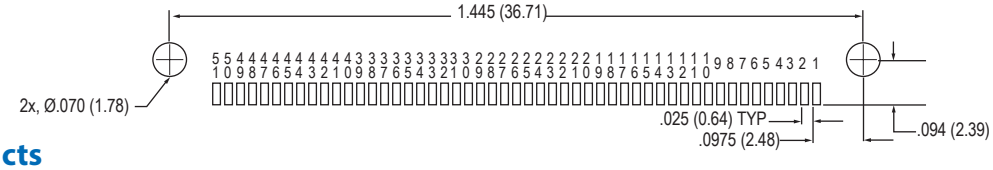
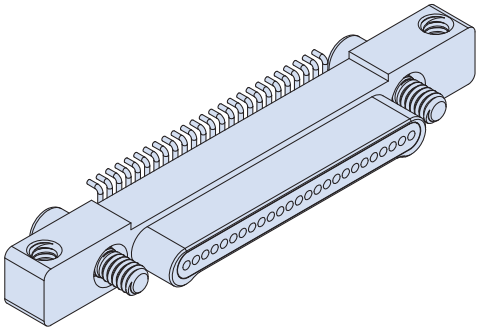


Layouts shown are for connector mounting side of PC Board.

PCB Single Row Connectors

Right Angle Surface Mount PCB Connectors with Jackscrews - How to Order



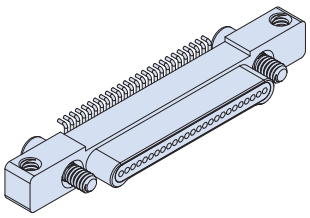
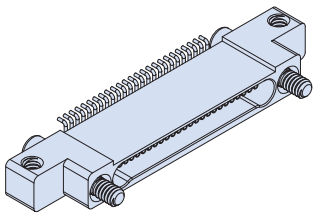
Right Angle SMT PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with #0-80 female threads and #0-80 jackscrew threads.

Pre-Tinned PC Tails are coated with Sn60Pb40 or Sn63Pb37 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eight layouts from 5 to 51 contacts. These connectors are intermateable with any corresponding Glenair Series 890 single row metal shell nanominiature connectors.

C

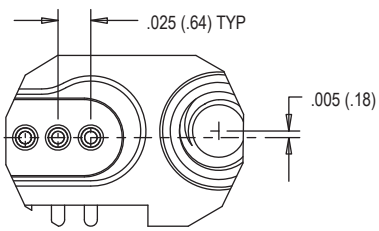
How to Order						
Sample Part Number		**890-019**	**-25P**	**A2**	**-BRS**	**J**
Series	**890-019** = Right Angle, Surface Mount PCB Plug **890-020** = Right Angle, Surface Mount PCB Receptacle					
Insert Arrangement/ Contact Type	Plugs (890-019): **5P, 9P, 15P, 21P, 25P, 31P, 37P, 51P,** Receptacles (890-020): **5S, 9S, 15S, 21S, 25S, 31S, 37S, 51S**					
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **S** = Stainless Steel Shell, Passivated **T** = Titanium Shell, Unplated					
Termination Type	**BRS** = Board Right Angle Surface Mount					
Hardware	**J** = Hex Head Jackscrew					

Plug (Pin) Connector	Receptacle (Socket) Connector
	
J - Jackscrew	J - Jackscrew

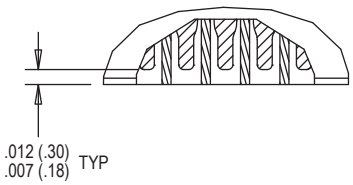
NOTES

1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: gold alloy/unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/1 and MIL-DTL-32139/2

DETAIL A



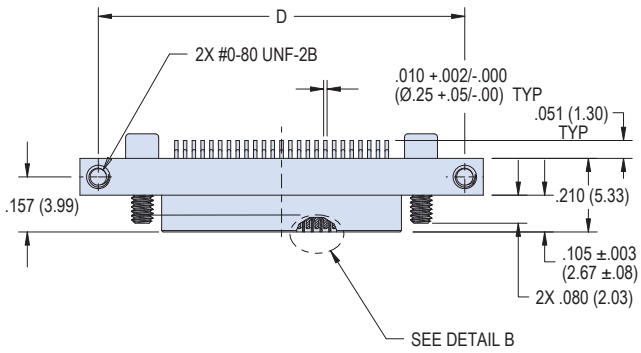
DETAIL B

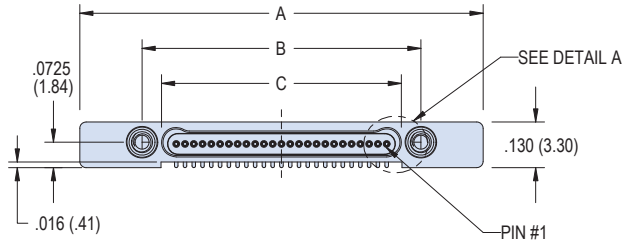


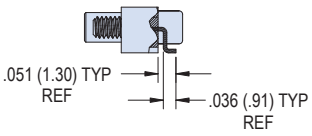
Right Angle Surface Mount PCB Connectors with Jackscrews - Dimensions

Dimensions

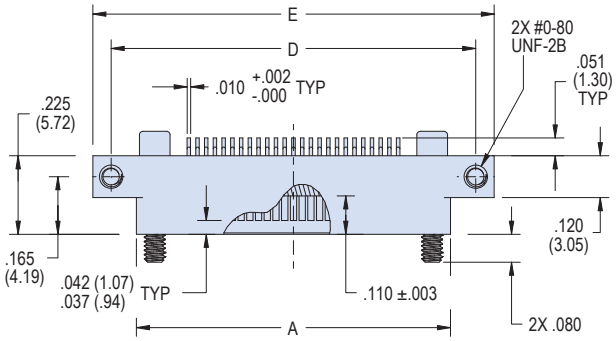
890-019 Plug (Pin) Connectors

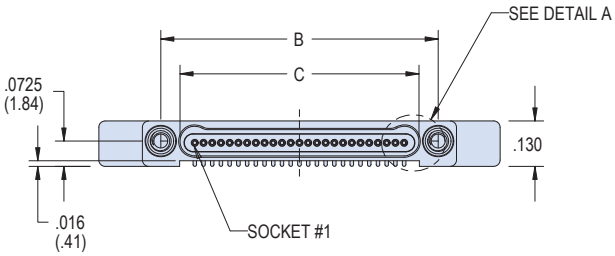


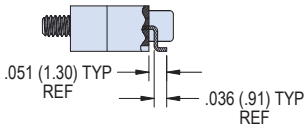




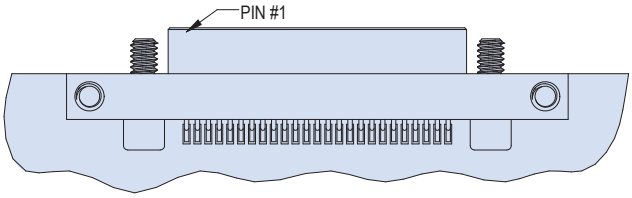
890-020 Receptacle (Socket) Connectors

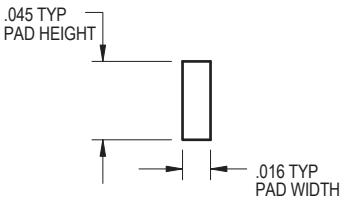






Layout	A		B BSC.		C BSC.		D BSC		E	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.	In	mm	In	mm
5P	.650	16.51	.295	7.49	.184	4.67	.545	13.84	-	-
5S	.400	10.16	.295	7.49	.185	4.70	.545	13.84	.650	16.51
9P	.750	19.05	.395	10.03	.284	7.21	.645	16.38	-	-
9S	.500	12.70	.395	10.03	.285	7.24	.645	16.38	.750	19.05
15P	.900	22.86	.545	13.84	.434	11.02	.795	20.19	-	-
15S	.650	16.51	.545	13.84	.435	11.05	.795	20.19	.900	22.86
21P	1.050	26.67	.695	17.65	.584	14.83	.945	24.00	-	-
21S	.800	20.32	.695	17.65	.585	14.86	.945	24.00	1.050	26.67
25P	1.150	29.21	.795	20.19	.684	17.37	1.045	26.54	-	-
25S	.900	22.86	.795	20.19	.685	17.40	1.045	26.54	1.150	29.21
31P	1.300	33.02	.945	24.00	.834	21.18	1.195	30.35	-	-
31S	1.050	26.67	.945	24.00	.835	21.21	1.195	30.35	1.300	33.02
37P	1.450	36.83	1.095	27.81	.984	24.99	1.345	34.16	-	-
37S	1.200	30.48	1.095	27.81	.985	25.02	1.345	34.16	1.450	36.83
51P	1.800	45.72	1.445	36.70	1.334	33.88	1.695	43.05	-	-
51S	1.550	39.37	1.445	36.70	1.335	33.91	1.695	43.05	1.800	45.72

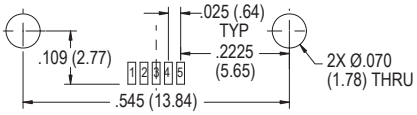




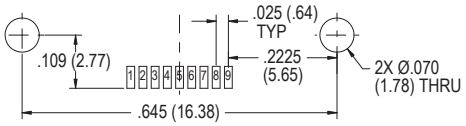
PAD FOOTPRINT DETAIL

C

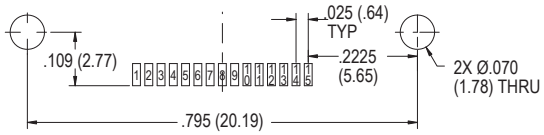
5 Contacts



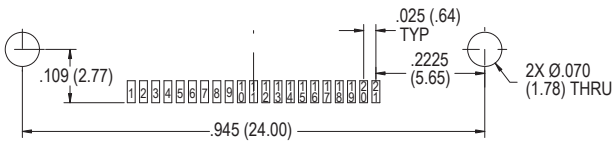
9 Contacts



15 Contacts



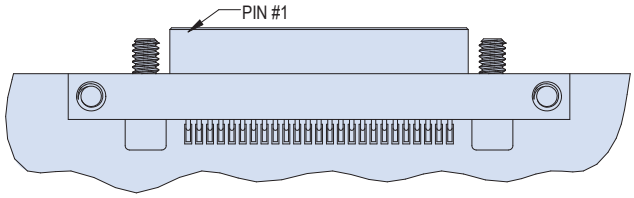
21 Contacts

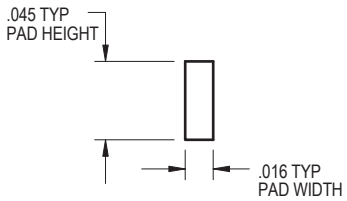


Layouts shown are for connector mounting side of PC Board.

PCB Single Row Connectors

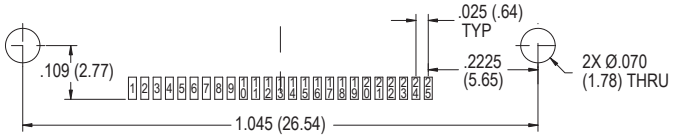
Right Angle Surface Mount PCB Connectors with Jackscrews - Plug Footprints



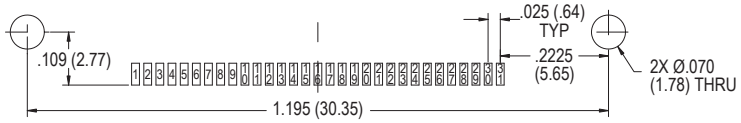


PAD FOOTPRINT DETAIL

25 Contacts



31 Contacts



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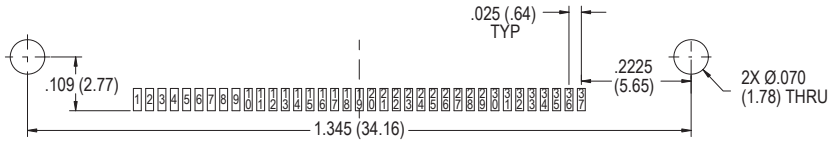
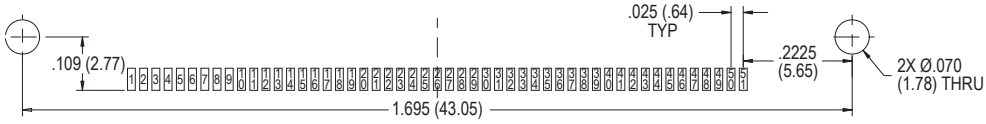
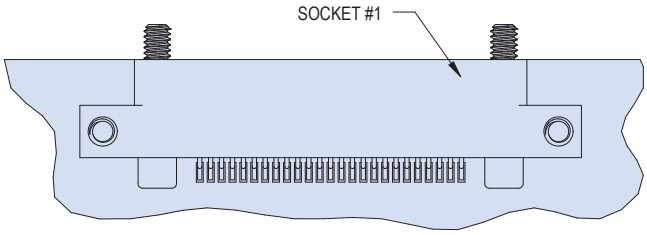
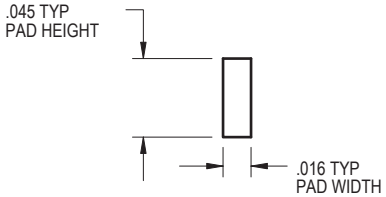


51 Contacts



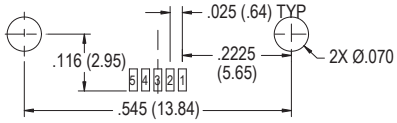
Layouts shown are for connector mounting side of PC Board.





PAD FOOTPRINT DETAIL

5 Contacts



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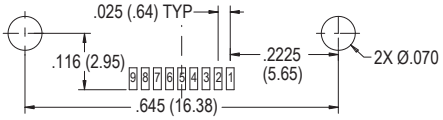

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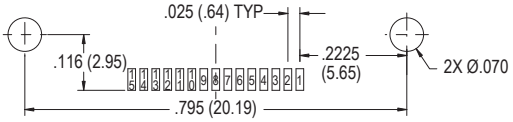

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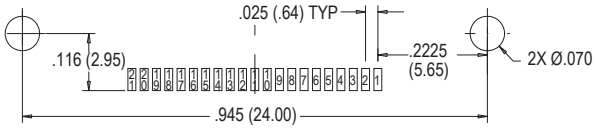
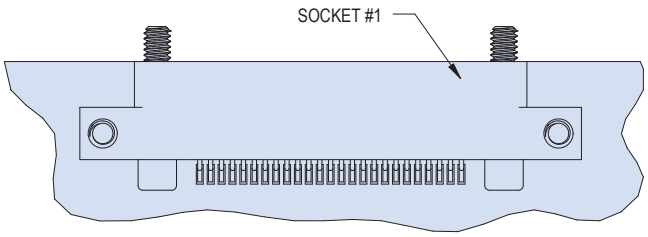
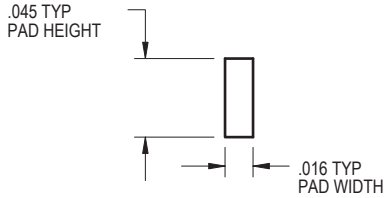
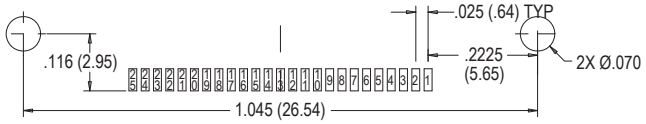




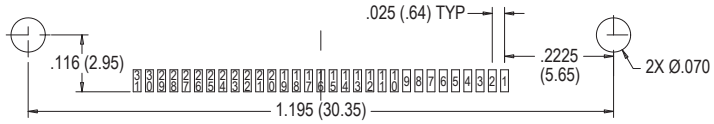


PAD FOOTPRINT DETAIL

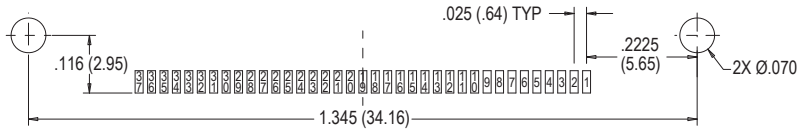
25 Contacts



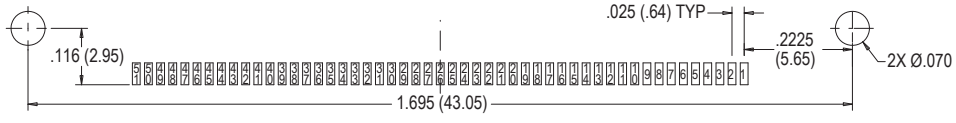
31 Contacts



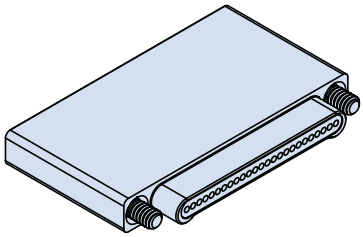
37 Contacts



51 Contacts



C



Glenair Connector Savers protect expensive connector contacts with Glenair Connector Savers. Once installed, this device will reduce wear on vital contacts and eliminate downtime due to fouled or damaged connectors.

How To Order					
Sample Part Number		**890-016**	**-15**	**US**	**P1**
Series	**890-016** = Single Row, Connector Saver				
Number of Contacts	**5**, **9**, **15**, **21**, **25**, **31**, **37**, **51**				
Connector Type	**US** = Plug to Receptacle One Piece Shell				
Hardware	**P1** = Permanently Installed Jackscrew/Jackpost				

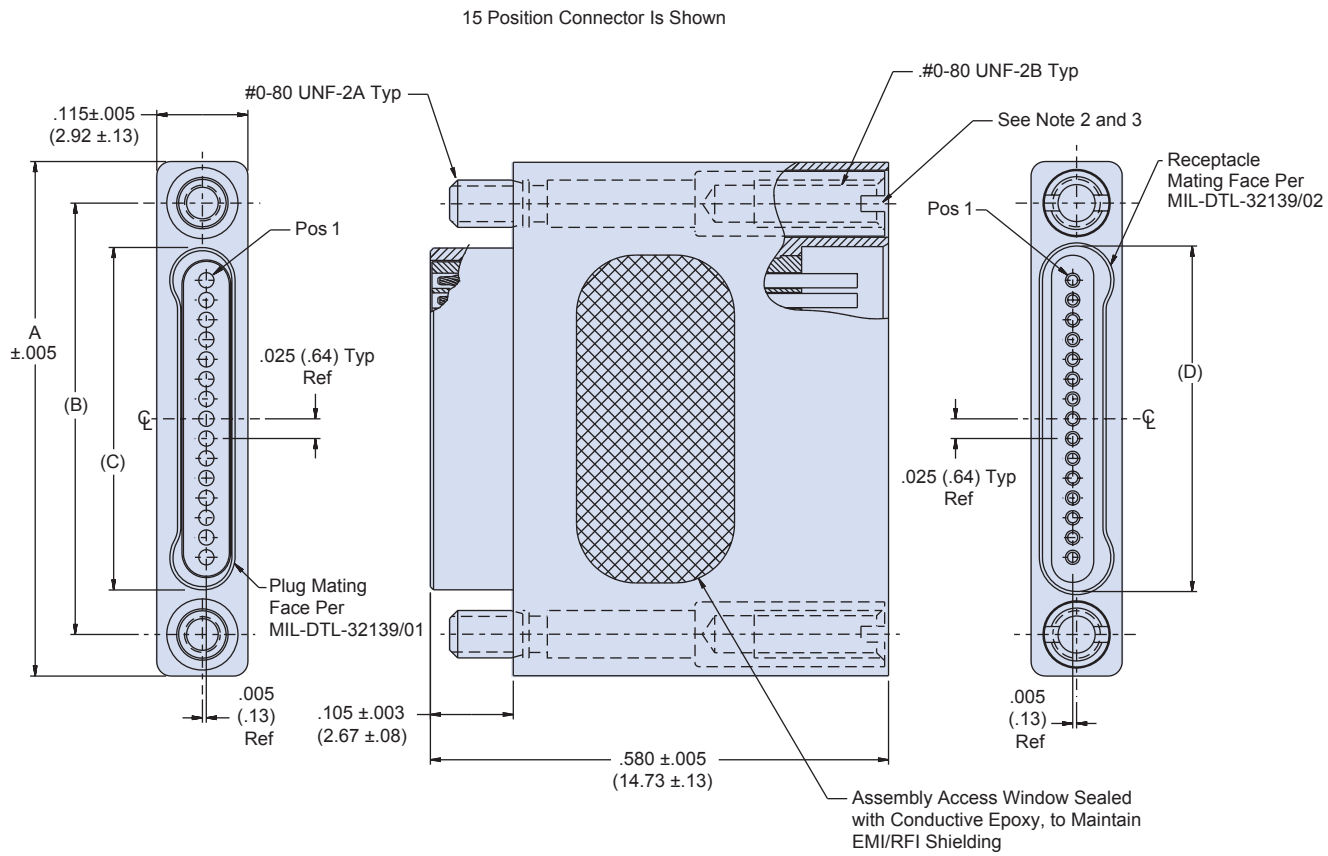
C

NOTES

1. Jackscrew/jackpost head has a slot drive. Use a slotted blade miniature screwdriver with a .080" wide blade to turn.
2. Jackscrew/jackpost recommended torque: 0.5 - 1.0 In-lbs.
3. Materials/finishes

- Aluminum alloy, electroless nickel plated per SAE-AMS-C-26074, Class 3 or 4, Grade B
- Socket insulator - liquid crystal polymer (LCP) per MIL-M-24519 or ASTM D5138
- Plug insulator - liquid crystal polymer (LCP) per MIL-M-24519 or ASTM D5138
- Potting material - hysol
- Plug contact - gold alloy/unplated
- Socket contact - gold alloy/unplated
- Wire - 30 AWG gold plated copper alloy (not shown)
- Emerson & Cuming conductive epoxy
- Jackscrew/jackpost combination - corrosion resistant steel I.A.W. ASTM A484 and ASTM A582
- Jackscrew retainer - corrosion resistant steel I.A.W. ASTM A484 and ASTM A582 (Not Shown)

Table I: Single Row Nano Connector Saver Dimensions

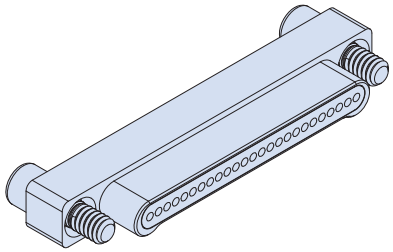


Number Of Contacts	A	B Ref	C Ref	D Ref
5	0.400	0.295	0.184	0.185
9	0.500	0.395	0.284	0.285
15	0.650	0.545	0.434	0.435
21	0.800	0.695	0.584	0.585
25	0.900	0.795	0.684	0.685
31	1.050	0.945	0.834	0.835
37	1.200	1.095	0.984	0.985
51	1.550	1.445	1.334	1.335

SERIES 89

PCB Single Row Connectors

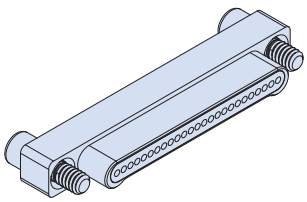
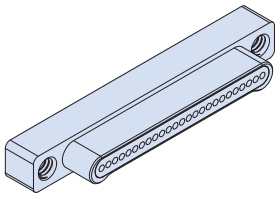
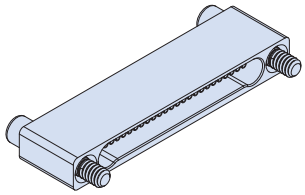
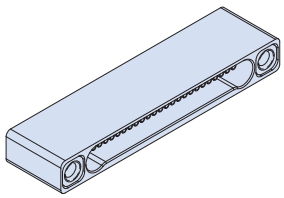
Plug and Receptacle Shorting Connectors
How to Order



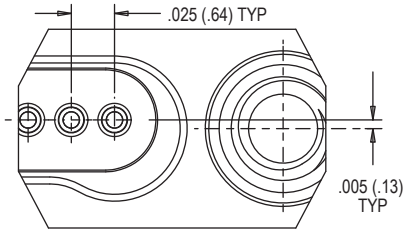
Nano Plug, Single Row Shorting Connectors feature gold alloy TwistPin contacts. These nanomimiature shorting connectors provide ESD protection for sensitive instrumentation. Available with #0-80 female threads or #0-80 jackscrew threads.

Choose Aluminum, Titanium or Stainless Steel Shells in eight layouts from 5 to 51 contacts. These connectors are intermateable with any corresponding Glenair Series 890 single row metal shell nanominiature connector.

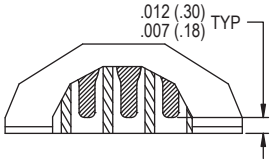
How to Order						
Sample Part Number		**890-037**	**-25P**	**A2**	**-C**	**-J**
Series	**890-037** = Shorting Plug **890-038** = Shorting Receptacle					
Insert Arrangement/ Contact Type	Plugs (890-037): **5P, 9P, 15P, 21P, 25P, 31P, 37P, 51P,** Receptacles (890-038): **5S, 9S, 15S, 21S, 25S, 31S, 37S, 51S**					
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **S** = Stainless Steel Shell, Passivated **T** = Titanium Shell, Unplated					
Shorting Combination	**C** = All Contacts Shorted Together, Isolated from the Shell **G** = All Contacts Shorted Together, and Grounded to the Shell					
Hardware	**J** = Hex Head Jackscrew **T** = Female Thread* * Female threads are available on plug connectors only if the shell material is titanium or stainless steel.					

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew	T - Female Thread	J - Jackscrew	T - Female Thread

DETAIL A



DETAIL B

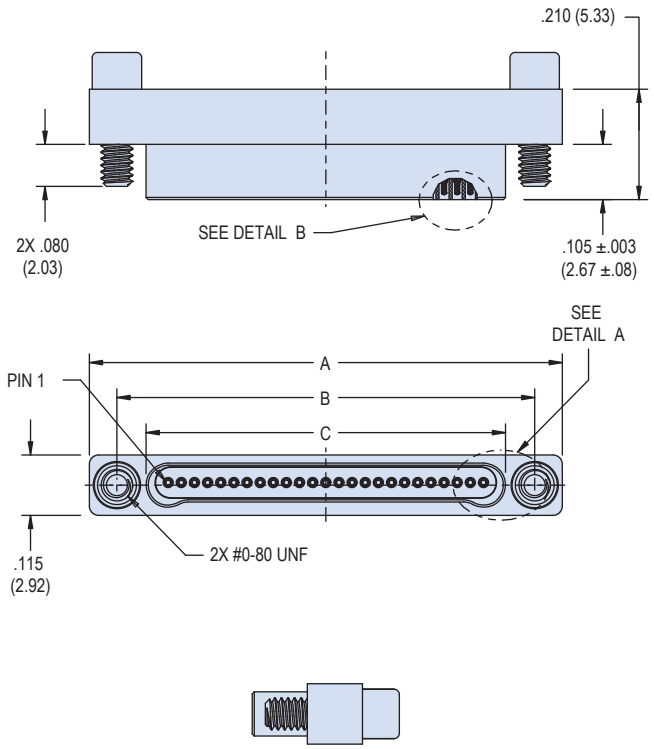


NOTES

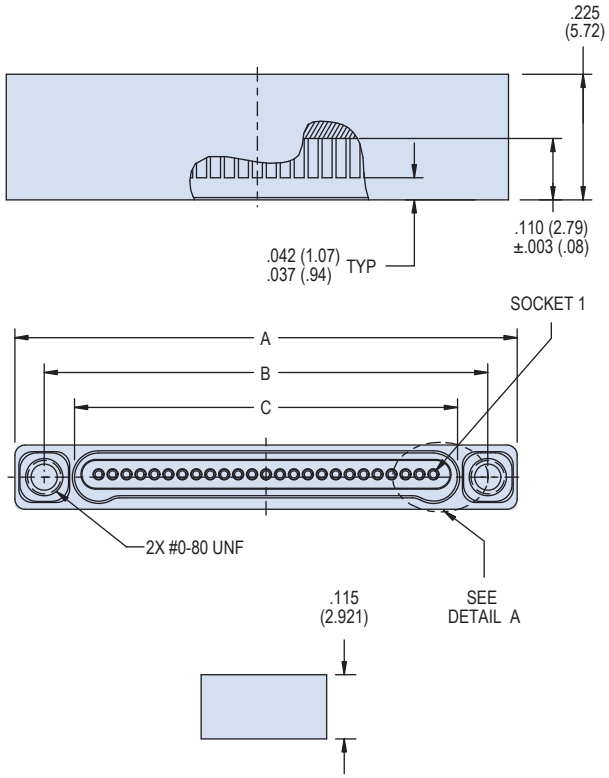
1. Inspect and Test IAW MIL-DTL-32139
2. Interface dimensions per MIL-DTL-32139/1 and MIL-DTL-32139/2
3. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: Gold alloy/unplated
   - Wire: single strand copper wire, uninsulated, with gold plating, 30 AWG
   - Hardware: stainless steel, passivated

Dimensions

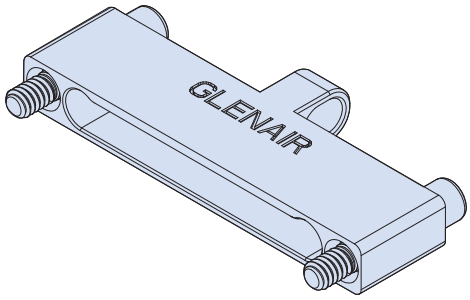
890-037 Plug (Pin) Connectors



890-038 Receptacle (Socket) Connectors



Layout	A		B BSC.		C BSC.	
	In.	mm.	In.	mm.	In.	mm.
5P	.400	10.16	.295	7.49	.184	4.67
5S	.400	10.16	.295	7.49	.185	4.70
9P	.500	12.7	.395	10.03	.284	7.21
9S	.500	12.7	.395	10.03	.285	7.24
15P	.650	16.51	.545	13.84	.434	11.02
15S	.650	16.51	.545	13.84	.435	11.05
21P	.800	20.32	.695	17.65	.584	14.83
21S	.800	20.32	.695	17.65	.585	14.86
25P	.900	22.86	.795	20.19	.684	17.37
25S	.900	22.86	.795	20.19	.685	17.40
31P	1.050	26.67	.945	24.00	.834	21.18
31S	1.050	26.67	.945	24.00	.835	21.21
37P	1.200	30.48	1.095	27.81	.984	24.99
37S	1.200	30.48	1.095	27.81	.985	25.02
51P	1.550	39.37	1.445	36.70	1.334	33.88
51S	1.550	39.37	1.445	36.70	1.335	33.91



Glenair EMI Covers offer the same EMI protection as mated connectors, from electro magnetic interferance, as a result of electromagnetic induction emitted from intended external sources such as radio transmissions or electromagnetic radiation from unintentional sources such as electric power transmission lines. These covers feature a solid one piece construction machined from your choice of aluminum, stainless steel or titanium. Standard aluminum finishes include cadmium or electroless nickel plating. Available with or without lanyard attachment. Covers are in accordance with MIL-DTL-32139/1 and MIL-DTL-32139/2

How to Order								
Sample Part Number	**899-010**	**-25**	**P**	**A2**	**J**	**F**	**3**	**-126**
Series	**899-010** = EMI Single Row, Nanominiature Cover							
Insert Arrangement	**5**, **9**, **15**, **21**, **25**, **31**, **37**, **51**							
Body Style	**P** = Plug **S** = Receptacle							
Cover Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **S** - Stainless Steel Shell, Passivated **A2** - Aluminum Shell, Electroless Nickel Plating **T** - Titanium Shell, Unplated							
Hardware	**J** = Jacksrew **T** = Female Thread Female threads are available on plug covers only if cover material is titanium or stainless steel.							
Attachment Type	**N** = No Lanyard **K** = No Lanyard/No Eyelet Attachment Point **F** = Stainless Steel Wire Rope, Nylon jacket, Black, Ø .034 **G** = Flexible Dacron Cord, MIL-DTL-5040 Type 1 Ø.0625, Natural **H** = Stainless Steel Wire Rope, Fluoropolymer Jacket, Black, Ø .034							
Attachment Length	Attachment Length in Inches (Omit for No Lanyard)							
Attachment Diameter	**-098**, **-126**, **-140**, **-156**, **-167**, **-188**, **-197**, **-218** For Dimensions See Table I; (Omit for No Lanyard)							

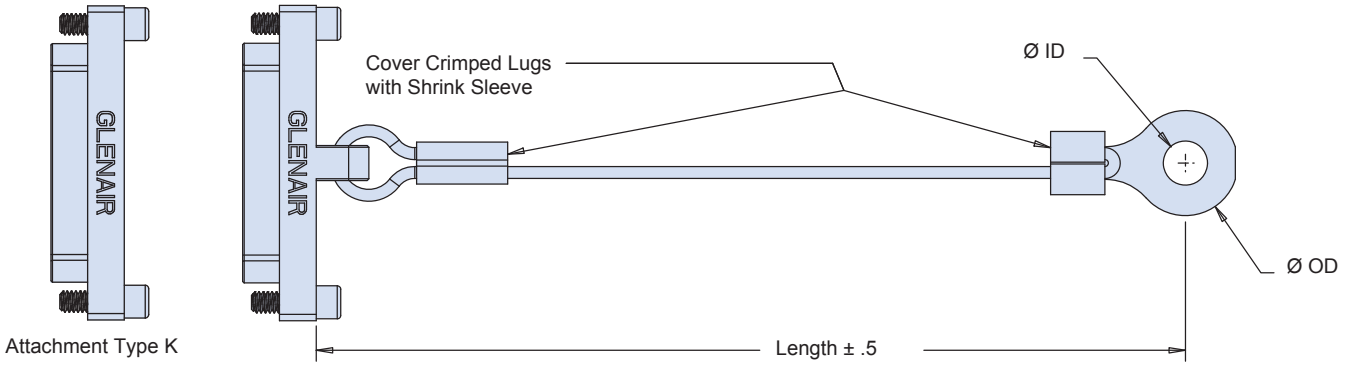
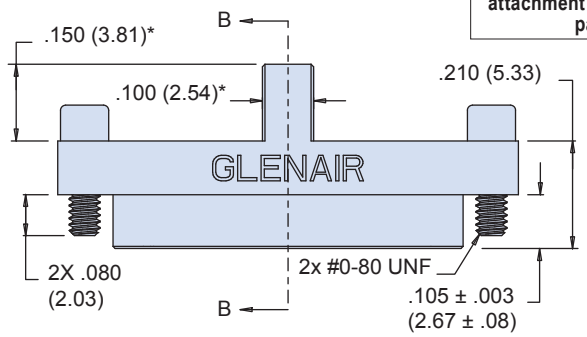


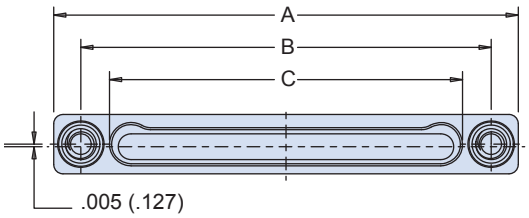
Table I: Attachment Diameter								
Dash No.	**-098**	**-126**	**-140**	**-156**	**-167**	**-188**	**-197**	**-218**
ID	Ø .098 (2.49)	Ø .126 (3.20)	Ø .140 (3.56)	Ø .156 (3.96)	Ø .167 (4.24)	Ø .188 (4.78)	Ø .197 (5.00)	Ø .223/.218 (5.66/5.54)
OD	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)

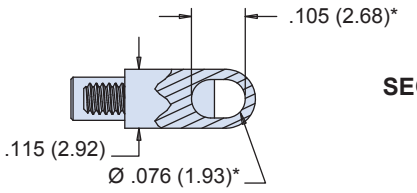
Dimensions

Plug Cover

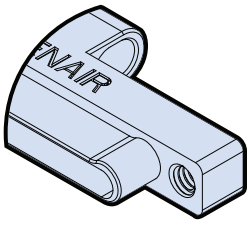
* Dimensions are not applicable if attachment type "K" is chosen in part number.





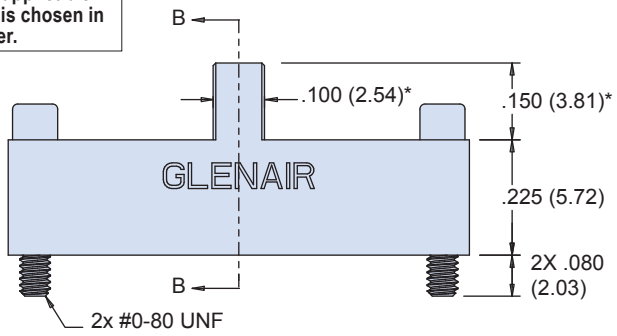


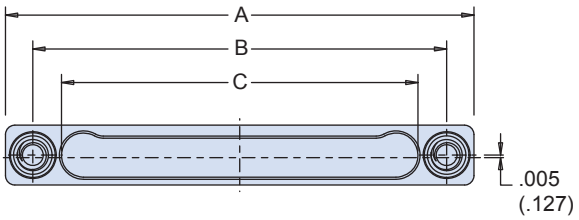
SECTION B-B
Plug

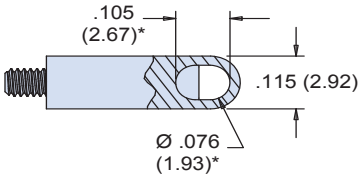


Plug with "T" Female Thread Option
Titanium or Stainless Steel Shells Only

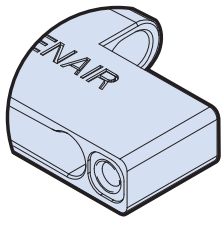
Receptacle Cover







SECTION B-B
Receptacle



Receptacle With "T" Female Thread Option

Size	A	B BSC.	C BSC.	Size	A	B BSC.	C BSC.
5P	.400 (10.16)	.295 (7.493)	.184 (4.67)	25P	.900 (22.86)	.795 (20.193)	.684 (17.37)
5S	.400 (10.16)	.295 (7.493)	.185 (4.70)	25S	.900 (22.87)	.795 (20.193)	.685 (17.40)
9P	.500 (12.7)	.395 (10.033)	.284 (7.21)	31P	1.050 (26.67)	.945 (24.00)	.834 (21.18)
9S	.500 (12.7)	.395 (10.033)	.285 (7.24)	31S	1.050 (26.67)	.945 (24.00)	.835 (21.21)
15P	.650 (16.51)	.545 (13.84)	.434 (11.02)	37P	1.200 (30.48)	1.095 (27.81)	.984 (24.99)
15S	.650 (16.51)	.545 (13.84)	.435 (11.05)	37S	1.200 (30.48)	1.095 (27.81)	.985 (25.02)
21P	.800 (20.32)	.695 (17.65)	.584 (14.83)	51P	1.550 (39.37)	1.445 (36.70)	1.334 (33.88)
21S	.800 (20.32)	.695 (17.65)	.585 (14.86)	51S	1.550 (39.37)	1.445 (36.70)	1.335 (33.91)

SERIES 171

AlphaLink® SL Flex Jumpers

The easiest and fastest way to incorporate flexible circuit cabling in your high-performance application

Glenair AlphaLink® SL I/O-to-board jumper assemblies are cataloged according to I/O connector type. Glenair currently offers six families of AlphaLink® jumpers for Series 801 and 804 Mighty Mouse, Series 79 Micro-Crimp, MWDM Micro-D, Series 89 Nanominiature circular and rectangular, and our nanominiature Series 88 SuperFly. Flex-to-board solutions available in each family are designed to optimize weight and package size reduction as well as maintain electrical performance equivalent with I/O connector performance*.

* Contacts mapped 1-to-1 from I/O to board level connector (unused board level contacts not connected). For alternative wire schedules, please consult factory.

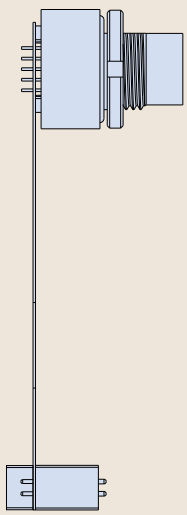
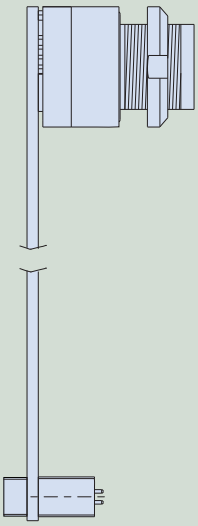
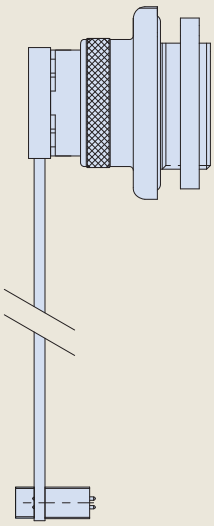
Easy-to-Order, Ready-to-Use

- **Solderless connection allows fast yet rugged PC board mating**
- **Easy ordering of high-performance I/O connector-to-board flex jumpers**
- **Chemically etched, copper-clad polyimide flex circuits offer excellent temperature tolerance, dimensional stability, and reduced size and weight**
- **Designed for optimal electrical performance, including matched-impedance applications**
- **Ideal for rapid prototyping**
- **Superior electrical and mechanical performance compared to other cabling options**
- **A high-availability, fast-turn catalog solution**

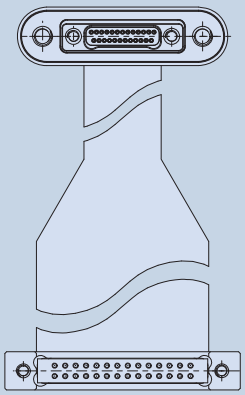
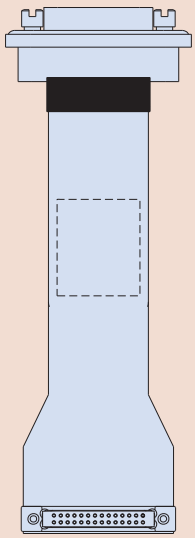
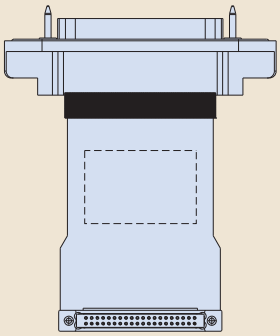
SERIES 171

AlphaLink® SL Flex Jumpers selection guide

Circular connector family selection guide

Nano Circular	Series 88 SuperFly	Series 80 Mighty Mouse
		
Glenair Series 89 Circular Nanominiature connectors with breakaway or threaded coupling in 6 contact arrangements, terminated with rugged polyimide-based flex to high-performance AlphaLink® SL board level connectors.	Glenair Series 88 SuperFly connectors with quick-disconnect or threaded coupling in 7 contact arrangements, terminated with rugged polyimide-based flex to high-performance AlphaLink® SL board level connectors.	Glenair Series 801 double-start ACME thread and Series 804 quick-disconnect Mighty Mouse receptacles in 8 contact arrangements terminated with rugged polyimide-based flex to high-performance AlphaLink® SL board level connectors.

Rectangular connector family selection guide

Rectangular Nano	MWDM Type Micro-D	Series 79 Micro-Crimp
		
Glenair Series 89 Rectangular Nanominiature rear-panel-mount plugs or receptacles in 7 contact arrangements, terminated with rugged polyimide-based flex to high-performance AlphaLink® SL board level connectors.	High-reliability Micro-D MWDM type rectangular connectors in 7 contact arrangements, terminated with rugged polyimide-based flex to high-performance AlphaLink® SL board level connectors.	Glenair Series 79 Micro-Crimp advanced-performance rectangular connectors in 7 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink® board level connectors.

nano miniature™

SERIES 89

Dual Row Connectors

Product Selection Guide

Glenair®

D

nano miniature™

SERIES 89

Dual Row Connectors

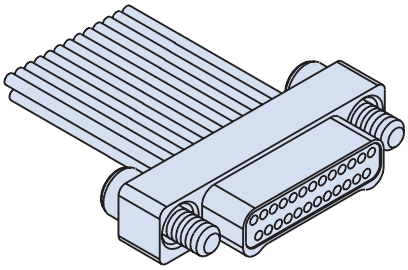
Product Selection Guide

Glenair®

D

Dual Row Connectors

Plug and Receptacle Connectors with Insulated Wire
How to Order



Nanominiature Connectors with Insulated Wire feature gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. These nanominiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. Wire gages #30 and #32 AWG.

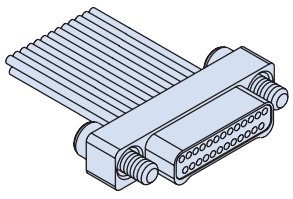
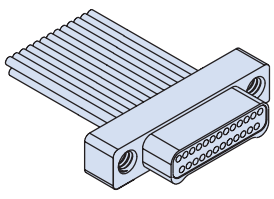
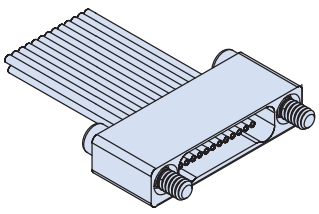
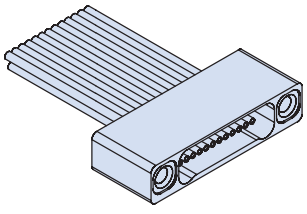
TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

How to Order

Sample Part Number	891-002	-25S	A2	-0	B	7	-12	J

Series	**891-001** = Plug **891-002** = Receptacle
Insert Arrangement/ Contact Type	Plugs (891-001): **9P, 15P, 21P, 25P, 31P, 37P, 41P, 51P, 65P, 69P, 85P** Receptacles (891-002): **9S, 15S, 21S, 25S, 31S, 37S, 41S, 51S, 65S, 69S, 85S**
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated
Wire Gage	**0** = #30 AWG **2** = #32 AWG (Wire Type 'B' Only)
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)
Wire Color Code	**1** = White **2** = Yellow **7** = 10 Color Repeating (Wire Type A is striped, Types B & C are solid colors)
Wire Length	**12** = 12.00 + 1.00 inches; as required in one inch increments.
Hardware	**J** = Hex Head Jackscrew **T** = Female Threads* *Female threads are available on plug connectors only if the shell material is titanium or stainless steel.

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option

NOTES

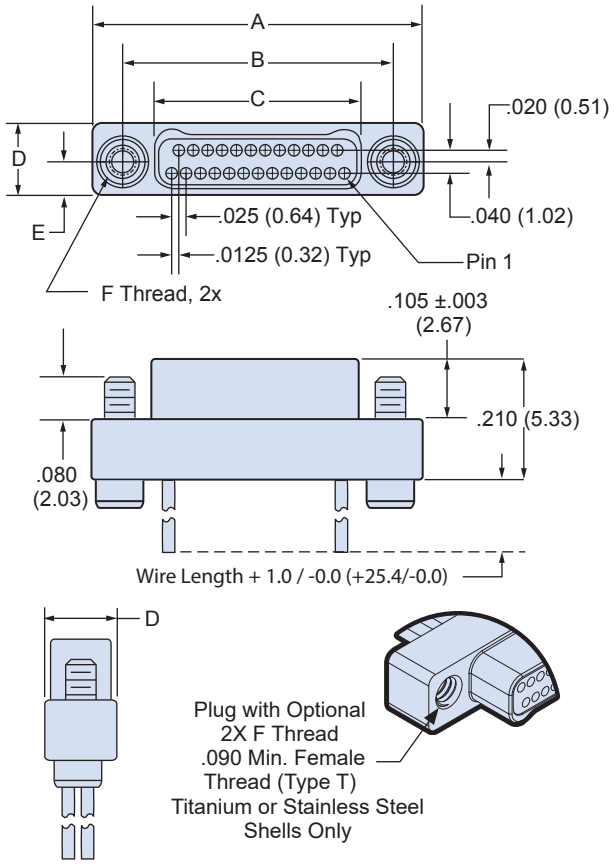
1. Material and Finishes:
   - Shell: see part number break down
   - insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Wire: see part number break down
   - Hardware: passivated stainless steel
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 and /4

Dual Row Connectors

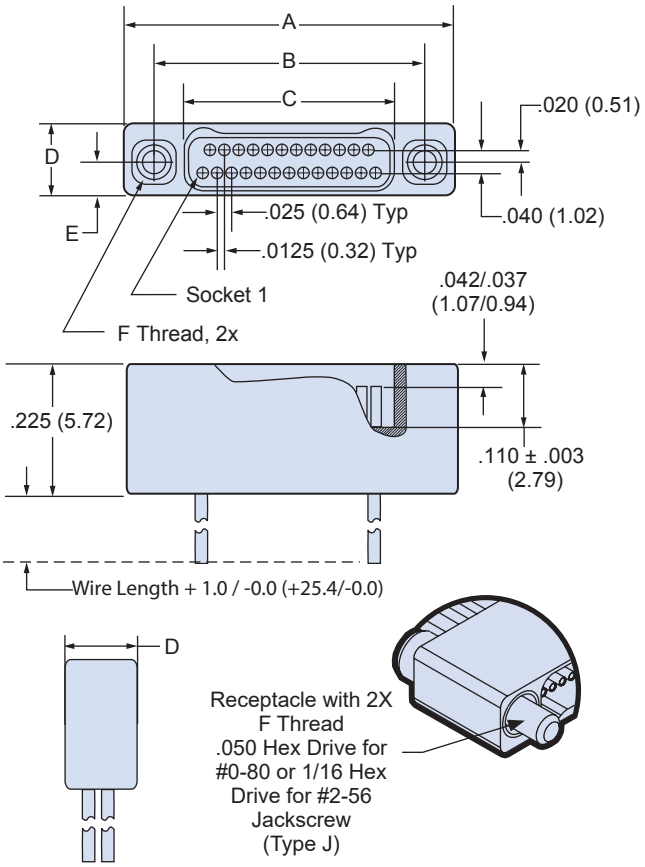
Plug and Receptacle Connectors with Insulated Wire Dimensions

Dimensions

891-001 Plug (pin) Connector



891-002 Receptalcle (Socket) Connector

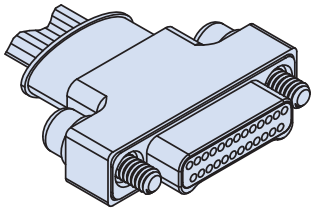


Layout	A		B BSC.		C BSC.		D		E BSC.		F Thread
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.	In. ±.005	mm ±0.13	In.	mm	
9P	.375	9.52	.270	6.86	.160	4.06	.125	3.18	.0575	1.46	#0-80 UNF
9S	.375	9.52	.270	6.86	.163	4.14	.125	3.18	.0575	1.46	#0-80 UNF
15P	.450	11.43	.345	8.76	.235	5.97	.125	3.18	.0575	1.46	#0-80 UNF
15S	.450	11.43	.345	8.76	.238	6.04	.125	3.18	.0575	1.46	#0-80 UNF
21P	.525	13.33	.420	10.67	.310	7.87	.125	3.18	.0575	1.46	#0-80 UNF
21S	.525	13.33	.420	10.67	.313	7.95	.125	3.18	.0575	1.46	#0-80 UNF
25P	.575	14.60	.470	11.94	.360	9.14	.125	3.18	.0575	1.46	#0-80 UNF
25S	.575	14.60	.470	11.94	.363	9.22	.125	3.18	.0575	1.46	#0-80 UNF
31P	.650	16.51	.545	13.84	.435	11.05	.125	3.18	.0575	1.46	#0-80 UNF
31S	.650	16.51	.545	13.84	.438	11.12	.125	3.18	.0575	1.46	#0-80 UNF
37P	.725	18.41	.620	15.75	.510	12.95	.125	3.18	.0575	1.46	#0-80 UNF
37S	.725	18.41	.620	15.75	.513	13.03	.125	3.18	.0575	1.46	#0-80 UNF
41P	.775	19.69	.670	17.02	.560	14.23	.125	3.18	.0575	1.46	#0-80 UNF
41S	.775	19.69	.670	17.02	.563	14.30	.125	3.18	.0575	1.46	#0-80 UNF
51P	.900	22.86	.795	20.19	.685	17.40	.125	3.18	.0575	1.46	#0-80 UNF
51S	.900	22.86	.795	20.19	.688	17.47	.125	3.18	.0575	1.46	#0-80 UNF
65P	1.075	27.30	.970	24.64	.860	21.84	.125	3.18	.0575	1.46	#0-80 UNF
65S	1.075	27.30	.970	24.64	.863	21.92	.125	3.18	.0575	1.46	#0-80 UNF
69P	1.125	28.57	1.020	25.91	.910	23.11	.125	3.18	.0575	1.46	#0-80 UNF
69S	1.125	28.57	1.020	25.91	.913	23.19	.125	3.18	.0575	1.46	#0-80 UNF
85P	1.377	34.97	1.246	31.65	1.110	28.19	.150	3.81	.0700	1.78	#2-56 UNC
85S	1.377	34.97	1.246	31.65	1.113	28.27	.150	3.81	.0700	1.78	#2-56 UNC

U.S. CAGE code 06324/0CA77 • Dimensions in Inches (millimeters) are subject to change without notice.

Dual Row Connectors

Connector with Straight, 45° or 90° Angle, Factory Installed Backshell and Insulated Wire – How to Order



Nano Connectors with Pre-installed Backshell and Insulated Wire. Factory terminated and available with three backshell styles (straight, 45° and 90° angle), provide premium performance, reliability and functionality for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. Wire gages #30 and #32 AWG.

Wire Type and Shield/Jacket Options include ultra lightweight XLETFE insulation, Extruded PTFE insulation and cross linked modifiied ETFE insulation. Shield options include Amberstrand®, Amorlite™ and nickel plated copper with or without E-CTFE halar jacket

How to Order

Sample Part Number	891-031	-25P	A2	N	-0	B	7	-12	J	C

Series	**891-031** = Plug or Receptacle
Insert Arrangement/ Contact Type	Plugs: **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Receptacles: **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**
Backshell/Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated
Backshell Orientation	**H** = 45°, Lobe Side Exit **L** = 90°, Lobe Side Exit **K** = 45°, Major Side Exit **M** = 90°, Major Side Exit **N** = Straight, No Orientation
Wire Gage	**0** = 30 AWG **2** = 32 AWG (wire type "B" only)
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)
Wire Color	**1** = White **2** = Yellow **7** = 10 Color Repeating* * (Wire Type A is striped, Types B & C are solid colors)
Wire Length	Wire Length in Inches, i.e. **12** = 12 inches
Hardware	**J** = Jackscrew **T** = Female Thread
Shield/Jacket Options	**N** = No Shield, No Jacket **A** = Braided Shield Installed (Nickel Plated Copper) **C** = Braided Shield Installed (Nickel Plated Copper), with E-CTFE Halar "Expando" Jacket (+150° C) **D** = No Shield, with E-CTFE Halar "Expando" Jacket (+150° C) **S** = 100% Braided Amberstrand Shield Installed **T** = 100% Braided Amberstrand Shield Installed, with E-CTFE Halar "Expando" Jacket (+150° C) **V** = 75% Braided Amberstrand Shield Installed **W** = Armorlite Braided Microfiliment Stainless Steel Shield Installed **X** = Armorlite Braided Microfiliment Stainless Steel Shield Installed with E-CTFE Halar "Expando" Jacket (+150° C) **Z** = 75% Braided Amberstrand Shield Installed, with E-CTFE Halar "Expando" Jacket (+150° C)

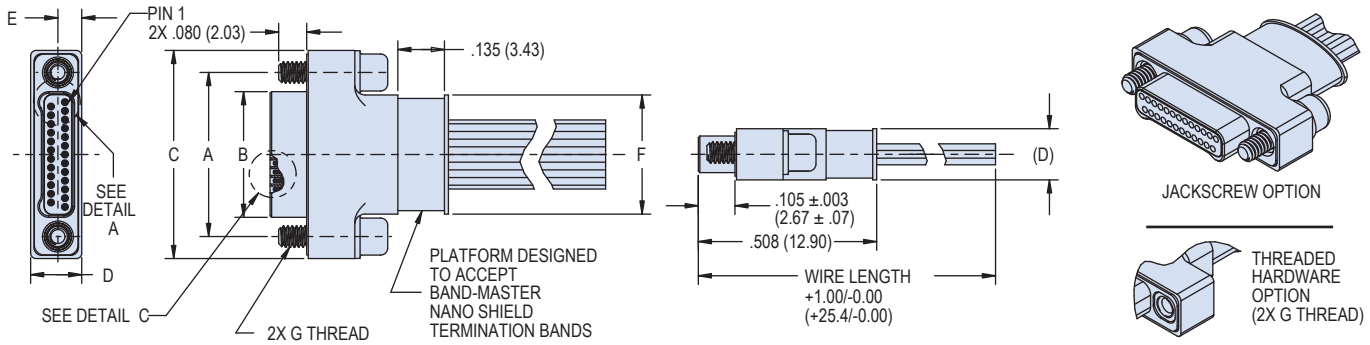
NOTES

1. Material and Finish
   - Shell: see part number break down
   - insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Wire: see part number break down
   - Hardware: stainless steel, passivated
   - Band clamp: (shield termination when applicable) stainless steel
2. Inspected and tested IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 and MIL-DTL-32139/4

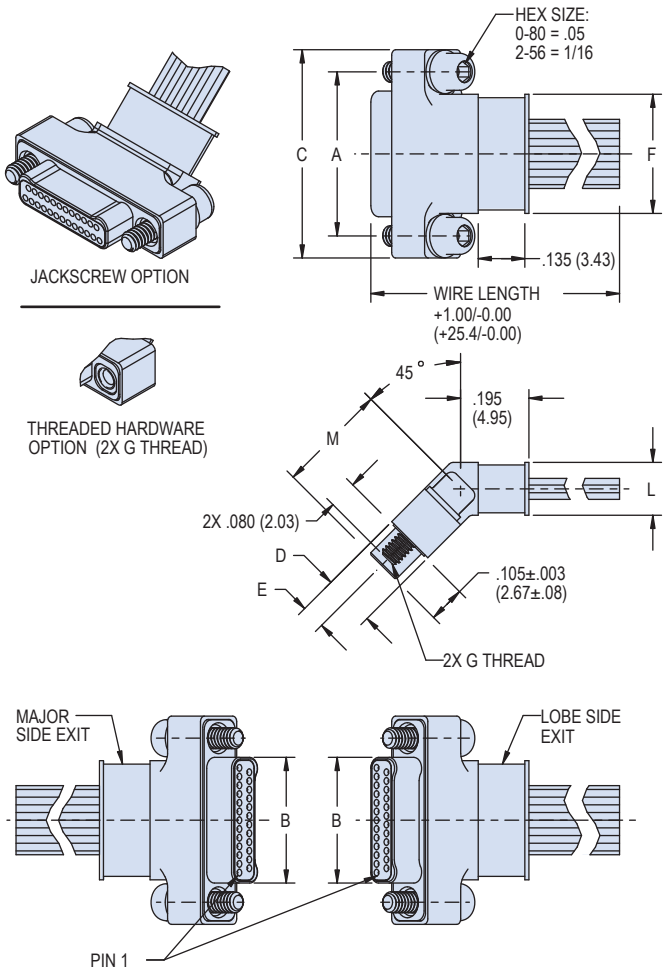
Dual Row Connectors

Plug with Straight, 45° or 90° Angle, Factory Installed Backshell with Insulated Wire - Dimensions

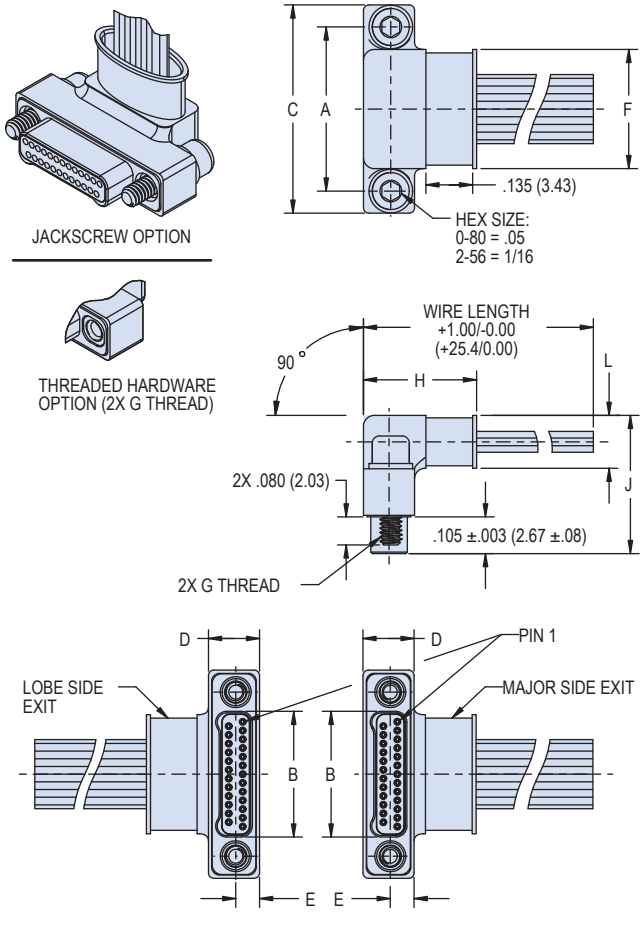
891-031 PLUG WITH STRAIGHT BACKSHELL



891-031 PLUG WITH 45° BACKSHELL



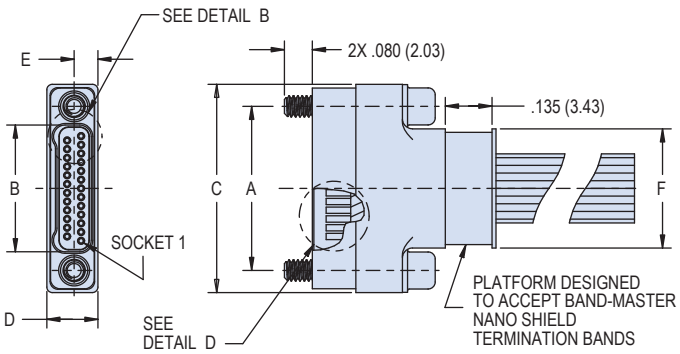
891-031 PLUG WITH 90° BACKSHELL

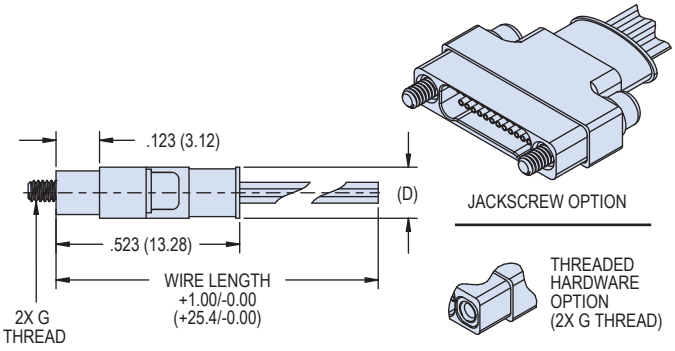


SPECIFY EXIT SIDE IN P/N

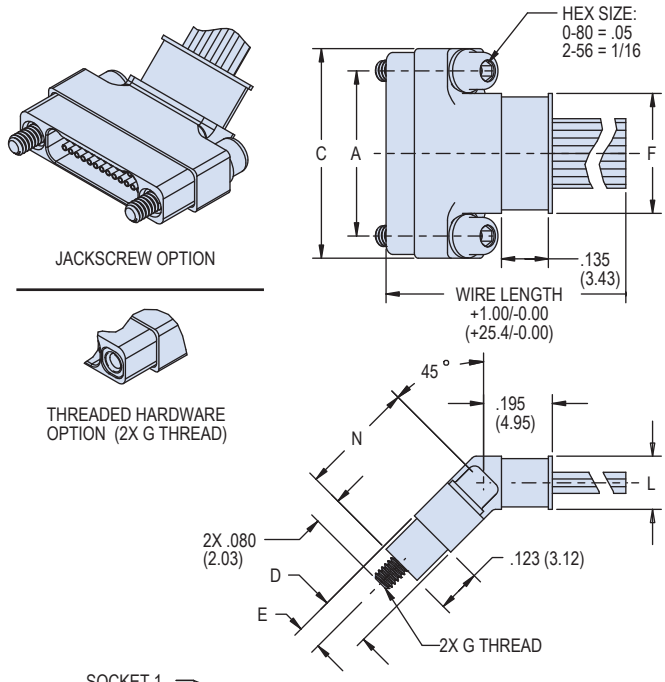
D

891-031 RECEPTACLE STRAIGHT BACKSHELL

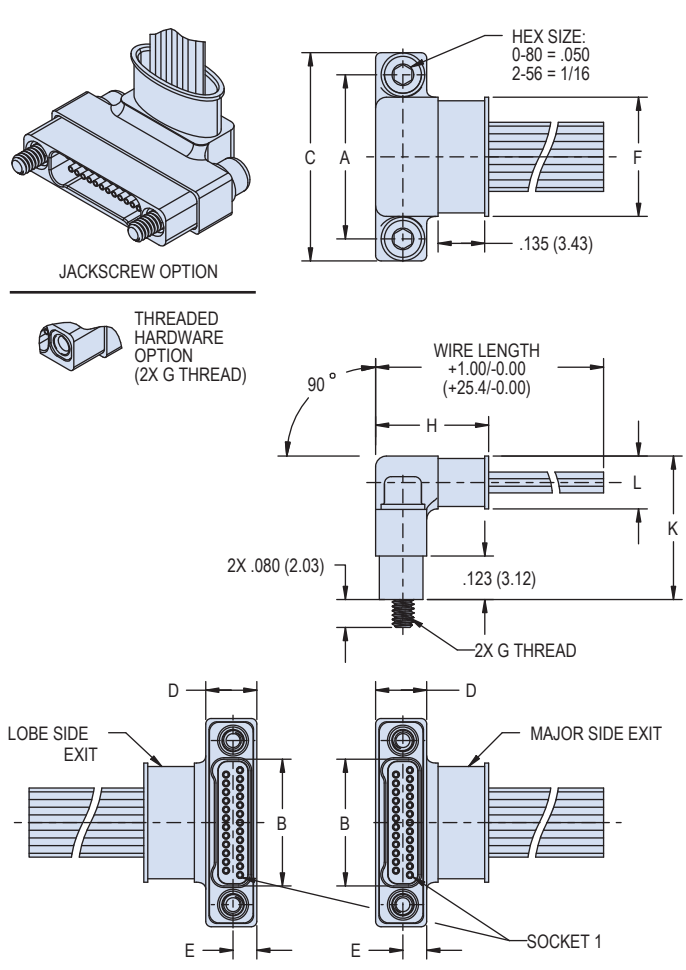




891-031 RECEPTACLE WITH 45° BACKSHELL



891-031 RECEPTACLE WITH 90° BACKSHELL

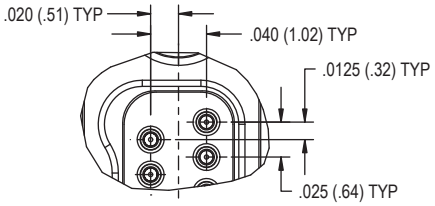


SPECIFY EXIT SIDE IN P/N

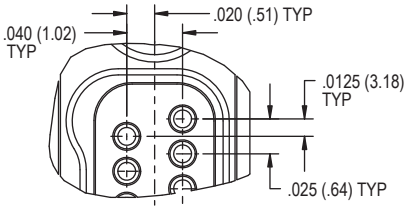
Plug Dimensions																				
Layout	A BSC.		B BSC.		C		D		E		F		G	H		J		L		M	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm		In	mm	In	mm	In	mm	In	mm
9P	.270	6.86	.160	4.06	.395	10.03	.145	3.68	.068	1.73	.140	3.56	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
15P	.345	8.76	.235	5.97	.470	11.94	.145	3.68	.068	1.73	.215	5.46	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
21P	.420	10.67	.310	7.87	.545	13.84	.145	3.68	.068	1.73	.290	7.37	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
25P	.470	11.94	.360	9.14	.595	15.11	.145	3.68	.068	1.73	.340	8.64	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
31P	.545	13.84	.435	11.05	.670	17.02	.145	3.68	.068	1.73	.415	10.54	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
37P	.620	15.75	.510	12.95	.745	18.92	.145	3.68	.068	1.73	.490	12.45	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
41P	.670	17.02	.560	14.22	.795	20.19	.145	3.68	.068	1.73	.540	13.72	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
51P	.795	20.19	.685	17.40	.920	23.37	.145	3.68	.068	1.73	.665	16.89	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
65P	.970	24.64	.860	21.84	1.095	27.81	.145	3.68	.068	1.73	.840	21.34	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
69P	1.020	25.91	.910	23.11	1.145	29.08	.145	3.68	.068	1.73	.890	22.61	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
85P	1.246	31.65	1.110	28.19	1.397	35.48	.170	4.32	.081	2.06	1.091	27.71	#2-56 UNC	.348	8.84	.421	10.69	.176	4.47	.318	8.08

Receptacle Dimensions																				
Layout	A BSC.		B BSC.		C		D		E		F		G	H		K		L		N	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm		In	mm	In	mm	In	mm	In	mm
9S	.270	6.86	.163	4.14	.395	10.03	.145	3.68	.068	1.73	.140	3.56	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
15S	.345	8.76	.238	6.05	.470	11.94	.145	3.68	.068	1.73	.215	5.46	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
21S	.420	10.67	.313	7.95	.545	13.84	.145	3.68	.068	1.73	.290	7.37	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
25S	.470	11.94	.363	9.22	.595	15.11	.145	3.68	.068	1.73	.340	8.64	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
31S	.545	13.84	.438	11.13	.670	17.02	.145	3.68	.068	1.73	.415	10.54	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
37S	.620	15.75	.513	13.03	.745	18.92	.145	3.68	.068	1.73	.490	12.45	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
41S	.670	17.02	.563	14.30	.795	20.19	.145	3.68	.068	1.73	.540	13.72	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
51S	.795	20.19	.688	17.48	.920	23.37	.145	3.68	.068	1.73	.665	16.89	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
65S	.970	24.64	.863	21.92	1.095	27.81	.145	3.68	.068	1.73	.840	21.34	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
69S	1.020	25.91	.913	23.19	1.145	29.08	.145	3.68	.068	1.73	.890	22.61	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
85S	1.246	31.65	1.113	28.27	1.397	35.48	.170	4.32	.081	2.06	1.091	27.71	#2-56 UNC	.348	8.84	.433	11.00	.176	4.47	.333	8.46

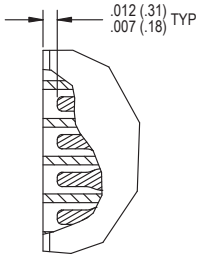
DETAIL A (PLUG)



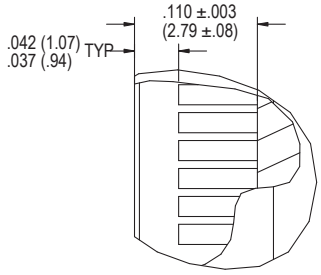
DETAIL B (RECEPTACLE)



DETAIL C (PLUG)



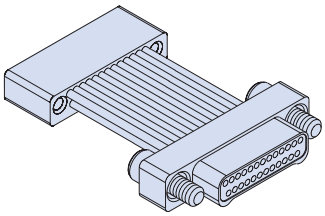
DETAIL D (RECEPTACLE)_



D

Dual Row Connectors

Back-to-Back Cable Assembly
How to Order

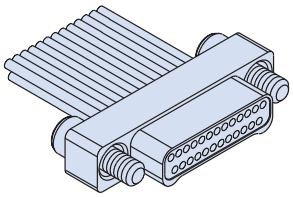
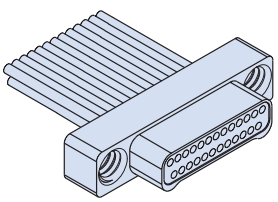
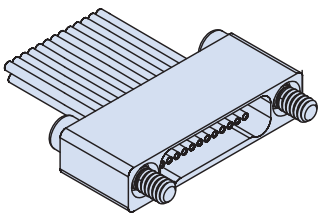
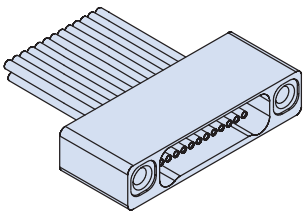


Glenair Back-To-Back Cable Asemblies are offered in three configurations and feature gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. These nanominiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. Wire gages #30 and #32 AWG.

TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

How To Order										
Sample Part Number	**891-005**	**-9**	**GP**	**A1**	**-0**	**A**	**1**	**-12**	**JJ**

Series	**891-005** Back-To-Back Cables, Dual Row, Nanominiature
Number of Contacts	**9**, **15**, **21**, **25**, **31**, **37**, **41**, **51**, **65**, **69**, **85**
Connector Type	**GP** = Plug (Pin) Connector on Both Ends **GS** = Receptacle (Socket) Connector on Both Ends **CS** = Plug (Pin) On One End, Receptacle On The Other End
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated
Wire Gage	**0** = #30 AWG **2** = #32 AWG (Wire Type B only)
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)
Wire Color Code	**1**= White **2** = Yellow **7** = 10 Color Repeating (wire type **A** is striped, types **B** and **C** are solid colors)
Length	**Overall Length** In Inches Including Connectors Example: "12" specifies 12 inches OAL; 2" minimum
Hardware	**JJ** = Jackscrews on both ends (GP, GS, CS) **JT** = Jackscrews on plug, threaded holes on receptacle (CS) **JP** = Jackscrews on plug, threaded holes on plug (GP)* **TJ** = Jackscrews on receptacle, threaded holes on plug (CS)* **JR** = Jackscrews on receptacle, threaded holes on receptacle (GS) **TT** - Threaded holes both ends (GP, CS)* *Female threads are available on plug connectors only if the shell material is titanium or stainless steel.

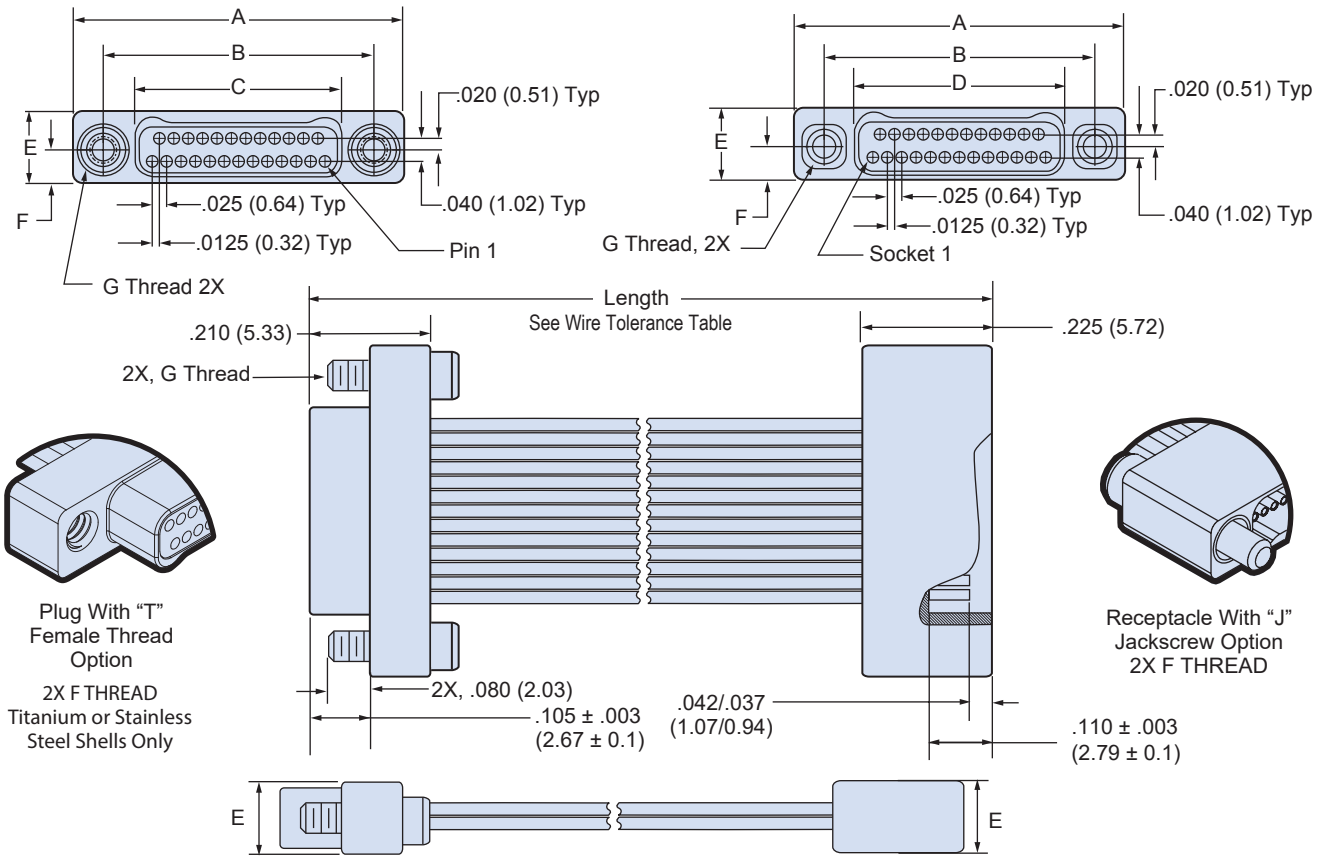
Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option

D

Dual Row Connectors

Back-to-Back Cable Assembly Dimensions

Back-to-Back Plug and Receptacle Connector Dimensions



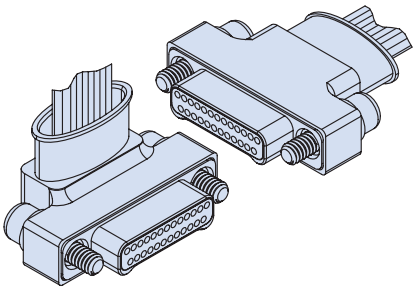
Layout	A		B BSC.		C BSC. (Plug)		D BSC (Receptacle)		E		F		G Thread
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.	In.	mm.	In. ±.005	mm ±0.13	In.	mm	
9	.375	9.52	.270	6.86	.160	4.06	.163	4.14	.125	3.18	.0575	1.46	#0-80 UNF
15	.450	11.43	.345	8.76	.235	5.97	.238	6.05	.125	3.18	.0575	1.46	#0-80 UNF
21	.525	13.33	.420	10.67	.310	7.87	.313	7.95	.125	3.18	.0575	1.46	#0-80 UNF
25	.575	14.60	.470	11.94	.360	9.14	.363	9.22	.125	3.18	.0575	1.46	#0-80 UNF
31	.650	16.51	.545	13.84	.435	11.05	.438	11.13	.125	3.18	.0575	1.46	#0-80 UNF
37	.725	18.41	.620	15.75	.510	12.95	.513	13.03	.125	3.18	.0575	1.46	#0-80 UNF
41	.775	19.69	.670	17.02	.560	14.23	.563	14.30	.125	3.18	.0575	1.46	#0-80 UNF
51	.900	22.86	.795	20.19	.685	17.40	.688	17.48	.125	3.18	.0575	1.46	#0-80 UNF
65	1.075	27.30	.970	24.64	.860	21.84	.863	21.92	.125	3.18	.0575	1.46	#0-80 UNF
69	1.125	28.57	1.020	25.91	.910	23.11	.913	23.19	.125	3.18	.0575	1.46	#0-80 UNF
85	1.377	34.97	1.246	31.65	1.110	28.19	1.113	28.27	.150	3.81	.0700	1.78	#2-56 UNC

Wire Length Tolerance	
Length Range	Tolerance
2″ - 48″	+0.50/-0.00
>48″ - 72″	+1.00/-0.00
>72″ - 120″	+2.00/0.00
>120″	+4.00/-0.00

D

Dual Row Connectors

Back-to-Back Cable with Straight, 45° or 90° Angle Factory Installed Backshell and Insulated Wire - How to Order



Cable Assemblies with Factory installed Backshell and Shield/ Jacket Option feature nano connectors with gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. These nanominiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. Wire gages #30 and #32 AWG.

Wire Type and shield/jacket options include ultra lightweight XLETFE insulation, Extruded PTFE insulation and cross linked modiffied ETFE insulation. Shield options include Amberstrand®, Amorlite™ and nickel plated copper with or without E-CTFE halar jacket

Typical Applications include UAV's, satellites, missile systems and geophysical instruments

How to Order

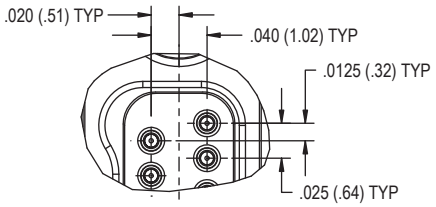
Sample Part Number	891-032	-25	CS	N	L	A2	-0	B	7	-12	T	J	-N
				SIDE 1	SIDE 2						SIDE 1	SIDE 2	

Series	**891-032** = Plug or Receptacle
Number of Contacts	**9**, **15**, **21**, **25**, **31**, **37**, **41**, **51**, **65**, **69**, **85**
Connector Type	**TYPE** / **SIDE 1** / **SIDE 2** **GP** Plug Plug **GS** Receptacle Receptacle **CS** Plug Receptacle
Backshell Accessory	**H** = 45°, Lobe Side Exit **K** = 45°, Major Side Exit **N** = Straight, No Orientation **L** = 90°, Lobe Side Exit **M** = 90°, Major Side Exit
Backshell/Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **A2** - Aluminum Shell, Electroless Nickel Plating **T** - Titanium Shell, Unplated **S** - Stainless Steel Shell, Passivated
Wire Gage	**0** = 30 AWG **2** = 32 AWG (Wire Type "B" Only)
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)
Wire Color	**1** = White **2** = Yellow **7** = 10 Color Repeating (Wire Type A is Striped, Types B and C are Solid Colors)
Length	Wire Lenth in Inches, i.e. 12 = 12 inches; 3 inches minimum
Hardware	**J** = Jackscrew **T** = Female Thread
Shield/Jacket Options	**N**, **A**, **C**, **D**, **S**, **T**, **V**, **W**, **X**, **Z**; See Shield / Jacket Options table

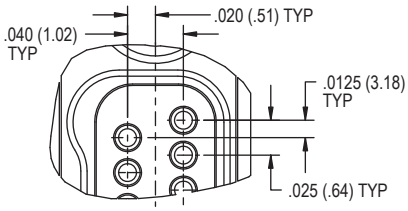
Dual Row Connectors

Back-to-Back Cable with Straight, 45° or 90° Angle Factory Installed Backshell and Insulated Wire - How to Order

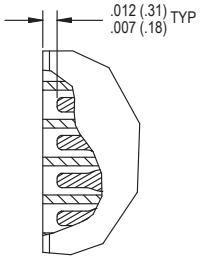
DETAIL A (PLUG)



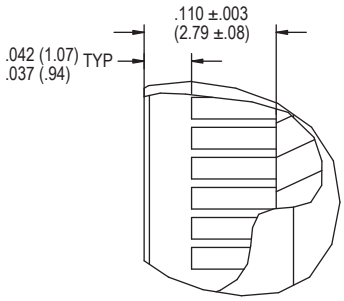
DETAIL B (RECEPTACLE)



DETAIL C (PLUG)



DETAIL D (RECEPTACLE)



Shield/Jacket Options Table	
Code	Description
N	No Shield, No Jacket
A	Braided Shield Installed (Nickel Plated Copper)
C	Braided Shield Installed (Nickel Plated Copper), with E-CTFE Halar "Expando" Jacket (+150° C)
D	No Shield, with E-CTFE Halar "Expando" Jacket (+150° C)
S	100% Braided Amberstrand Shield Installed
T	100% Braided Amberstrand Shield Installed, with E-CTFE Halar "Expando" Jacket (+150° C)
V	75% Braided Amberstrand Shield Installed
W	Armorlite Braided Microfiliment Stainless Steel Shield Installed
X	Armorlite Braided Microfiliment Stainless Steel Shield Installed with E-CTFE Halar "Expando" Jacket (+150°C)
Z	75% Braided Amberstrand Shield Installed, with E-CTFE Halar "Expando" Jacket (+150 C)

NOTES

1. Material/Finishes:
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Wire: see part number break down
   - Hardware: stainless steel, passivated
   - Band clamp: (Shield termination when applicable) stainless steel
2. Inspected and tested IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 and MIL-DTL-32139/4

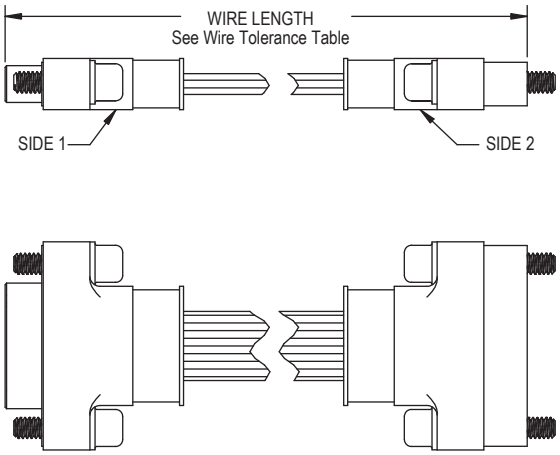
Wire Length Tolerance	
Length Range	Tolerance
3" - 48"	+0.50/-0.00
>48" - 72"	+1.00/-0.00
>72" - 120"	+2.00/0.00
>120"	+4.00/-0.00

D

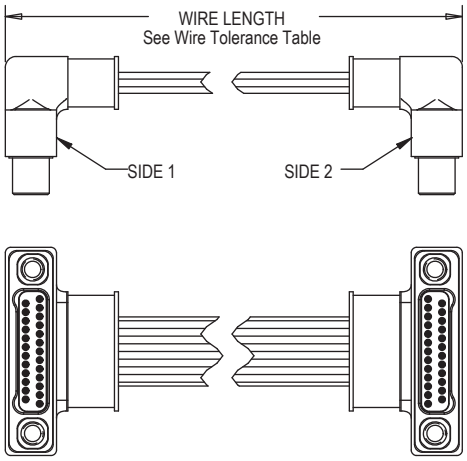
Dual Row Connectors

Back-to-Back Cable with Straight, 45° or 90° Angle Factory Installed Backshell and Insulated Wire - Configurations

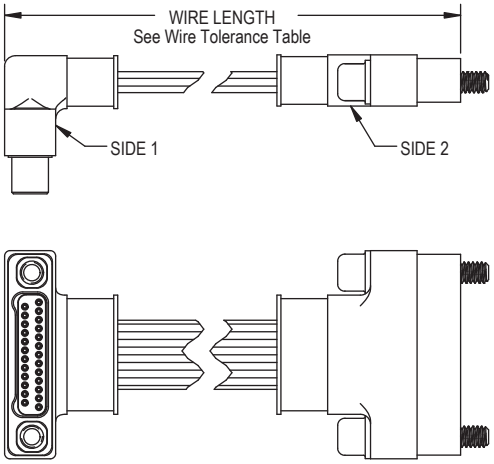
CS STRAIGHT CABLE ASSEMBLY



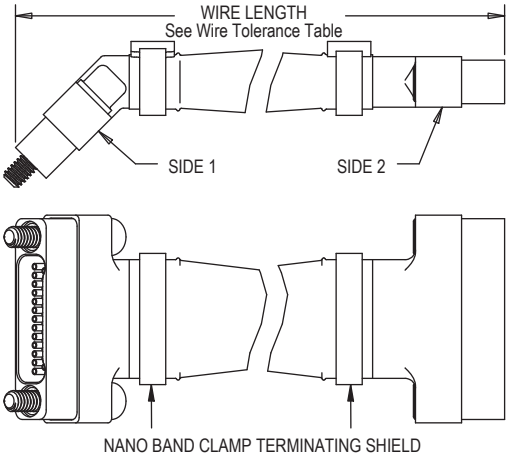
GP RIGHT ANGLE CABLE ASSEMBLY



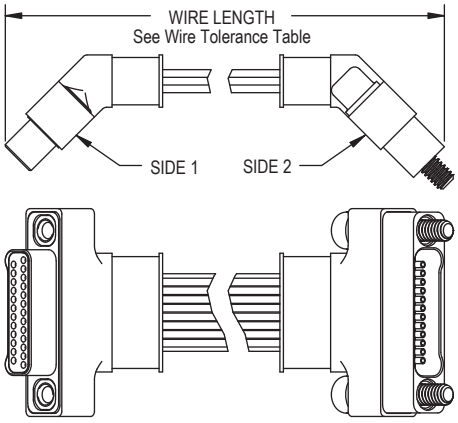
CS 90° TO STRAIGHT CABLE ASSEMBLY



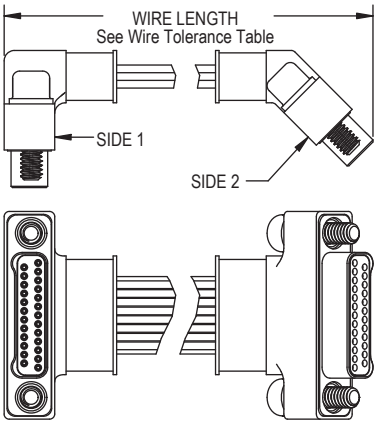
GS 45° TO STRAIGHT CABLE ASSEMBLY



CS 45° TO 45° CABLE ASSEMBLY



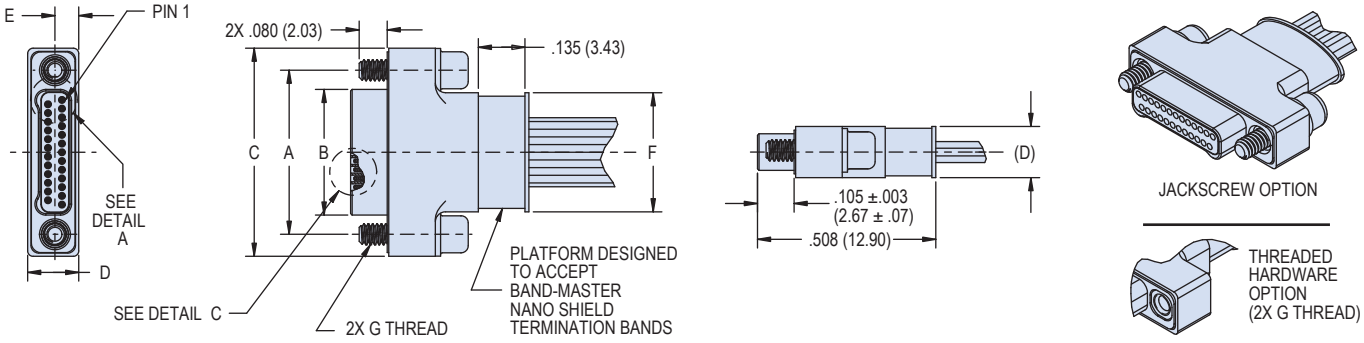
GP 90° TO 45° CABLE ASSEMBLY



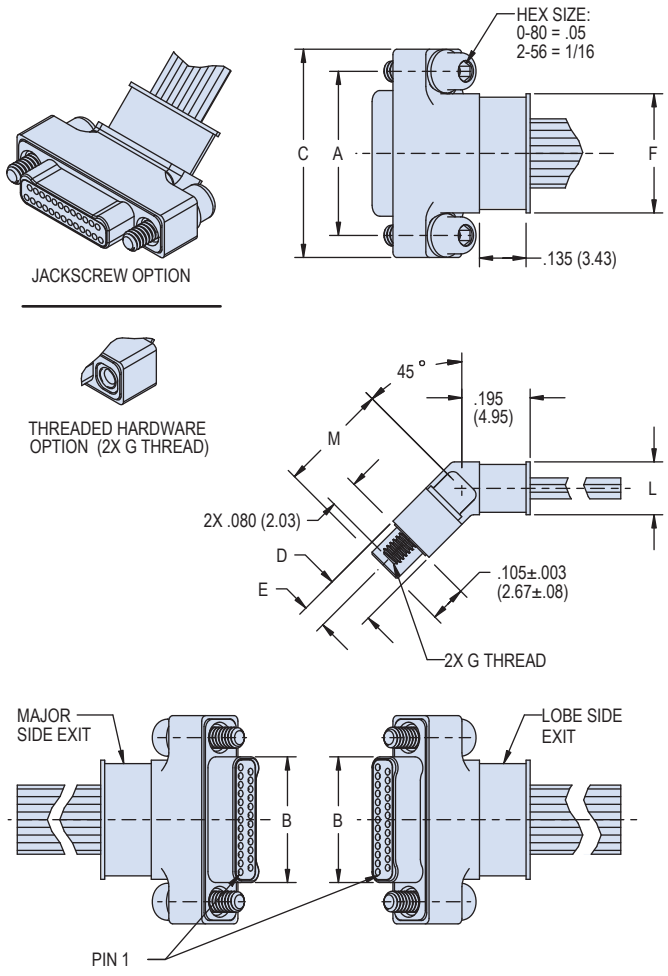
D

Back-to-Back Cable with Straight, 45° or 90° Angle Factory Installed Backshell and Insulated Wire - Dimensions

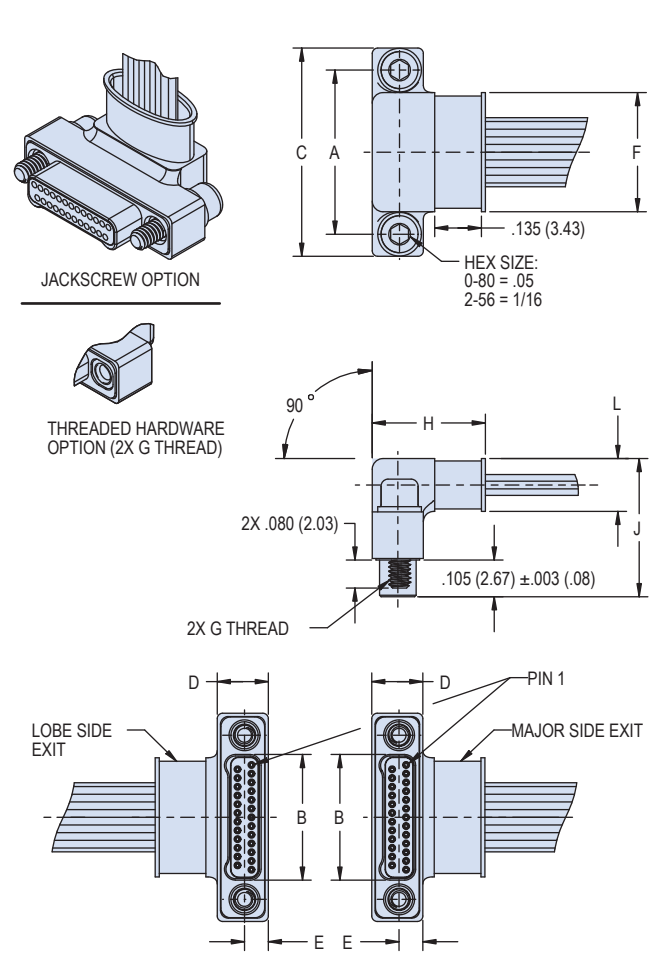
891-032 PLUG WITH STRAIGHT BACKSHELL



891-032 PLUG WITH 45° BACKSHELL



891-032 PLUG WITH 90° BACKSHELL

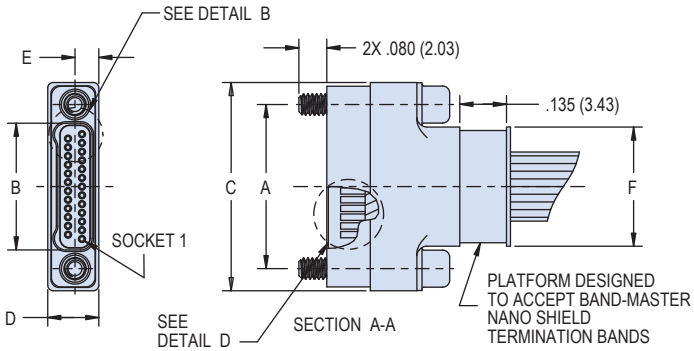


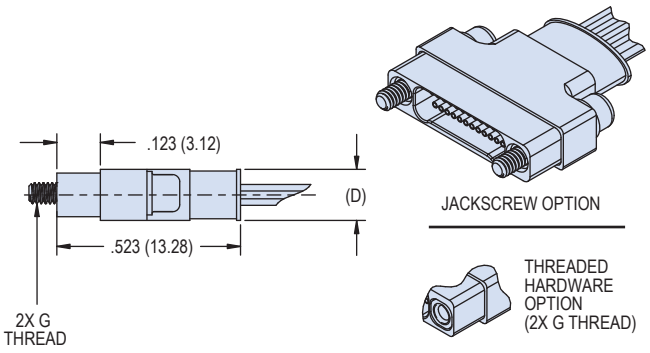
SPECIFY EXIT SIDE IN P/N

D

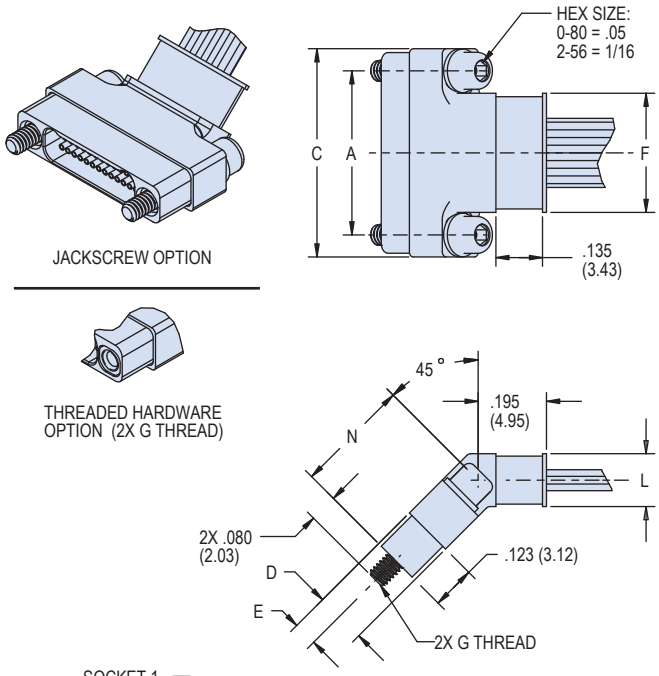
Back-to-Back Cable with Straight, 45° or 90° Angle Factory Installed Backshell and Insulated Wire - Dimensions

891-032 RECEPTACLE WITH STRAIGHT BACKSHELL

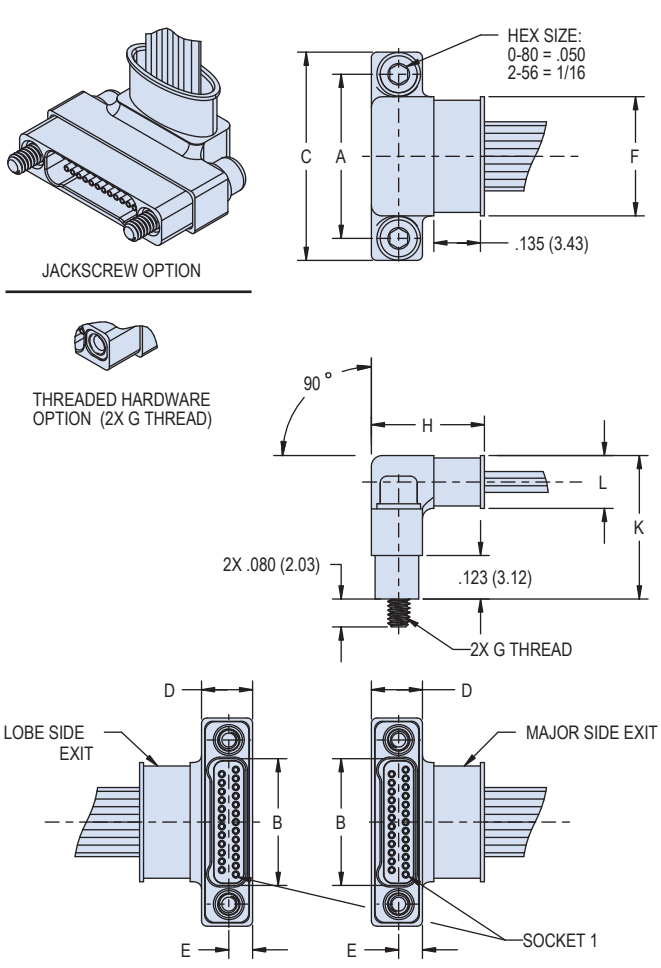




891-032 RECEPTACLE WITH 45° BACKSHELL



891-032 RECEPTACLE WITH 90° BACKSHELL



SPECIFY EXIT SIDE IN P/N

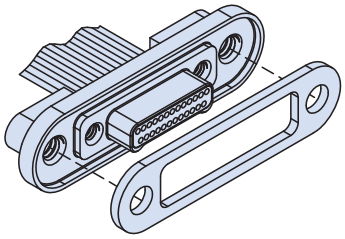
Back-to-Back Cable with Straight, 45° or 90° Angle Factory Installed Backshell and Insulated Wire - Dimensions

Plug Dimensions																				
Layout	A BSC.		B BSC.		C		D		E		F		G	H		J		L		M	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm		In	mm	In	mm	In	mm	In	mm
9	.270	6.86	.160	4.06	.395	10.03	.145	3.68	.068	1.73	.140	3.56	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
15	.345	8.76	.235	5.97	.470	11.94	.145	3.68	.068	1.73	.215	5.46	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
21	.420	10.67	.310	7.87	.545	13.84	.145	3.68	.068	1.73	.290	7.37	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
25	.470	11.94	.360	9.14	.595	15.11	.145	3.68	.068	1.73	.340	8.64	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
31	.545	13.84	.435	11.05	.670	17.02	.145	3.68	.068	1.73	.415	10.54	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
37	.620	15.75	.510	12.95	.745	18.92	.145	3.68	.068	1.73	.490	12.45	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
41	.670	17.02	.560	14.22	.795	20.19	.145	3.68	.068	1.73	.540	13.72	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
51	.795	20.19	.685	17.40	.920	23.37	.145	3.68	.068	1.73	.665	16.89	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
65	.970	24.64	.860	21.84	1.095	27.81	.145	3.68	.068	1.73	.840	21.34	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
69	1.020	25.91	.910	23.11	1.145	29.08	.145	3.68	.068	1.73	.890	22.61	#0-80 UNF	.323	8.20	.395	10.03	.150	3.81	.313	7.95
85	1.246	31.65	1.110	28.19	1.397	35.48	.170	4.32	.081	2.06	1.091	27.71	#2-56 UNC	.348	8.84	.421	10.69	.176	4.47	.318	8.08

Receptacle Dimensions																				
Layout	A BC.		B BC.		C		D		E		F		G	H		K		L		N	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm		In	mm	In	mm	In	mm	In	mm
9	.270	6.86	.163	4.14	.395	10.03	.145	3.68	.068	1.73	.140	3.56	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
15	.345	8.76	.238	6.05	.470	11.94	.145	3.68	.068	1.73	.215	5.46	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
21	.420	10.67	.313	7.95	.545	13.84	.145	3.68	.068	1.73	.290	7.37	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
25	.470	11.94	.363	9.22	.595	15.11	.145	3.68	.068	1.73	.340	8.64	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
31	.545	13.84	.438	11.13	.670	17.02	.145	3.68	.068	1.73	.415	10.54	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
37	.620	15.75	.513	13.03	.745	18.92	.145	3.68	.068	1.73	.490	12.45	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
41	.670	17.02	.563	14.30	.795	20.19	.145	3.68	.068	1.73	.540	13.72	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
51	.795	20.19	.688	17.48	.920	23.37	.145	3.68	.068	1.73	.665	16.89	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
65	.970	24.64	.863	21.92	1.095	27.81	.145	3.68	.068	1.73	.840	21.34	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
69	1.020	25.91	.913	23.19	1.145	29.08	.145	3.68	.068	1.73	.890	22.61	#0-80 UNF	.323	8.20	.408	10.36	.150	3.81	.328	8.33
85	1.246	31.65	1.113	28.27	1.397	35.48	.170	4.32	.081	2.06	1.091	27.71	#2-56 UNC	.348	8.84	.433	11.00	.176	4.47	.333	8.46

Dual Row Connectors

Rear Panel Mount Connectors with Insulated Wire and Gasket Seal – How to Order

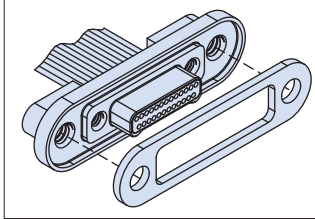
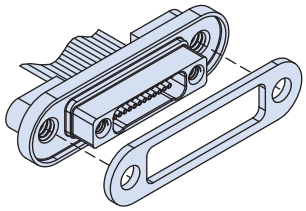


Rear Panel Mount Nano Connectors with Insulated Wire feature gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. These nanominiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC.

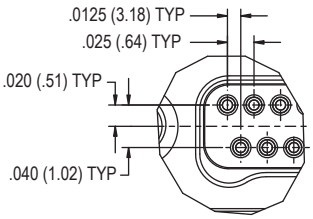
Gasket Seals are available in fluorosilicone, passivated silver plated aluminum filled fluorosilicone or nickel plated aluminum filled fluorosilicone. For replacement gaskets, see 899-015.

How to Order

Sample Part Number	891-025	-25P	S	-0	B	7	-12	T	-01	M
Series	**891-025** = Plug **891-026** = Receptacle									
Insert Arrangement/ Contact Type	Plugs (891-025): **9P, 15P, 21P, 25P, 31P, 37P, 41P, 51P, 65P, 69P, 85P** Receptacles (891-026): **9S, 15S, 21S, 25S, 31S, 37S, 41S, 51S, 65S, 69S, 85S**									
Shell Material and Finish	**T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated									
Wire Gage	**0** = #30 AWG **2** = #32 AWG (Wire Type 'B' Only)									
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)									
Wire Color Code	**1** = White **2** = Yellow **7** = 10 Color Repeating (Wire Type A is striped, Types B & C are solid colors)									
Wire Length	**12** = 12.00 + 1.00 inches; as required in one inch increments.									
Hardware Option	**T** = Female Threads (#0-80 for size 9-69, #2-56 for size 85)									
Gasket Material	**Omit** for no gasket **01** = Fluorosilicone IAW MIL-DTL-25988 Type II, Class I, Grade 70 **02** = Passivated Silver Plated Aluminum Filled Fluorosilicone IAW MIL-DTL-83528, Type "D" (Cho-seal 1298 or Equivalent) **03** = Nickel Plated, Aluminum Filled Fluorosilicone (Cho-Seal 6503 or Equivalent)									
Mounting Thread	**Omit** for #2-56 UNC-2B **M** = M2X0.4 6H									

Plug (Pin)	Receptacle (Socket)
	
T - Female Thread	T - Female Thread

DETAIL A

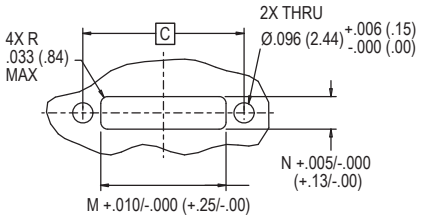


NOTES

1. Inspect and test IAW MIL-DTL-32139
2. Interface dimensions per MIL-DTL-32139, plug (/3) Receptacle (/4)
3. Panel cutout sized to allow lobe up or lobe down mounting orientation
4. Recommended Panel thickness .100 (2.54) max

PANEL MOUNT DIMENSIONS

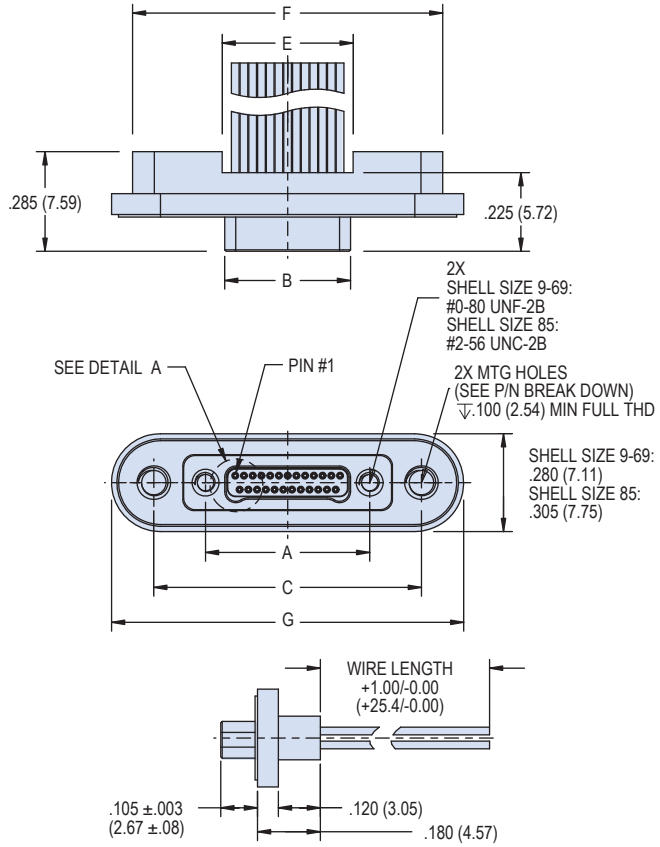
	SIZE-9	SIZE-15	SIZE-21	SIZE-25	SIZE-31	SIZE-37	SIZE-41	SIZE-51	SIZE-65	SIZE-69	SIZE-85
C	.566 (14.38)	.641 (16.28)	.716 (18.19)	.766 (19.46)	.841 (21.36)	.916 (23.27)	.966 (24.54)	1.091 (27.71)	1.266 (32.16)	1.316 (33.43)	1.568 (39.83)
M	.395 (10.03)	.470 (11.94)	.545 (13.84)	.595 (15.11)	.670 (17.02)	.745 (18.92)	.795 (20.19)	.920 (23.37)	1.095 (27.81)	1.145 (29.08)	1.397 (35.48)
N	.155 (3.94)	.155 (3.94)	.155 (3.94)	.155 (3.94)	.155 (3.94)	.155 (3.94)	.155 (3.94)	.155 (3.94)	.155 (3.94)	.155 (3.94)	.180 (4.57)



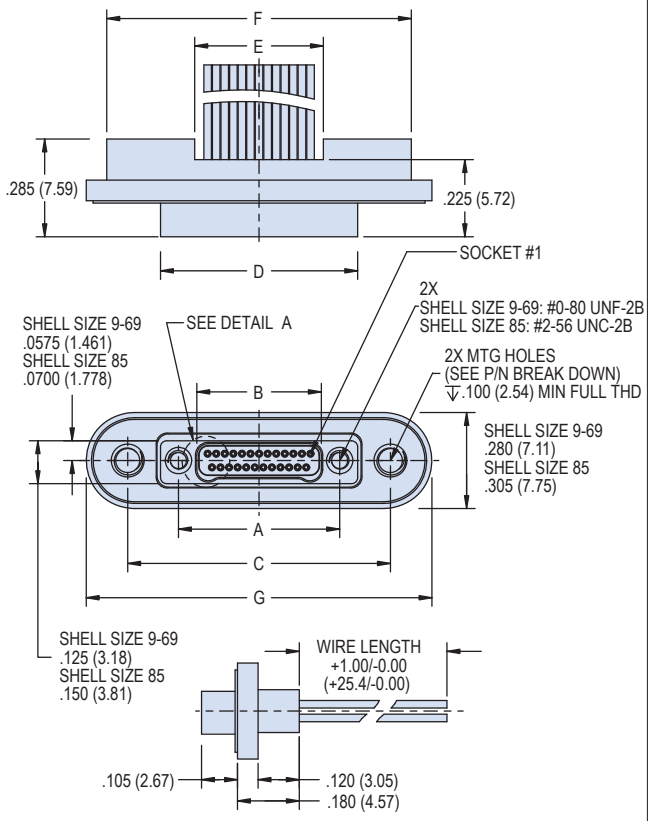
Dual Row Connectors

Rear Panel Mount Connectors with Insulated Wire and Gasket Seal – Dimensions

891-025 Plug (Pin) Connectors



891-026 Receptacle (Socket) Connectors

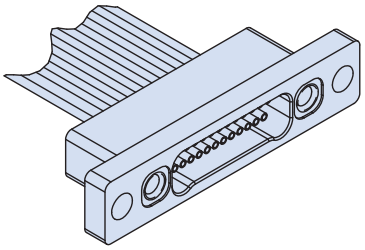


Dimensions

Layout	A BSC.		B BSC.		C BSC.		D		E		F		G	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
9P	.270	6.86	.160	4.06	.566	14.38	--	--	.175	4.45	.688	17.48	.808	20.52
9S	.270	6.86	.163	4.14	.566	14.38	.375	9.53	.175	4.45	.688	17.48	.808	20.52
15P	.345	8.76	.235	5.97	.641	16.28	--	--	.250	6.35	.763	19.38	.883	22.43
15S	.345	8.76	.238	6.05	.641	16.28	.450	11.43	.250	6.35	.763	19.38	.883	22.43
21P	.420	10.67	.310	7.87	.716	18.19	--	--	.325	8.26	.838	21.29	.958	24.33
21S	.420	10.67	.313	7.95	.716	18.19	.525	13.34	.325	8.26	.838	21.29	.958	24.33
25P	.470	11.94	.360	9.14	.766	19.46	--	--	.375	9.53	.888	22.56	1.008	25.60
25S	.470	11.94	.363	9.22	.766	19.46	.575	14.61	.375	9.53	.888	22.56	1.008	25.60
31P	.545	13.84	.435	11.05	.841	21.36	--	--	.450	11.43	.963	24.46	1.083	27.51
31S	.545	13.84	.438	11.13	.841	21.36	.650	16.51	.450	11.43	.963	24.46	1.083	27.51
37P	.620	15.75	.510	12.95	.916	23.27	--	--	.525	13.34	1.038	26.37	1.158	29.41
37S	.620	15.75	.513	13.03	.916	23.27	.725	18.42	.525	13.34	1.038	26.37	1.158	29.41
41P	.670	17.02	.560	14.22	.966	24.54	--	--	.575	14.61	1.088	27.64	1.208	30.68
41S	.670	17.02	.563	14.30	.966	24.54	.775	19.69	.575	14.61	1.088	27.64	1.208	30.61
51P	.795	20.19	.685	17.40	1.091	27.71	--	--	.700	17.78	1.213	30.81	1.333	33.86
51S	.795	20.19	.688	17.48	1.091	27.71	.900	22.86	.700	17.78	1.213	30.81	1.333	33.86
65P	.970	24.64	.860	21.84	1.266	32.16	--	--	.875	22.23	1.388	35.26	1.508	38.30
65S	.970	24.64	.863	21.92	1.266	32.16	1.075	27.31	.875	22.23	1.388	35.26	1.508	38.30
69P	1.020	25.91	.910	23.11	1.316	33.43	--	--	.925	23.50	1.438	36.53	1.558	39.57
69S	1.020	25.91	.913	23.19	1.316	33.43	1.125	28.58	.925	23.50	1.438	36.53	1.558	39.57
85P	1.246	31.65	1.110	28.19	1.568	39.83	--	--	1.125	28.58	1.690	42.93	1.810	45.97
85S	1.246	31.65	1.113	28.27	1.568	39.83	1.377	34.98	1.125	28.58	1.690	42.93	1.810	45.97

Dual Row Connectors

Front Panel Mount Receptacle with Insulated Wire
How to Order



Nano Front Panel Mount Receptacles with Insulated Wire feature gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. These nanominiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC.

TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

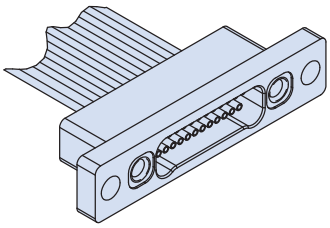
Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

How to Order

Sample Part Number	891-050	-25S	A2	-0	B	7	-12	T	C

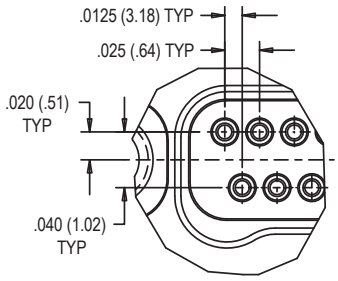
Series	**891-050** = Receptacle
Insert Arrangement/ Contact Type	**9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**
Shell Material and Finish	**A1** = Aluminum Shell Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **S** = Stainless Steel Shell, Passivated **T** = Titanium Shell, Unplated
Wire Gage	**0** = #30 AWG **2** = #32 AWG (Wire Type "B" only)
Wire Type	**A** = Ultra Lightweight XLETFE Insulation, Silver Coated Ultra High Strength Copper. (Not available in #32 AWG) **B** = Extruded PTFE Insulation, Silver Coated Copper NEMA HP3-ETX (MIL-W-16878/6) **C** = Cross Linked Modified ETFE Insulation, Silver Coated High Strength Copper. MIL-W-22759/33 (Not available in #32 AWG)
Wire Color Code	**1** = White **2** = Yellow **7** = 10 Color Repeating (Wire Type A is striped, Types B & C are solid colors)
Wire Length	**12** = 12.00 + 1.00 inches; as required in one inch increments.
Hardware Option	**T** = Female Threads (#0-80 for size 9-69, #2-56 for size 85) Passivated 303 stainless steel inserts installed in aluminum shells, stainless steel and titanium are tapped directly into shell
Mounting Hole Option	**C** = Clearance Hole **T** = Female Thread

Receptacle (Socket)



T - Female Thread

891-050 DETAIL A



Front Panel Mount Connetor Mounting Matrix

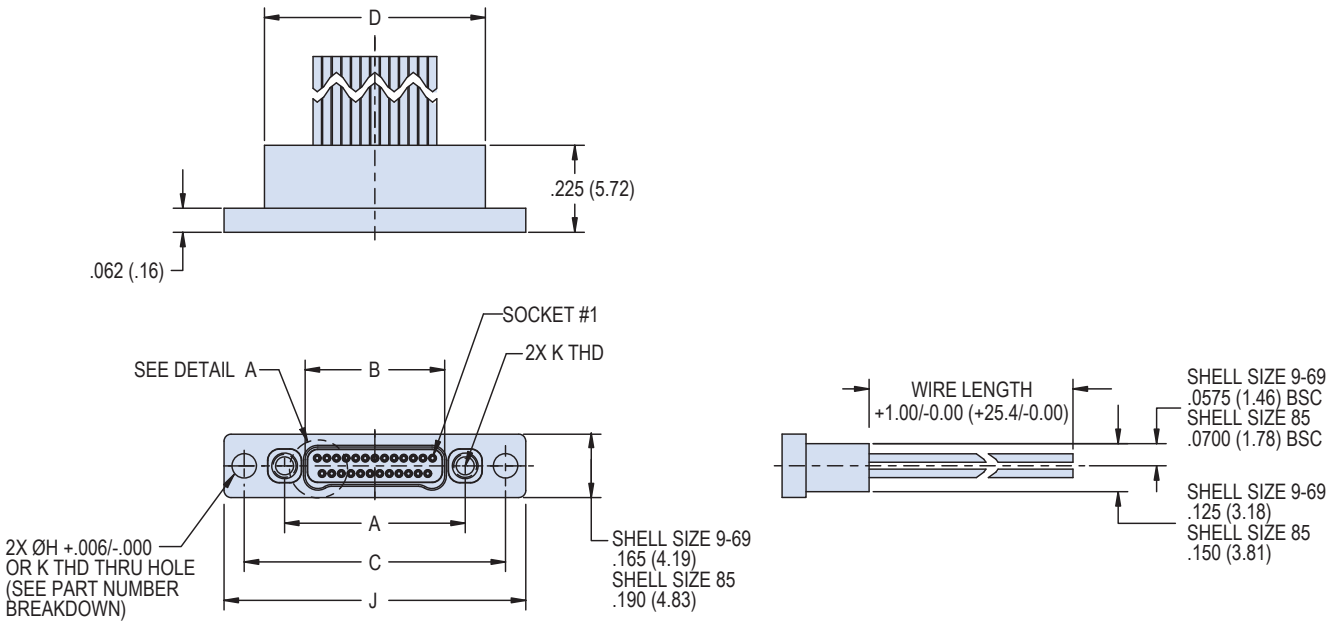
Connector Holes	Panel Holes	Mounting Location
Tapped	Clearance	Rear Panel Mount
Clearance	Tapped	Front Panel Mount
Clearance	Clearance	Front or Rear Panel Mount with screw and nut

NOTES

1. Inspect and test IAW MIL-DTL-32139
2. Interface receptacle dimensions per MIL-DTL-32139/4
3. Panel cutout sized to allow lobe up or lobe down mounting orientation
4. Connector may be mounted to front or back of panel depending on selected mounting hole option
5. Recommended panel thickness .100 (2.54) max
6. Material and Finish
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts:gold alloy / unplated
   - Wire: See part number break down
   - Jacking hardware: See part number break down

Dimensions

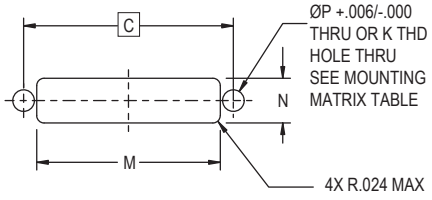
891-050 Receptacle (Socket) Connector



Layout	A BSC.		B BSC.		C BSC.		D		H		J		K
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	
9S	.270	6.86	.163	4.14	.480	12.19	.375	9.53	.0635	1.61	.585	14.86	#0-80 UNF-2B
15S	.345	8.76	.238	6.05	.555	14.10	.450	11.43	.0635	1.61	.660	16.76	#0-80 UNF-2B
21S	.420	10.67	.313	7.95	.630	16.00	.525	13.34	.0635	1.61	.735	18.67	#0-80 UNF-2B
25S	.470	11.94	.363	9.22	.680	17.27	.575	14.61	.0635	1.61	.785	19.94	#0-80 UNF-2B
31S	.545	13.84	.438	11.13	.755	19.18	.650	16.51	.0635	1.61	.860	21.84	#0-80 UNF-2B
37S	.620	15.75	.513	13.03	.830	21.08	.725	18.42	.0635	1.61	.935	23.75	#0-80 UNF-2B
41S	.670	17.02	.563	14.30	.880	22.35	.775	19.69	.0635	1.61	.985	25.02	#0-80 UNF-2B
51S	.795	20.19	.688	17.48	1.005	25.53	.900	22.86	.0635	1.61	1.110	28.19	#0-80 UNF-2B
65S	.970	24.64	.863	21.92	1.180	29.97	1.075	27.31	.0635	1.61	1.285	32.64	#0-80 UNF-2B
69S	1.020	25.91	.913	23.19	1.230	31.24	1.125	28.58	.0635	1.61	1.335	33.91	#0-80 UNF-2B
85S	1.246	31.65	1.113	28.27	1.527	38.79	1.377	34.98	.0890	2.26	1.677	42.60	#2-56 UNC-2B

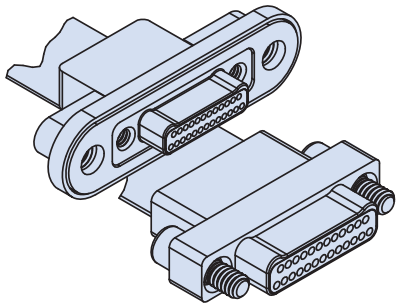
PANEL MOUNT DIMENSIONS

	SIZE-9	SIZE-15	SIZE-21	SIZE-25	SIZE-31	SIZE-37	SIZE-41	SIZE-51	SIZE-65	SIZE-69	SIZE-85
C	.480 (12.19)	.555 (14.10)	.630 (16.00)	.680 (17.27)	.755 (19.18)	.830 (21.08)	.880 (22.35)	1.005 (25.52)	1.180 (29.97)	1.230 (31.24)	1.527 (38.79)
K	#0-80 UNF-2B										#2-56 UNC-2B
M	.395 (10.03)	.470 (11.94)	.545 (13.84)	.595 (15.11)	.670 (17.02)	.745 (18.92)	.795 (20.19)	.920 (23.37)	1.095 (27.81)	1.145 (29.08)	1.397 (35.48)
N	.145 (3.68)										.170 (4.32)
P	.070 (1.78)										.096 (2.44)



Dual Row Connectors

Flex Assembly with Rear Panel Mount Nano to Nano I/O – How to Order



Glenair Flex Assemblies offer rear panel mount Nano to Nano I/O connector with gold alloy TwistPin contacts terminated to flex. Ideal for inside enclosures where the flex path can exit the connector perpendicular to the enclosure panel. These assemblies offer premium performance while saving space and weight in comparison to wired assemblies. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. For custom length, flex shape, and signal terminations, please contact your Glenair sales representative.

Gasket Seals are available in passivated, silver plated, Aluminum filled fluorosilicone or nickel plated, aluminum filled fluorosilicone. For replacement gaskets see 899-015.

How to Order

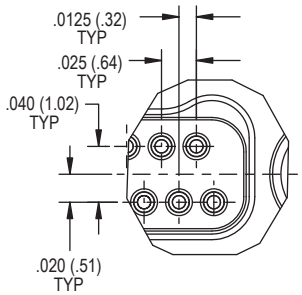
Sample Part Number	891-033	-25P	S	01	M	-P	A2	J	-12	S

Series	**891-033** = Plug or Receptacle
Insert Arrangement/ Contact Type	Plugs: **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Receptacles: **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**
Panel Mount Contact Type	**T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated
Panel Mount Gasket Material	**Omit** for No Gasket **01** = Fluorosilicone IAW MIL-DTL-25988 Type II, Class I, Grade 70 **02** = Passivated Silver Plated Aluminum Filled Fluorosilicon IAW MIL-DTL-83528, Type "D" (Cho-Seal 1298 or Equivalent) **03** = Nickel Plated Aluminum Filled Fluorosilicone, (Cho-Seal 6503 or Equivalent)
Mounting Thread Option	**Omit** for #2-56 UNC-2B **M** = M2X0.4 6H
Board Level Contact Type	**P** = Plug **S** = Receptacle
Board Level Shell/ Can Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **S** = Stainless Steel Shell, Passivated **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated
Board Level Hardware Option	**J** = Hex Head Jackscrew **T** = Female Thread* * Female threads are available on plug connectors only if the shell material is titanium or stainless steel.
Assembly Length	**3** = 3.00 ± .05 inches **6** = 6.00 ± .05 inches **12** = 12.0 ± .05 inches
Shielding Option	**Omit** for none **S** = Shielding

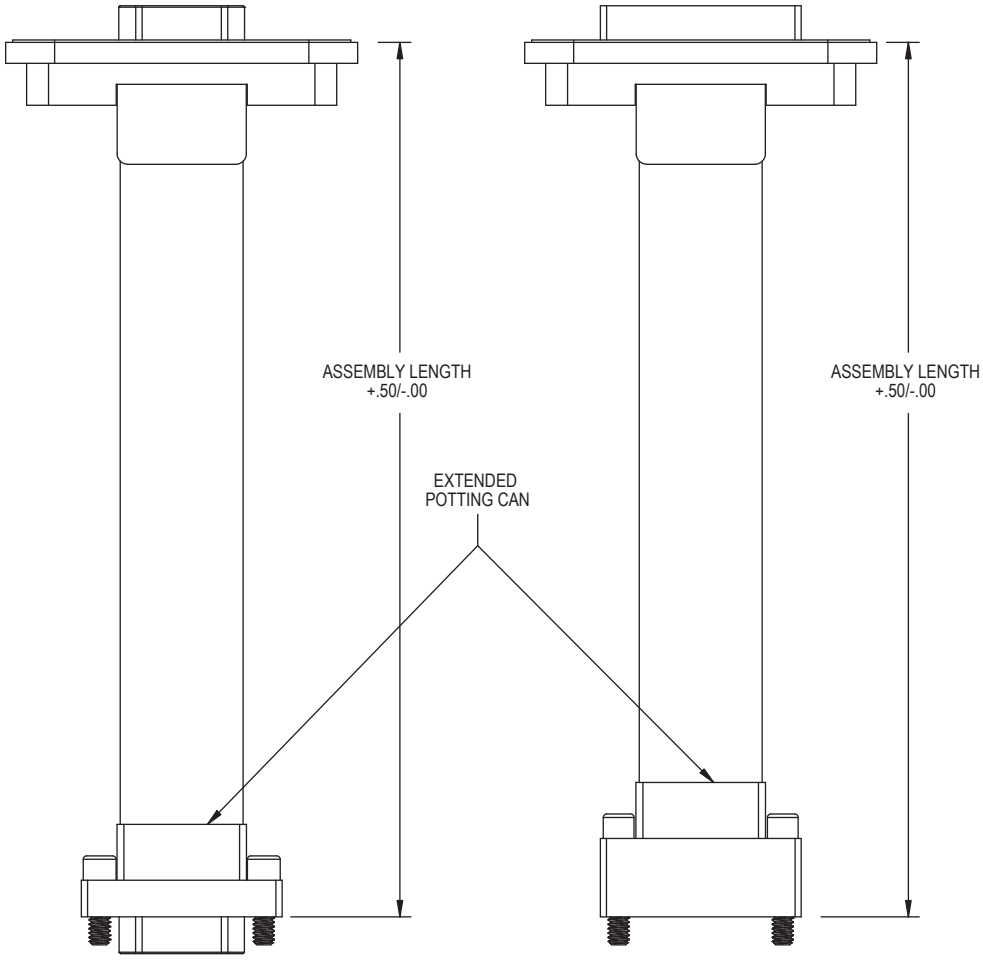
NOTES

1. Connector performance IAW MIL-DTL-32139
2. Connector interface dimensions per MIL-DTL-32139/3 and MIL-DTL-32139/4
3. Panel mount and board level connectors shall be the same size. Flex traces are terminated from panel mount connector to board level connector 1 to 1.
4. Flex workmanship shall be IAW IPC-6013, Class 2.
5. Typical flex will be .01 ± .005 Thick.
6. Minimum bend radius is 6 to 10 times the flex thickness.
7. Flex shielding: EMI shielding film will be used when shielding option is chosen.

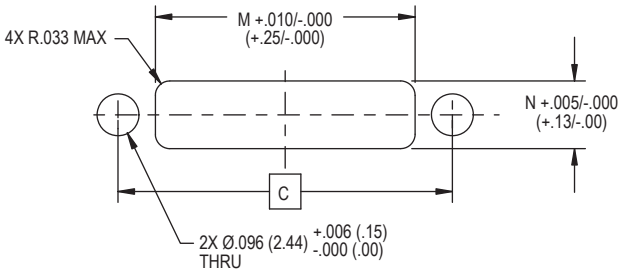
DETAIL A



891-033 FLEX ASSEMBLY LENGTH



891-033 RECOMMENDED PANEL CUTOUT DIMENSIONS



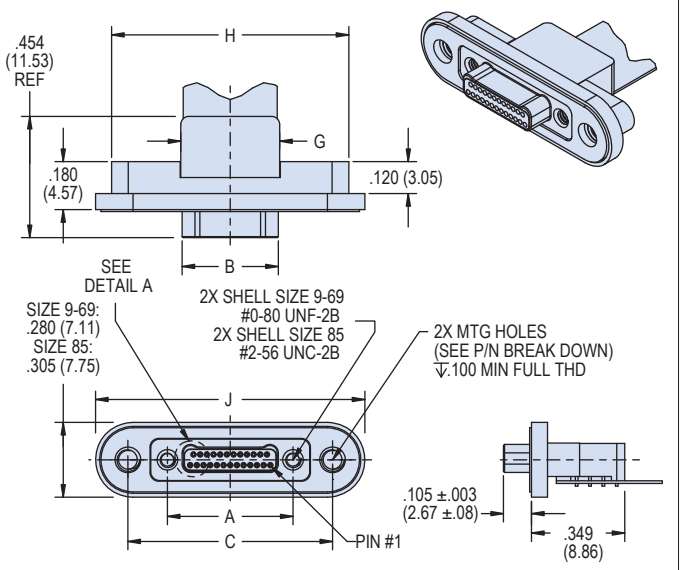
Rear panel mount connector can be installed into panel with either lobes up or lobes down orientation

Shell Size	C		M		N	
	In	mm	In	mm	In	mm
9	.566	14.38	.395	10.03	.155	3.94
15	.641	16.28	.470	11.94	.155	3.94
21	.716	18.19	.545	13.84	.155	3.94
25	.766	19.46	.595	15.11	.155	3.94
31	.841	21.36	.670	17.02	.155	3.94
37	.916	23.27	.745	18.92	.155	3.94
41	.966	24.54	.795	20.19	.155	3.94
51	1.091	27.71	.920	23.37	.155	3.94
65	1.266	32.16	1.095	27.81	.155	3.94
69	1.316	33.43	1.145	29.08	.155	3.94
85	1.568	39.83	1.397	35.48	.180	4.57

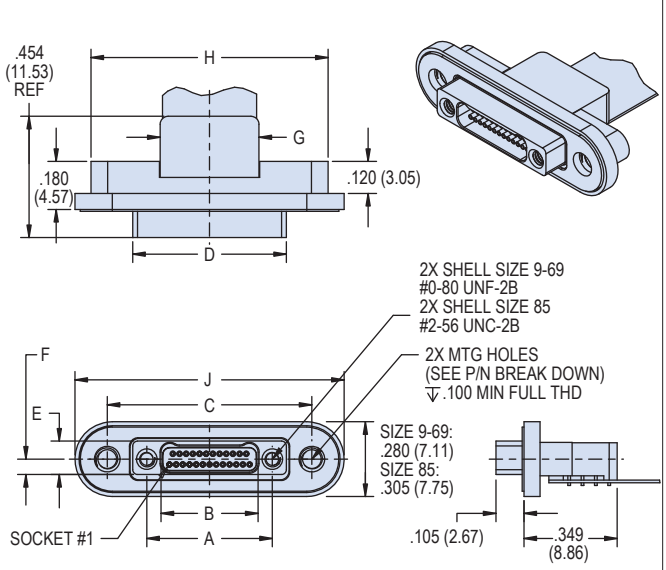
Flex Assembly with Rear Panel Mount Nano to Nano I/O Dimensions

Panel Mount Plug and Receptacle Dimensions

891-033 Panel Mount Plug



891-033 Panel Mount Receptacle



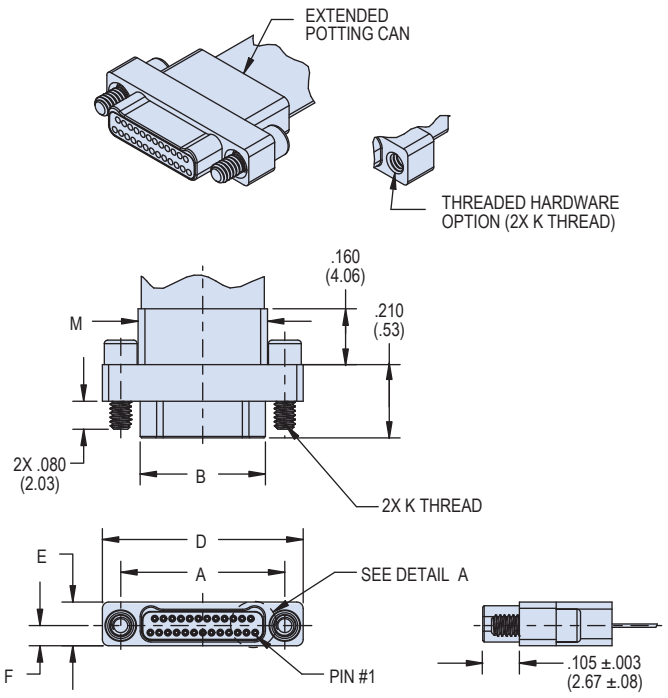
Layout	A BSC.		B BSC.		C BSC.		D		E		F		G		H		J	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
9P	.270	6.86	.160	4.06	.566	14.38	--	--	--	--	--	--	.170	4.32	.688	17.48	.808	20.52
9S	.270	6.86	.163	4.14	.566	14.38	.375	9.53	.125	3.18	.0575	1.46	.170	4.32	.688	17.48	.808	20.52
15P	.345	8.76	.235	5.97	.641	16.28	--	--	--	--	--	--	.245	6.22	.763	19.38	.883	22.43
15S	.345	8.76	.238	6.05	.641	16.28	.450	11.43	.125	3.18	.0575	1.46	.245	6.22	.763	19.38	.883	22.43
21P	.420	10.67	.310	7.87	.716	18.19	--	--	--	--	--	--	.320	8.13	.838	21.29	.958	24.33
21S	.420	10.67	.313	7.95	.716	18.19	.525	13.34	.125	3.18	.0575	1.46	.320	8.13	.838	21.29	.958	24.33
25P	.470	11.94	.360	9.14	.766	19.46	--	--	--	--	--	--	.370	9.40	.888	22.56	1.008	25.60
25S	.470	11.94	.363	9.22	.766	19.46	.575	14.61	.125	3.18	.0575	1.46	.370	9.40	.888	22.56	1.008	25.60
31P	.545	13.84	.435	11.05	.841	21.36	--	--	--	--	--	--	.445	11.30	.963	24.46	1.083	27.51
31S	.545	13.84	.438	11.13	.841	21.36	.650	16.51	.125	3.18	.0575	1.46	.445	11.30	.963	24.46	1.083	27.51
37P	.620	15.75	.510	12.95	.916	23.27	--	--	--	--	--	--	.520	13.21	1.038	26.37	1.158	29.41
37S	.620	15.75	.513	13.03	.916	23.27	.725	18.42	.125	3.18	.0575	1.46	.520	13.21	1.038	26.37	1.158	29.41
41P	.670	17.02	.560	14.22	.966	24.54	--	--	--	--	--	--	.570	14.48	1.088	27.64	1.208	30.68
41S	.670	17.02	.563	14.30	.966	24.54	.775	19.69	.125	3.18	.0575	1.46	.570	14.48	1.088	27.64	1.208	30.68
51P	.795	20.19	.685	17.40	1.091	27.71	--	--	--	--	--	--	.695	17.65	1.213	30.81	1.333	33.86
51S	.795	20.19	.688	17.48	1.091	27.71	.900	22.86	.125	3.18	.0575	1.46	.695	17.65	1.213	30.81	1.333	33.86
65P	.970	24.64	.860	21.84	1.266	32.16	--	--	--	--	--	--	.870	22.10	1.388	35.26	1.508	38.30
65S	.970	24.64	.863	21.92	1.266	32.16	1.075	27.31	.125	3.18	.0575	1.46	.870	22.10	1.388	35.26	1.508	38.30
69P	1.020	25.91	.910	23.11	1.316	33.43	--	--	--	--	--	--	.920	23.37	1.438	36.53	1.558	39.57
69S	1.020	25.91	.913	23.19	1.316	33.43	1.125	28.58	.125	3.18	.0575	1.46	.920	23.37	1.438	36.53	1.558	39.57
85P	1.246	31.65	1.110	28.19	1.568	39.83	--	--	--	--	--	--	1.120	28.45	1.690	42.93	1.810	45.97
85S	1.246	31.65	1.113	28.27	1.568	39.83	1.377	34.98	.150	3.81	.0700	1.78	1.120	28.45	1.690	42.93	1.810	45.97

D

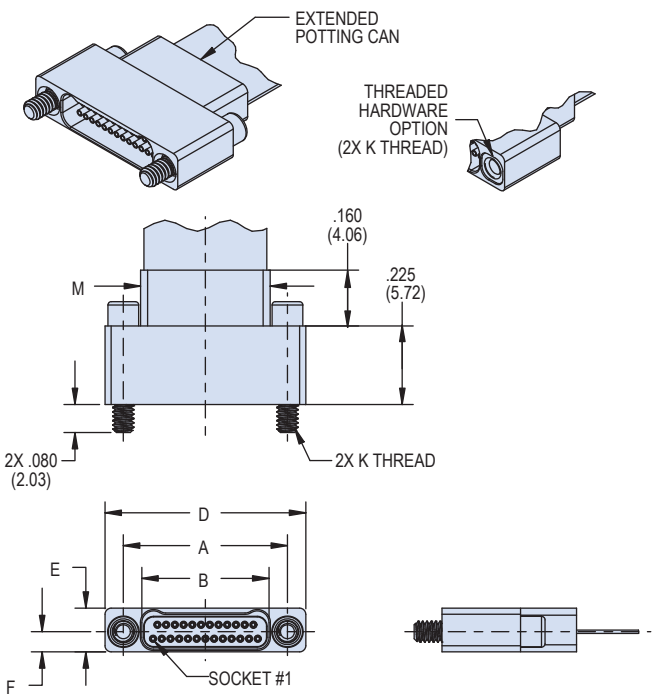
Flex Assembly with Rear Panel Mount Nano to Nano I/O Dimensions

Board level Plug and Receptacle Dimensions

891-033 Board Level Plug



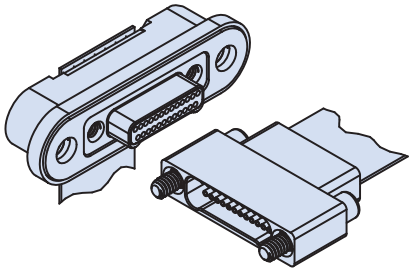
891-033 Board Level Receptacle



Layout	A BSC.		B BSC.		D		E		F		K	M	
	in	mm	in	mm	in	mm	in	mm	in	mm		in	mm
9P	.270	6.86	.160	4.06	.375	9.53	.125	3.18	.0575	1.46	#0-80 UNF	.171	4.34
9S	.270	6.86	.163	4.14	.375	9.53	.125	3.18	.0575	1.46	#0-80 UNF	.171	4.34
15P	.345	8.76	.235	5.97	.450	11.43	.125	3.18	.0575	1.46	#0-80 UNF	.246	6.25
15S	.345	8.76	.238	6.05	.450	11.43	.125	3.18	.0575	1.46	#0-80 UNF	.246	6.25
21P	.420	10.67	.310	7.87	.525	13.34	.125	3.18	.0575	1.46	#0-80 UNF	.321	8.15
21S	.420	10.67	.313	7.95	.525	13.34	.125	3.18	.0575	1.46	#0-80 UNF	.321	8.15
25P	.470	11.94	.360	9.14	.575	14.61	.125	3.18	.0575	1.46	#0-80 UNF	.371	9.42
25S	.470	11.94	.363	9.22	.575	14.61	.125	3.18	.0575	1.46	#0-80 UNF	.371	9.42
31P	.545	13.84	.435	11.05	.650	16.51	.125	3.18	.0575	1.46	#0-80 UNF	.446	11.33
31S	.545	13.84	.438	11.13	.650	16.51	.125	3.18	.0575	1.46	#0-80 UNF	.446	11.33
37P	.620	15.75	.510	12.95	.725	18.42	.125	3.18	.0575	1.46	#0-80 UNF	.521	13.23
37S	.620	15.75	.513	13.03	.725	18.42	.125	3.18	.0575	1.46	#0-80 UNF	.521	13.23
41P	.670	17.02	.560	14.22	.775	19.69	.125	3.18	.0575	1.46	#0-80 UNF	.571	14.50
41S	.670	17.02	.563	14.30	.775	19.69	.125	3.18	.0575	1.46	#0-80 UNF	.571	14.50
51P	.795	20.19	.685	17.40	.900	22.86	.125	3.18	.0575	1.46	#0-80 UNF	.696	17.68
51S	.795	20.19	.688	17.48	.900	22.86	.125	3.18	.0575	1.46	#0-80 UNF	.696	17.68
65P	.970	24.64	.860	21.84	1.075	27.31	.125	3.18	.0575	1.46	#0-80 UNF	.871	22.12
65S	.970	24.64	.863	21.92	1.075	27.31	.125	3.18	.0575	1.46	#0-80 UNF	.871	22.12
69P	1.020	25.91	.910	23.11	1.125	28.58	.125	3.18	.0575	1.46	#0-80 UNF	.921	23.39
69S	1.020	25.91	.913	23.19	1.125	28.58	.125	3.18	.0575	1.46	#0-80 UNF	.921	23.39
85P	1.246	31.65	1.110	28.19	1.377	34.98	.150	3.81	.0700	1.78	#2-56 UNC	1.121	28.47
85S	1.246	31.65	1.113	28.27	1.377	34.98	.150	3.81	.0700	1.78	#2-56 UNC	1.121	28.47

Dual Row Connectors

Flex Assembly with Rear Panel Mount Nano to Nano I/O
How to Order



Flex Assemblies feature rear panel mount to Nano I/O connectors with gold alloy TwistPin contacts terminated to flex. Ideal for inside enclosures where the flex path can exit the connector parallel to the enclosure panel. These assemblies offer premium performance while saving space and weight in comparison to wired assemblies. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. For custom length, flex shape, and signal terminations, please contact your Glenair sales representative.

Gasket Seals are available in fluorosilicone, passivated silver plated aluminum filled fluorosilicone or nickel plated aluminum filled fluorosilicone. For replacement gaskets, see 899-015.

How to Order

Sample Part Number	891-034	-25P	S	01	M	-P	A2	J	-12	S

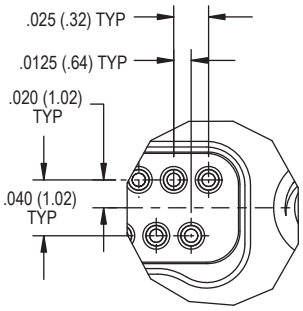
Series	**891-034** = Plug or Receptacle
Insert Arrangement/ Contact Type	Plugs: **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Receptacles: **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**
Panel Mount Shell Material and Finish	**T** - Titanium Shell, Unplated **S** - Stainless Steel Shell, Passivated
Panel Mount Gasket Material	**Omit** for No Gasket **01** = Fluorosilicone IAW MIL-DTL-25988 Type II, Class I, Grade 70 **02** = Passivated Silver Plated Aluminum Filled Fluorosilicon IAW MIL-DTL-83528, Type "D" (Cho-Seal 1298 or Equivalent) **03** = Nickel Plated Aluminum Filled Fluorosilicone, (Cho-Seal 6503 or Equivalent)
Mounting Thread Option	**Omit** for #2-56 UNC-2B **M** = M2X0.4 6H
Board Level Contact Type	**P** = Plug **S** = Receptacle
Board Level Shell/ Can Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **S** = Stainless Steel Shell, Passivated **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated
Board Level Hardware Option	**J** = Hex Head Jackscrew **T** = Female Thread* * Female threads are available on plug connectors only if the shell material is titanium or stainless steel.
Assembly Length	**3** = 3.00 ±.05 **6** = 6.00 ±.05 **12** = 12.00 ±.05
Shielding Option	**Omit** for none **S** = Shielding

D

NOTES

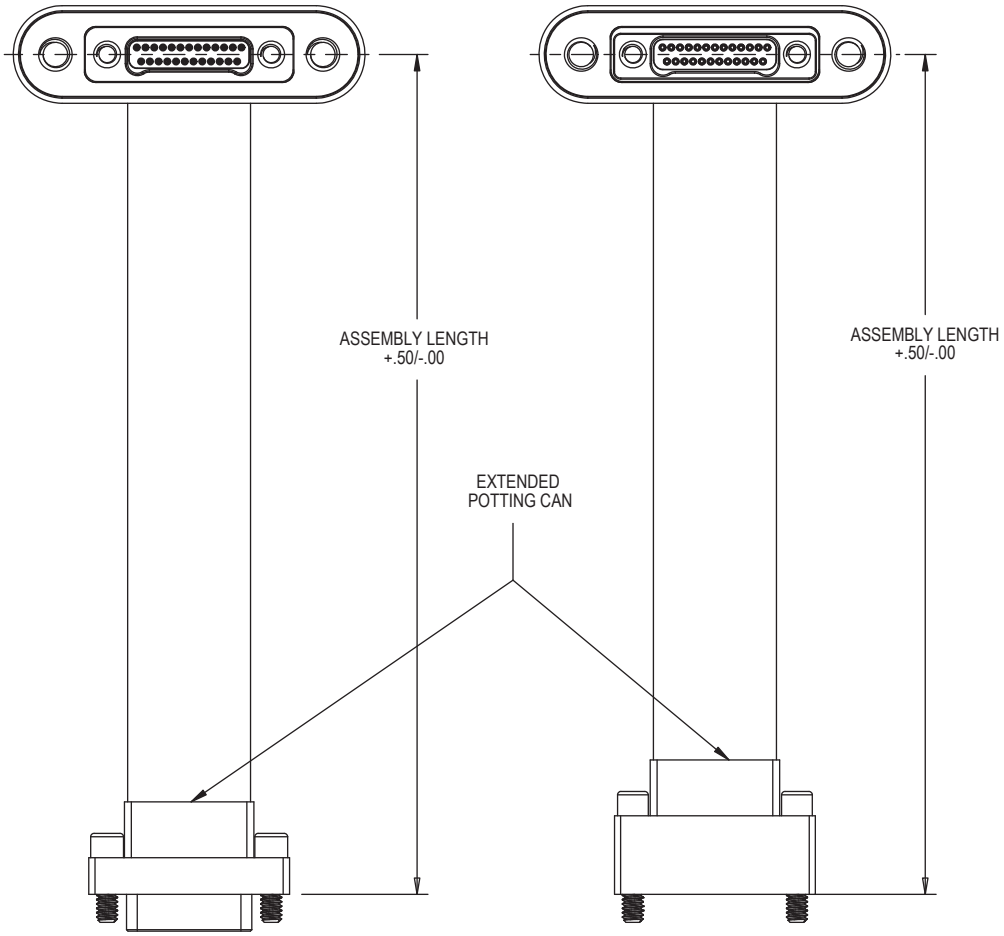
1. Connector performance IAW MIL-DTL-32139
2. Connector interface dimensions per MIL-DTL-32139/3 and MIL-DTL-32139/4
3. Panel mount and board level connectors shall be the same size. Flex traces are terminated from panel mount connector to board level connector 1 to 1.
4. Flex workmanship shall be IAW IPC-6013, Class 2.
5. Typical flex will be .01 ± .005 Thick.
6. Minimum bend radius is 6 to 10 times the flex thickness.
7. Flex shielding: EMI shielding film will be used when shielding option is chosen.

DETAIL A

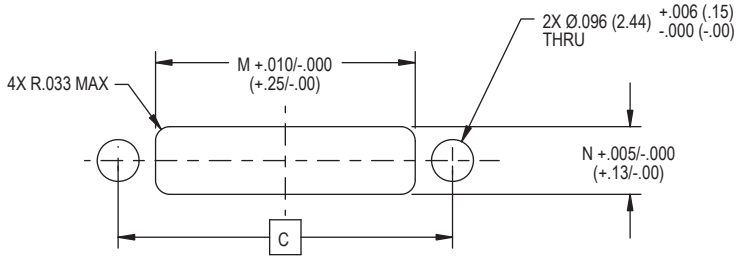


DIMENSIONS APPLY TO PLUG AND RECEPTACLE

891-034 FLEX ASSEMBLY LENGTH



891-034 RECOMMENDED PANEL CUTOUT DIMENSIONS



Rear panel mount connector can be installed into panel in either lobes up or lobes down orientation

Layout	C		M		N	
	In	mm	In	mm	In	mm
9	.566	14.376	.395	10.033	.155	3.937
15	.641	16.281	.470	11.938	.155	3.937
21	.716	18.186	.545	13.843	.155	3.937
25	.766	19.456	.595	15.113	.155	3.937
31	.841	21.361	.670	17.018	.155	3.937
37	.916	23.266	.745	18.923	.155	3.937
41	.966	24.536	.795	20.193	.155	3.937
51	1.091	27.711	.920	23.368	.155	3.937
65	1.266	32.156	1.095	27.813	.155	3.937
69	1.316	33.426	1.145	29.083	.155	3.937
85	1.568	39.827	1.397	35.484	.180	4.572

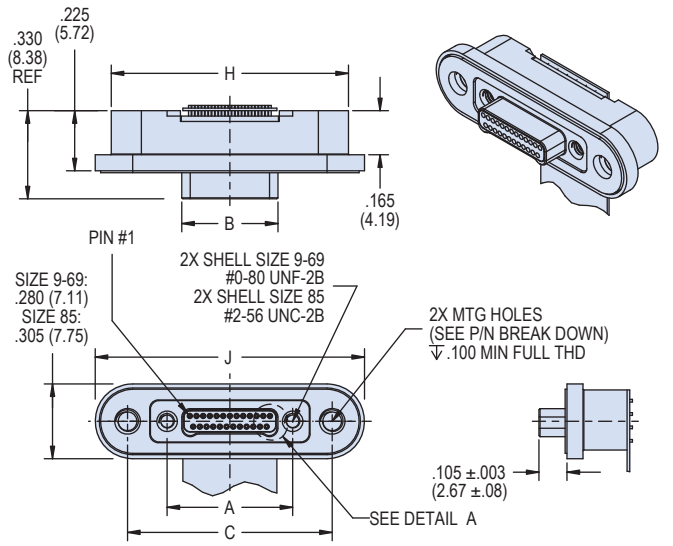
D

Dual Row Connectors

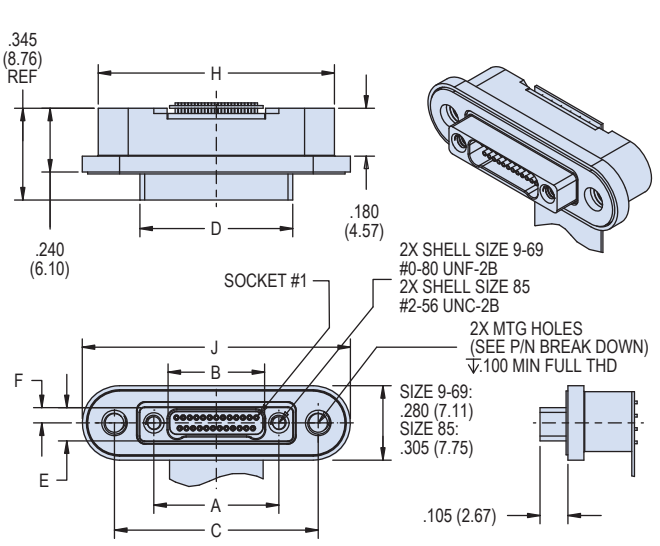
Flex Assembly with Rear Panel Mount Nano to Nano I/O Dimensions

Panel Mount Connector Dimensions

891-034 Panel Mount Plug



891-034 Panel Mount Receptacle



Layout	A BSC.		B BSC.		C BSC.		D		E		F		H		J	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
9P	.270	6.86	.160	4.06	.566	14.38	--	--	--	--	--	--	.688	17.48	.808	20.52
9S	.270	6.86	.163	4.14	.566	14.38	.375	9.53	.125	3.18	.0575	1.46	.688	17.48	.808	20.52
15P	.345	8.76	.235	5.97	.641	16.28	--	--	--	--	--	--	.763	19.38	.883	22.43
15S	.345	8.76	.238	6.05	.641	16.28	.450	11.43	.125	3.18	.0575	1.46	.763	19.38	.883	22.43
21P	.420	10.67	.310	7.87	.716	18.19	--	--	--	--	--	--	.838	21.29	.958	24.33
21S	.420	10.67	.313	7.95	.716	18.19	.525	13.34	.125	3.18	.0575	1.46	.838	21.29	.958	24.33
25P	.470	11.94	.360	9.14	.766	19.46	--	--	--	--	--	--	.888	22.56	1.008	25.60
25S	.470	11.94	.363	9.22	.766	19.46	.575	14.61	.125	3.18	.0575	1.46	.888	22.56	1.008	25.60
31P	.545	13.84	.435	11.05	.841	21.36	--	--	--	--	--	--	.963	24.46	1.083	27.51
31S	.545	13.84	.438	11.13	.841	21.36	.650	16.51	.125	3.18	.0575	1.46	.963	24.46	1.083	27.51
37P	.620	15.75	.510	12.95	.916	23.27	--	--	--	--	--	--	1.038	26.37	1.158	29.41
37S	.620	15.75	.513	13.03	.916	23.27	.725	18.42	.125	3.18	.0575	1.46	1.038	26.37	1.158	29.41
41P	.670	17.02	.560	14.22	.966	24.54	--	--	--	--	--	--	1.088	27.64	1.208	30.68
41S	.670	17.02	.563	14.30	.966	24.54	.775	19.69	.125	3.18	.0575	1.46	1.088	27.64	1.208	30.68
51P	.795	20.19	.685	17.40	1.091	27.71	--	--	--	--	--	--	1.213	30.81	1.333	33.86
51S	.795	20.19	.688	17.48	1.091	27.71	.900	22.86	.125	3.18	.0575	1.46	1.213	30.81	1.333	33.86
65P	.970	24.64	.860	21.84	1.266	32.16	--	--	--	--	--	--	1.388	35.26	1.508	38.30
65S	.970	24.64	.863	21.92	1.266	32.16	1.075	27.31	.125	3.18	.0575	1.46	1.388	35.26	1.508	38.30
69P	1.020	25.91	.910	23.11	1.316	33.43	--	--	--	--	--	--	1.438	36.53	1.558	39.57
69S	1.020	25.91	.913	23.19	1.316	33.43	1.125	28.58	.125	3.18	.0575	1.46	1.438	36.53	1.558	39.57
85P	1.246	31.65	1.110	28.19	1.568	39.83	--	--	--	--	--	--	1.690	42.93	1.810	45.97
85S	1.246	31.65	1.113	28.27	1.568	39.83	1.377	34.98	.150	3.81	.0700	1.78	1.690	42.93	1.810	45.97

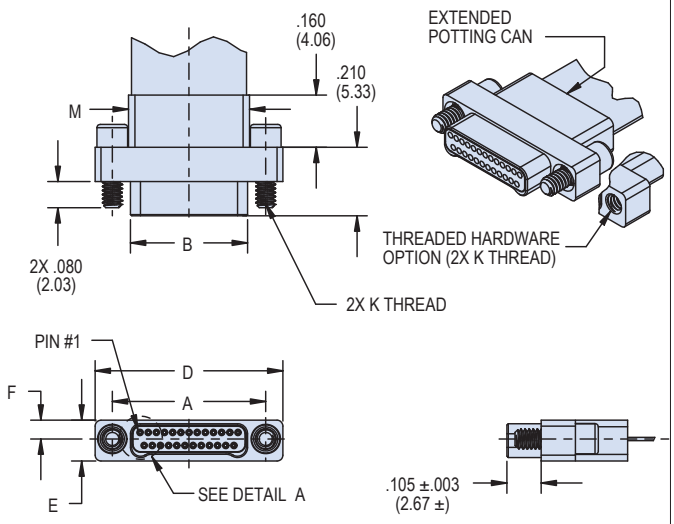
D

Dual Row Connectors

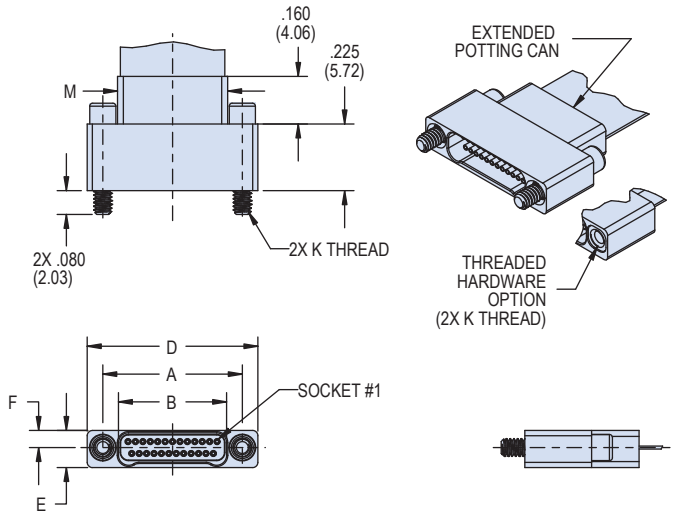
Flex Assembly with Rear Panel Mount Nano to Nano I/O Dimensions

Board Level Connector Dimensions

891-034 Board Level Plug



891-034 Board Level Receptacle

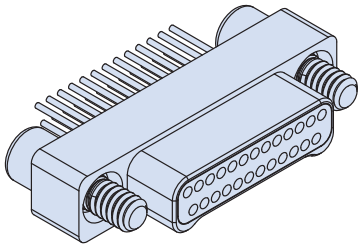


Layout	A BSC.		B BSC.		D		E		F		K	M	
	in	mm	in	mm	in	mm	in	mm	in	mm		in	mm
9P	.270	6.86	.160	4.06	.375	9.53	.125	3.18	.0575	1.46	#0-80 UNF	.171	4.34
9S	.270	6.86	.163	4.14	.375	9.53	.125	3.18	.0575	1.46	#0-80 UNF	.171	4.34
15P	.345	8.76	.235	5.97	.450	11.43	.125	3.18	.0575	1.46	#0-80 UNF	.246	6.25
15S	.345	8.76	.238	6.05	.450	11.43	.125	3.18	.0575	1.46	#0-80 UNF	.246	6.25
21P	.420	10.67	.310	7.87	.525	13.34	.125	3.18	.0575	1.46	#0-80 UNF	.321	8.15
21S	.420	10.67	.313	7.95	.525	13.34	.125	3.18	.0575	1.46	#0-80 UNF	.321	8.15
25P	.470	11.94	.360	9.14	.575	14.61	.125	3.18	.0575	1.46	#0-80 UNF	.371	9.42
25S	.470	11.94	.363	9.22	.575	14.61	.125	3.18	.0575	1.46	#0-80 UNF	.371	9.42
31P	.545	13.84	.435	11.05	.650	16.51	.125	3.18	.0575	1.46	#0-80 UNF	.446	11.33
31S	.545	13.84	.438	11.13	.650	16.51	.125	3.18	.0575	1.46	#0-80 UNF	.446	11.33
37P	.620	15.75	.510	12.95	.725	18.42	.125	3.18	.0575	1.46	#0-80 UNF	.521	13.23
37S	.620	15.75	.513	13.03	.725	18.42	.125	3.18	.0575	1.46	#0-80 UNF	.521	13.23
41P	.670	17.02	.560	14.22	.775	19.69	.125	3.18	.0575	1.46	#0-80 UNF	.571	14.50
41S	.670	17.02	.563	14.30	.775	19.69	.125	3.18	.0575	1.46	#0-80 UNF	.571	14.50
51P	.795	20.19	.685	17.40	.900	22.86	.125	3.18	.0575	1.46	#0-80 UNF	.696	17.68
51S	.795	20.19	.688	17.48	.900	22.86	.125	3.18	.0575	1.46	#0-80 UNF	.696	17.68
65P	.970	24.64	.860	21.84	1.075	27.31	.125	3.18	.0575	1.46	#0-80 UNF	.871	22.12
65S	.970	24.64	.863	21.92	1.075	27.31	.125	3.18	.0575	1.46	#0-80 UNF	.871	22.12
69P	1.020	25.91	.910	23.11	1.125	28.58	.125	3.18	.0575	1.46	#0-80 UNF	.921	23.39
69S	1.020	25.91	.913	23.19	1.125	28.58	.125	3.18	.0575	1.46	#0-80 UNF	.921	23.39
85P	1.246	31.65	1.110	28.19	1.377	34.98	.150	3.81	.0700	1.78	#2-56 UNC	1.121	28.47
85S	1.246	31.65	1.113	28.27	1.377	34.98	.150	3.81	.0700	1.78	#2-56 UNC	1.121	28.47

D

Dual Row Connectors

Plug and Receptacle Connectors with Uninsulated Wire
How to Order

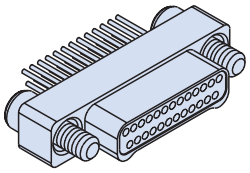
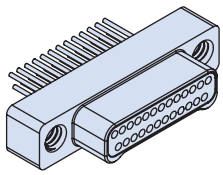
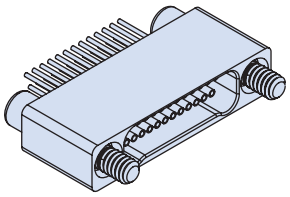
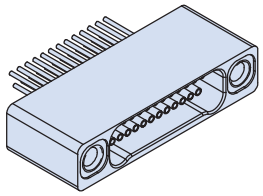


Nanominiature Connectors with Uninsulated Wire feature gold alloy TwistPin contacts. Contacts are precision-crimped to uninsulated wire. These nanominiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. Wire gages #30 and #32 AWG.

TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

How to Order							
Sample Part Number	**891-003**	**-9P**	**A2**	**-0**	**D3**	**-.125**	**J**
Series	**891-003** = Plug **891-004** = Receptacle						
Insert Arrangement/ Contact Type	Plugs (891-003): **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Receptacles (891-004): **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**						
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **S** = Stainless Steel Shell, Passivated **T** = Titanium Shell, Unplated						
Wire Gage	**0** = #30 AWG **2** = #32 AWG						
Wire Type	**D3** = Single Strand Copper Wire, Uninsulated with Gold Plating						
Wire Length	**.125**, **.250**, **.375**, **.500**						
Hardware	**J** = Jackscrew **T** = Female Thread* *Female threads are available on plug connectors only if the shell material is titanium or stainless steel.						

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option

NOTES

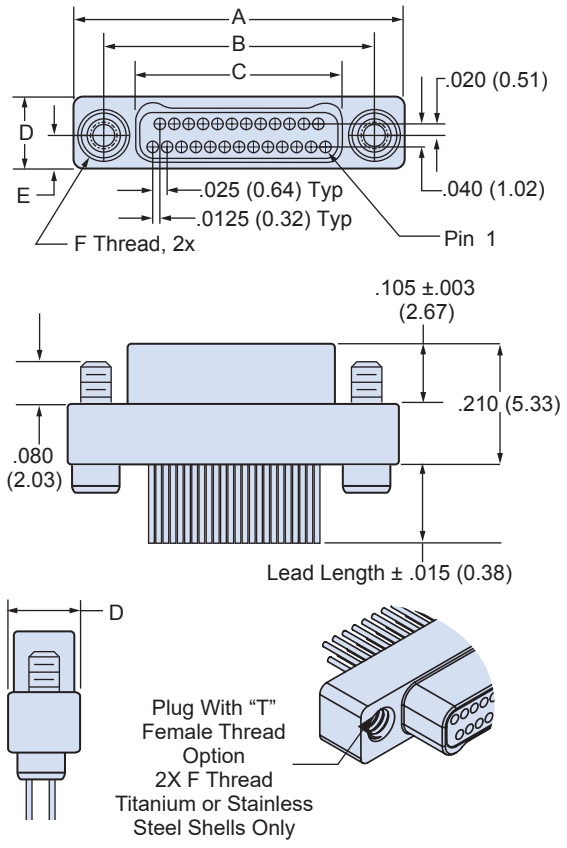
1. Material and Finishes:
   - Shell: see part number break down
   - insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Wire: see part number break down
   - Hardware: passivated stainless steel
2. Inspect and test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 & /4

Dual Row Connectors

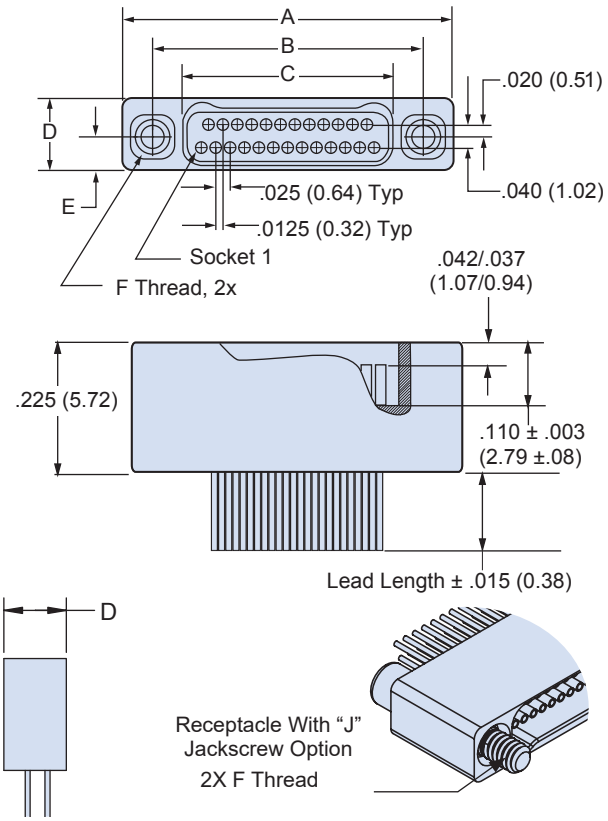
Plug and Receptacle Connectors with Uninsulated Wire Dimensions

Dimensions

891-003 Plug (Pin) Connector

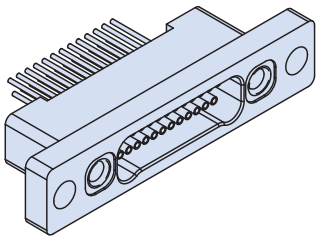


891-004 Receptacle (Socket) Connector



Layout	A		B BSC.		C BSC.		D		E BSC.		F Thread
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.	In. ±.005	mm ±0.13	In.	mm	
9P	.375	9.52	.270	6.86	.160	4.06	.125	3.18	.0575	1.46	#0-80 UNF
9S	.375	9.52	.270	6.86	.163	4.14	.125	3.18	.0575	1.46	#0-80 UNF
15P	.450	11.43	.345	8.76	.235	5.97	.125	3.18	.0575	1.46	#0-80 UNF
15S	.450	11.43	.345	8.76	.238	6.04	.125	3.18	.0575	1.46	#0-80 UNF
21P	.525	13.33	.420	10.67	.310	7.87	.125	3.18	.0575	1.46	#0-80 UNF
21S	.525	13.33	.420	10.67	.313	7.95	.125	3.18	.0575	1.46	#0-80 UNF
25P	.575	14.60	.470	11.94	.360	9.14	.125	3.18	.0575	1.46	#0-80 UNF
25S	.575	14.60	.470	11.94	.363	9.22	.125	3.18	.0575	1.46	#0-80 UNF
31P	.650	16.51	.545	13.84	.435	11.05	.125	3.18	.0575	1.46	#0-80 UNF
31S	.650	16.51	.545	13.84	.438	11.12	.125	3.18	.0575	1.46	#0-80 UNF
37P	.725	18.41	.620	15.75	.510	12.95	.125	3.18	.0575	1.46	#0-80 UNF
37S	.725	18.41	.620	15.75	.513	13.03	.125	3.18	.0575	1.46	#0-80 UNF
41P	.775	19.69	.670	17.02	.560	14.23	.125	3.18	.0575	1.46	#0-80 UNF
41S	.775	19.69	.670	17.02	.563	14.30	.125	3.18	.0575	1.46	#0-80 UNF
51P	.900	22.86	.795	20.19	.685	17.40	.125	3.18	.0575	1.46	#0-80 UNF
51S	.900	22.86	.795	20.19	.688	17.47	.125	3.18	.0575	1.46	#0-80 UNF
65P	1.075	27.30	.970	24.64	.860	21.84	.125	3.18	.0575	1.46	#0-80 UNF
65S	1.075	27.30	.970	24.64	.863	21.92	.125	3.18	.0575	1.46	#0-80 UNF
69P	1.125	28.57	1.020	25.91	.910	23.11	.125	3.18	.0575	1.46	#0-80 UNF
69S	1.125	28.57	1.020	25.91	.913	23.19	.125	3.18	.0575	1.46	#0-80 UNF
85P	1.377	34.97	1.246	31.65	1.110	28.19	.150	3.81	.0700	1.78	#2-56 UNC
85S	1.377	34.97	1.246	31.65	1.113	28.27	.150	3.81	.0700	1.78	#2-56 UNC

Front Panel Mount Receptacle with Uninsulated Wire
How to Order



Front Panel Mount Receptacles with Uninsulated Wire feature gold alloy TwistPin contacts. Contacts are precision-crimped to solid wire. These nanominiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. Wire gages #30 and #32 AWG

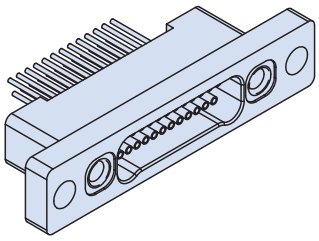
TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

How to Order								
Sample Part Number	**891-053**	**-25S**	**A2**	**-0**	**D3**	**-.125**	**T**	**C**

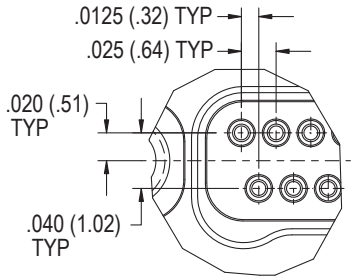
Series	**891-053** = Receptacle
Insert Arrangement/ Contact Type	**9S, 15S, 21S, 25S, 31S, 37S, 41S, 51S, 65S, 69S, 85S**
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated
Wire Gage	**0** = #30 AWG **2** = #32 AWG
Wire Type	**D3** = Single Strand Coppper Wire, Uninsulated, with Gold Plating
Wire Length	**.070, .125, .250, .375, .500, 1.000**
Hardware Option	**T** = Female Threads (#0-80 for size 9-69, #2-56 for size 85) Passivated 303 stainless steel inserts installed in aluminum shells, otherwise tapped directly into shell
Mounting Hole Option	**C** = Clearance Hole **T** = Female Thread

Receptacle (Socket)



T - Female Thread

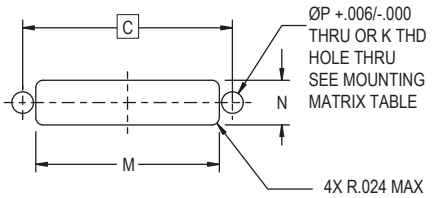
891-053 DETAIL A



Panel Mount Connector Mounting Matrix		
Connector Holes	**Panel Holes**	**Mounting Location**
Tapped	Clearance	Rear Panel Mount
Clearance	Tapped	Front Panel Mount
Clearance	Clearance	Front or Rear Panel Mount with screw and nut

PANEL MOUNT DIMENSIONS

	SIZE-9	SIZE-15	SIZE-21	SIZE-25	SIZE-31	SIZE-37	SIZE-41	SIZE-51	SIZE-65	SIZE-69	SIZE-85
C	.480 (12.19)	.555 (14.10)	.630 (16.00)	.680 (17.27)	.755 (19.18)	.830 (21.08)	.880 (22.35)	1.005 (25.52)	1.180 (29.97)	1.230 (31.24)	1.527 (38.79)
K	#0-80 UNF-2B										#2-56 UNC-2B
M	.395 (10.03)	.470 (11.94)	.545 (13.84)	.595 (15.11)	.670 (17.02)	.745 (18.92)	.795 (20.19)	.920 (23.37)	1.095 (27.81)	1.145 (29.08)	1.397 (35.48)
N	.145 (3.68)										.170 (4.32)
P	.070 (1.78)										.096 (2.44)

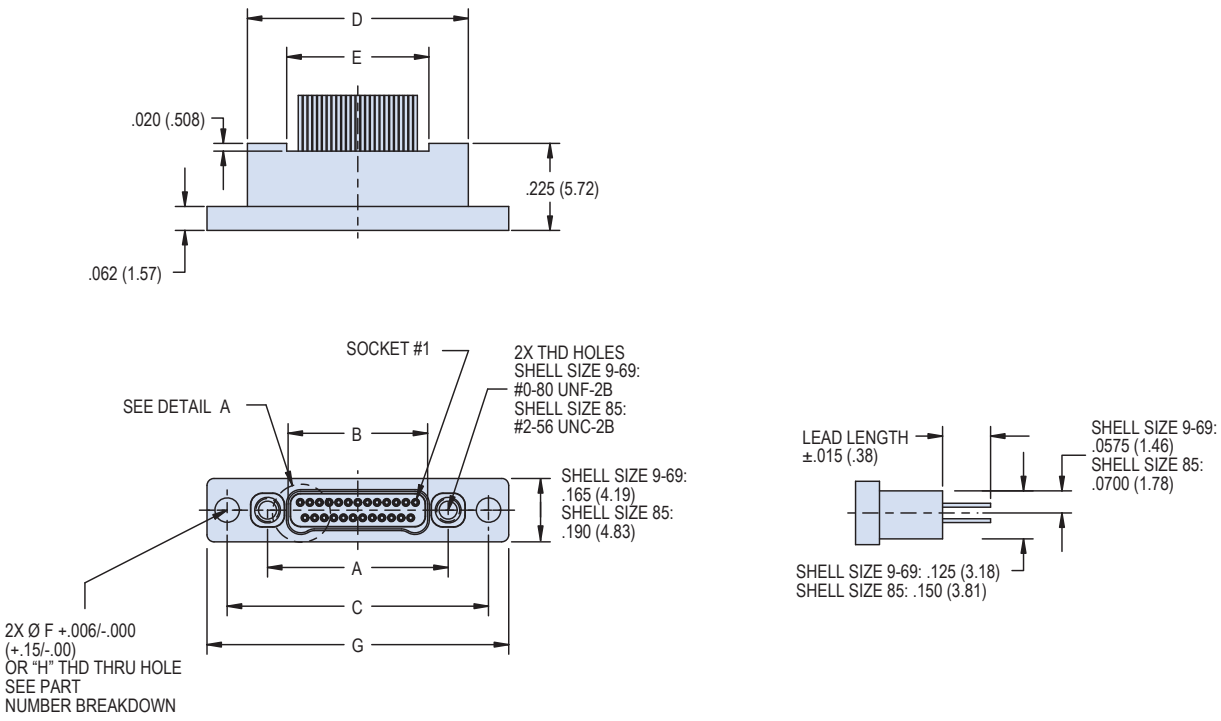


Dual Row Connectors

Front Panel Mount Receptacle with Uninsulated Wire Dimensions

Dimensions

891-053 Receptacle (Socket) Connector



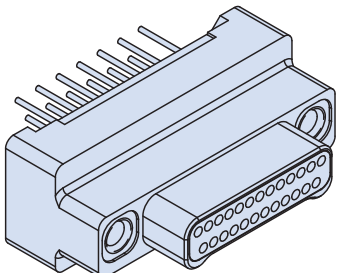
Layout	A BSC.		B BSC.		C BSC.		D		E		F		G		H
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	
9S	.270	6.86	.163	4.14	.480	12.19	.375	9.53	.170	4.32	.0635	1.61	.585	14.86	#0-80 UNF-2B
15S	.345	8.76	.238	6.05	.555	14.10	.450	11.43	.245	6.22	.0635	1.61	.660	16.76	#0-80 UNF-2B
21S	.420	10.67	.313	7.95	.630	16.00	.525	13.34	.320	8.13	.0635	1.61	.735	18.67	#0-80 UNF-2B
25S	.470	11.94	.363	9.22	.680	17.27	.575	14.61	.370	9.40	.0635	1.61	.785	19.94	#0-80 UNF-2B
31S	.545	13.84	.438	11.13	.755	19.18	.650	16.51	.445	11.30	.0635	1.61	.860	21.84	#0-80 UNF-2B
37S	.620	15.75	.513	13.03	.830	21.08	.725	18.42	.520	13.21	.0635	1.61	.935	23.75	#0-80 UNF-2B
41S	.670	17.02	.563	14.30	.880	22.35	.775	19.69	.570	14.48	.0635	1.61	.985	25.02	#0-80 UNF-2B
51S	.795	20.19	.688	17.48	1.005	25.53	.900	22.86	.695	17.65	.0635	1.61	1.110	28.19	#0-80 UNF-2B
65S	.970	24.64	.863	21.92	1.180	29.97	1.075	27.31	.870	22.10	.0635	1.61	1.285	32.64	#0-80 UNF-2B
69S	1.020	25.91	.913	23.19	1.230	31.24	1.125	28.58	.920	23.37	.0635	1.61	1.335	33.91	#0-80 UNF-2B
85S	1.246	31.65	1.113	28.27	1.527	38.79	1.377	34.98	1.120	28.45	.0890	2.26	1.677	42.60	#2-56 UNC-2B

NOTES

1. Inspect and test IAW MIL-DTL-32139
2. Interface receptacle dimensions per MIL-DTL-32139/4
3. Panel cutout sized to allow lobe up or lobe down mounting orientation
4. Connector may be mounted to front or back of panel depending on selected mounting hole option
5. Recommended panel thickness .100 (2.54) max
6. Materials/finishes
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts:gold alloy / unplated
   - Wire: copper alloy/gold plated
   - Jacking hardware: see part number break down

Dual Row Connectors

Vertical Mount Thru Hole PCB Connectors
How to Order



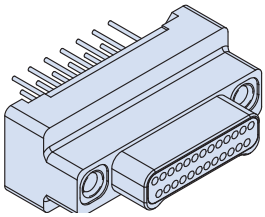
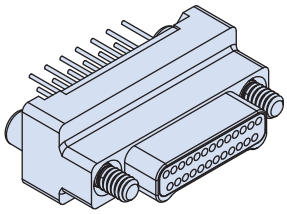
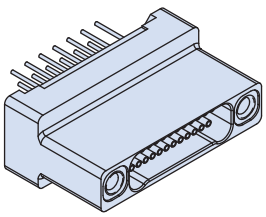
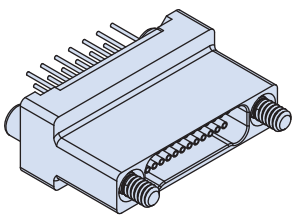
Vertical Mount Thru Hole PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with female threads, or with jackscrews for use with flexible circuits.

Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. Complies to the requirements of MIL-DTL-32139. These connectors are intermateable with any corresponding Glenair Series 891 Dual row metal shell nanominiature connector.

How to Order

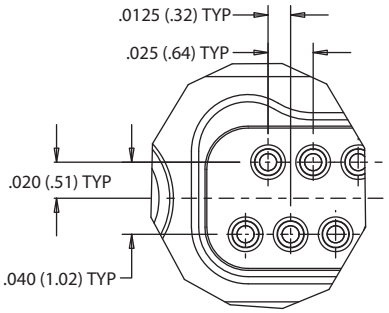
Sample Part Number	891-007	-25S	A2	-BST	1	T
Series	**891-006** Plug, Vertical Mount PCB Connector **891-007** Receptacle, Vertical Mount PCB Connector					
Insert Arrangement/ Contact Type	Pins (891-006 Plugs) **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Sockets (891-007 Receptacles) **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**					
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **A2** - Aluminum Shell, Electroless Nickel Plating **S** - Stainless Steel Shell, Passivated **T** - Titanium Shell, Unplated					
Termination Type	**BST** - Board Straight Thru Hole					
PC Tail Length	**1** - .110 (2.79) **2** - .172 (4.37) **3** - .140 (3.56)					
Hardware	**J** - Jackscrew **T** - Female Thread					

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option

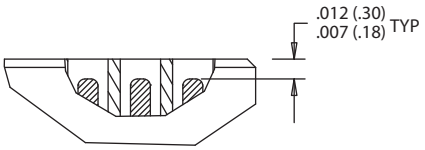
NOTES

1. Inspect and test IAW MIL-DTL-32139
2. Interface dimensions per MIL-DTL-32139/3 and /4
3. Materials/finishes
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: passivated stainless steel

DETAIL A

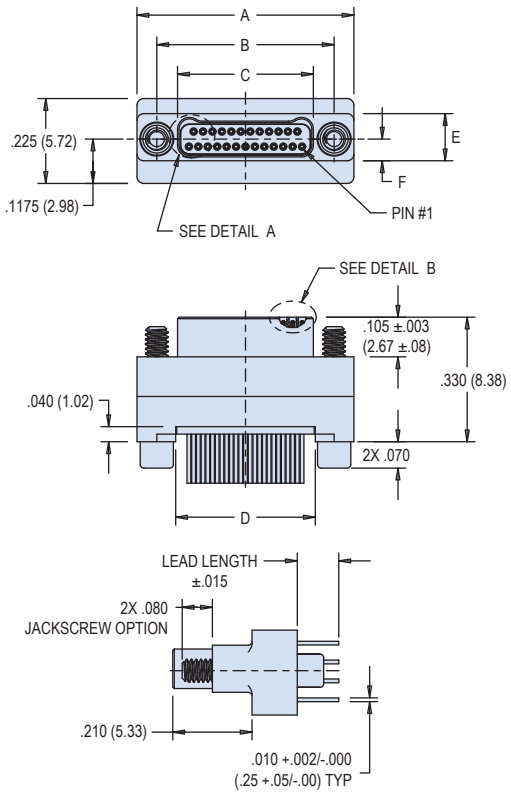


DETAIL B

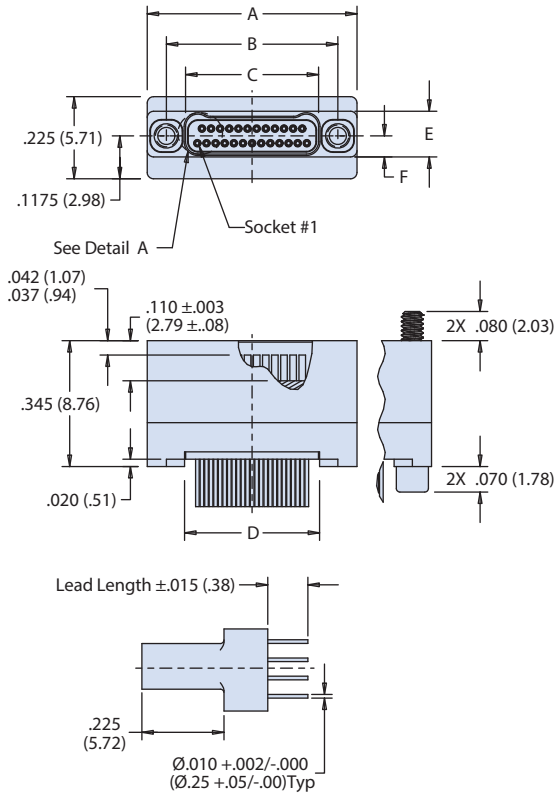


Dimensions

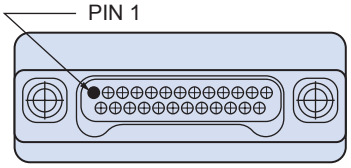
891-006 Plug (Pin) Connectors

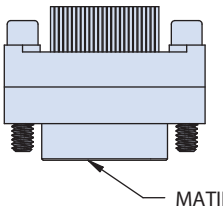


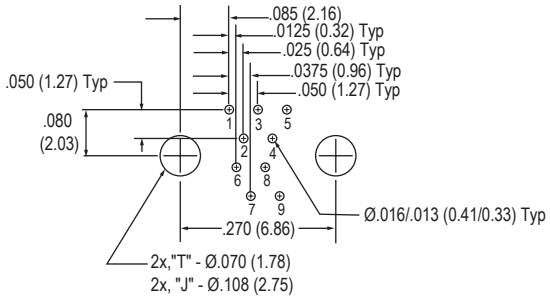
891-007 Receptacle (Socket) Connectors



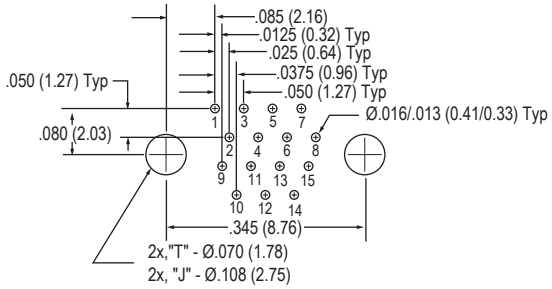
Layout	A		B BSC.		C BSC.		D		E		F		G Thread
	In. ± .005	mm. ± .13	In.	mm.	In.	mm.	In. ±.005	mm ±0.13.	In.	mm.	In	mm	
9P	.375	9.52	.270	6.86	.160	4.06	.170	4.32	.125	3.18	.0575	1.46	#0-80 UNF
9S	.375	9.52	.270	6.86	.163	4.14	.170	4.32	.125	3.18	.0575	1.46	#0-80 UNF
15P	.450	11.43	.345	8.76	.235	5.97	.245	6.22	.125	3.18	.0575	1.46	#0-80 UNF
15S	.450	11.43	.345	8.76	.238	6.04	.245	6.22	.125	3.18	.0575	1.46	#0-80 UNF
21P	.525	13.33	.420	10.67	.310	7.87	.320	8.13	.125	3.18	.0575	1.46	#0-80 UNF
21S	.525	13.33	.420	10.67	.313	7.95	.320	8.13	.125	3.18	.0575	1.46	#0-80 UNF
25P	.575	14.60	.470	11.94	.360	9.14	.370	9.40	.125	3.18	.0575	1.46	#0-80 UNF
25S	.575	14.60	.470	11.94	.363	9.22	.370	9.40	.125	3.18	.0575	1.46	#0-80 UNF
31P	.650	16.51	.545	13.84	.435	11.05	.445	11.30	.125	3.18	.0575	1.46	#0-80 UNF
31S	.650	16.51	.545	13.84	.438	11.12	.445	11.30	.125	3.18	.0575	1.46	#0-80 UNF
37P	.725	18.41	.620	15.75	.510	12.95	.520	13.21	.125	3.18	.0575	1.46	#0-80 UNF
37S	.725	18.41	.620	15.75	.513	13.03	.520	13.21	.125	3.18	.0575	1.46	#0-80 UNF
41P	.775	19.69	.670	17.02	.560	14.23	.570	14.48	.125	3.18	.0575	1.46	#0-80 UNF
41S	.775	19.69	.670	17.02	.563	14.30	.570	14.48	.125	3.18	.0575	1.46	#0-80 UNF
51P	.900	22.86	.795	20.19	.685	17.40	.695	17.65	.125	3.18	.0575	1.46	#0-80 UNF
51S	.900	22.86	.795	20.19	.688	17.47	.695	17.65	.125	3.18	.0575	1.46	#0-80 UNF
65P	1.075	27.30	.970	24.64	.860	21.84	.870	22.10	.125	3.18	.0575	1.46	#0-80 UNF
65S	1.075	27.30	.970	24.64	.863	21.92	.870	22.10	.125	3.18	.0575	1.46	#0-80 UNF
69P	1.125	28.57	1.020	25.91	.910	23.11	.920	23.37	.125	3.18	.0575	1.46	#0-80 UNF
69S	1.125	28.57	1.020	25.91	.913	23.19	.920	23.37	.125	3.18	.0575	1.46	#0-80 UNF
85P	1.377	34.97	1.246	31.65	1.110	28.19	1.120	28.45	.150	3.81	.0700	1.78	#2-56 UNC
85S	1.377	34.97	1.246	31.65	1.113	28.27	1.120	28.45	.150	3.81	.0700	1.78	#2-56 UNC



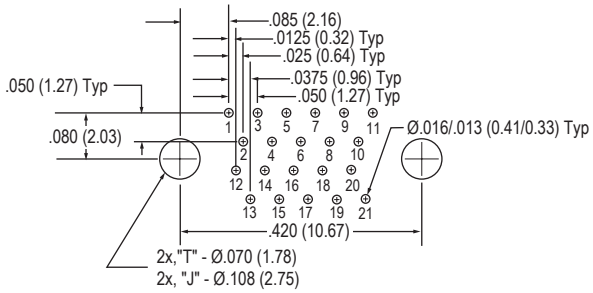




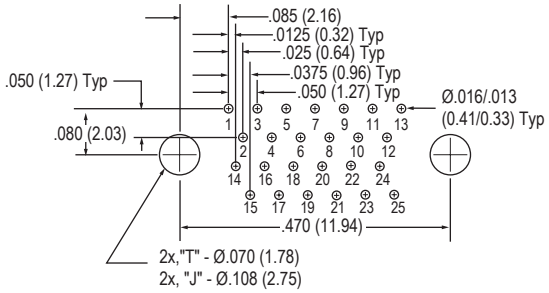
9 Contacts



15 Contacts



21 Contacts



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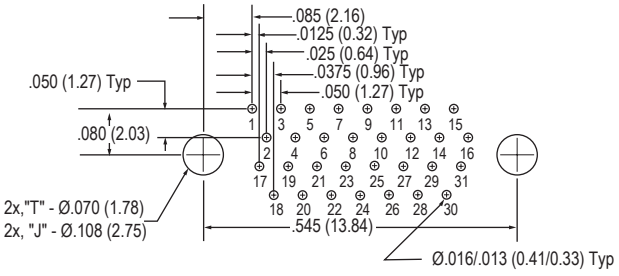
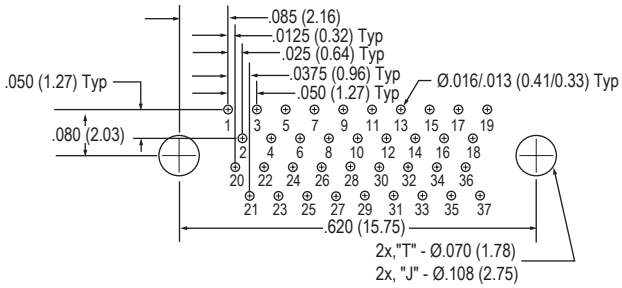
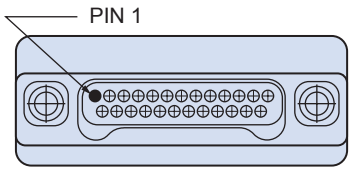


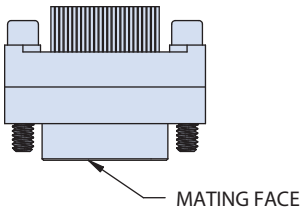
31 Contacts

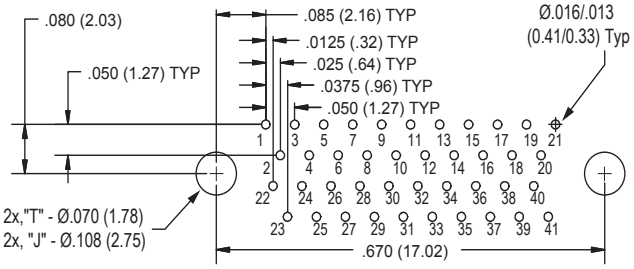


37 Contacts

Layouts shown are for connector mounting side of PC Board.







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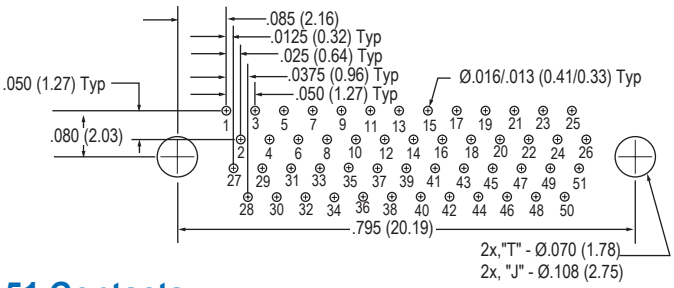
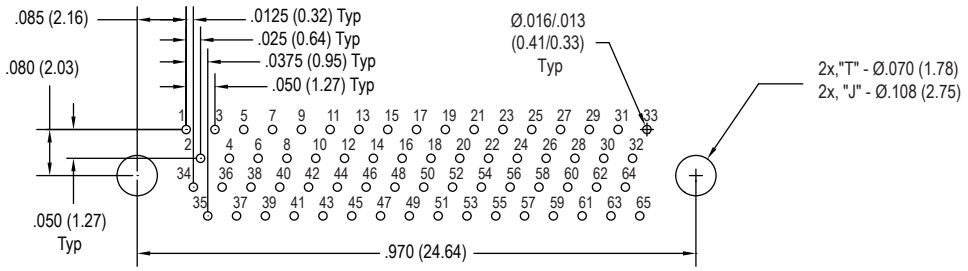


51 Contacts



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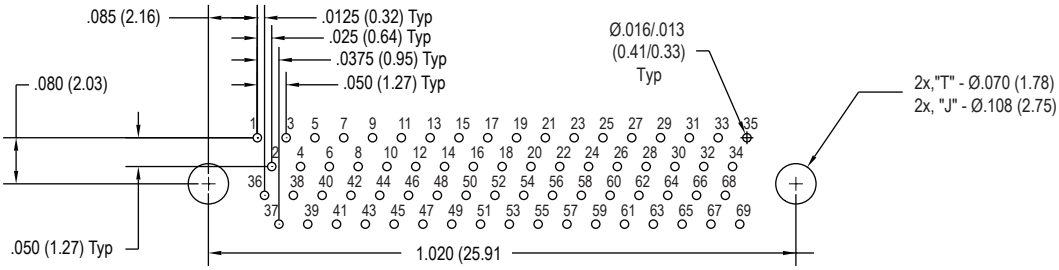
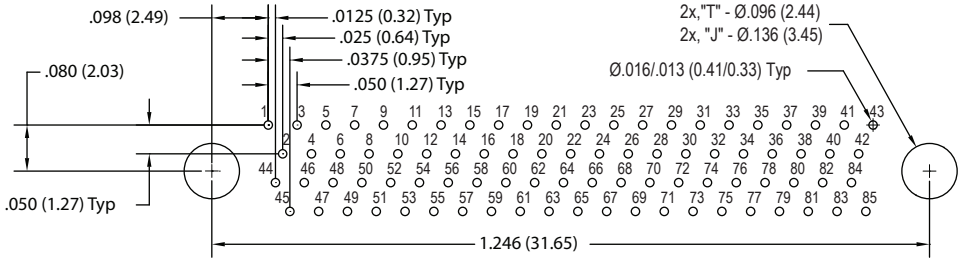
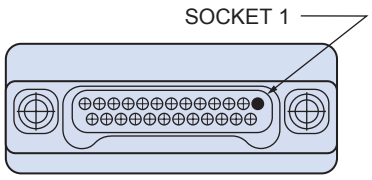


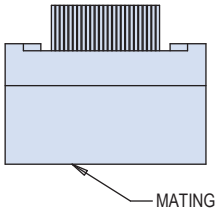
69 Contacts

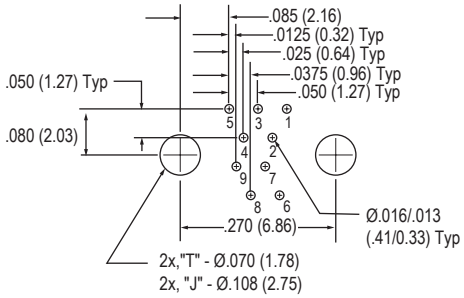


85 Contacts

Layouts shown are for connector mounting side of PC Board.







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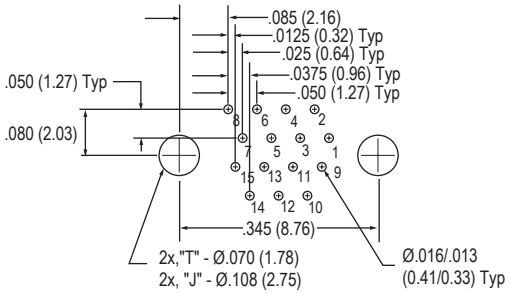
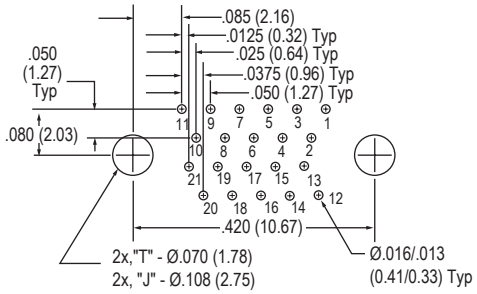


15 Contacts



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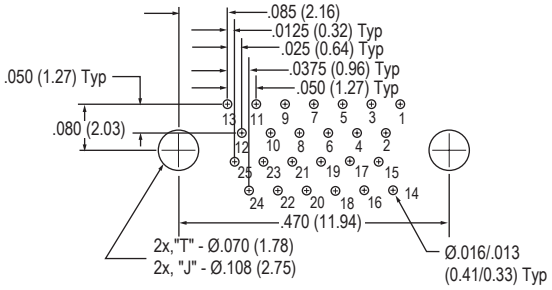

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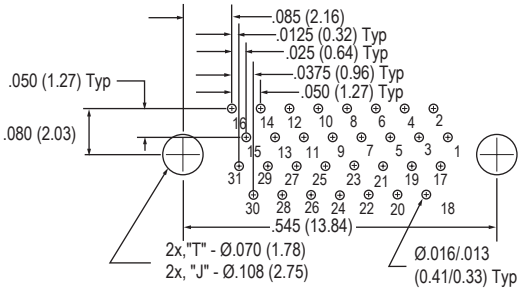
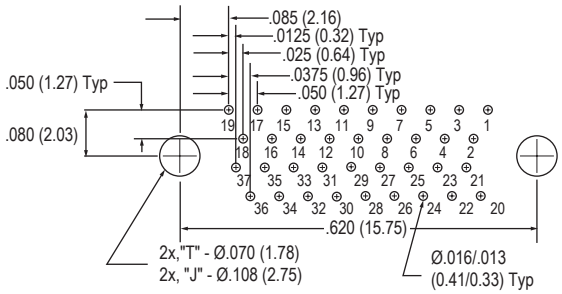
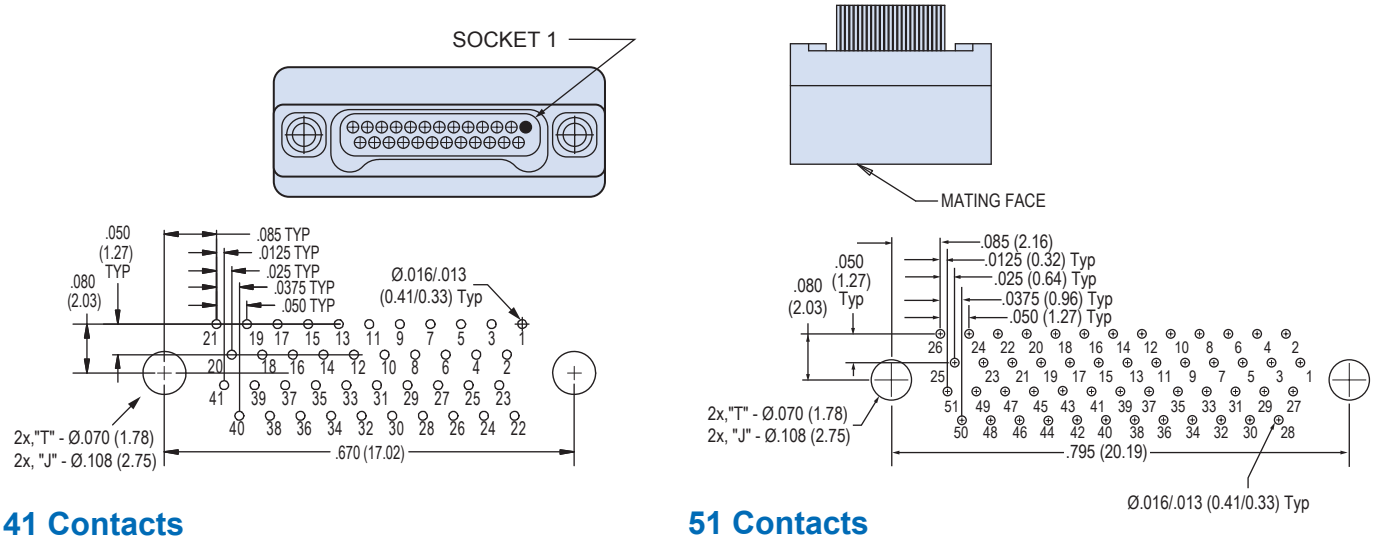


31 Contacts



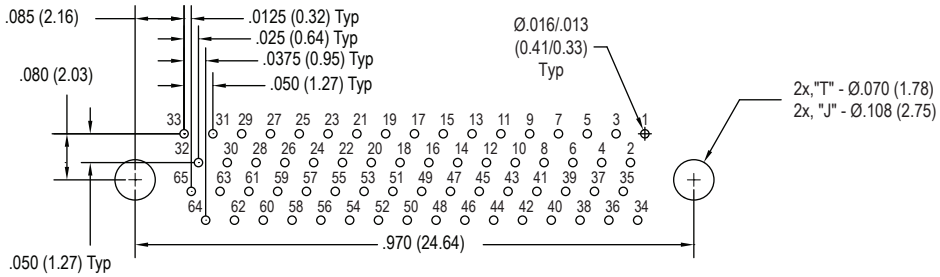
37 Contacts

Layouts shown are for connector mounting side of PC Board.



41 Contacts

51 Contacts



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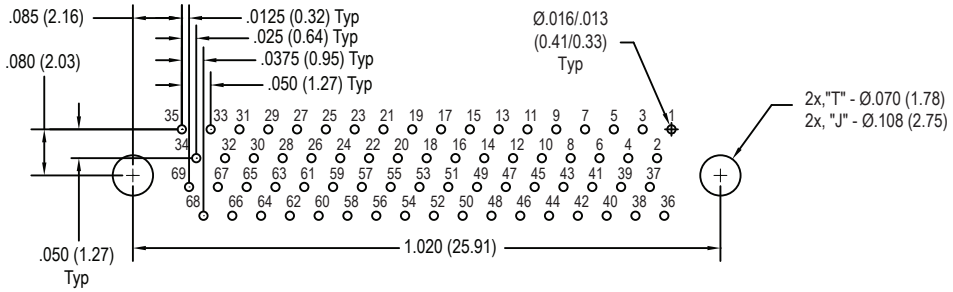
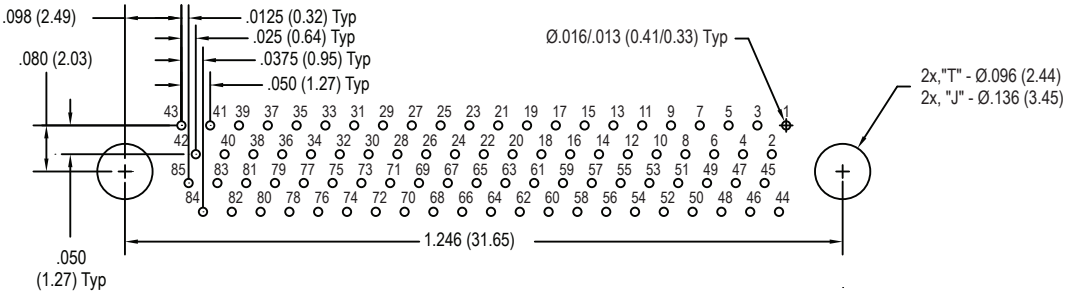


69 Contacts

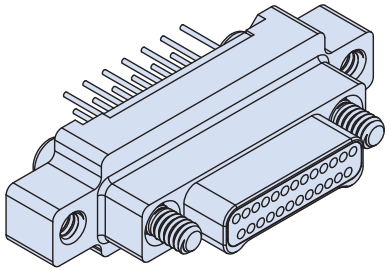


85 Contacts

Layouts shown are for connector mounting side of PC Board.

Dual Row Connectors

Vertical Mount Thru Hole PCB Connectors with Mounting Ears - How to Order



Vertical Mount PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with female mounting threads and jackscrews

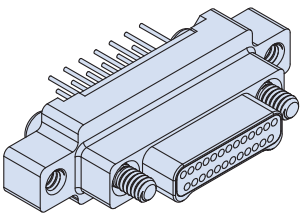
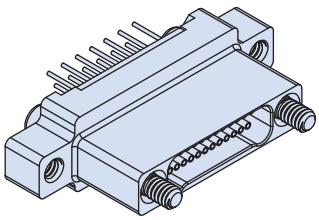
Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. Complies to the requirements of MIL-DTL-32139. These connectors are intermateable with any corresponding Glenair Series 891 Dual row metal shell nanominiature connector.

How to Order

Sample Part Number	891-040	-25S	A2	-BST	1	J

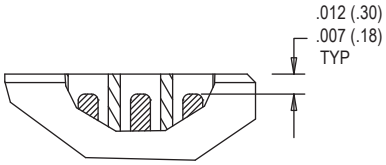
Series	**891-039** Plug, Vertical Mount Thru Hole PCB Connector with Mounting Ears **891-040** Receptacle, Vertical Mount Thru Hole PCB Connector with Mounting Ears
Insert Arrangement/ Contact Type	Pins (891-039 Plugs) **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Sockets (891-040 Receptacles) **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **A2** - Aluminum Shell, Electroless Nickel Plating **S** - Stainless Steel Shell, Passivated **T** - Titanium Shell, Unplated
Termination Type	**BST** - Board Straight Thru Hole
PC Tail Length	**1** - .110 (2.79) **2** - .172 (4.37) **3** - .140 (3.56)
Hardware	**J** - Jackscrew

Plug (Pin) Connector	Receptacle (Socket) Connector
	
J - Jackscrew	J - Jackscrew

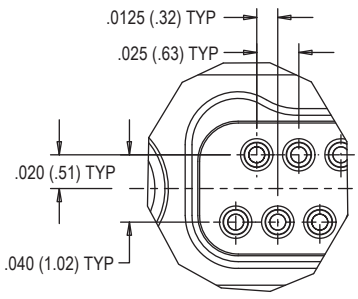
NOTES

1. Inspect and test IAW MIL-DTL-32139
2. Interface dimensions per MIL-DTL-32139/3 and /4
3. Materials/finishes
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: passivated stainless steel

DETAIL B



DETAIL A

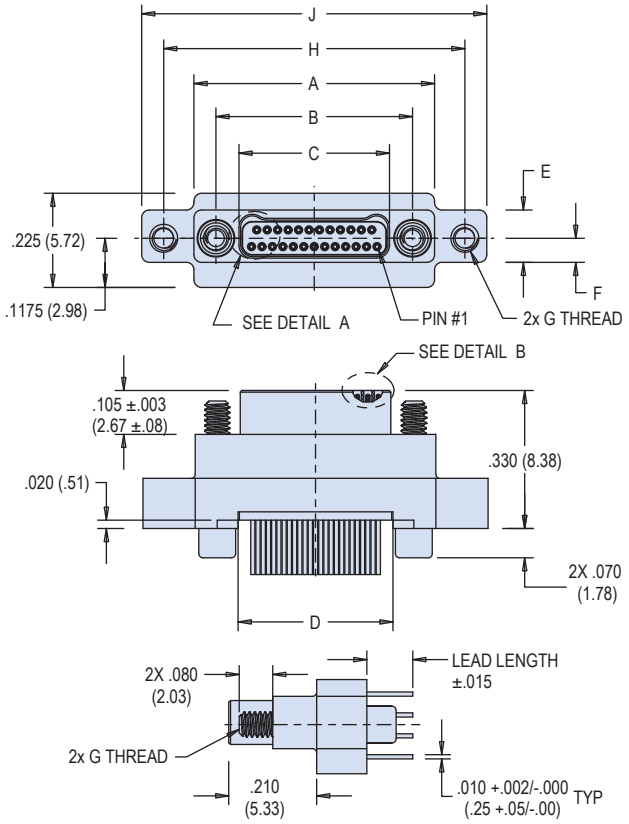


Dual Row Connectors

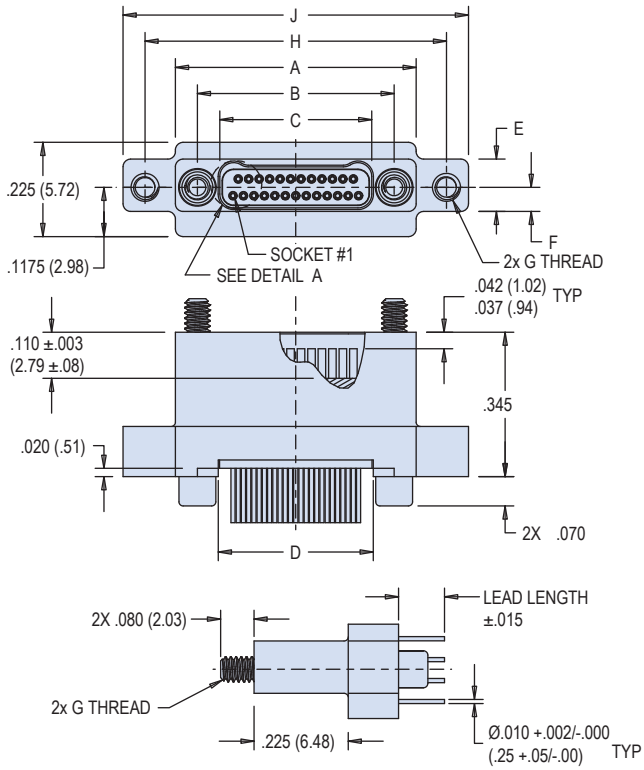
Vertical Mount, Thru Hole PCB Connectors with Mounting Ears - Dimensions

Dimensions

891-039 Plug (Pin) Connector



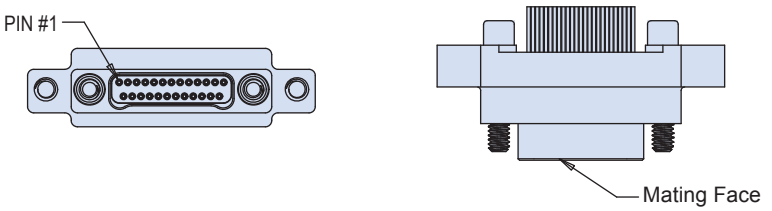
891-040 Receptacle (Socket) Connector

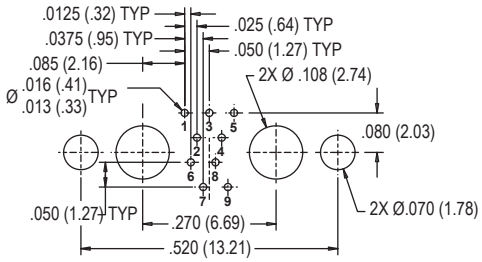


Size	A		B BSC.		C BSC.		D		E		F		G Thrd	H		J	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm		In	mm	In	mm
9P	.375	9.53	.270	6.86	.160	4.06	.170	4.32	.125	3.18	.0575	1.46	#0-80 UNF	.520	13.21	.625	15.88
9S	.375	9.53	.270	6.86	.163	4.14	.170	4.32	.125	3.18	.0575	1.46	#0-80 UNF	.520	13.21	.625	15.88
15P	.450	11.43	.345	8.76	.235	5.97	.245	6.22	.125	3.18	.0575	1.46	#0-80 UNF	.595	15.11	.700	17.78
15S	.450	11.43	.345	8.76	.238	6.05	.245	6.22	.125	3.18	.0575	1.46	#0-80 UNF	.595	15.11	.700	17.78
21P	.525	13.34	.420	10.67	.310	7.87	.320	8.13	.125	3.18	.0575	1.46	#0-80 UNF	.670	17.02	.775	19.69
21S	.525	13.34	.420	10.67	.313	7.95	.320	8.13	.125	3.18	.0575	1.46	#0-80 UNF	.670	17.02	.775	19.69
25P	.575	14.61	.470	11.94	.360	9.14	.370	9.40	.125	3.18	.0575	1.46	#0-80 UNF	.720	18.29	.825	20.96
25S	.575	14.61	.470	11.94	.363	9.22	.370	9.40	.125	3.18	.0575	1.46	#0-80 UNF	.720	18.29	.825	20.96
31P	.650	16.51	.545	13.84	.435	11.05	.445	11.30	.125	3.18	.0575	1.46	#0-80 UNF	.795	20.19	.900	22.86
31S	.650	16.51	.545	13.84	.438	11.13	.445	11.30	.125	3.18	.0575	1.46	#0-80 UNF	.795	20.19	.900	22.86
37P	.725	18.42	.620	15.75	.510	12.95	.520	13.21	.125	3.18	.0575	1.46	#0-80 UNF	.870	22.10	.975	24.77
37S	.725	18.42	.620	15.75	.513	13.03	.520	13.21	.125	3.18	.0575	1.46	#0-80 UNF	.870	22.10	.975	24.77
41P	.775	19.69	.670	17.02	.560	14.22	.570	14.48	.125	3.18	.0575	1.46	#0-80 UNF	.920	23.37	1.025	26.04
41S	.775	19.69	.670	17.02	.563	14.30	.570	14.48	.125	3.18	.0575	1.46	#0-80 UNF	.920	23.37	1.025	26.04
51P	.900	22.86	.975	24.77	.685	17.40	.695	17.65	.125	3.18	.0575	1.46	#0-80 UNF	1.045	26.54	1.150	29.21
51S	.900	22.86	.795	20.19	.688	17.48	.695	17.65	.125	3.18	.0575	1.46	#0-80 UNF	1.045	26.54	1.150	29.21
65P	1.075	27.31	.970	24.64	.860	21.84	.870	22.10	.125	3.18	.0575	1.46	#0-80 UNF	1.220	30.99	1.325	33.66
65S	1.075	27.31	.970	24.64	.863	21.92	.870	22.10	.125	3.18	.0575	1.46	#0-80 UNF	1.220	30.99	1.325	33.66
69P	1.125	28.58	1.020	25.91	.910	23.11	.920	23.37	.125	3.18	.0575	1.46	#0-80 UNF	1.270	32.26	1.375	34.93
69S	1.125	28.58	1.020	25.91	.913	23.19	.920	23.37	.125	3.18	.0575	1.46	#0-80 UNF	1.270	32.26	1.375	34.93
85P	1.377	34.98	1.246	31.65	1.110	28.19	1.120	28.45	.150	3.81	.0700	1.78	#2-56 UNC	1.546	39.27	1.679	42.65
85S	1.377	34.98	1.246	31.65	1.113	28.27	1.120	28.45	.150	3.81	.0700	1.78	#2-56 UNC	1.546	39.27	1.679	42.65

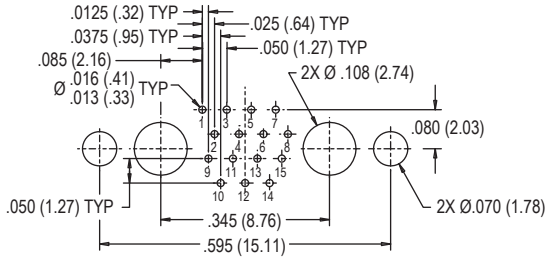
D

U.S. CAGE code 06324/0CA77 • Dimensions in Inches (millimeters) are subject to change without notice.

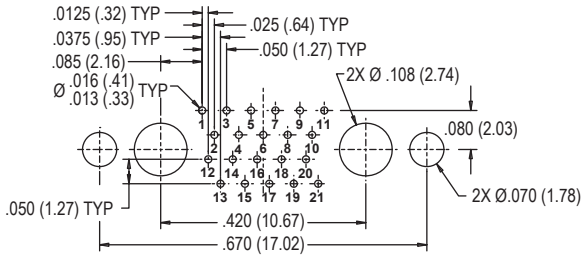




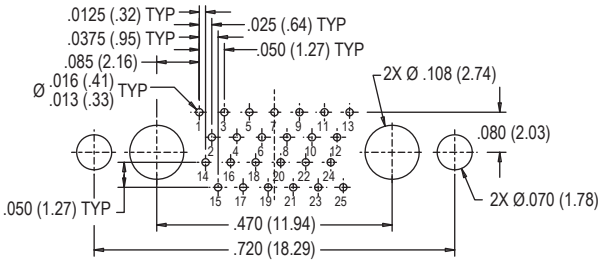
9 Contacts



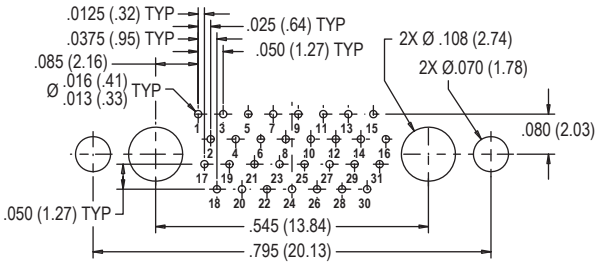
15 Contacts



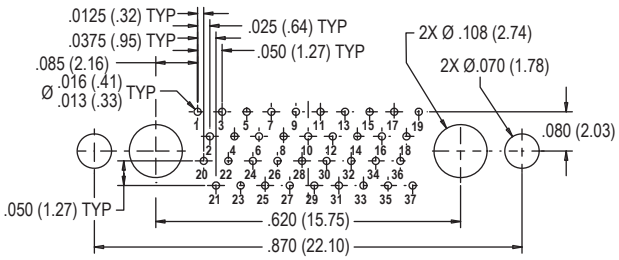
21 Contacts



25 Contacts

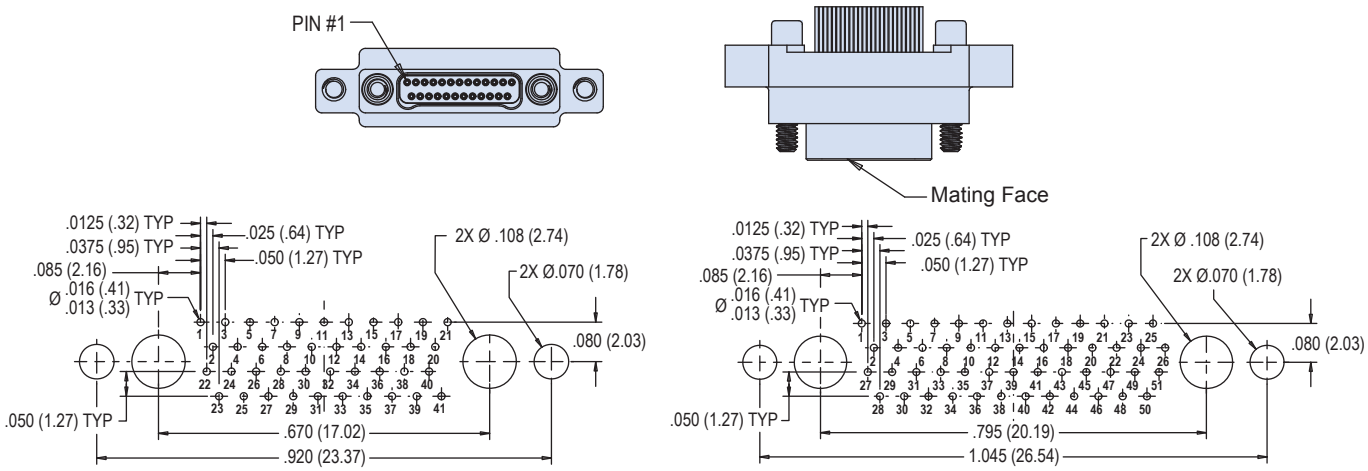


31 Contacts



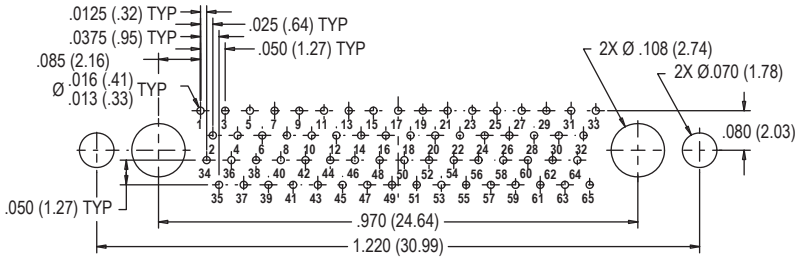
37 Contacts

Layouts shown are for connector mounting side of PC Board.

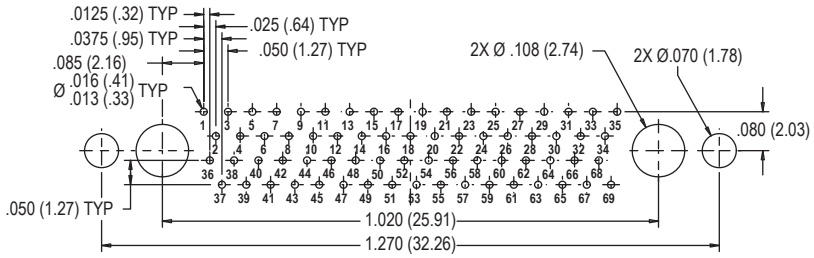


41 Contacts

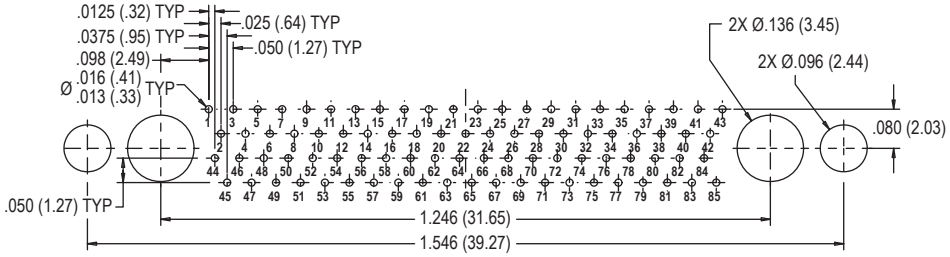
51 Contacts



65 Contacts

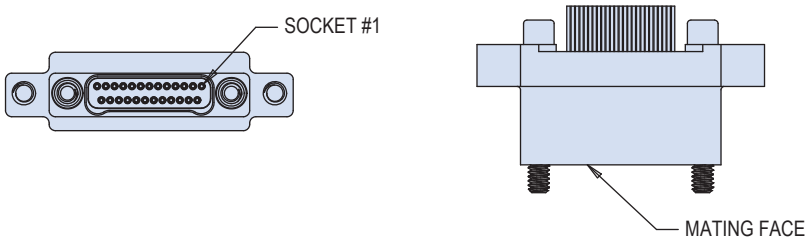


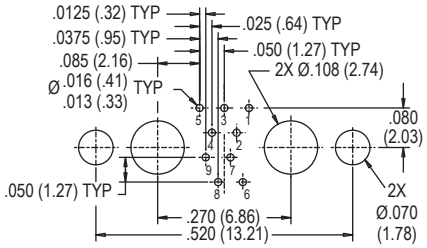
69 Contacts



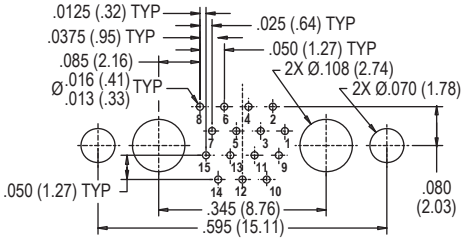
85 Contacts

Layouts shown are for connector mounting side of PC Board.

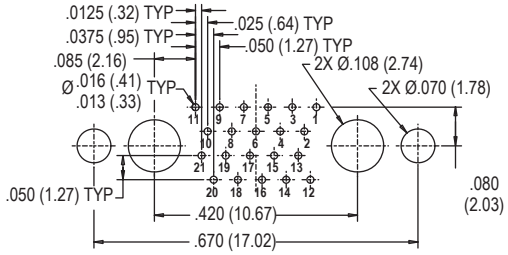




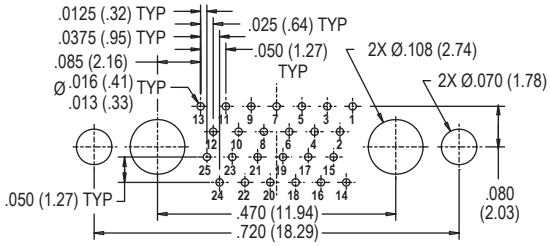
9 Contacts



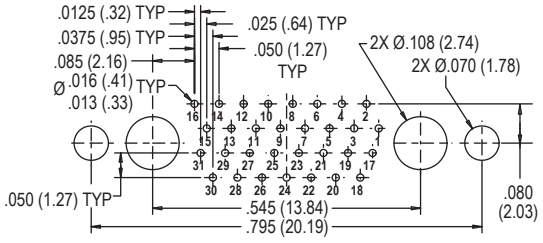
15 Contacts



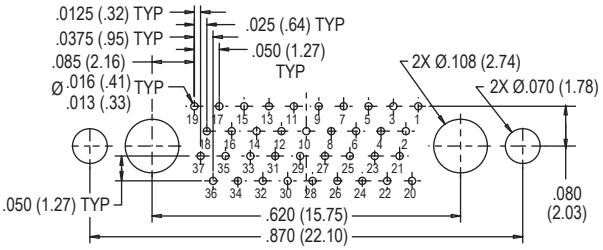
21 Contacts



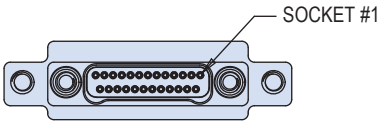
25 Contacts

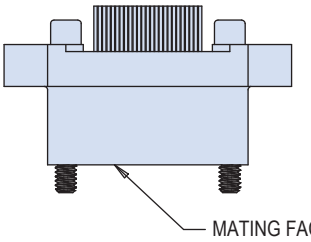


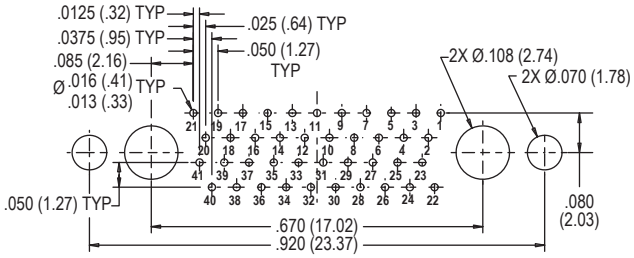
31 Contacts



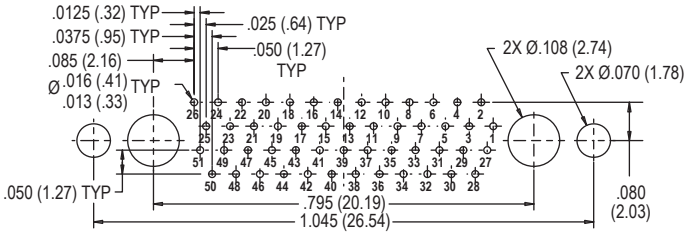
37 Contacts



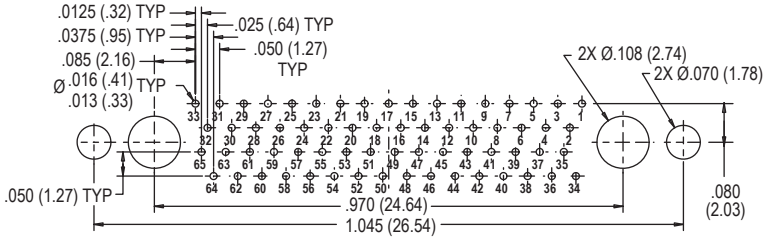




41 Contacts



51 Contacts



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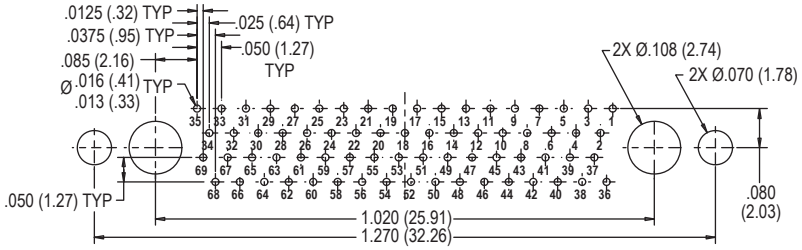
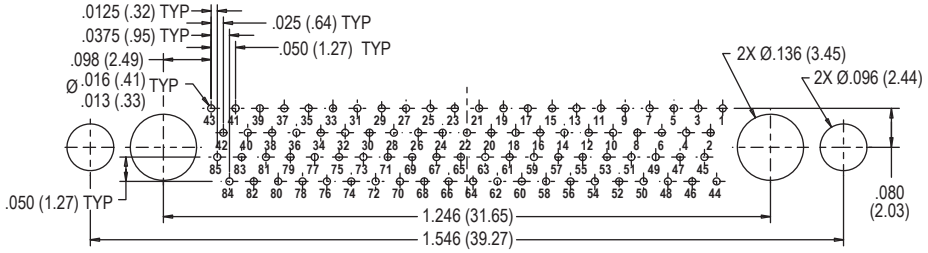


69 Contacts

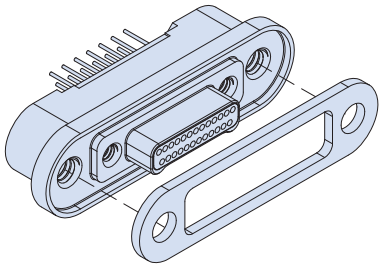


85 Contacts

D

Dual Row Connectors

Rear Panel Mount, Vertical Thru Hole PCB Connectors with Gasket Seal - How to Order



Rear Panel Mount PCB Connectors feature gold alloy TwistPin contacts, titanium or stainless steel shells offering premium performance and reliability for demanding applications.

Gasket Seals fuorosilicone, Cho-Seal 1298 and Cho-Seal 6503 available. For replacement gaskets see 899-015.

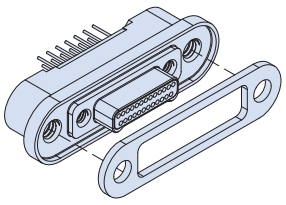
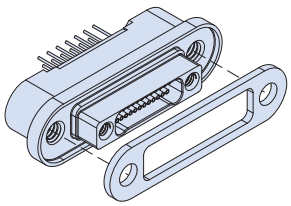
Eleven Layouts From 9 To 85 Contacts. MIL-DTL-32139 type connectors are intermateable with any M32139 compliant connector or Glenair Series 891 dual row metal shell nanominiature connector.

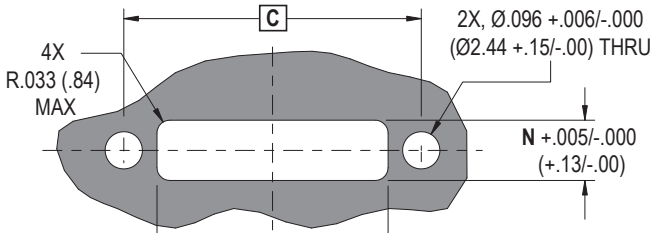
Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

How to Order

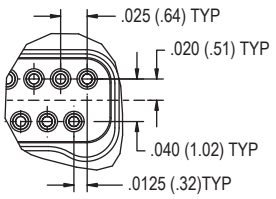
Sample Part Number	891-030	-25S	S	-BST	1	T	-01	M

Series	**891-029** = Rear Panel Mount Plug, Vertical Thru Hole **891-030** = Rear Panel Mount Receptacle, Vertical Thru Hole
Insert Arrangement/ Contact Type	Pins (891-029 Plugs): **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Sockets (891-030 Receptacles): **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85P**
Shell Material and Finish	**T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated
Termination Type	**BST** = Board Straight Thru Hole
PC Tail Length	**1** = .110 (2.79) **2** = .172 (4.37) **3** = .140 (3.56)
Hardware Option	**T** = Female Threads (#0-80 for size 9-69, #2-56 for size 85)
Gasket Material	**Omit** for No Gasket **01** = Fluorosilicone IAW MIL-DTL25988 Type II, Class I, Grade 70 **02** = Passivated Silver Plated Aluminum Filled Fluorosilicone IAW MIL-DTL-83528, Type D (Cho-Seal 1298 or Equivalent) **03** = Nickel Plated Aluminum Filled Fluorosilicone, (Cho-Seal 6503 or Equivalent)
Mounting Thread Option	**Omit** for #2-56 UNC-2B **M** = M2X0.4 6H

Plug (Pin)	Receptacle (Socket)
	
T - Female Thread	T - Female Thread



DETAIL A



NOTES

1. Inspect and test IAW MIL-DTL-32139
2. Interface dimensions per MIL-DTL-32139, plug (/3) Receptacle (/4)
3. Panel cutout sized to allow lobe up or lobe down mounting orientation
4. Recommended Panel thickness .100 (2.54) max

Panel Cut-out Dimensions

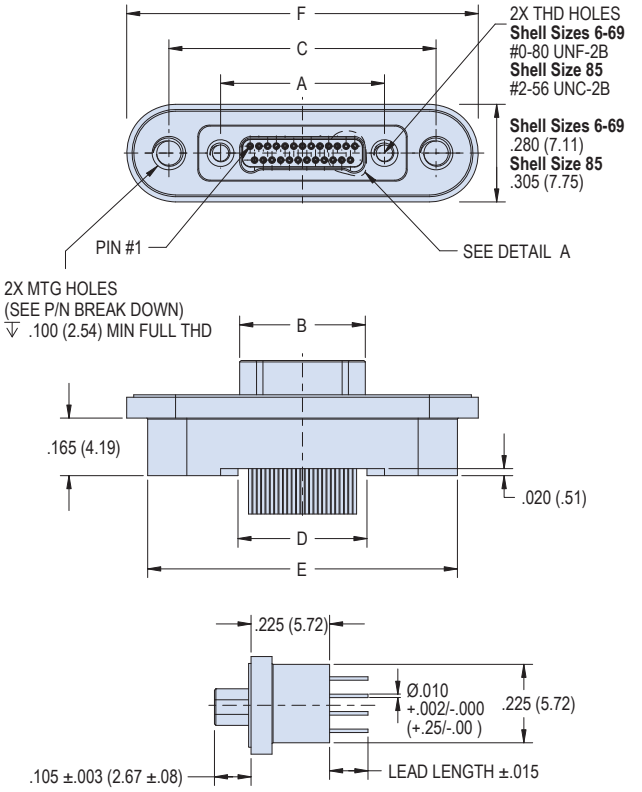
Shell Size	C	M	N
9	.566 (14.38)	.395 (10.03)	.155 (3.93)
15	.641 (16.28)	.470 (11.94)	.155 (3.93)
21	.716 (18.19)	.545 (13.84)	.155 (3.93)
25	.766 (19.46)	.595 (15.11)	.155 (3.93)
31	.841 (21.36)	.670 (17.02)	.155 (3.93)
37	.916 (23.27)	.745 (18.92)	.155 (3.93)
41	.966 (24.54)	.795 (20.19)	.155 (3.93)
51	1.091 (27.71)	.920 (23.37)	.155 (3.93)
65	1.266 (32.16)	1.095 (27.81)	.155 (3.93)
69	1.316 (33.43)	1.145 (29.08)	.155 (3.93)
85	1.568 (39.83)	1.397 (34.48)	.180 (4.57)

Dual Row Connectors

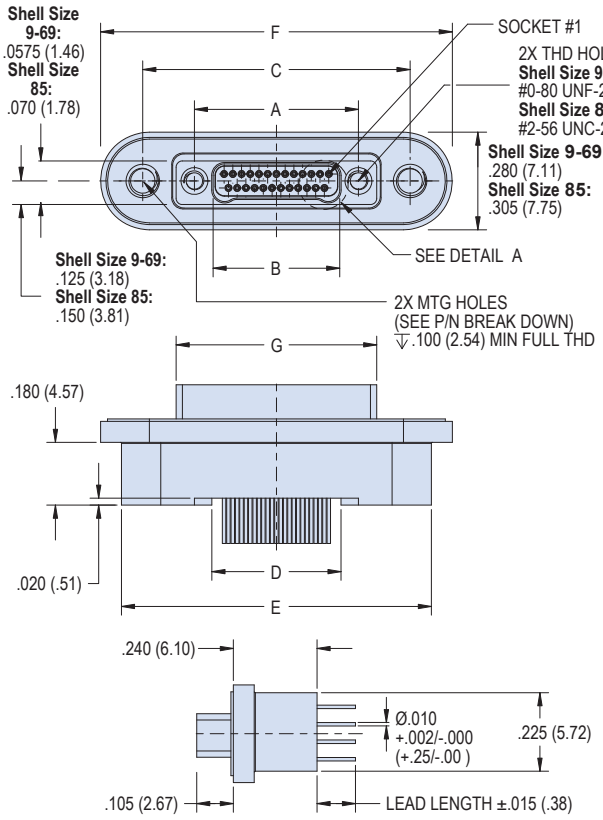
Rear Panel Mount, Vertical Thru Hole PCB Connectors with Gasket Seal - Dimensions

Dimensions

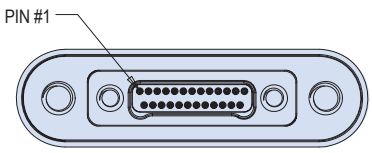
891-029 Plug (Pin) Connectors



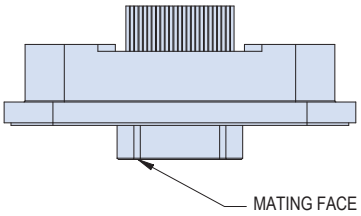
891-030 Receptacle (Socket) Connectors

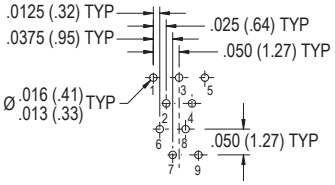


Layout	A BSC		B BSC.		C BSC.		D		E		F		G	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
9P	.270	6.86	.160	4.06	.566	14.38	.170	4.32	.688	17.48	.808	20.52	--	--
9S	.270	6.86	.163	4.14	.566	14.38	.170	4.32	.688	17.48	.808	20.52	.375	9.53
15P	.345	8.76	.235	5.97	.641	16.28	.245	6.22	.763	19.38	.883	22.43	--	--
15S	.345	8.76	.238	6.05	.641	16.28	.245	6.22	.763	19.38	.883	22.43	.450	11.43
21P	.420	10.67	.310	7.87	.716	18.19	.320	8.13	.838	21.29	.958	24.33	--	--
21S	.420	10.67	.313	7.95	.716	18.19	.320	8.13	.838	21.29	.958	24.33	.525	13.34
25P	.470	11.94	.360	9.14	.766	19.46	.370	9.40	.888	22.56	1.008	25.60	--	--
25S	.470	11.94	.363	9.22	.766	19.46	.370	9.40	.888	22.56	1.008	25.60	.575	14.61
31P	.545	13.84	.435	11.05	.841	21.36	.445	11.30	.963	24.46	1.083	27.51	--	--
31S	.545	13.84	.438	11.13	.841	21.36	.445	11.30	.963	24.46	1.083	27.51	.650	16.51
37P	.620	15.75	.510	12.95	.916	23.27	.520	13.21	1.038	26.37	1.158	29.41	--	--
37S	.620	15.75	.513	13.03	.916	23.27	.520	13.21	1.038	26.37	1.158	29.41	.725	18.42
41P	.670	17.02	.560	14.22	.966	24.54	.570	14.48	1.088	27.64	1.208	30.68	--	--
41S	.670	17.02	.563	14.30	.966	24.54	.570	14.48	1.088	27.64	1.208	30.68	.775	19.69
51P	.795	20.19	.685	17.40	1.091	27.71	.695	17.65	1.213	30.81	1.333	33.86	--	--
51S	.795	20.19	.688	17.48	1.091	27.71	.695	17.65	1.213	30.81	1.333	33.86	.900	22.86
65P	.970	24.64	.860	21.84	1.266	32.16	.870	22.10	1.388	35.26	1.508	38.30	--	--
65S	.970	24.64	.863	21.92	1.266	32.16	.870	22.10	1.388	35.26	1.508	38.30	1.075	27.31
69P	1.020	25.91	.910	23.11	1.316	33.43	.920	23.37	1.438	36.53	1.558	39.57	--	--
69S	1.020	25.91	.913	23.19	1.316	33.43	.920	23.37	1.438	36.53	1.558	39.57	1.125	28.58
85P	1.246	31.65	1.110	28.19	1.568	39.83	1.120	28.45	1.690	42.93	1.810	45.97	--	--
85S	1.246	31.65	1.113	28.27	1.568	39.83	1.120	28.45	1.690	42.93	1.810	45.97	1.377	34.98

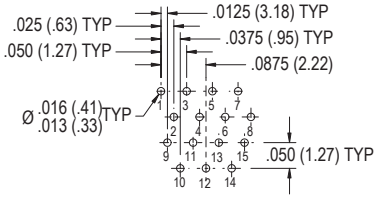


Patterns shown are for the connector mounting side of PC board

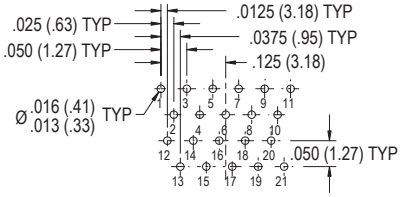




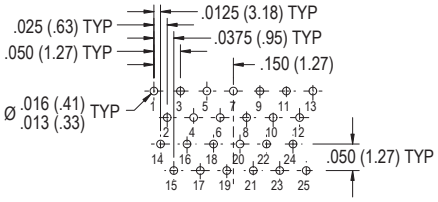
9 Contacts



15 Contacts



21 Contacts



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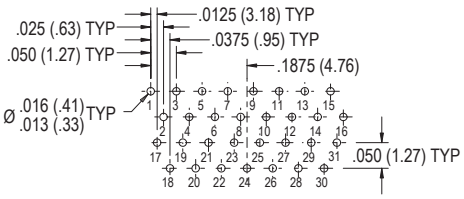
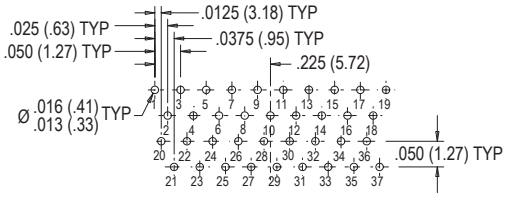
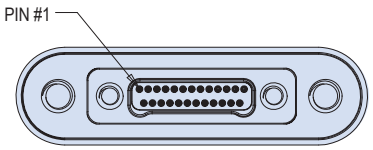


31 Contacts

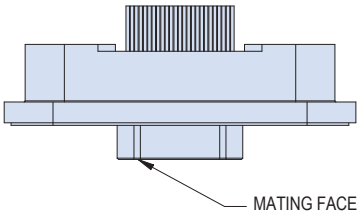


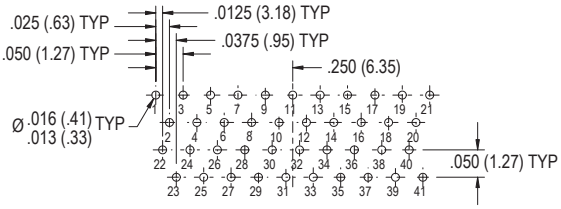
37 Contacts

Rear Panel Mount, Vertical Thru Hole PCB Connectors with Gasket Seal - PCB Plug Footprint

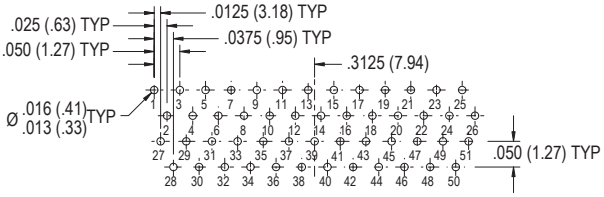


Patterns shown are for the connector mounting side of PC board

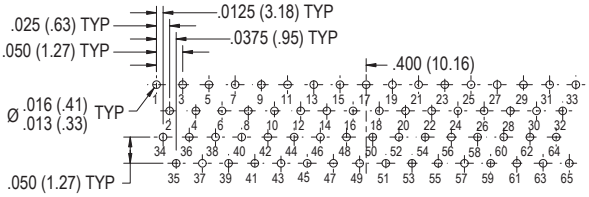




41 Contacts



51 Contacts



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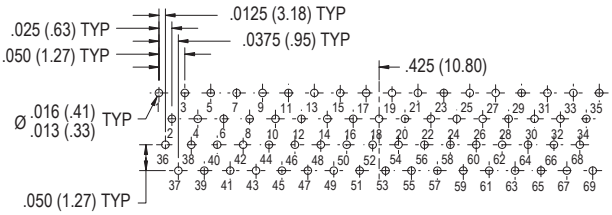
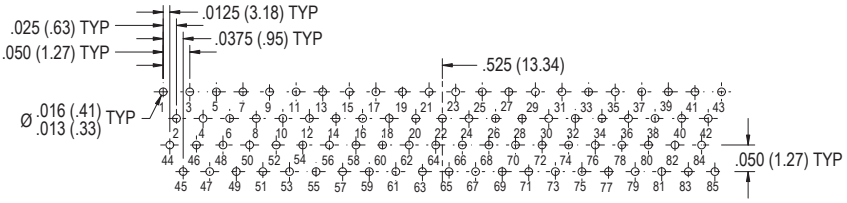
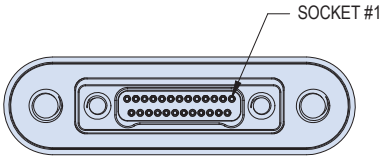


69 Contacts

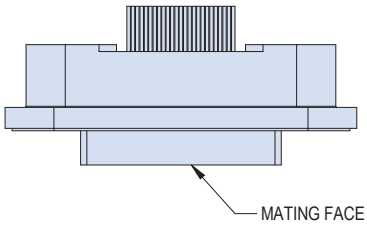


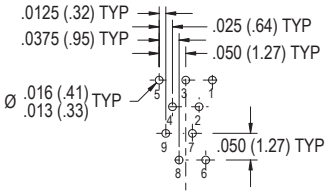
85 Contacts

D

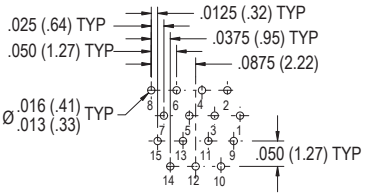


Patterns shown are for the connector mounting side of PC board





9 Contacts



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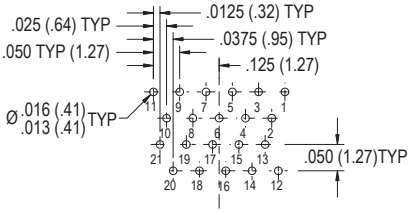
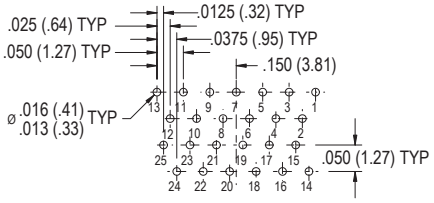


21 Contacts



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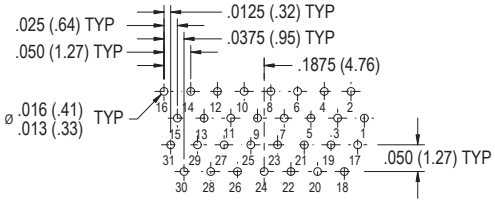
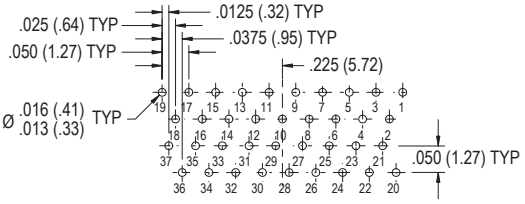
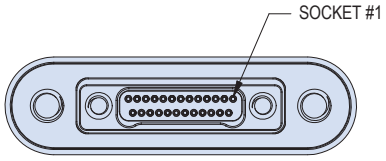


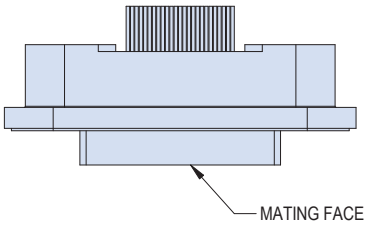
31 Contacts

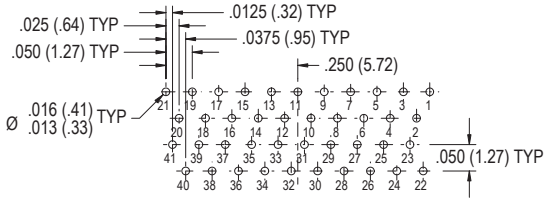


37 Contacts



Patterns shown are for the connector mounting side of PC board





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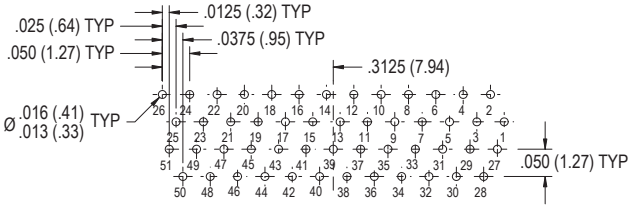

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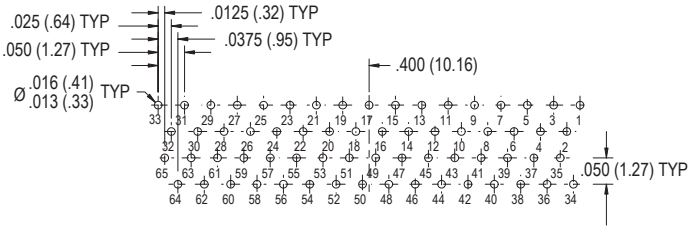
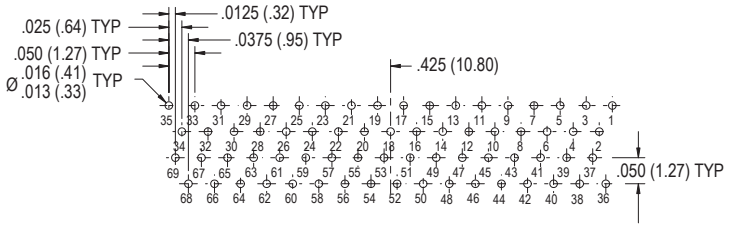
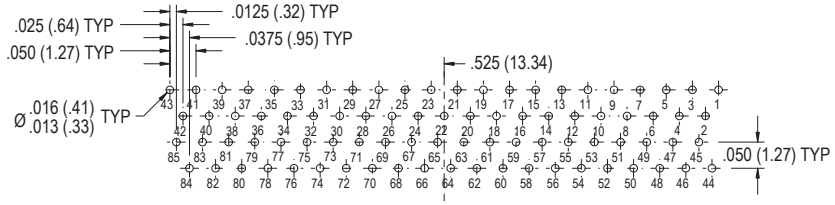


65 Contacts



69 Contacts

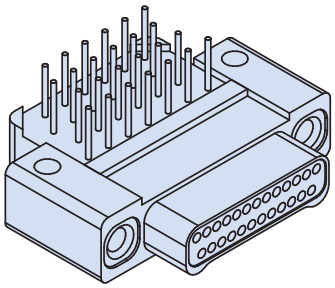


85 Contacts

D

Dual Row Connectors

Right Angle Mount Thru Hole PCB Connectors
How to Order

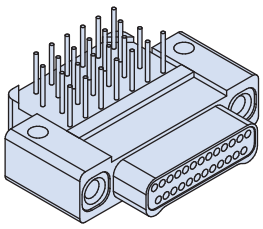
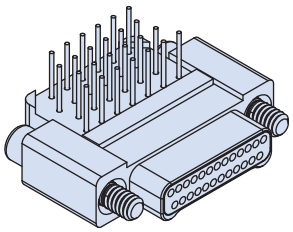
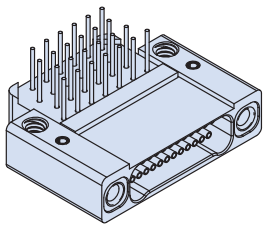
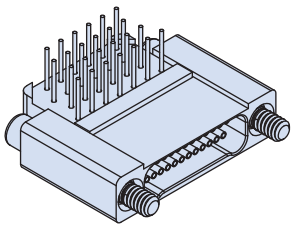


Right Angle Mount Thru Hole PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with female threads, or with jackscrews for use with printed circuits boards.

Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. Complies to the requirements of MIL-DTL-32139. These connectors are intermateable with any M32139 compliant connector or Glenair Series 891 Dual row metal shell nanominiature connector.

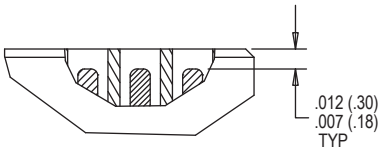
How to Order						
Sample Part Number	**891-009**	**-25S**	**A2**	**-BRT**	**1**	**T**
Series	**891-008** Plug, Right Angle PCB Connector **891-009** Receptacle, Right Angle PCB Connector					
Insert Arrangement/ Contact Type	Pins (891-008 Plugs): **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Sockets (891-009 Receptacles): **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**					
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **A2** - Aluminum Shell, Electroless Nickel Plating		**T** - Titanium Shell, Unplated **S** - Stainless Steel Shell, Passivated			
Termination Type	**BRT** - Board Right Angle Thru Hole					
PC Tail Length	**1** - .110 (2.79)	**2** - .172 (4.37)	**3** - .140 (3.56)			
Hardware	**J** - Hex Head Jackscrew	**T** - Female Thread				

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option

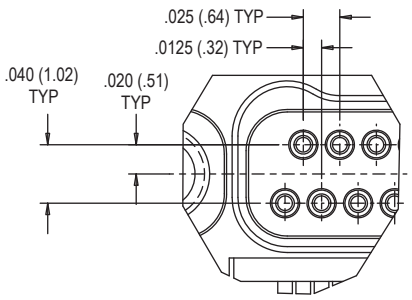
NOTES

1. Inspect and test IAW MIL-DTL-32139
2. Interface dimensions per MIL-DTL-32139/3 and /4
3. Materials/finishes
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: passivated stainless steel

DETAIL B



DETAIL A

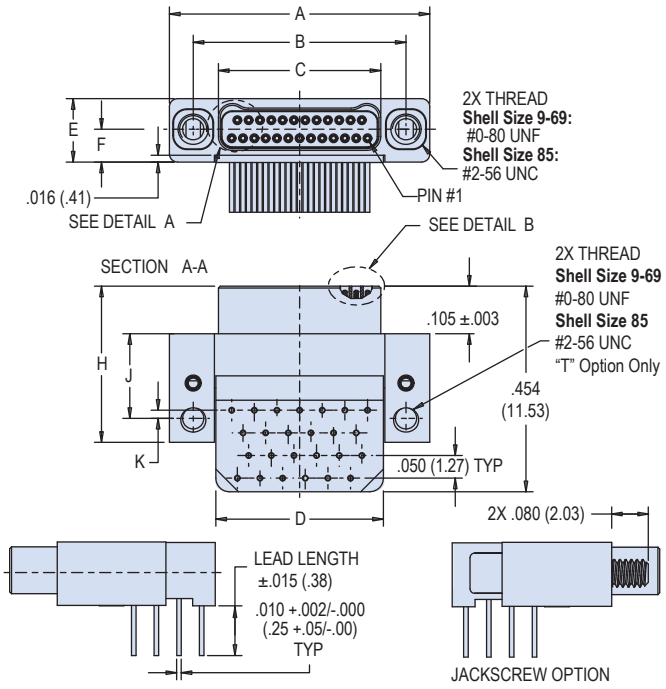


Dual Row Connectors

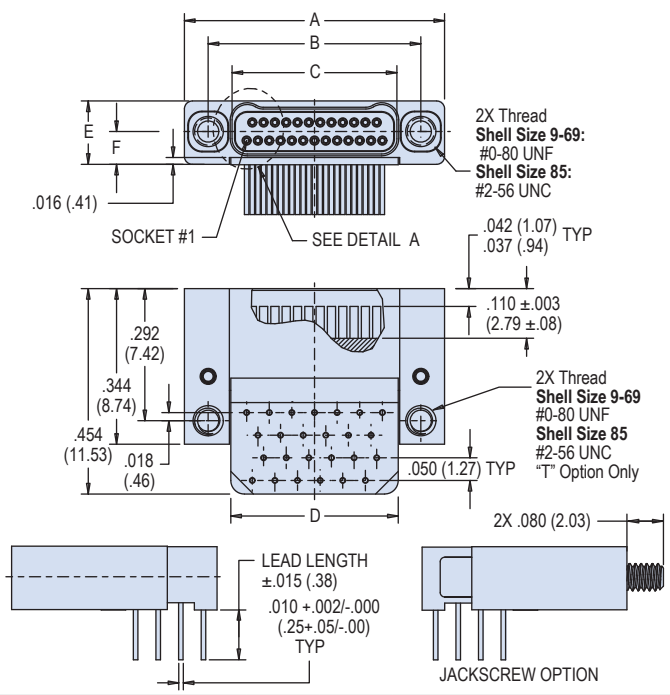
Right Angle Mount Thru Hole PCB Connectors
Dimensions

Dimensions

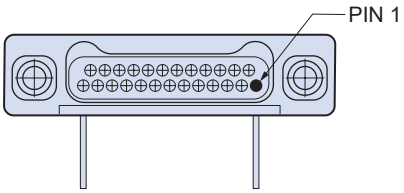
891-008 Plug (Pin) Connector

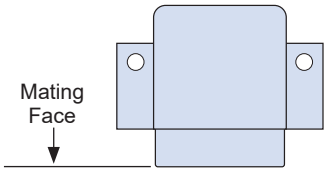


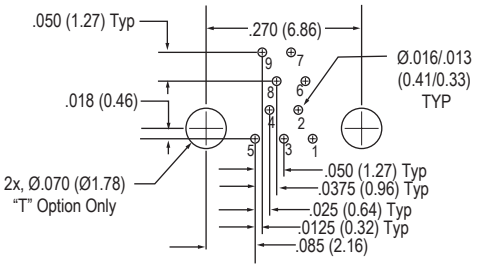
891-009 Plug (Socket) Connector



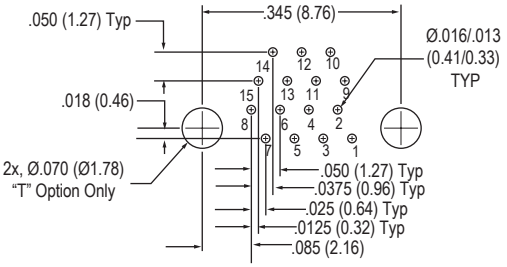
Size	A		B BSC.		C BSC.		D		E		F		H		J		K	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
9P	.375	9.52	.270	6.86	.160	4.06	.170	4.32	.140	3.56	.0725	1.84	.344	8.74	.187	4.75	.018	.46
9S	.375	9.53	.270	6.86	.163	4.14	.170	4.32	.140	3.56	.0725	1.84	--	--	--	--	--	--
15P	.450	11.43	.345	8.76	.235	5.97	.245	6.22	.140	3.56	.0725	1.84	.344	8.74	.187	4.75	.018	.46
15S	.450	11.43	.345	8.76	.238	6.05	.245	6.22	.140	3.56	.0725	1.84	--	--	--	--	--	--
21P	.525	13.33	.420	10.67	.310	7.87	.320	8.13	.140	3.56	.0725	1.84	.344	8.74	.187	4.75	.018	.46
21S	.525	13.34	.420	10.67	.313	7.95	.320	8.13	.140	3.56	.0725	1.84	--	--	--	--	--	--
25P	.575	14.60	.470	11.94	.360	9.14	.370	9.40	.140	3.56	.0725	1.84	.344	8.74	.187	4.75	.018	.46
25S	.575	14.61	.470	11.94	.363	9.22	.370	9.40	.140	3.56	.0725	1.84	--	--	--	--	--	--
31P	.650	16.51	.545	13.84	.435	11.05	.445	11.30	.140	3.56	.0725	1.84	.344	8.74	.187	4.75	.018	.46
31S	.650	16.51	.545	13.84	.438	11.13	.445	11.30	.140	3.56	.0725	1.84	--	--	--	--	--	--
37P	.725	18.41	.620	15.75	.510	12.95	.520	13.21	.140	3.56	.0725	1.84	.344	8.74	.187	4.75	.018	.46
37S	.725	18.42	.620	15.75	.513	13.03	.520	13.21	.140	3.56	.0725	1.84	--	--	--	--	--	--
41P	.775	19.69	.670	17.02	.560	14.23	.570	14.48	.140	3.56	.0725	1.84	.344	8.74	.187	4.75	.018	.46
41S	.775	19.69	.670	17.02	.563	14.30	.570	14.48	.140	3.56	.0725	1.84	--	--	--	--	--	--
51P	.900	22.86	.795	20.19	.685	17.40	.695	17.65	.140	3.56	.0725	1.84	.344	8.74	.187	4.75	.018	.46
51S	.900	22.86	.795	20.19	.688	17.48	.695	17.65	.140	3.56	.0725	1.84	--	--	--	--	--	--
65P	1.075	27.30	.970	24.64	.860	21.84	.870	22.10	.140	3.56	.0725	1.84	.344	8.74	.187	4.75	.018	.46
65S	1.075	27.31	.970	24.64	.863	21.92	.870	22.10	.140	3.56	.0725	1.84	--	--	--	--	--	--
69P	1.125	28.57	1.020	25.91	.910	23.11	.920	23.37	.140	3.56	.0725	1.84	.344	8.74	.187	4.75	.018	.46
69S	1.125	28.58	1.020	25.91	.913	23.19	.920	23.37	.140	3.56	.0725	1.84	--	--	--	--	--	--
85P	1.377	34.97	1.246	31.65	1.110	28.19	1.120	28.45	.165	4.19	.0850	2.16	.410	10.41	.244	6.20	.075	1.91
85S	1.377	34.98	1.246	31.65	1.113	28.27	1.120	28.45	.165	4.19	.0850	2.16	--	--	--	--	--	--



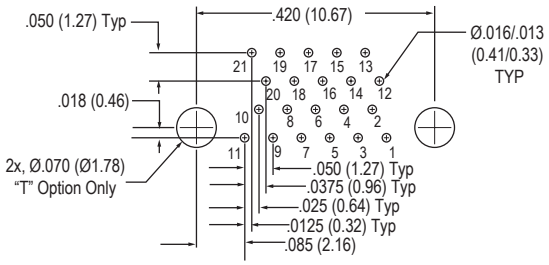




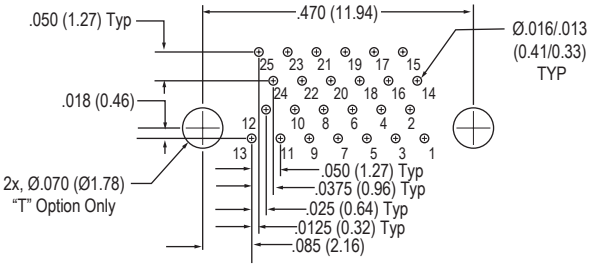
9 Contacts



15 Contacts



21 Contacts



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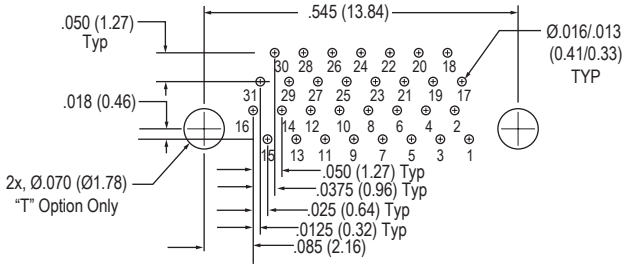

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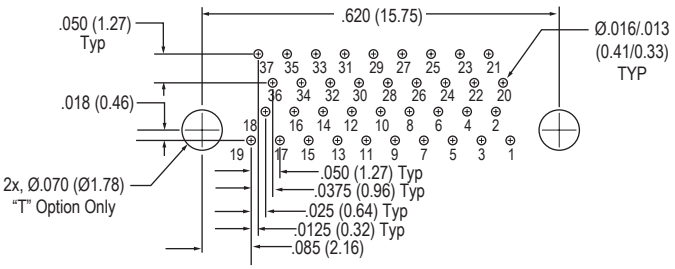
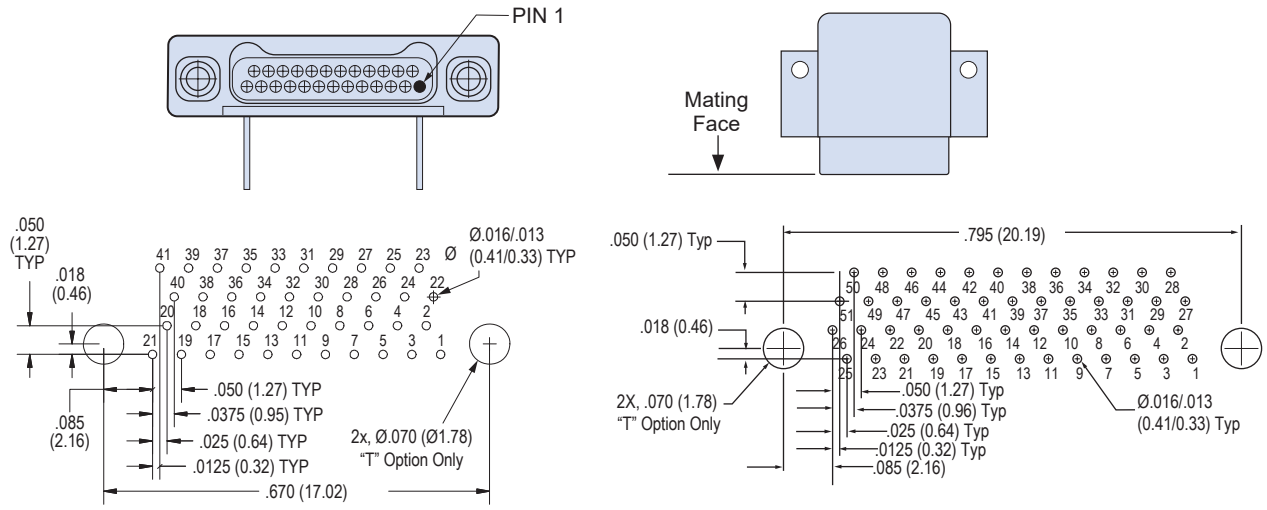


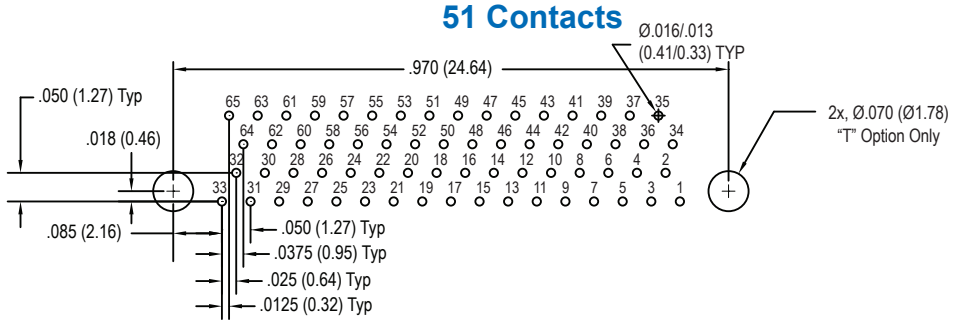
37 Contacts

Layouts shown are for connector mounting side of PC Board.



41 Contacts

51 Contacts



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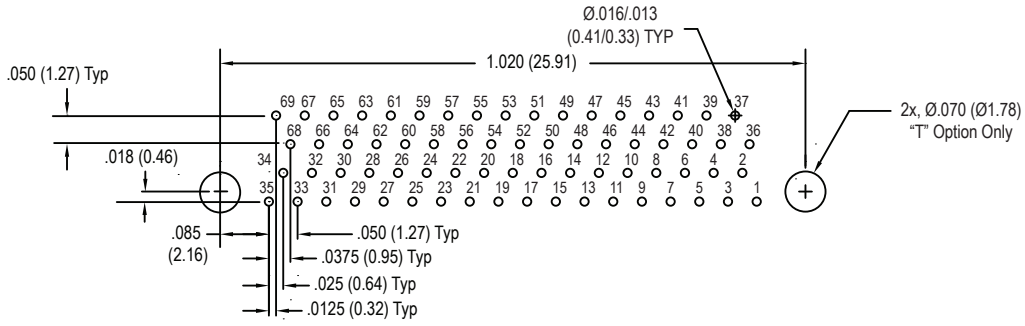

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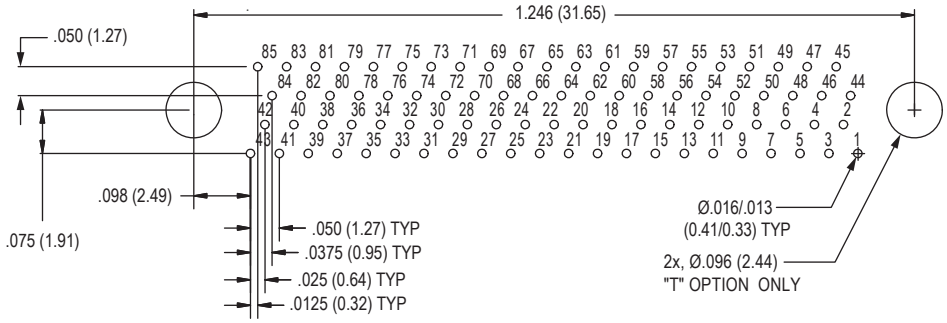

85 Contacts

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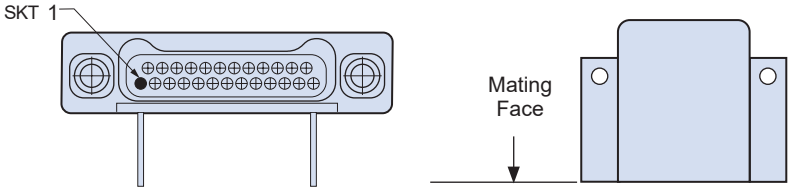

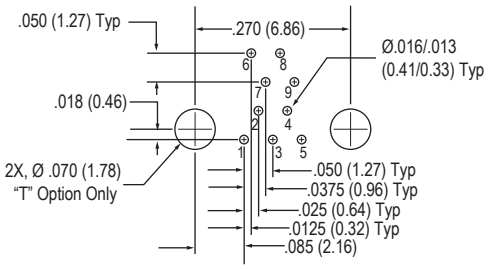

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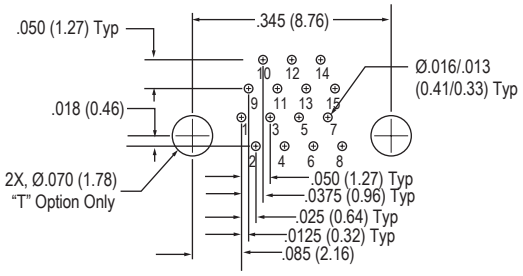

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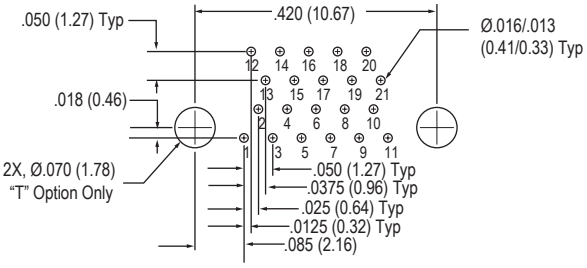
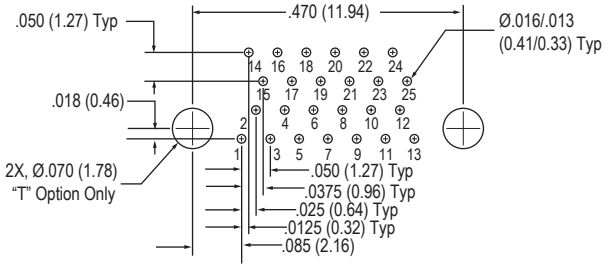
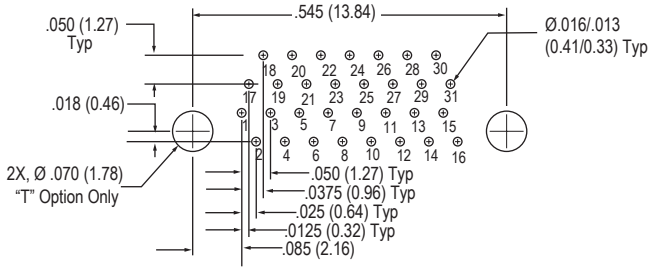


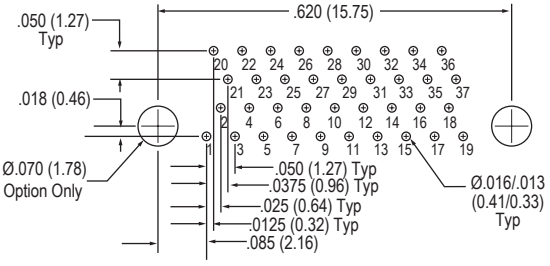
21 Contacts



25 Contacts

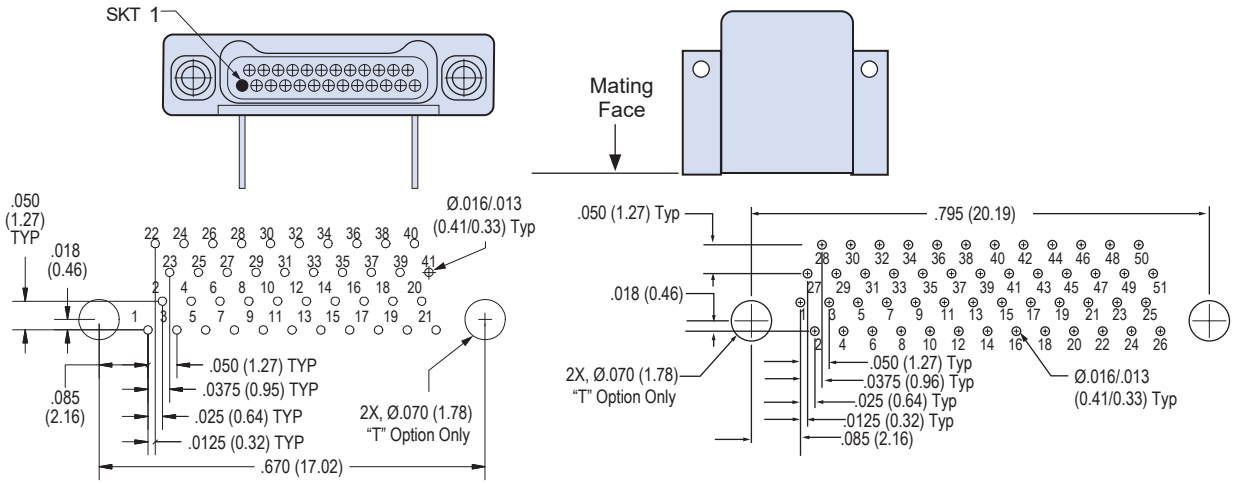


31 Contacts



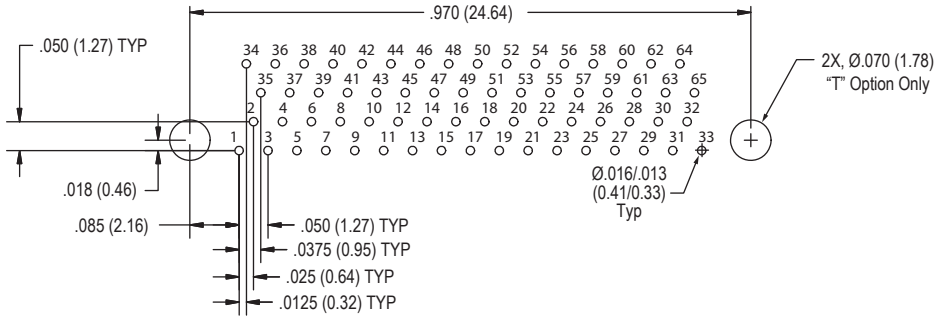
37 Contacts

Layouts shown are for connector mounting side of PC Board.



41 Contacts

51 Contacts



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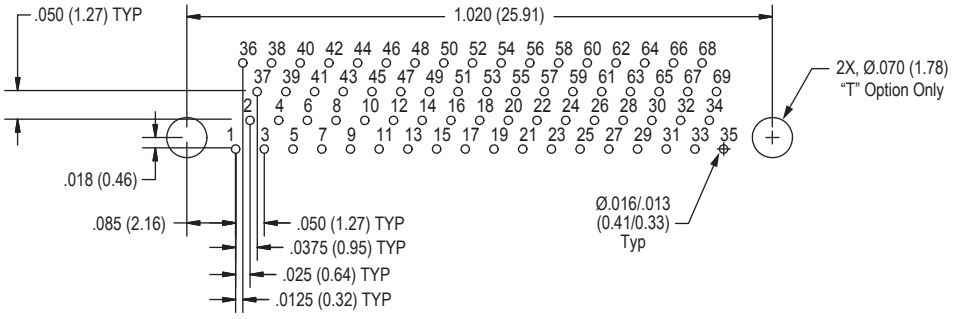
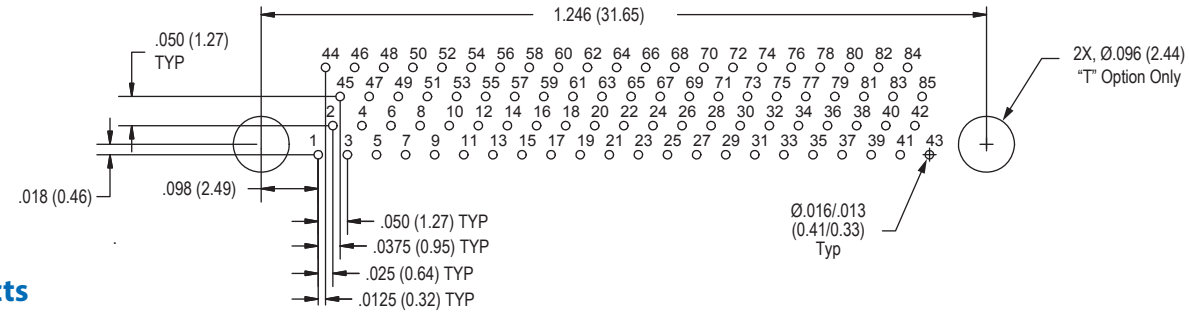


69 Contacts



85 Contacts

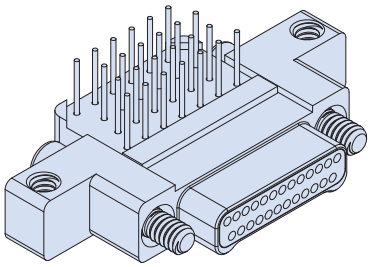
Layouts shown are for connector mounting side of PC Board.

D

SERIES 89

Dual Row Connectors

Right Angle Mount Thru Hole PCB Connectors with Mounting Ears - PCB Footprint



Right Angle Mount PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications. Available with female mounting threads and jackscrews for use with printed circuits boards.

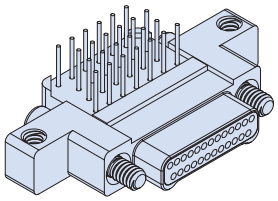
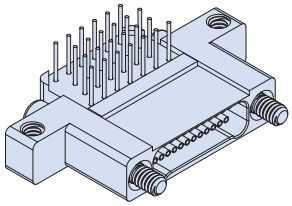
Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. Complies to the requirements of MIL-DTL-32139. These connectors are intermateable with any M32139 compliant connector or Glenair Series 891 Dual row metal shell nanominiature connector.

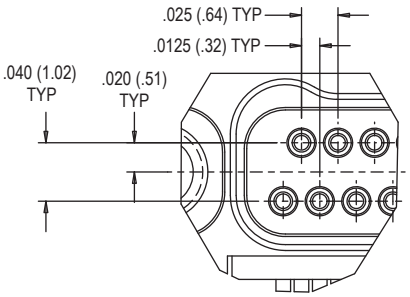
How to Order

Sample Part Number	891-044	-25S	A2	-BRT	1	J

Series	**891-043** Plug, Right Angle Thru Hole PCB Connector with Mounting Ears **891-044** Receptacle, Right Angle Thru Hole PCB Connector with Mounting Ears
Insert Arrangement/ Contact Type	Pins (891-043 Plugs): **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Sockets (891-044 Receptacles): **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **A2** - Aluminum Shell, Electroless Nickel Plating **T** - Titanium Shell, Unplated **S** - Stainless Steel Shell, Passivated
Termination Type	**BRT** - Board Right Angle Thru Hole
PC Tail Length	**1** - .110 (2.79) **2** - .172 (4.37) **3** - .140 (3.56)
Hardware	**J** - Hex Head Jackscrew

Plug (Pin) Connector	Receptacle (Socket) Connector
	
J - Jackscrew	J - Jackscrew

DETAIL A



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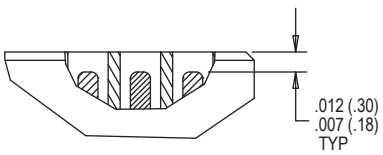


NOTES

1. Inspect and test IAW MIL-DTL-32139
2. Interface dimensions per MIL-DTL-32139/3 and /4
3. Materials/finishes
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: passivated stainless steel

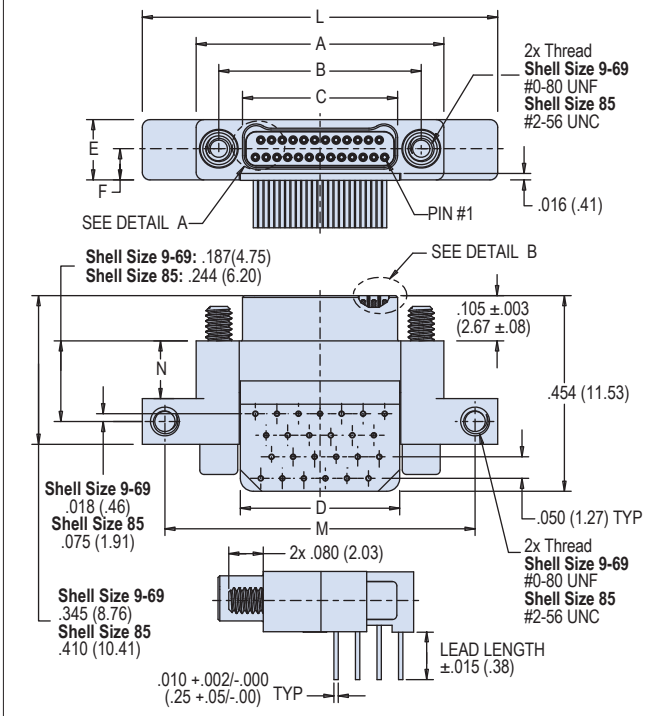
D

Dual Row Connectors

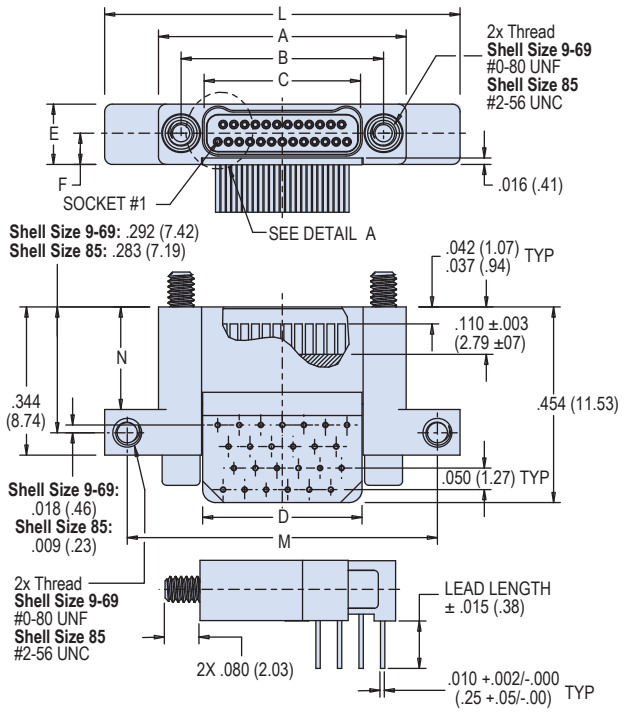
Right Angle Mount Thru Hole PCB Connectors with Mounting Ears - PCB Footprint

Dimensions

891-043 Plug (Pin) Connector



891-044 Plug (Socket) Connector

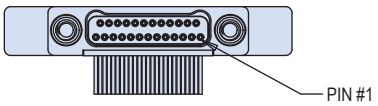


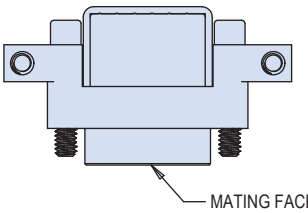
Size	A		B BSC.		C BSC.		D		E		F		L		M BSC		N	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
9P	.375	9.52	.270	6.86	.160	4.06	.170	4.32	.140	3.56	.0725	1.84	.625	15.88	.520	13.21	.134	3.40
9S	.375	9.53	.270	6.86	.163	4.14	.170	4.32	.140	3.56	.0725	1.84	.625	15.88	.520	13.21	.238	6.05
15P	.450	11.43	.345	8.76	.235	5.97	.245	6.22	.140	3.56	.0725	1.84	.700	17.78	.595	15.11	.134	3.40
15S	.450	11.43	.345	8.76	.238	6.05	.245	6.22	.140	3.56	.0725	1.84	.700	17.78	.595	15.11	.238	6.05
21P	.525	13.33	.420	10.67	.310	7.87	.320	8.13	.140	3.56	.0725	1.84	.775	19.69	.670	17.02	.134	3.40
21S	.525	13.34	.420	10.67	.313	7.95	.320	8.13	.140	3.56	.0725	1.84	.775	19.69	.670	17.02	.238	6.05
25P	.575	14.60	.470	11.94	.360	9.14	.370	9.40	.140	3.56	.0725	1.84	.825	20.96	.720	18.29	.134	3.40
25S	.575	14.61	.470	11.94	.363	9.22	.370	9.40	.140	3.56	.0725	1.84	.825	20.96	.720	18.29	.238	6.05
31P	.650	16.51	.545	13.84	.435	11.05	.445	11.30	.140	3.56	.0725	1.84	.900	22.86	.795	20.19	.134	3.40
31S	.650	16.51	.545	13.84	.438	11.13	.445	11.30	.140	3.56	.0725	1.84	.900	22.86	.795	20.19	.238	6.05
37P	.725	18.41	.620	15.75	.510	12.95	.520	13.21	.140	3.56	.0725	1.84	.975	24.77	.870	22.10	.134	3.40
37S	.725	18.42	.620	15.75	.513	13.03	.520	13.21	.140	3.56	.0725	1.84	.975	24.77	.870	22.10	.238	6.05
41P	.775	19.69	.670	17.02	.560	14.23	.570	14.48	.140	3.56	.0725	1.84	1.025	26.04	.920	23.37	.134	3.40
41S	.775	19.69	.670	17.02	.563	14.30	.570	14.48	.140	3.56	.0725	1.84	1.025	26.04	.920	23.37	.238	6.05
51P	.900	22.86	.795	20.19	.685	17.40	.695	17.65	.140	3.56	.0725	1.84	1.150	29.21	1.045	26.54	.134	3.40
51S	.900	22.86	.795	20.19	.688	17.48	.695	17.65	.140	3.56	.0725	1.84	1.150	29.21	1.045	26.54	.238	6.05
65P	1.075	27.30	.970	24.64	.860	21.84	.870	22.10	.140	3.56	.0725	1.84	1.325	33.66	1.220	30.99	.134	3.40
65S	1.075	27.31	.970	24.64	.863	21.92	.870	22.10	.140	3.56	.0725	1.84	1.325	33.66	1.220	30.99	.238	6.05
69P	1.125	28.57	1.020	25.91	.910	23.11	.920	23.37	.140	3.56	.0725	1.84	1.375	34.93	1.270	32.26	.134	3.40
69S	1.125	28.58	1.020	25.91	.913	23.19	.920	23.37	.140	3.56	.0725	1.84	1.375	34.93	1.270	32.26	.238	6.05
85P	1.377	34.97	1.246	31.65	1.110	28.19	1.120	28.45	.165	4.19	.0850	2.16	1.679	42.65	1.546	39.27	.183	4.65
85S	1.377	34.98	1.246	31.65	1.113	28.27	1.120	28.45	.165	4.19	.0850	2.16	1.679	42.65	1.546	39.27	.222	5.64

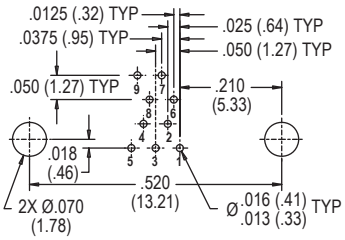
D

Dual Row Connectors

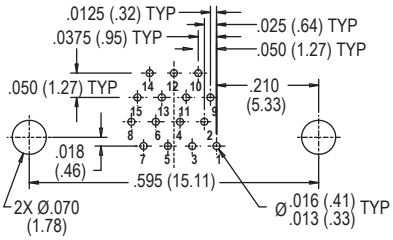
Right Angle Mount Thru Hole PCB Connectors with Mounting Ears - PCB Plug Footprint



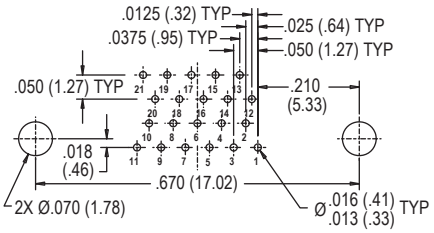




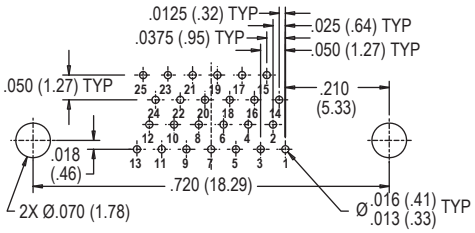
9 Contacts



15 Contacts



21 Contacts



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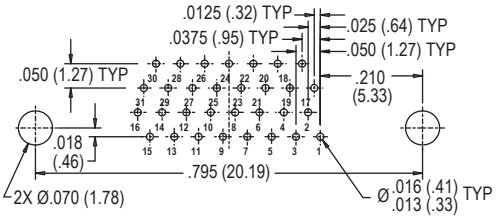
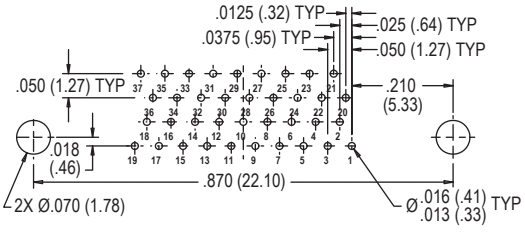
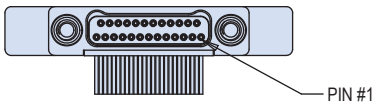
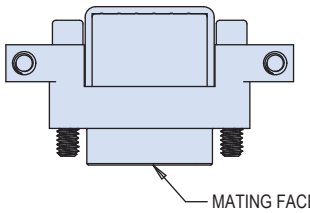


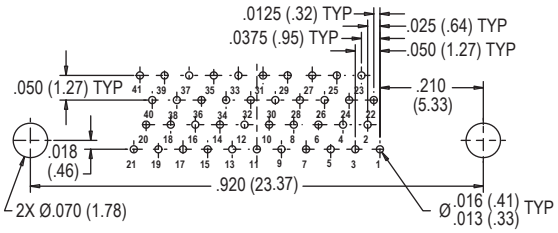
31 Contacts



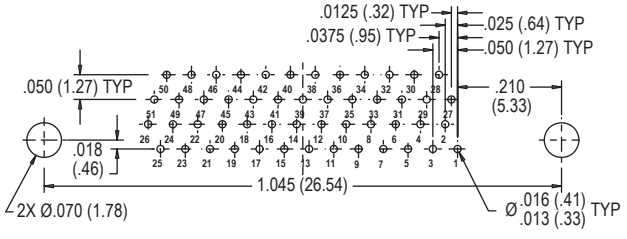
37 Contacts



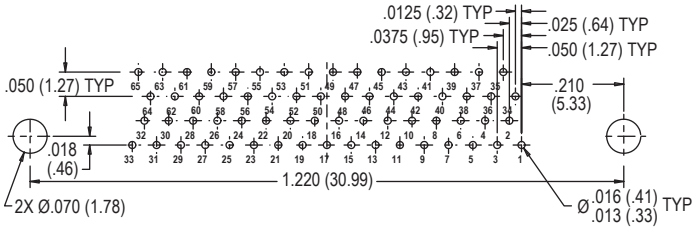




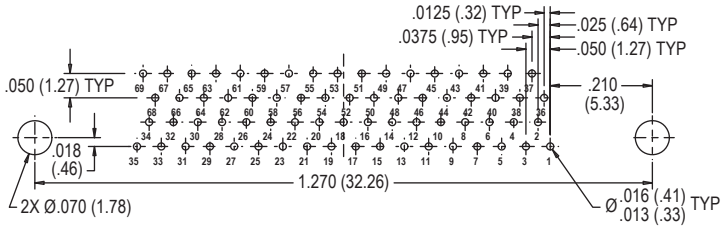
41 Contacts



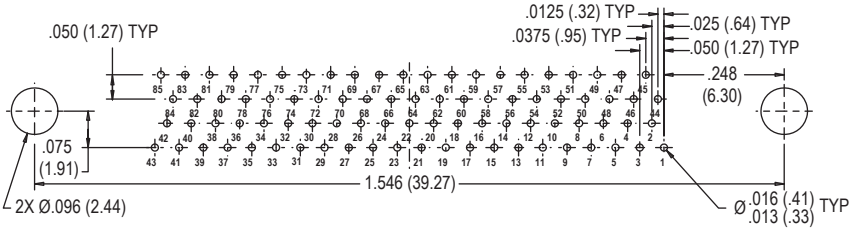
51 Contacts



65 Contacts

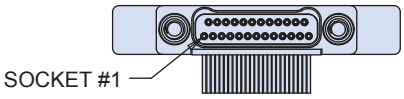


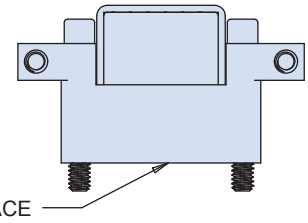
69 Contacts

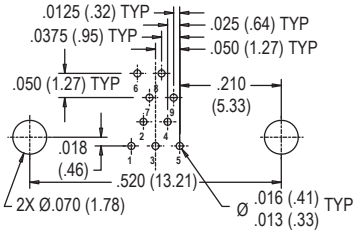


85 Contacts

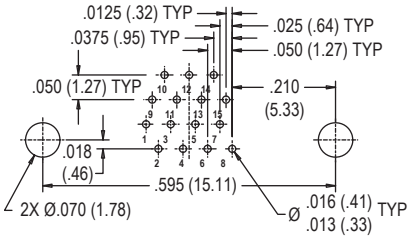
D







9 Contacts



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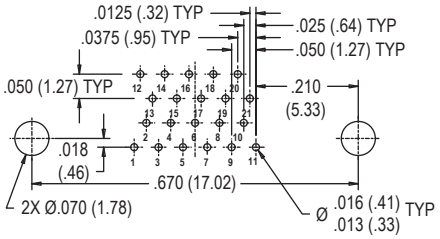

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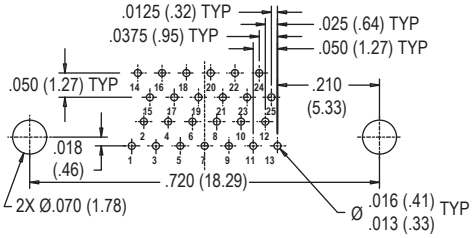

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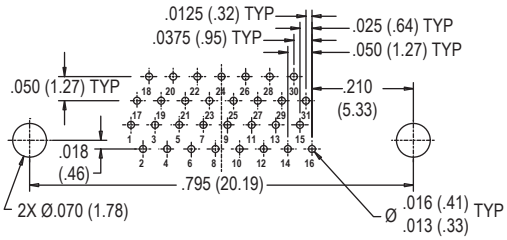
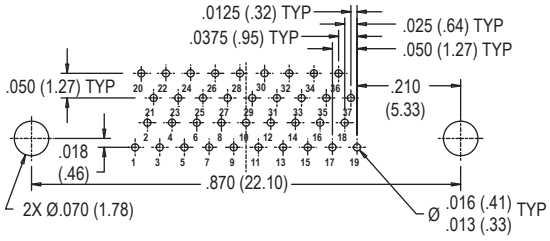


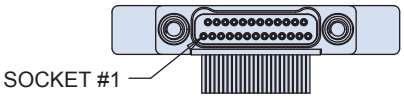
31 Contacts

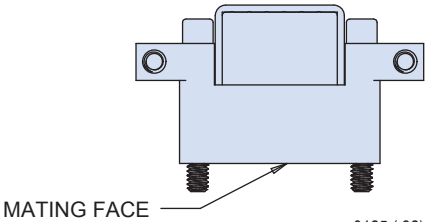


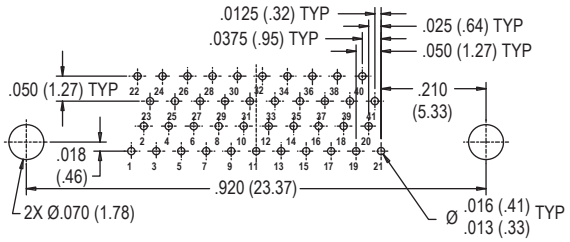
37 Contacts

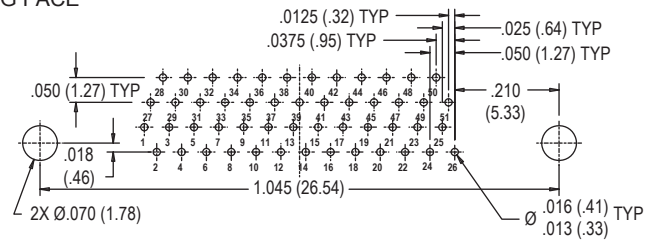
Dual Row Connectors

Right Angle Mount Thru Hole PCB Connectors with Mounting Ears - PCB Receptacle Footprint

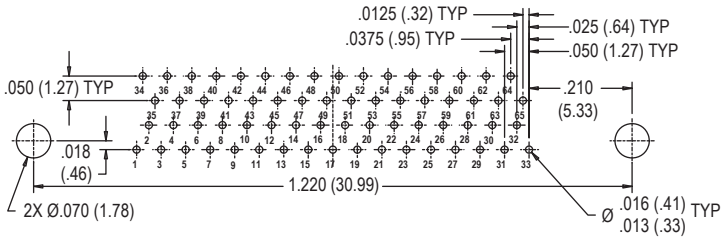






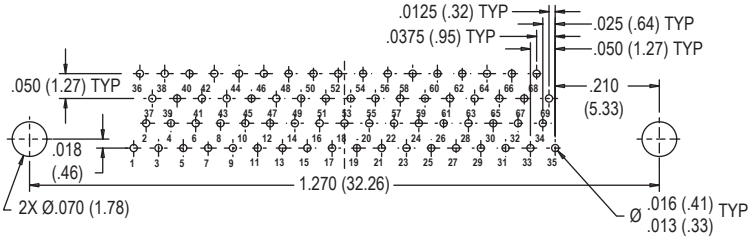


41 Contacts

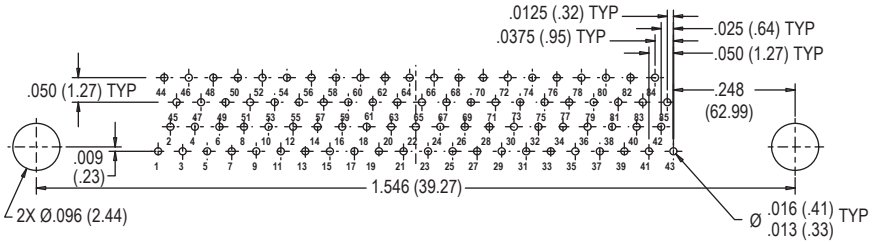


51 Contacts

65 Contacts



69 Contacts

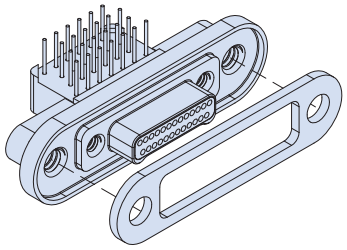


85 Contacts

D

Dual Row Connectors

Rear Panel Mount, Right Angle Thru Hole PCB Connectors with Gasket Seal - How to Order



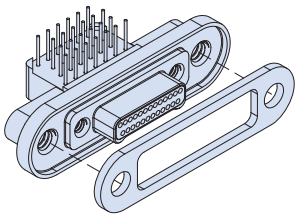
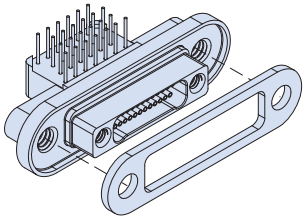
Rear Panel Mount Right Angle Thru Hole Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with female threads.

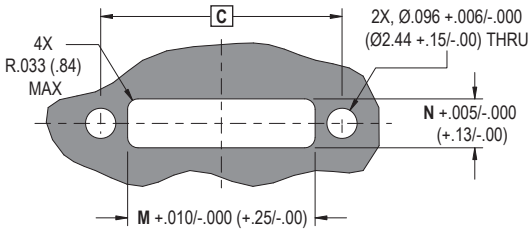
Gasket Seals fuorosilicone, Cho-Seal 1298 and Cho-Seal 6503 available. For replacement gaskets see 899-015.

Choose Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. Intermateable with any MIL-DTL-32139 type connector or corresponding Glenair Series 891 Dual row metal shell nanominiature connector.

Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

How to Order									
Sample Part Number	**891-027**	**-25P**	**S**	**-BRT**	**1**	**T**	**-01**	**M**
Series	**891-027** Rear Panel Mount Plug, Right Angle Thru Hole **891-028** Rear Panel Mount Receptacle, Right Angle Thru Hole							
Insert Arrangement/ Contact Type	Pins (891-027 Plugs): **9P, 15P, 21P, 25P, 31P, 37P, 41P, 51P, 65P, 69P, 85P** Sockets (891-028 Receptacles): **9S, 15S, 21S, 25S, 31S, 37S, 41S, 51S, 65S, 69S, 85S**							
Shell Material and Finish	**T** - Titanium Shell, Unplated **S** - Stainless Steel Shell, Passivated							
Termination Type	**BRT** - Board Right Angle Thru Hole							
PC Tail Length	**1** - .110 (2.79) **2** - .172 (4.37) **3** - .140 (3.56)							
Hardware Option	**T** - Female Threads (#0-80 for size 9-69, #2-56 for size 85)							
Gasket Material	**Omit** for No Gasket **01** - Fluorosilicone IAW MIL-DTL25988 Type II, Class I, Grade 70 **02** - Passivated Silver Plated Aluminum Filled Fluorosilicone IAW MIL-DTL-83528, Type D (Cho-Seal 1298 or Equivalent) **03** - Nickel Plated Aluminum Filled Fluorosilicone, (Cho-Seal 6503 or Equivalent)							
Mounting Thread Option	**Omit** for #2-56 UNC-2B **M** - M2X0.4 6H							

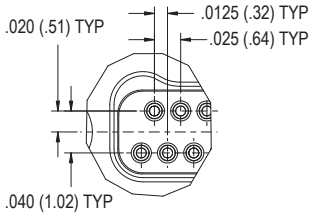
Plug (Pin)	Receptacle (Socket)
	
T - Female Thread	T - Female Thread



NOTES

1. Material and Finish:
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Pre-tinned PC tails: Coated with Sn63Pb37 or Sn60Pb40 tin-lead
2. Inspect and test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 and /4

DETAIL A



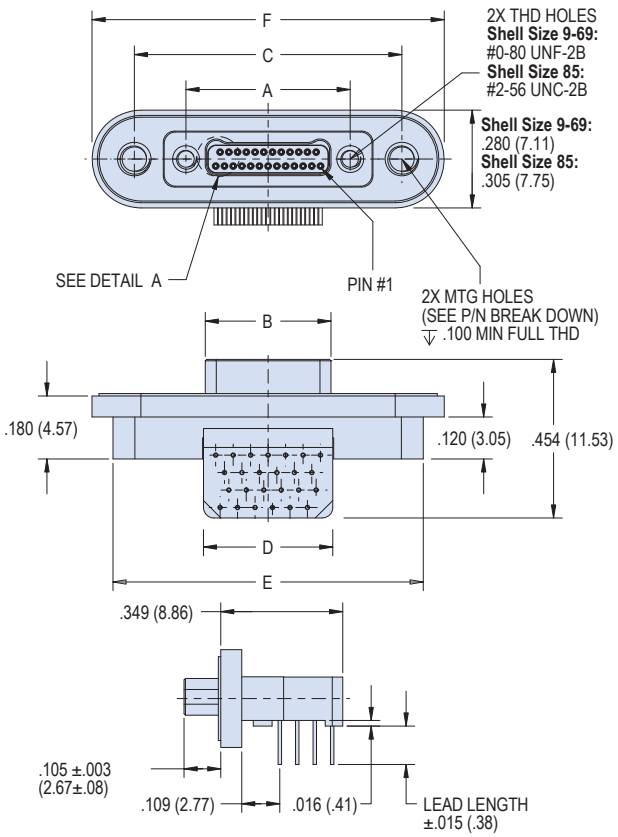
Panel Cut-out Dimensions			
Shell Size	C	M	N
9	.566 (14.38)	.395 (10.03)	.155 (3.93)
15	.641 (16.28)	.470 (11.94)	.155 (3.93)
21	.716 (18.19)	.545 (13.84)	.155 (3.93)
25	.766 (19.46)	.595 (15.11)	.155 (3.93)
31	.841 (21.36)	.670 (17.02)	.155 (3.93)
37	.916 (23.27)	.745 (18.92)	.155 (3.93)
41	.966 (24.54)	.795 (20.19)	.155 (3.93)
51	1.091 (27.71)	.920 (23.37)	.155 (3.93)
65	1.266 (32.16)	1.095 (27.81)	.155 (3.93)
69	1.316 (33.43)	1.145 (29.08)	.155 (3.93)
85	1.568 (39.83)	1.397 (34.48)	.180 (4.57)

Dual Row Connectors

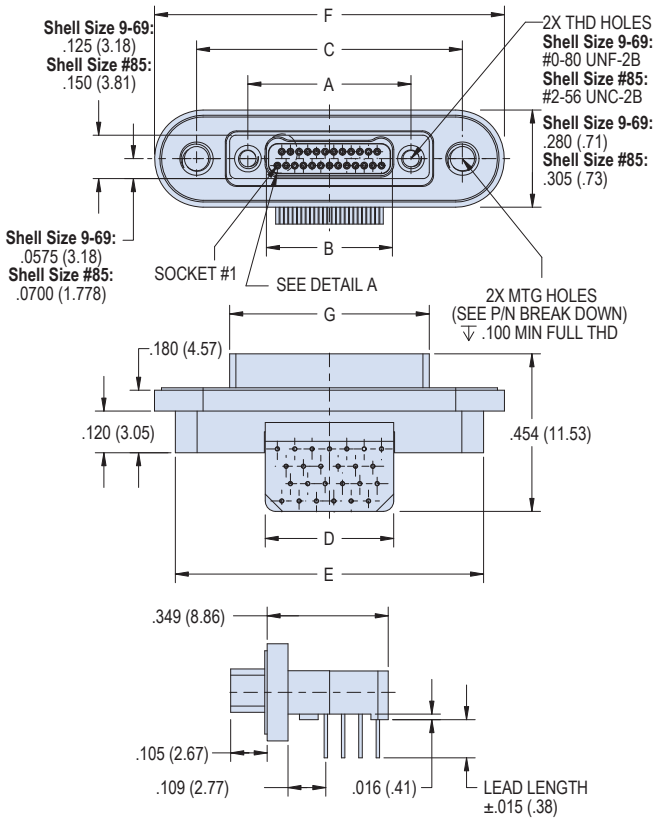
Rear Panel Mount, Right Angle Thru Hole PCB Connectors with Gasket Seal - Dimensions

Dimensions

891-027 Plug (Pin) Connectors



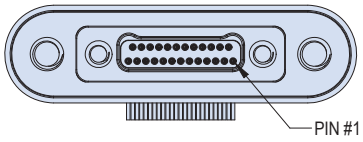
891-028 Receptacle (Socket) Connectors



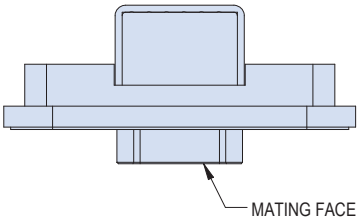
Layout	A BSC		B BSC.		C BSC.		D		E		F		G	
9P	.270	6.86	.160	4.06	.566	14.38	.170	4.32	.688	17.48	.808	20.52	--	--
9S	.270	6.86	.163	4.14	.566	14.38	.170	4.32	.688	17.48	.808	20.52	.375	9.53
15P	.345	8.76	.235	5.97	.641	16.28	.245	6.22	.763	19.38	.883	22.43	--	--
15S	.345	8.76	.238	6.05	.641	16.28	.245	6.22	.763	19.38	.883	22.43	.450	11.43
21P	.420	10.67	.310	7.87	.716	18.19	.320	8.13	.838	21.29	.958	24.33	--	--
21S	.420	10.67	.313	7.95	.716	18.19	.320	8.13	.838	21.29	.958	24.33	.525	13.34
25P	.470	11.94	.360	9.14	.766	19.46	.370	9.40	.888	22.56	1.008	25.60	--	--
25S	.470	11.94	.363	9.22	.766	19.46	.370	9.40	.888	22.56	1.008	25.60	.575	14.61
31P	.545	13.84	.435	11.05	.841	21.36	.445	11.30	.963	24.46	1.083	27.51	--	--
31S	.545	13.84	.438	11.13	.841	21.36	.445	11.30	.963	24.46	1.083	27.51	.650	16.51
37P	.620	15.75	.510	12.95	.916	23.27	.520	13.21	1.038	26.37	1.158	29.41	--	--
37S	.620	15.75	.513	13.03	.916	23.27	.520	13.21	1.038	26.37	1.158	29.41	.725	18.42
41P	.670	17.02	.560	14.22	.966	24.54	.570	14.48	1.088	27.64	1.208	30.68	--	--
41S	.670	17.02	.563	14.30	.966	24.54	.570	14.48	1.088	27.64	1.208	30.68	.775	19.69
51P	.795	20.19	.685	17.40	1.091	27.71	.695	17.65	1.213	30.81	1.333	33.86	--	--
51S	.795	20.19	.688	17.48	1.091	27.71	.695	17.65	1.213	30.81	1.333	33.86	.900	22.86
65P	.970	24.64	.860	21.84	1.266	32.16	.870	22.10	1.388	35.26	1.508	38.30	--	--
65S	.970	24.64	.863	21.92	1.266	32.16	.870	22.10	1.388	35.26	1.508	38.30	1.075	27.31
69P	1.020	25.91	.910	23.11	1.316	33.43	.920	23.37	1.438	36.53	1.558	39.57	--	--
69S	1.020	25.91	.913	23.19	1.316	33.43	.920	23.37	1.438	36.53	1.558	39.57	1.125	28.58
85P	1.246	31.65	1.110	28.19	1.568	39.83	1.120	28.45	1.690	42.93	1.810	45.97	--	--
85S	1.246	31.65	1.113	28.27	1.568	39.83	1.120	28.45	1.690	42.93	1.810	45.97	1.377	34.98

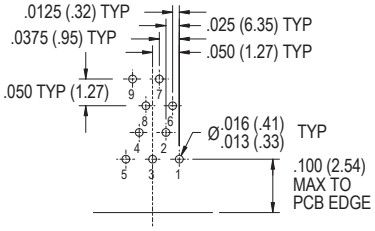
Dual Row Connectors

Rear Panel Mount, Right Angle Thru Hole PCB Connectors with Gasket Seal - PCB Plug Footprint

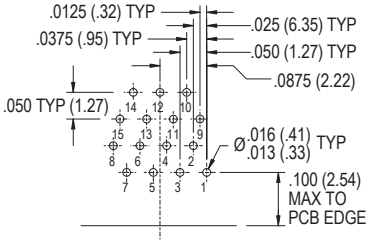


Right angle plug (pin) connector layout patterns shown are for the connector mounting side of PC board

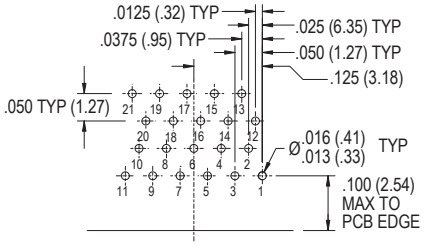




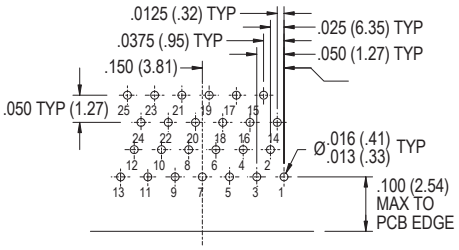
9 Contacts



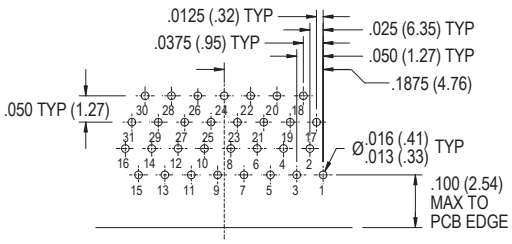
15 Contacts



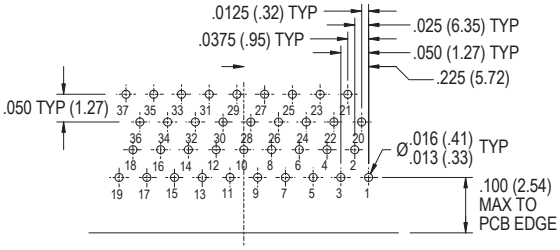
21 Contacts



25 Contacts

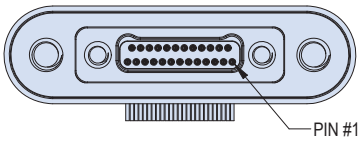


31 Contacts

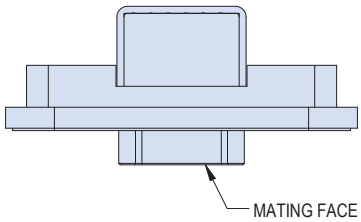


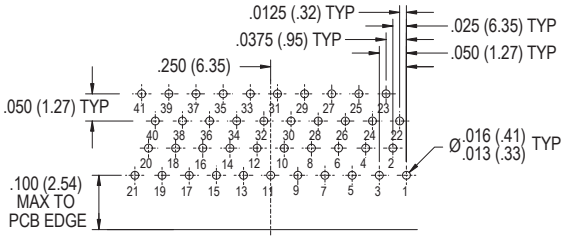
37 Contacts

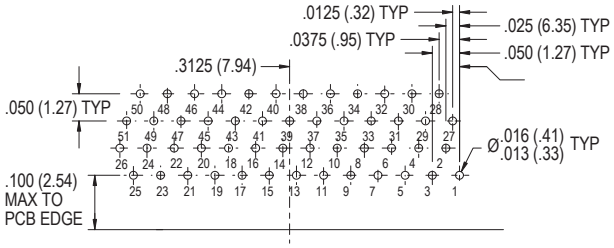
Rear Panel Mount, Right Angle Thru Hole PCB Connectors with Gasket Seal - PCB Plug Footprint



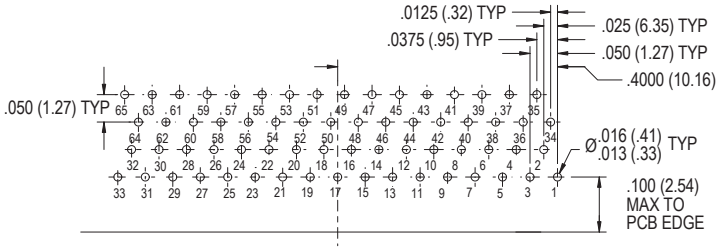
Right angle plug (pin) connector layout patterns shown are for the connector mounting side of PC board





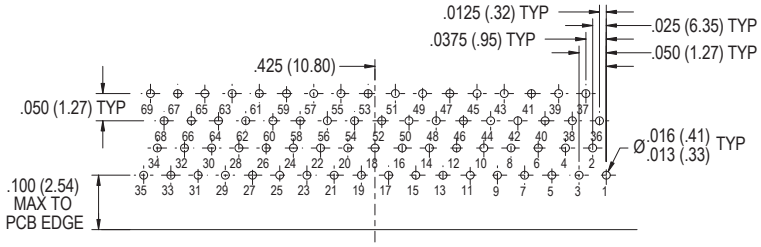


41 Contacts

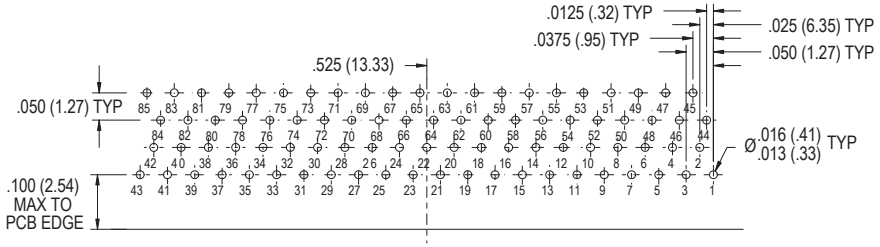


51 Contacts

65 Contacts



69 Contacts

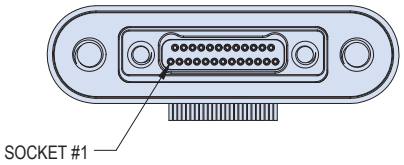


85 Contacts

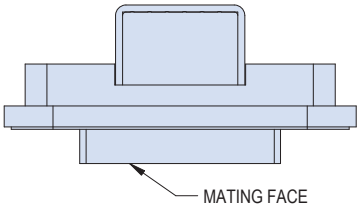
D

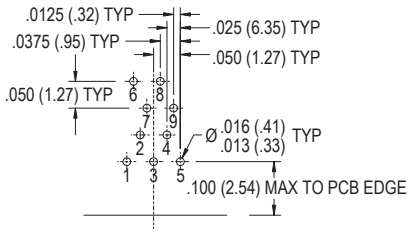
Dual Row Connectors

Rear Panel Mount, Right Angle Thru Hole PCB Connectors with Gasket Seal - PCB Receptacle Footprint

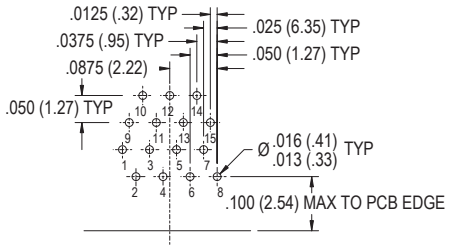


Right angle receptacle (socket) connector layout patterns shown are for the connector mounting side of PC board

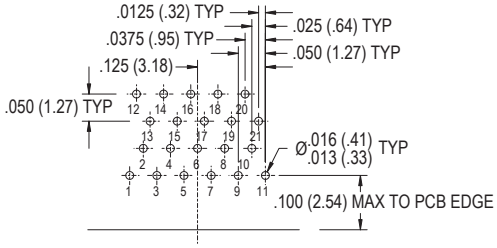




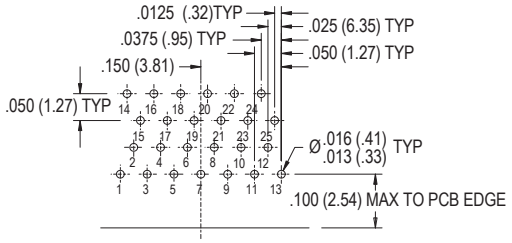
9 Contacts



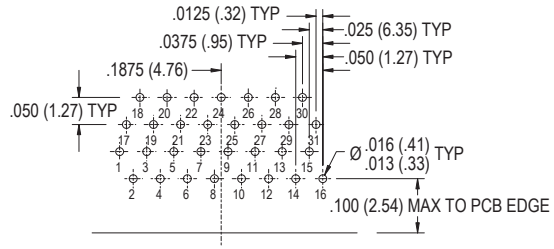
15 Contacts



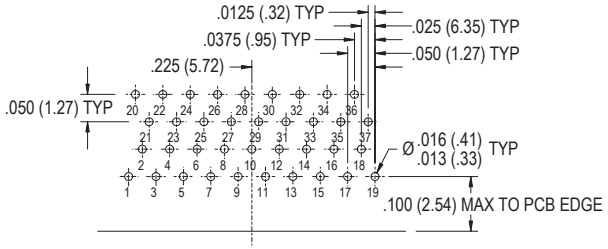
21 Contacts



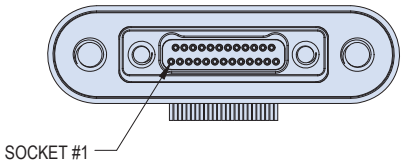
25 Contacts



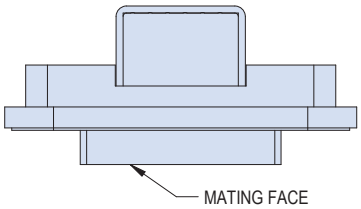
31 Contacts

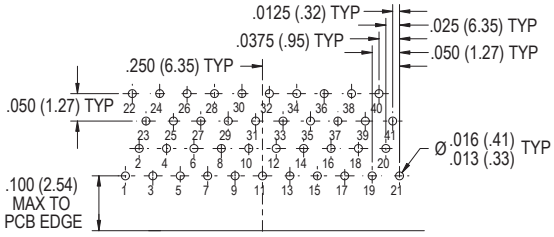


37 Contacts

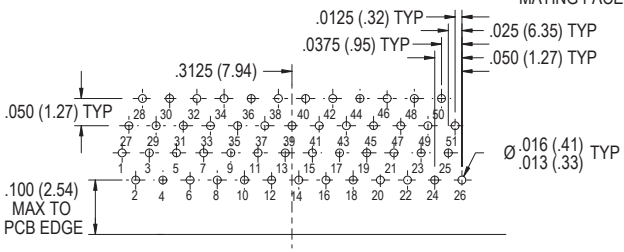


Right angle receptacle (socket) connector layout patterns shown are for the connector mounting side of PC board

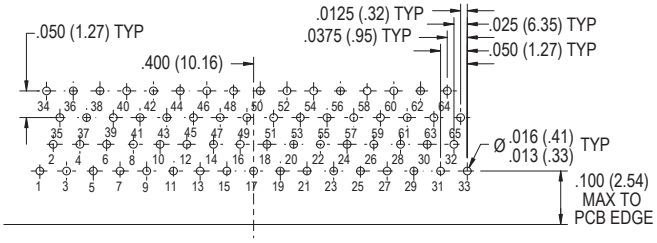




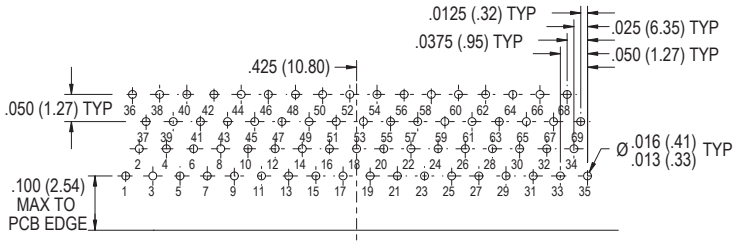
41 Contacts



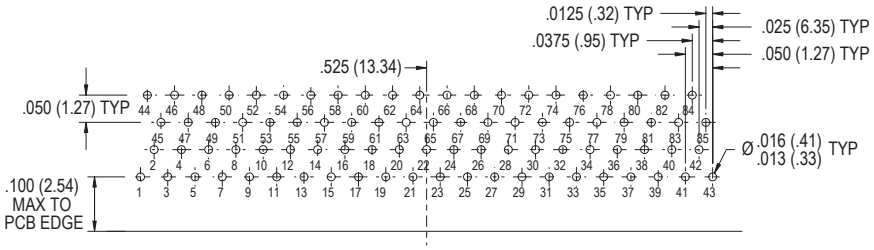
51 Contacts



65 Contacts



69 Contacts

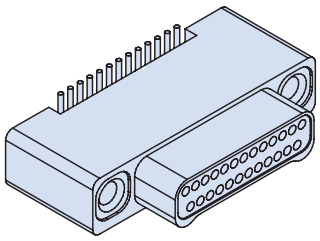


85 Contacts

D

Dual Row Connectors

Vertical Surface Mount PCB Connectors
How to Order

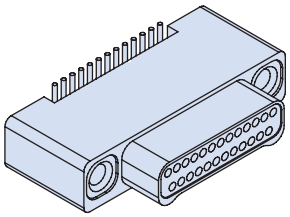
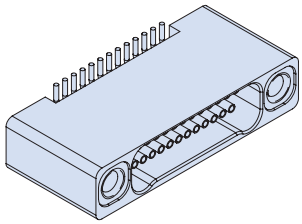


Vertical Surface Mount PCB Connectors feature gold alloy TwistPin contacts. Contacts are precision-crimped #30 AWG gold-plated wire. These nanomimiature connectors offer premium performance and reliability for demanding applications.

Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. Complies to the requirements of MIL-DTL-32139.

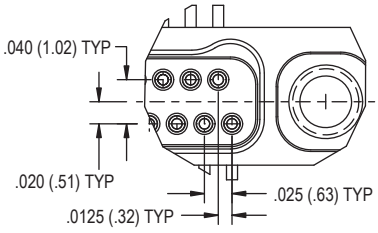
How to Order					
Sample Part Number	**891-011**	**-25S**	**A2**	**-BSS**	**T**
Series	**891-010** Plug, Vertical SMT Connector **891-011** Receptacle, Vertical SMT Connector				
Insert Arrangement/ Contact Type	Pins (891-010 Plugs): **9P, 15P, 21P, 25P, 31P, 37P, 41P, 51P, 65P, 69P, 85P** Sockets (891-011 Receptacles): **9S, 15S, 21S, 25S, 31S, 37S, 41S, 51S, 65S, 69S, 85S**				
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **A2** - Aluminum Shell, Electroless Nickel Plating	**T** - Titanium Shell, Unplated **S** - Stainless Steel Shell, Passivated			
Termination Type	**BSS** - Board Surface Mount Straight				
Hardware	**T** - Female Thread				

Plug (Pin) Connector	Receptacle (Socket) Connector
	
T - Female Thread	T - Female Thread

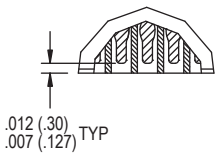
NOTES

1. Material and Finish:
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: passivated stainless steel
2. Inspect and test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 and /4

DETAIL A

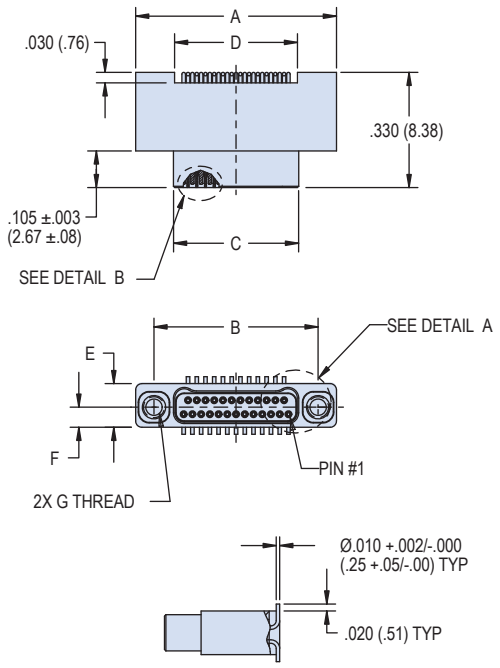


DETAIL B

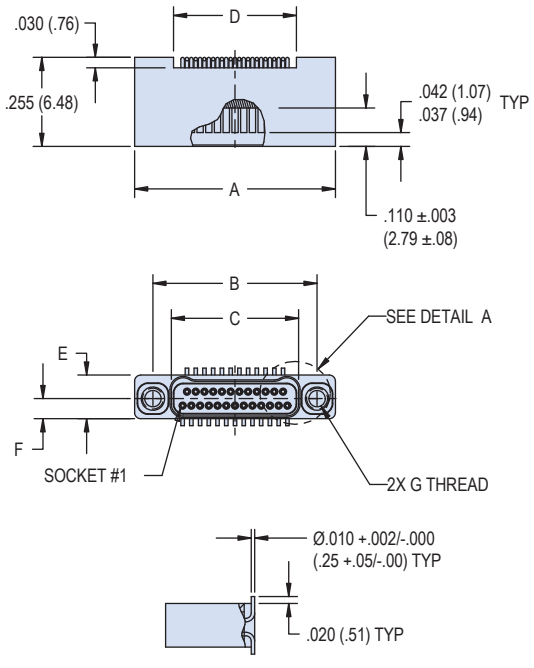


Dimensions

891-010 Plug (Pin) Connectors



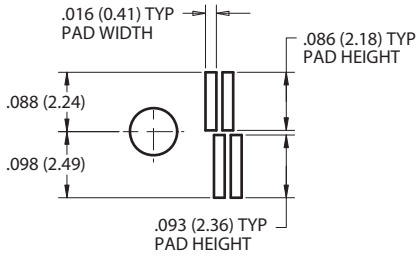
891-011 Receptacle (Socket) Connectors



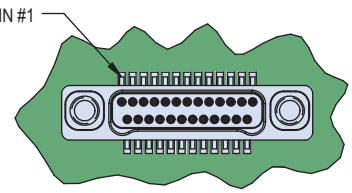
Layout	A		B BSC.		C BSC.		D		E		F BSC.		G Thread
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm	In. ± .005	mm. ± 0.13	In. ± .005	mm± 0.13	In.	mm	
9P	.375	9.52	.270	6.86	.160	4.06	.152	3.86	.125	3.18	.0575	1.46	#0-80 UNF
9S	.375	9.52	.270	6.86	.163	4.14	.152	3.86	.125	3.18	.0575	1.46	#0-80 UNF
15P	.450	11.43	.345	8.76	.235	5.97	.227	5.77	.125	3.18	.0575	1.46	#0-80 UNF
15S	.450	11.43	.345	8.76	.238	6.04	.227	5.77	.125	3.18	.0575	1.46	#0-80 UNF
21P	.525	13.33	.420	10.67	.310	7.87	.302	7.67	.125	3.18	.0575	1.46	#0-80 UNF
21S	.525	13.33	.420	10.67	.313	7.95	.302	7.67	.125	3.18	.0575	1.46	#0-80 UNF
25P	.575	14.60	.470	11.94	.360	9.14	.352	8.94	.125	3.18	.0575	1.46	#0-80 UNF
25S	.575	14.60	.470	11.94	.363	9.22	.352	8.94	.125	3.18	.0575	1.46	#0-80 UNF
31P	.650	16.51	.545	13.84	.435	11.05	.427	10.85	.125	3.18	.0575	1.46	#0-80 UNF
31S	.650	16.51	.545	13.84	.438	11.12	.427	10.85	.125	3.18	.0575	1.46	#0-80 UNF
37P	.725	18.41	.620	15.75	.510	12.95	.502	12.75	.125	3.18	.0575	1.46	#0-80 UNF
37S	.725	18.41	.620	15.75	.513	13.03	.502	12.75	.125	3.18	.0575	1.46	#0-80 UNF
41P	.775	19.69	.670	17.02	.560	14.23	.552	14.03	.125	3.18	.0575	1.46	#0-80 UNF
41S	.775	19.69	.670	17.02	.563	14.30	.552	14.03	.125	3.18	.0575	1.46	#0-80 UNF
51P	.900	22.86	.795	20.19	.685	17.40	.677	17.20	.125	3.18	.0575	1.46	#0-80 UNF
51S	.900	22.86	.795	20.19	.688	17.47	.677	17.20	.125	3.18	.0575	1.46	#0-80 UNF
65P	1.075	27.30	.970	24.64	.860	21.84	.852	21.64	.125	3.18	.0575	1.46	#0-80 UNF
65S	1.075	27.30	.970	24.64	.863	21.92	.852	21.64	.125	3.18	.0575	1.46	#0-80 UNF
69P	1.125	28.57	1.020	25.91	.910	23.11	.902	22.91	.125	3.18	.0575	1.46	#0-80 UNF
69S	1.125	28.57	1.020	25.91	.913	23.19	.902	22.91	.125	3.18	.0575	1.46	#0-80 UNF
85P	1.377	34.97	1.246	31.65	1.110	28.19	1.102	27.99	.150	3.81	.070	1.78	#2-56 UNC
85S	1.377	34.97	1.246	31.65	1.113	28.27	1.102	27.99	.150	3.81	.070	1.78	#2-56 UNC

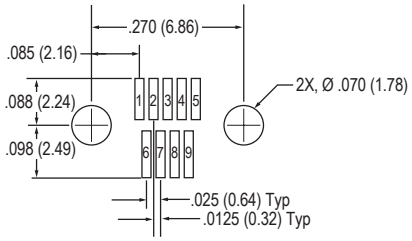
D

U.S. CAGE code 06324/0CA77 • Dimensions in Inches (millimeters) are subject to change without notice.

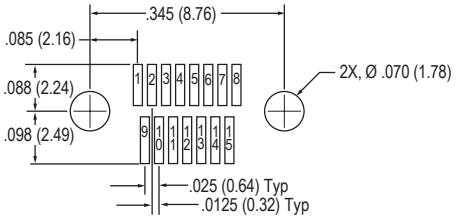


PAD FOOTPRINT DETAIL
LAYOUT 9-69

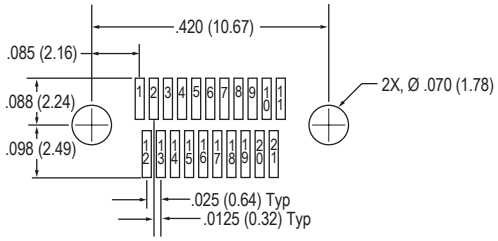




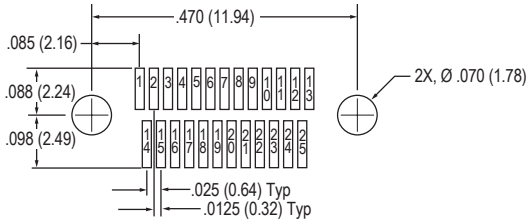
9 Contacts



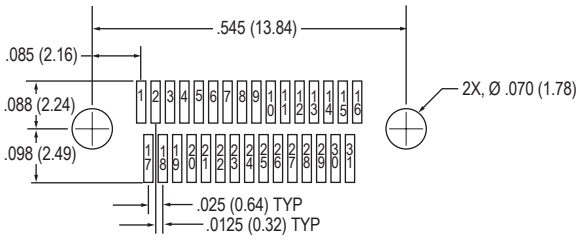
15 Contacts



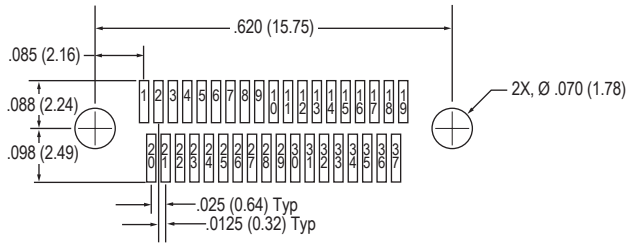
21 Contacts



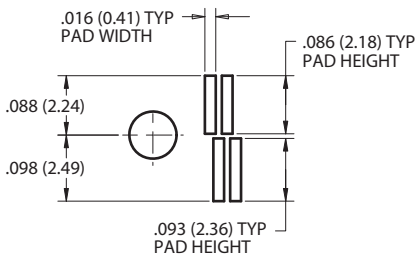
25 Contacts



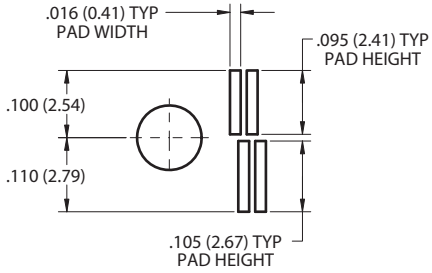
31 Contacts



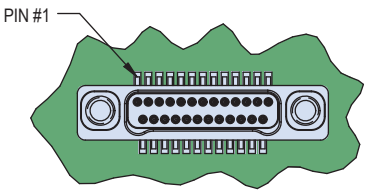
37 Contacts

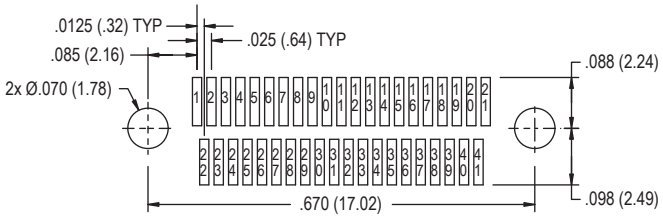


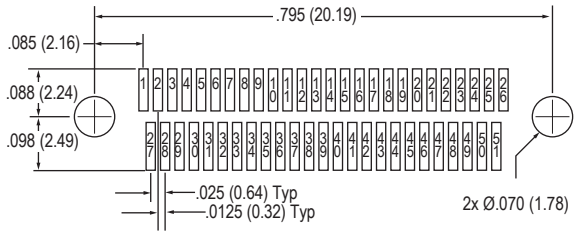
PAD FOOTPRINT DETAIL
LAYOUT 9-69



PAD FOOTPRINT DETAIL
LAYOUT 85 ONLY

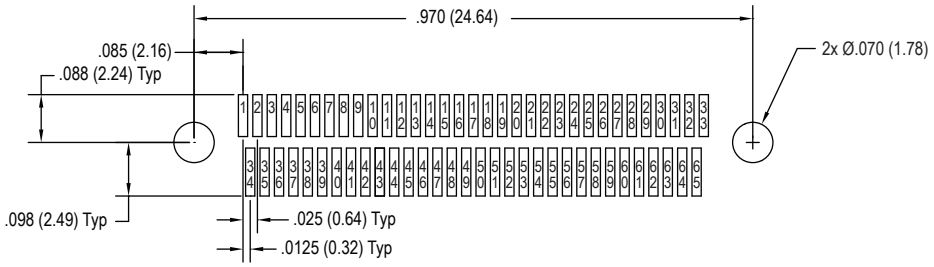




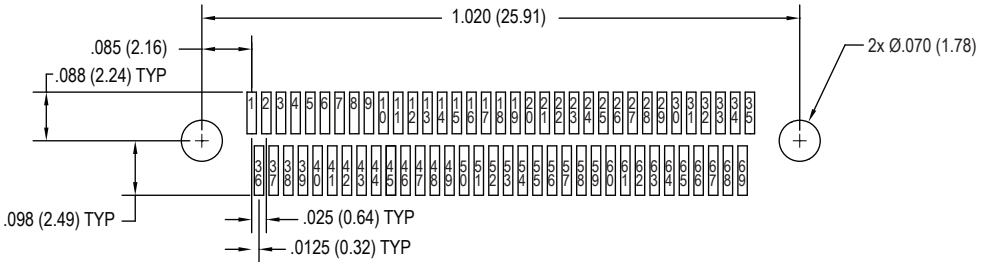


41 Contacts

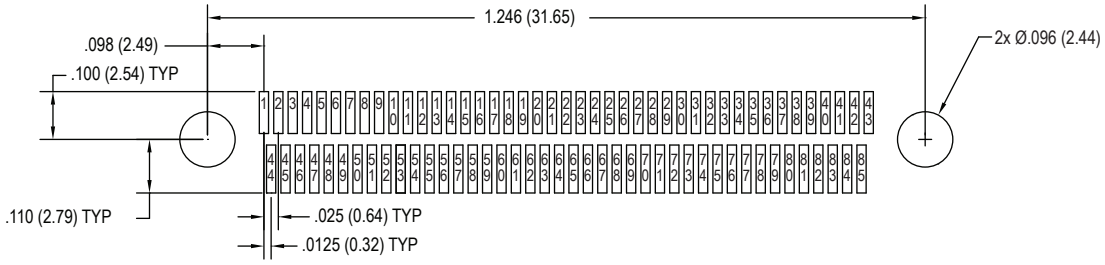
51 Contacts



65 Contacts

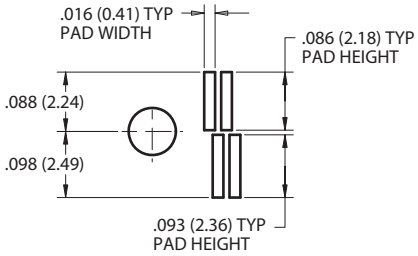


69 Contacts

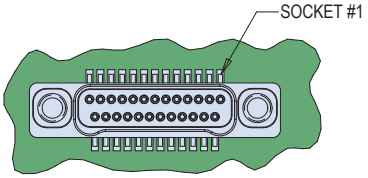


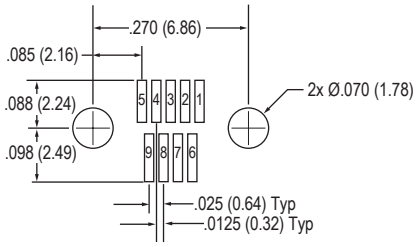
85 Contacts **(See pad detail for 85 contact layout above)**

D

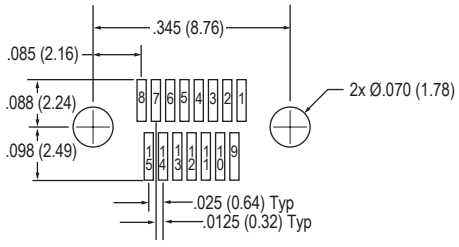


PAD FOOTPRINT DETAIL
LAYOUT 9-69

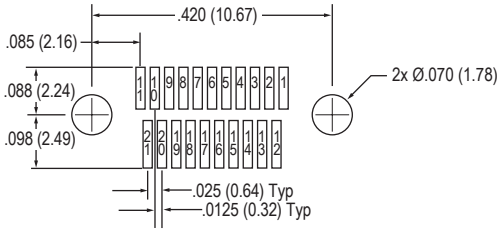




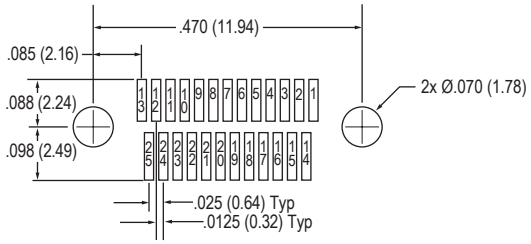
9 Contacts



15 Contacts



21 Contacts



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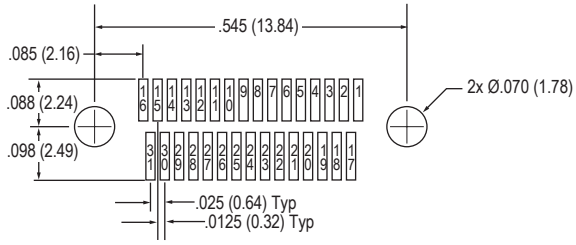
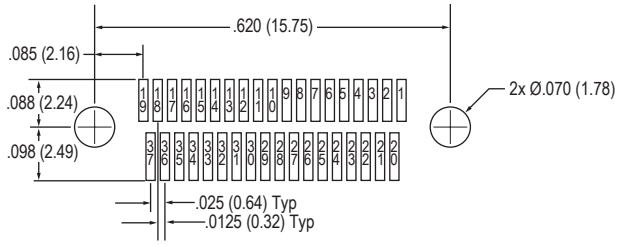
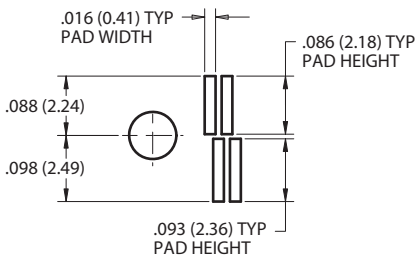


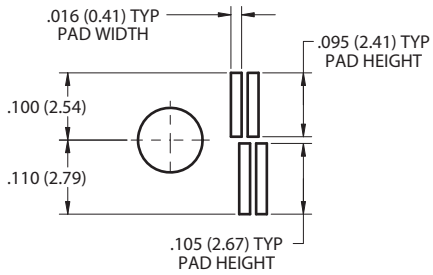
31 Contacts



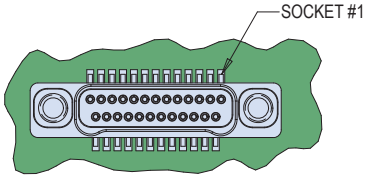
37 Contacts

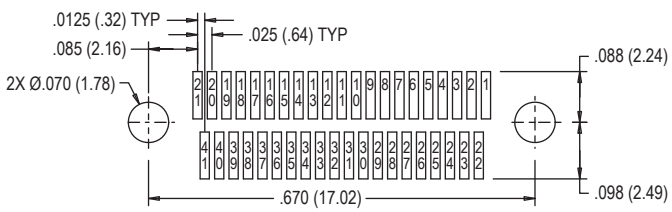


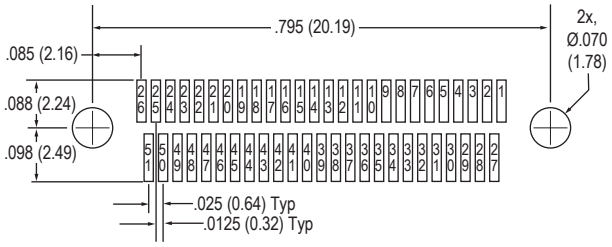
PAD FOOTPRINT DETAIL
LAYOUT 9-69



PAD FOOTPRINT DETAIL
LAYOUT 85 ONLY

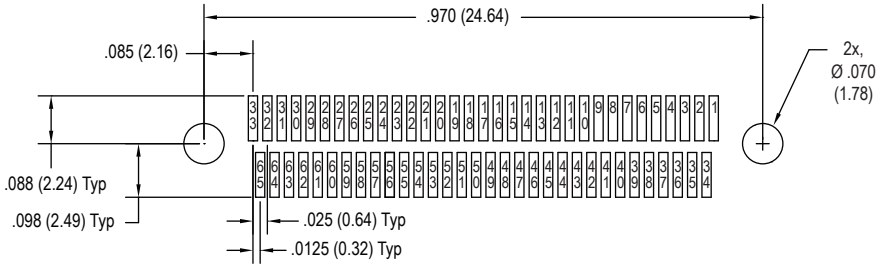




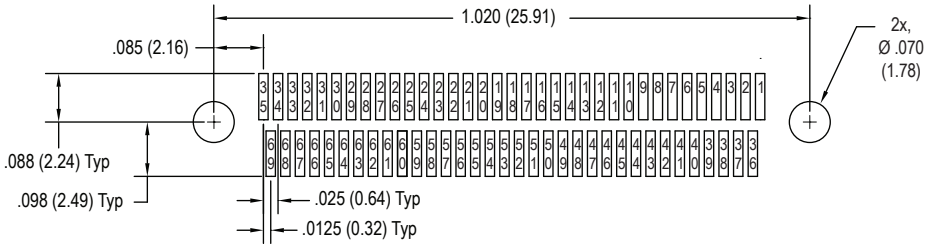


41 Contacts

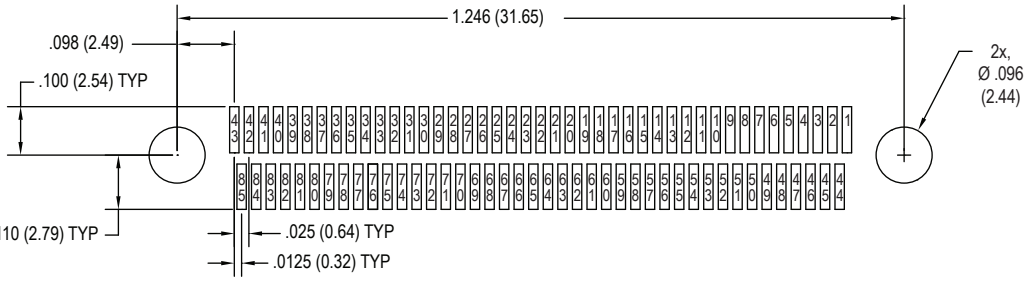
51 Contacts



65 Contacts



69 Contacts

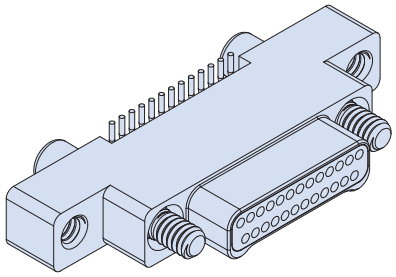


85 Contacts **(See pad detail for 85 contact layout above)**

D

Dual Row Connectors

Vertical Surface Mount PCB Connectors with Jackscrews
How to Order

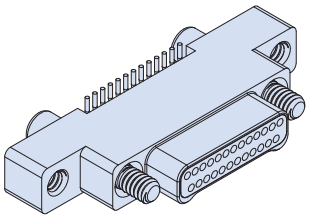
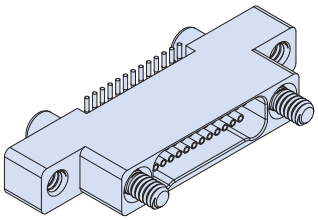


Vertical Surface Mount PCB Connectors feature gold alloy TwistPin contacts. Contacts are precision-crimped #30 AWG gold-plated wire. These nanomimiature connectors offer premium performance and reliability for demanding applications.

Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. Complies to the requirements of MIL-DTL-32139.

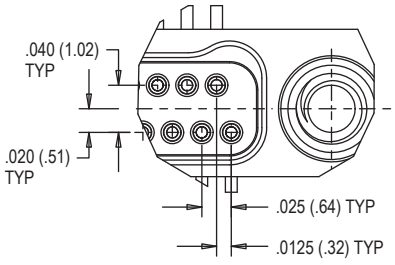
How to Order						
Sample Part Number		**891-017**	**-25P**	**A2**	**-BSS**	**J**
Series	**891-017** Plug, Vertical Surface Mount Connector **891-018** Receptacle, Vertical Surface Mount Connector					
Insert Arrangement/Contact Type	Pins (891-017 Plugs): **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Sockets (891-018 Receptacles): **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**					
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **A2** - Aluminum Shell, Electroless Nickel Plating **T** - Titanium Shell, Unplated **S** - Stainless Steel Shell, Passivated					
Termination Type	**BSS** - Board Surface Mount Straight					
Hardware	**J** - Hex Head Jackscrew					

Plug (Pin) Connector	Receptacle (Socket) Connector
	
J - Jackscrew	

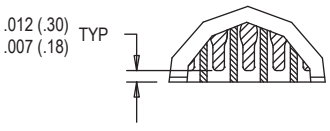
NOTES

1. Material and Finish
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: passivated stainless steel
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 and /4

DETAIL A



DETAIL B



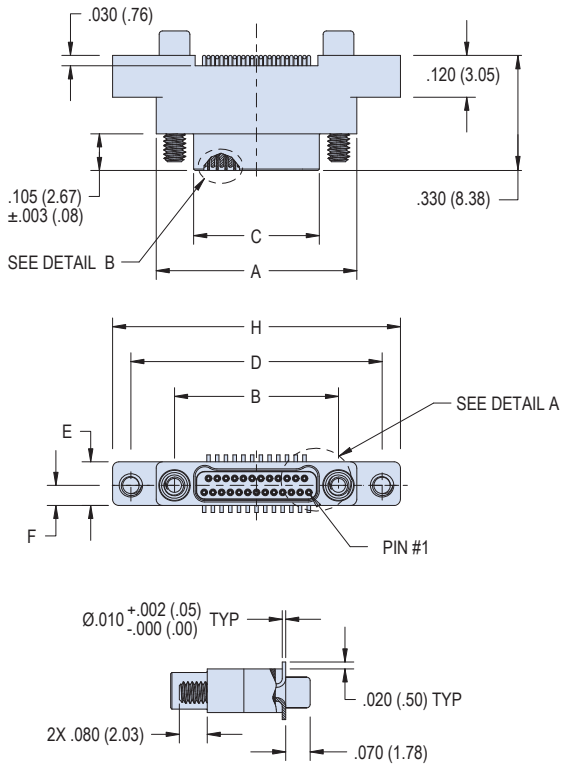
D

Dual Row Connectors

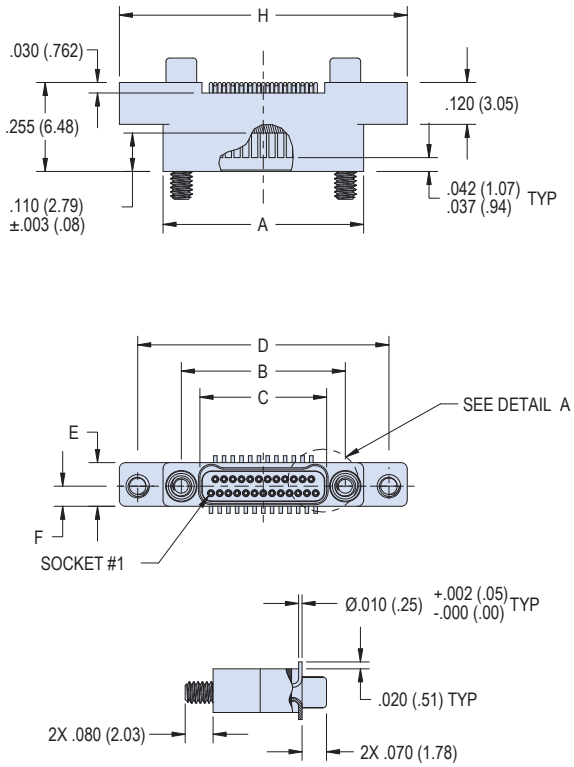
Vertical Surface Mount PCB Connector with Jackscrews
Dimensions

Dimensions

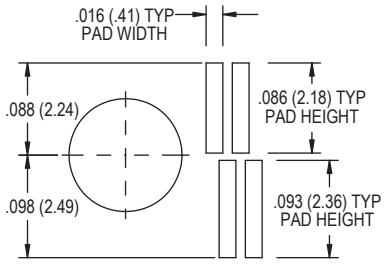
891-017 Plug (Pin) Connectors



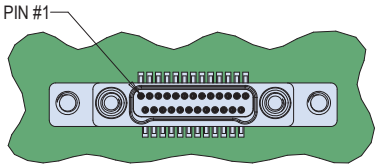
891-018 Receptacle (Socket) Connectors

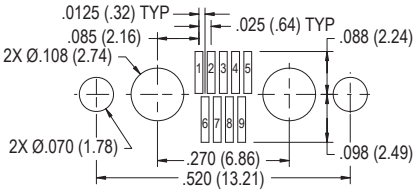


Layout	A		B BSC.		C BSC.		D		E		F BSC.			H	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.	In. ± .005	mm. ± 0.13	In. ± .005	mm± 0.13	In.	mm	G Thread	In.	mm
9P	.375	9.52	.270	6.86	.160	4.06	.520	13.21	.125	3.18	.0575	1.46	#0-80 UNF	.625	15.88
9S	.375	9.52	.270	6.86	.163	4.14	.520	13.21	.125	3.18	.0575	1.46	#0-80 UNF	.625	15.88
15P	.450	11.43	.345	8.76	.235	5.97	.595	15.11	.125	3.18	.0575	1.46	#0-80 UNF	.700	17.78
15S	.450	11.43	.345	8.76	.238	6.04	.595	15.11	.125	3.18	.0575	1.46	#0-80 UNF	.700	17.78
21P	.525	13.33	.420	10.67	.310	7.87	6.70	170.18	.125	3.18	.0575	1.46	#0-80 UNF	.775	19.69
21S	.525	13.33	.420	10.67	.313	7.95	.670	17.02	.125	3.18	.0575	1.46	#0-80 UNF	.775	19.69
25P	.575	14.60	.470	11.94	.360	9.14	.720	18.29	.125	3.18	.0575	1.46	#0-80 UNF	.825	20.96
25S	.575	14.60	.470	11.94	.363	9.22	.720	18.29	.125	3.18	.0575	1.46	#0-80 UNF	.825	20.96
31P	.650	16.51	.545	13.84	.435	11.05	.795	20.19	.125	3.18	.0575	1.46	#0-80 UNF	.900	22.86
31S	.650	16.51	.545	13.84	.438	11.12	.795	20.19	.125	3.18	.0575	1.46	#0-80 UNF	.900	22.86
37P	.725	18.41	.620	15.75	.510	12.95	.870	22.10	.125	3.18	.0575	1.46	#0-80 UNF	.975	24.77
37S	.725	18.41	.620	15.75	.513	13.03	.870	22.10	.125	3.18	.0575	1.46	#0-80 UNF	.975	24.77
41P	.775	19.69	.670	17.02	.560	14.23	.920	23.37	.125	3.18	.0575	1.46	#0-80 UNF	1.025	26.04
41S	.775	19.69	.670	17.02	.563	14.30	.920	23.37	.125	3.18	.0575	1.46	#0-80 UNF	1.025	26.04
51P	.900	22.86	.795	20.19	.685	17.40	1.045	26.54	.125	3.18	.0575	1.46	#0-80 UNF	1.150	29.21
51S	.900	22.86	.795	20.19	.688	17.47	1.045	26.54	.125	3.18	.0575	1.46	#0-80 UNF	1.150	29.21
65P	1.075	27.30	.970	24.64	.860	21.84	1.220	30.99	.125	3.18	.0575	1.46	#0-80 UNF	1.325	33.66
65S	1.075	27.30	.970	24.64	.863	21.92	1.220	30.99	.125	3.18	.0575	1.46	#0-80 UNF	1.325	33.66
69P	1.125	28.57	1.020	25.91	.910	23.11	1.270	32.26	.125	3.18	.0575	1.46	#0-80 UNF	1.375	34.93
69S	1.125	28.57	1.020	25.91	.913	23.19	1.270	32.26	.125	3.18	.0575	1.46	#0-80 UNF	1.375	34.93
85P	1.377	34.97	1.246	31.65	1.110	28.19	1.546	39.27	.150	3.81	.0700	1.78	#2-56 UNC	1.679	42.65
85S	1.377	34.97	1.246	31.65	1.113	28.27	1.546	39.27	.150	3.81	.0700	1.78	#2-56 UNC	1.679	42.65

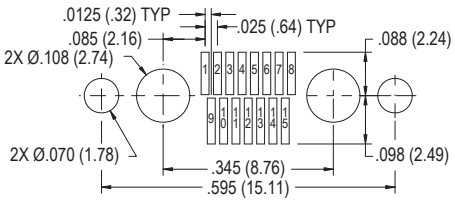


PAD FOOTPRINT DETAIL
LAYOUTS 9-69

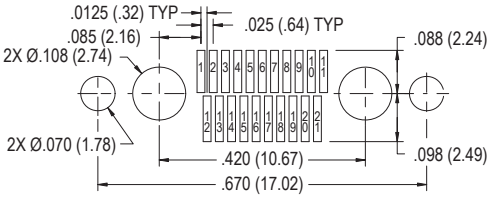




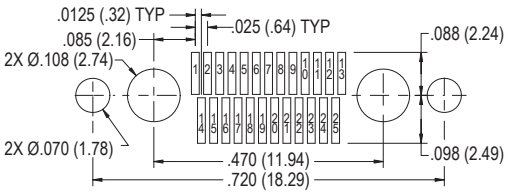
9 Contacts



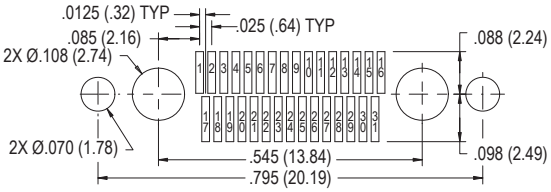
15 Contacts



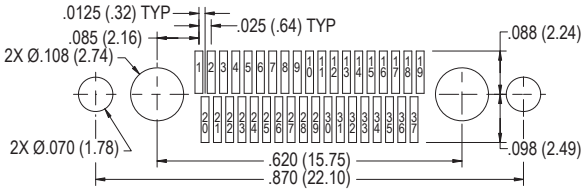
21 Contacts



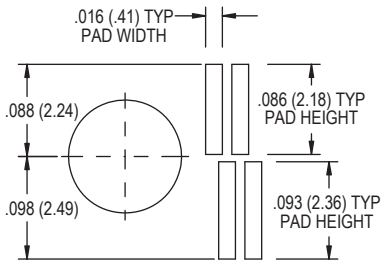
25 Contacts



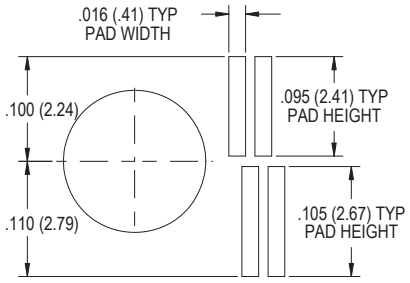
31 Contacts



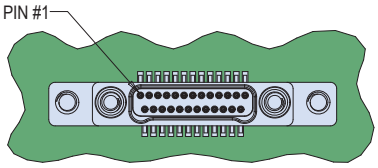
37 Contacts

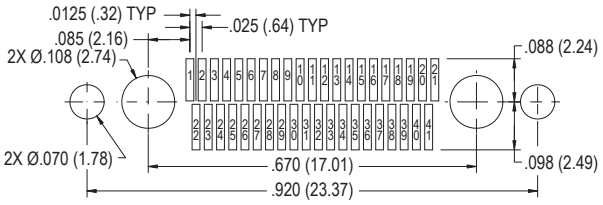


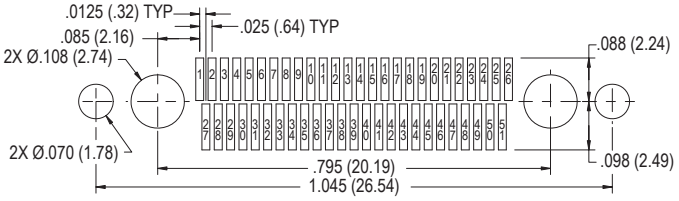
PAD FOOTPRINT DETAIL
LAYOUTS 9-69



PAD FOOTPRINT DETAIL
LAYOUT 85 ONLY

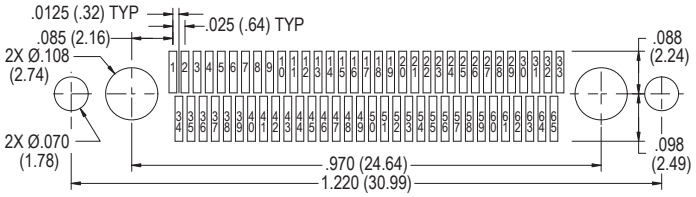




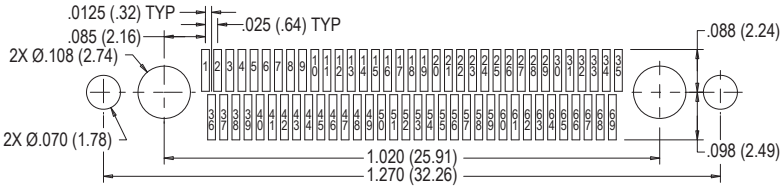


41 Contacts

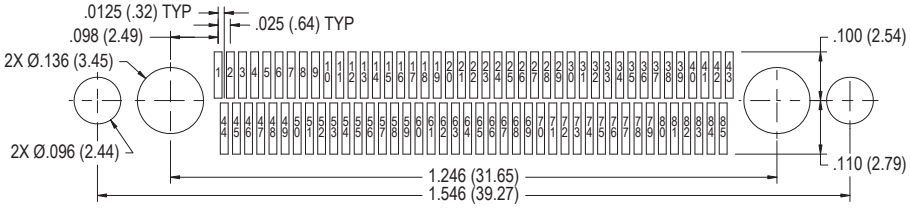
51 Contacts



65 Contacts

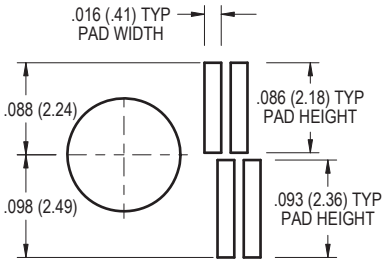


69 Contacts

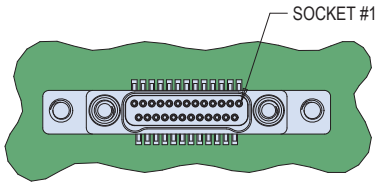


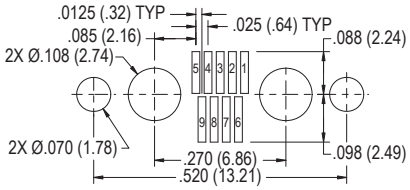
85 Contacts **(See pad detail for 85 contact layout above)**

D

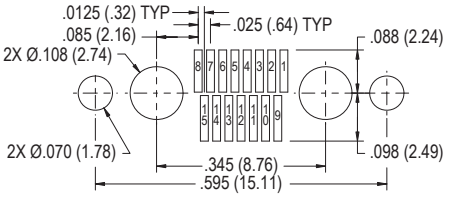


PAD FOOTPRINT DETAIL
LAYOUTS 9-69

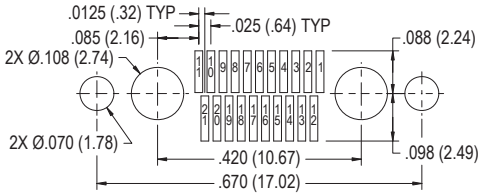




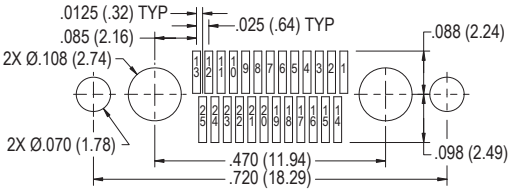
9 Contacts



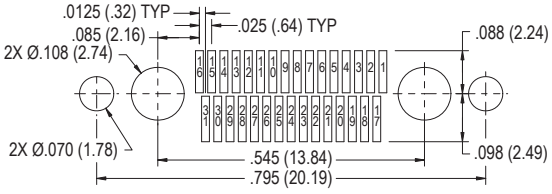
15 Contacts



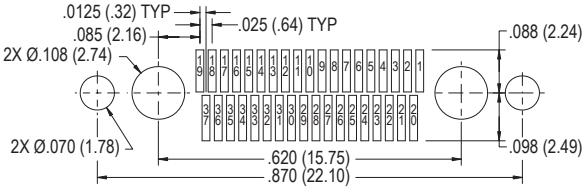
21 Contacts



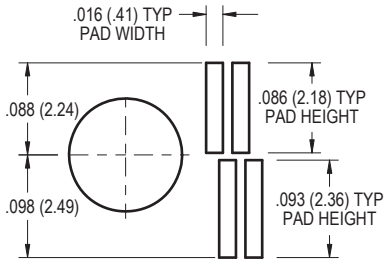
25 Contacts



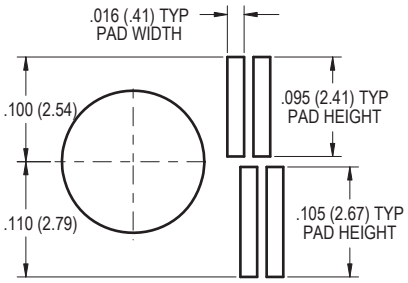
31 Contacts



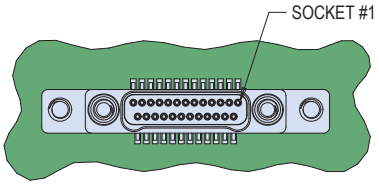
37 Contacts

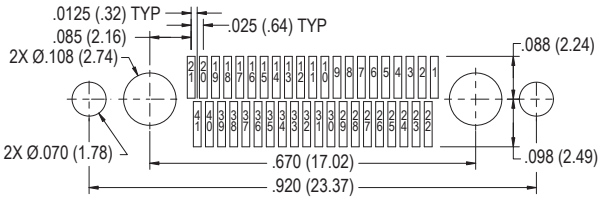


PAD FOOTPRINT DETAIL
LAYOUTS 9-69

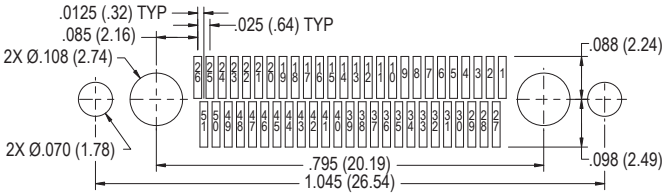


PAD FOOTPRINT DETAIL
LAYOUT 85 ONLY

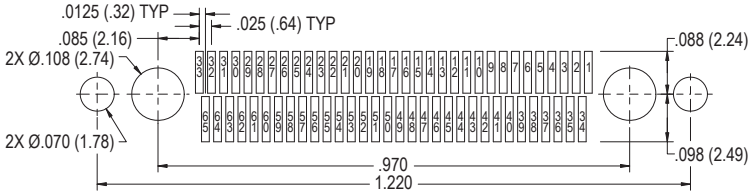




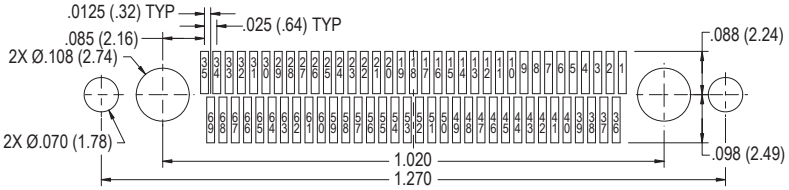
41 Contacts



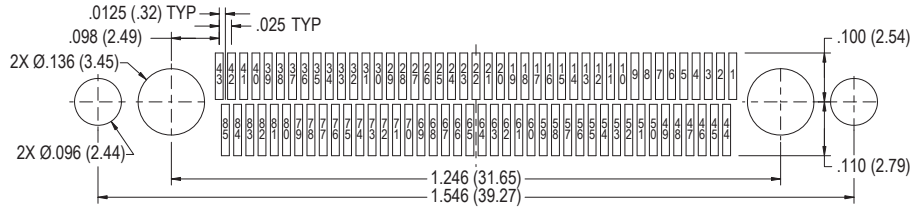
51 Contacts



65 Contacts



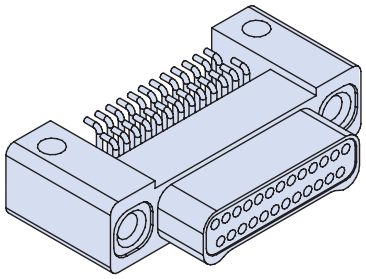
69 Contacts



85 Contacts **(See pad footprint detail for 85 contact layout above)**

Dual Row Connectors

Right Angle Surface Mount PCB Connector
How to Order

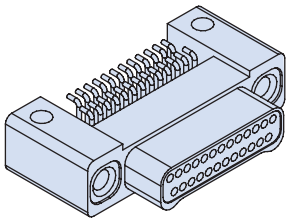
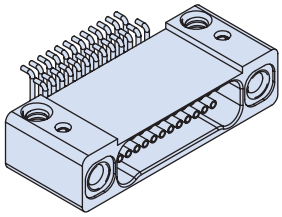


Right Angle Surface Mount Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications.

Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. Complies to the requirements of MIL-DTL-32139.

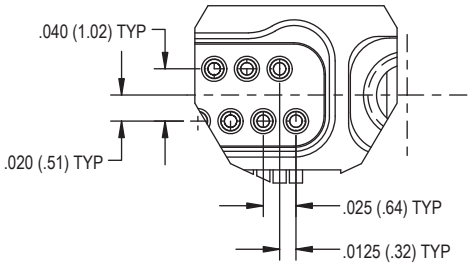
How to Order						
Sample Part Number		**891-012**	**-25P**	**A2**	**-BRS**	**T**
Series	**891-012** Plug, Right Angle Surface Mount Connector **891-013** Receptacle, Right Angle Surface Mount Connector					
Insert Arrangement/Contact Type	Pins (891-012 Plugs) **9P, 15P, 21P, 25P, 31P, 37P, 41P, 51P, 65P, 69P, 85P** Socket (891-013 Receptacles) **9S, 15S, 21S, 25S, 31S, 37S, 41S, 51S, 65S, 69S, 85S**					
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **A2** - Aluminum Shell, Electroless Nickel Plating **T** - Titanium Shell, Unplated **S** - Stainless Steel Shell, Passivated					
Termination Type	**BRS** - Board Right Angle Surface Mount					
Hardware	**T** - Female Thread					

Plug (Pin) Connector	Receptacle (Socket) Connector
	
T - Female Thread	T - Female Thread

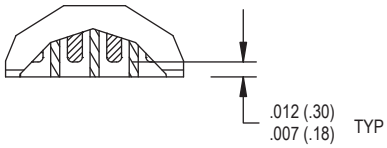
NOTES

1. Material and Finish:
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: passivated stainless steel
2. Inspect and test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 and /4

DETAIL A



DETAIL B

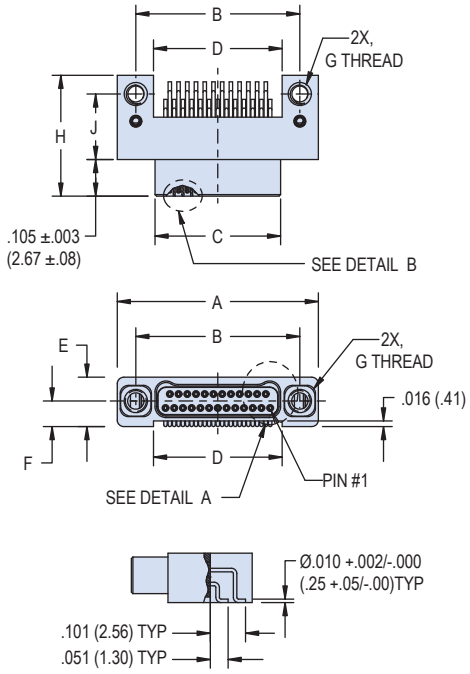


Dual Row Connectors

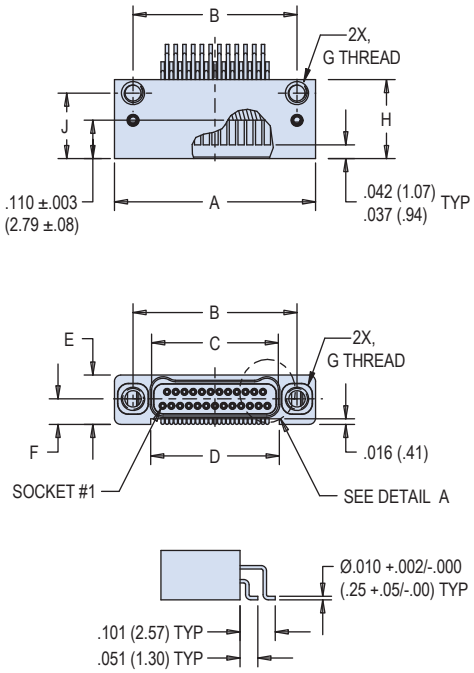
Right Angle Surface Mount PCB Connector Dimensions

Dimensions

891-012 Plug (Pin) Connectors

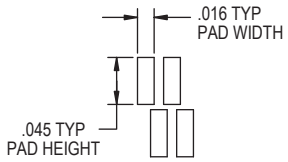


891-013 Receptacle (Socket) Connectors

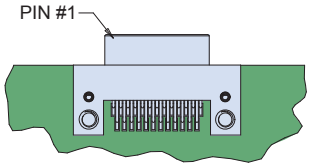


Layout	A		B BSC.		C BSC.		D		E		F BSC.		G Thread	H		J	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm	In.	mm		In.	mm	In.	mm
9P	.375	9.52	.270	6.86	.160	4.06	.170	4.32	.140	3.56	.0725	1.84	#0-80 UNF	.345	8.76	.187	4.75
9S	.375	9.52	.270	6.86	.163	4.14	.170	4.32	.140	3.56	.0725	1.84	#0-80 UNF	.225	5.71	.187	4.75
15P	.450	11.43	.345	8.76	.235	5.97	.245	6.22	.140	3.56	.0725	1.84	#0-80 UNF	.345	8.76	.187	4.75
15S	.450	11.43	.345	8.76	.238	6.04	.245	6.22	.140	3.56	.0725	1.84	#0-80 UNF	.225	5.71	.187	4.75
21P	.525	13.33	.420	10.67	.310	7.87	.320	8.13	.140	3.56	.0725	1.84	#0-80 UNF	.345	8.76	.187	4.75
21S	.525	13.33	.420	10.67	.313	7.95	.320	8.13	.140	3.56	.0725	1.84	#0-80 UNF	.225	5.71	.187	4.75
25P	.575	14.60	.470	11.94	.360	9.14	.370	9.40	.140	3.56	.0725	1.84	#0-80 UNF	.345	8.76	.187	4.75
25S	.575	14.60	.470	11.94	.363	9.22	.370	9.40	.140	3.56	.0725	1.84	#0-80 UNF	.225	5.71	.187	4.75
31P	.650	16.51	.545	13.84	.435	11.05	.445	11.30	.140	3.56	.0725	1.84	#0-80 UNF	.345	8.76	.187	4.75
31S	.650	16.51	.545	13.84	.438	11.12	.445	11.30	.140	3.56	.0725	1.84	#0-80 UNF	.225	5.71	.187	4.75
37P	.725	18.41	.620	15.75	.510	12.95	.520	13.21	.140	3.56	.0725	1.84	#0-80 UNF	.345	8.76	.187	4.75
37S	.725	18.41	.620	15.75	.513	13.03	.520	13.21	.140	3.56	.0725	1.84	#0-80 UNF	.225	5.71	.187	4.75
41P	.775	19.69	.670	17.02	.560	14.23	.570	14.48	.140	3.56	.0725	1.84	#0-80 UNF	.345	8.76	.187	4.75
41S	.775	19.69	.670	17.02	.563	14.30	.570	14.48	.140	3.56	.0725	1.84	#0-80 UNF	.225	5.72	.187	4.75
51P	.900	22.86	.795	20.19	.685	17.40	.695	17.65	.140	3.56	.0725	1.84	#0-80 UNF	.345	8.76	.187	4.75
51S	.900	22.86	.795	20.19	.688	17.47	.695	17.65	.140	3.56	.0725	1.84	#0-80 UNF	.225	5.71	.187	4.75
65P	1.075	27.30	.970	24.64	.860	21.84	.870	22.10	.140	3.56	.0725	1.84	#0-80 UNF	.345	8.76	.187	4.75
65S	1.075	27.30	.970	24.64	.863	21.92	.870	22.10	.140	3.56	.0725	1.84	#0-80 UNF	.225	5.71	.187	4.75
69P	1.125	28.57	1.020	25.91	.910	23.11	.920	23.37	.140	3.56	.0725	1.84	#0-80 UNF	.345	8.76	.187	4.75
69S	1.125	28.57	1.020	25.91	.913	23.19	.920	23.37	.140	3.56	.0725	1.84	#0-80 UNF	.225	5.71	.187	4.75
85P	1.377	34.97	1.246	31.65	1.110	28.19	1.120	28.45	.165	4.19	.085	2.16	#2-56 UNC	.375	9.53	.205	5.34
85S	1.377	34.97	1.246	31.65	1.113	28.27	1.120	28.45	.165	4.19	.085	2.16	#2-56 UNC	.270	6.86	.210	5.21

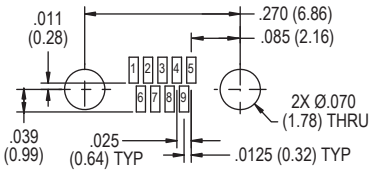
U.S. CAGE code 06324/0CA77 • Dimensions in Inches (millimeters) are subject to change without notice.



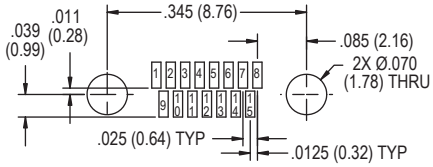
PAD FOOTPRINT DETAIL



Pin #1 Position



9 Contacts



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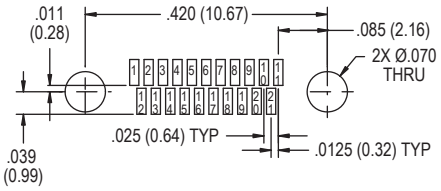

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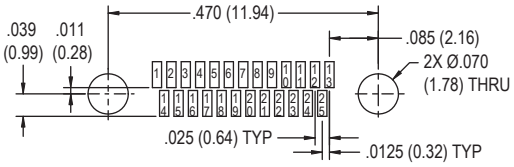
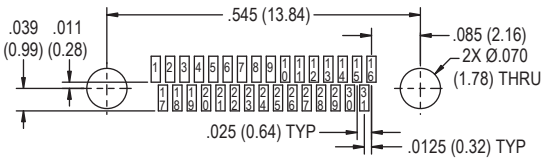
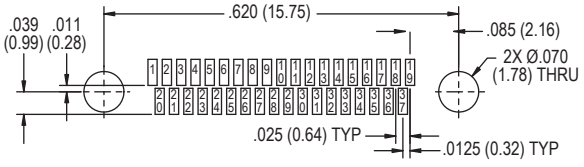


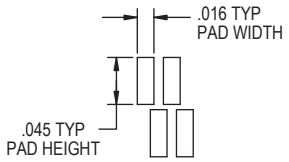
25 Contacts



31 Contacts



37 Contacts



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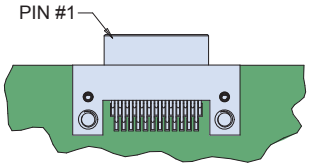

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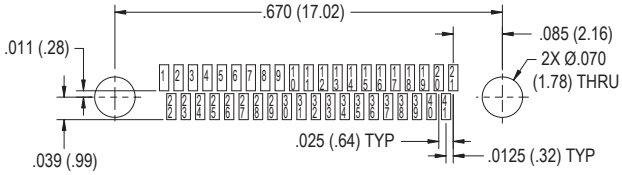
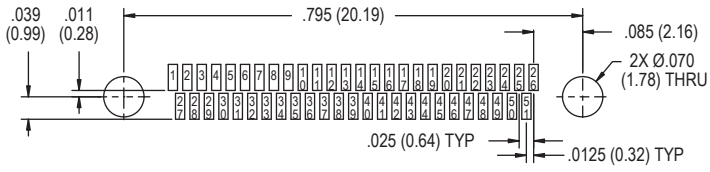
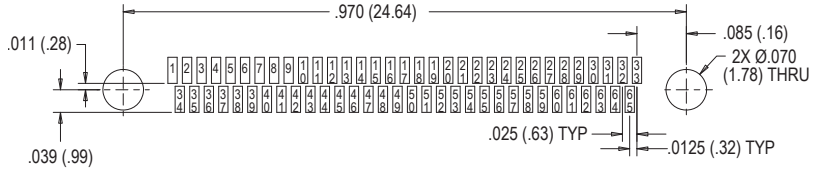




41 Contacts

51 Contacts



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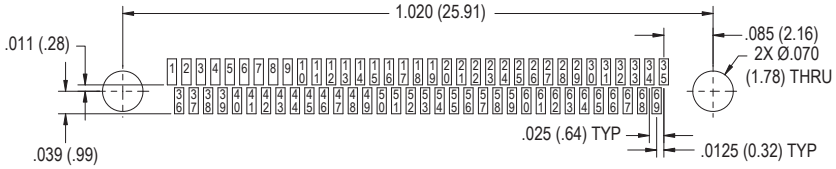
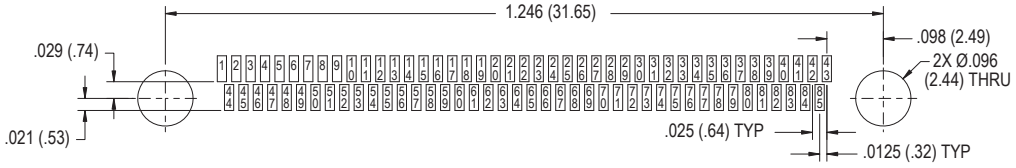


69 Contacts



85 Contacts

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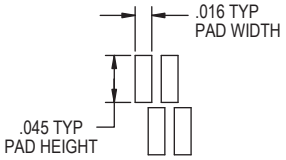

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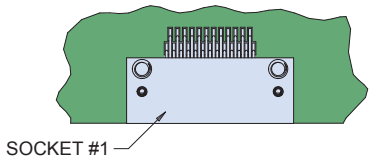
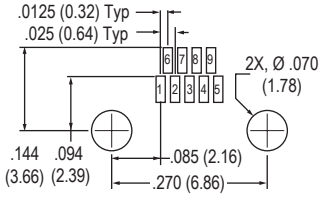
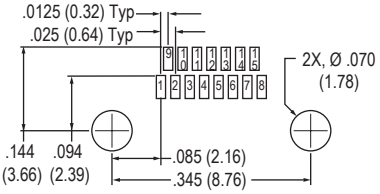


CONNECTOR ORIENTATION



9 Contacts



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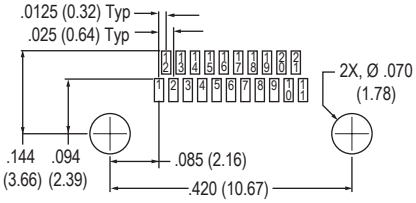
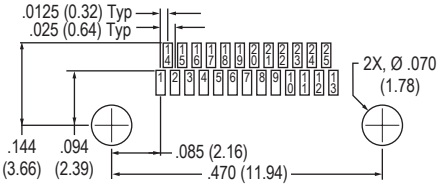


21 Contacts



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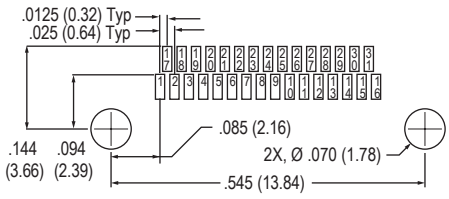
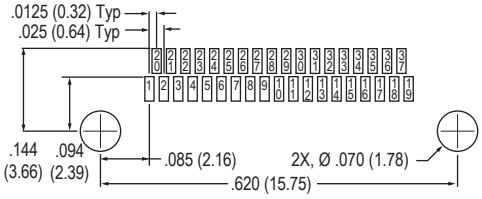
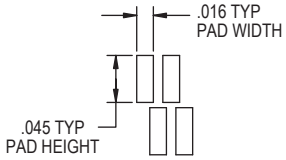


31 Contacts



37 Contacts



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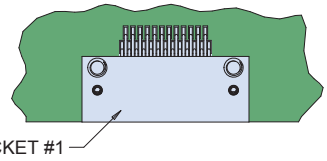
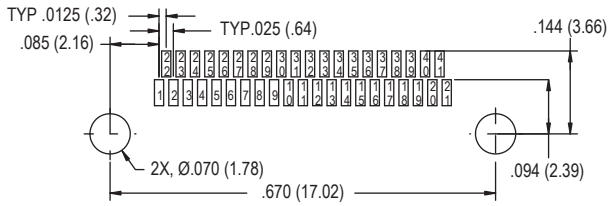
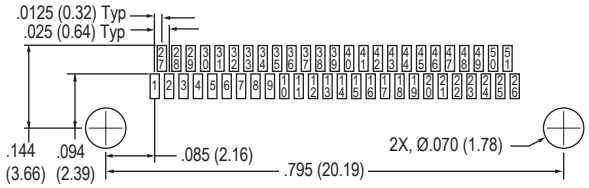


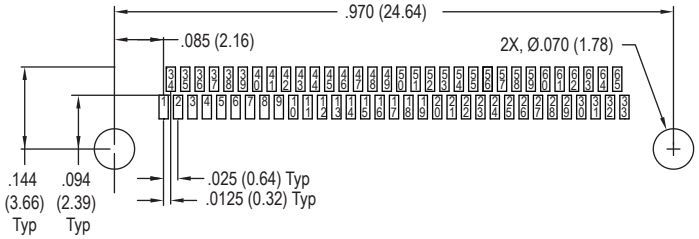
CONNECTOR ORIENTATION





41 Contacts

51 Contacts



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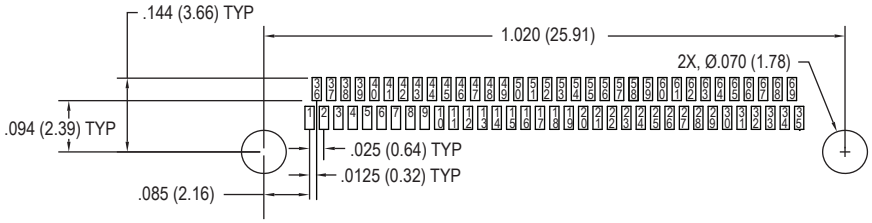
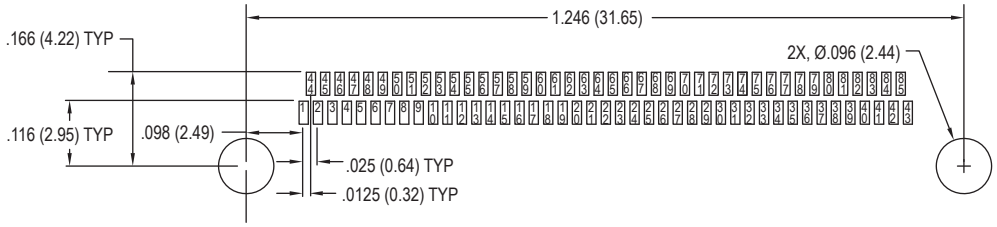


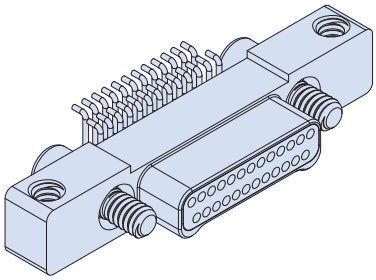
69 Contacts



85 Contacts

Dual Row Connectors

Right Angle Surface Mount PCB Connector with Jackscrews - How to Order

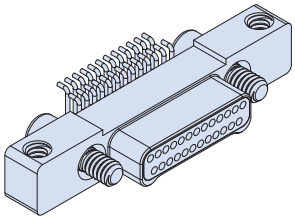
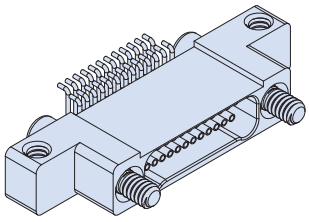


Right Angle Surface Mount PCB Nano Connectors feature gold alloy TwistPin contacts. These nanomimiature connectors offer premium performance and reliability for demanding applications.

Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. Complies to the requirements of MIL-DTL-32139.

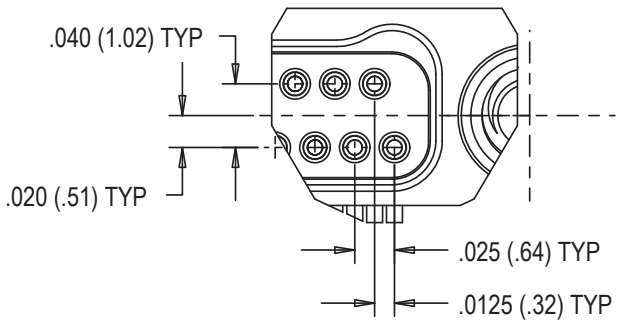
How to Order					
Sample Part Number	**891-019**	**-25P**	**A2**	**-BRS**	**J**
Series	**891-019** Plug, Right Angle Surface Mount Connector with Jackscrews **891-020** Receptacle, Right Angle Surface Mount Connector with Jackscrews				
Insert Arrangement/Contact Type	Pins (891-019 Plugs) - **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Sockets (891-020 Receptacles) - **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**				
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **A2** - Aluminum Shell, Electroless Nickel Plating	**T** - Titanium Shell, Unplated **S** - Stainless Steel Shell, Passivated			
Termination Type	**BRS** - Board Right Angle Surface Mount				
Hardware	**J** - Hex Head Jackscrew				

Plug (Pin) Connector	Receptacle (Socket) Connector
	
J - Jackscrew	J - Jackscrew

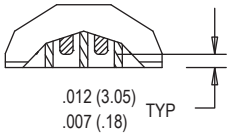
NOTES

1. Material and Finish
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Pre-tinned PC tails: coated with Sn63Pb37 or Sn60Pb40 tin-lead
   - Hardware: passivated stainless steel
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 and /4

DETAIL A



DETAIL B

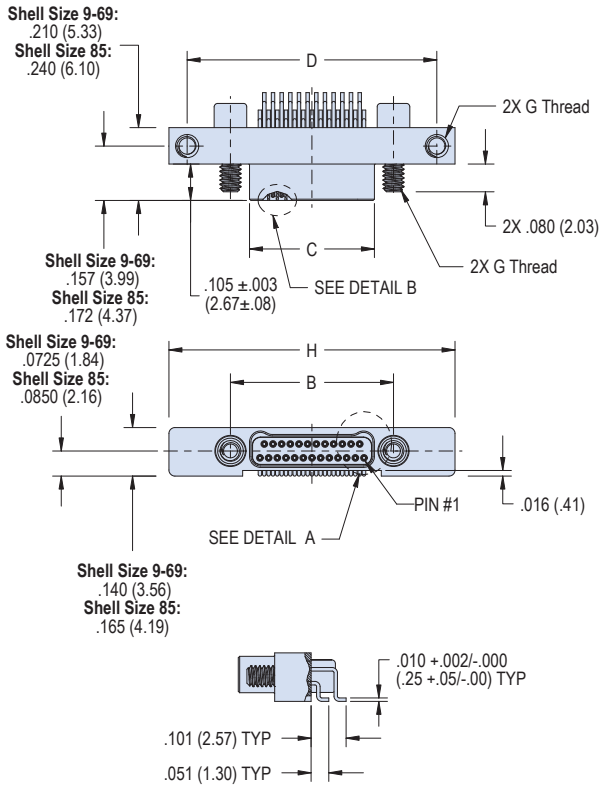


Dual Row Connectors

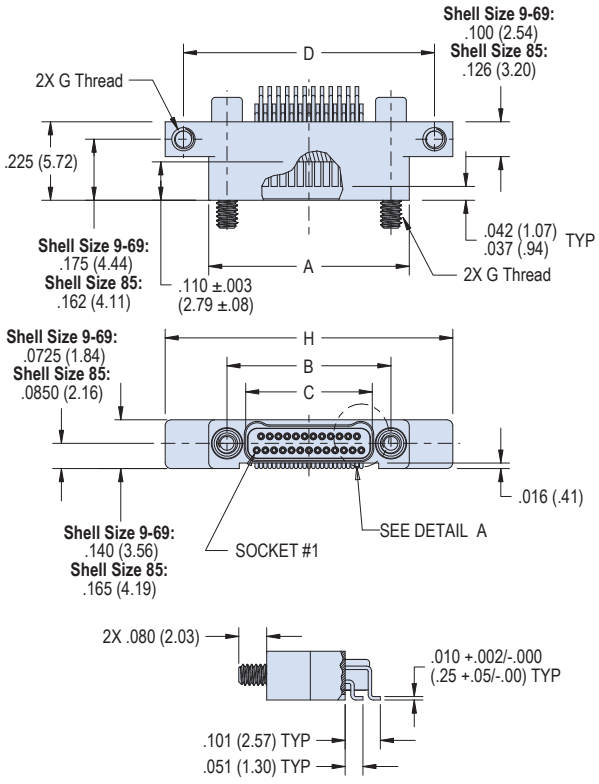
Right Angle Surface Mount PCB Connector with Jackscrews - Dimensions

Dimensions

891-019 Plug (Pin) Connectors

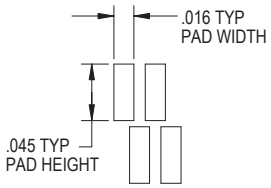


891-020 Receptacle (Socket) Connectors



Layout	A		B BSC.		C BSC.		D		G Thread	H	
	In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	In.	mm
9P	--	--	.270	6.86	.160	4.06	.520	13.21	#0-80 UNF	.625	15.88
9S	.375	9.53	.270	6.86	.163	4.14	.520	13.21	#0-80 UNF	.625	15.88
15P	--	--	.345	8.76	.235	5.97	.595	15.11	#0-80 UNF	.700	17.78
15S	.450	11.43	.345	8.76	.238	6.05	.595	15.11	#0-80 UNF	.700	17.78
21P	--	--	.420	10.67	.310	7.87	.670	17.02	#0-80 UNF	.775	19.69
21S	.525	13.34	.420	10.67	.313	7.95	.670	17.02	#0-80 UNF	.775	19.69
25P	--	--	.470	11.94	.360	9.14	.720	18.29	#0-80 UNF	.825	20.96
25S	.575	14.61	.470	11.94	.363	9.22	.720	18.29	#0-80 UNF	.825	20.96
31P	--	--	.545	13.84	.435	11.05	.795	20.19	#0-80 UNF	.900	22.86
31S	.650	16.51	.545	13.84	.438	11.13	.795	20.19	#0-80 UNF	.900	22.86
37P	--	--	.620	15.75	.510	12.95	.870	22.10	#0-80 UNF	.975	24.77
37S	.725	18.42	.620	15.75	.513	13.03	.870	22.10	#0-80 UNF	.975	24.77
41P	--	--	.670	17.02	.560	14.22	.920	23.37	#0-80 UNF	1.025	26.04
41S	.775	19.69	.670	17.02	.563	14.30	.920	23.37	#0-80 UNF	1.025	26.04
51P	--	--	.795	20.19	.685	17.40	1.045	26.54	#0-80 UNF	1.150	29.21
51S	.900	22.86	.795	20.19	.688	17.48	1.045	26.54	#0-80 UNF	1.150	29.21
65P	--	--	.970	24.64	.860	21.84	1.220	30.99	#0-80 UNF	1.325	33.66
65S	1.075	27.31	.970	24.64	.863	21.92	1.220	30.99	#0-80 UNF	1.325	33.66
69P	--	--	1.020	25.91	.910	23.11	1.270	32.26	#0-80 UNF	1.375	34.93
69S	1.125	28.58	1.020	25.91	.913	23.19	1.270	32.26	#0-80 UNF	1.375	34.93
85P	--	--	1.246	31.65	1.110	28.19	1.546	39.27	#2-56 UNC	1.679	42.65
85S	1.377	34.98	1.246	31.65	1.113	28.27	1.546	39.27	#2-56 UNC	1.679	42.65

U.S. CAGE code 06324/0CA77 • Dimensions in Inches (millimeters) are subject to change without notice.



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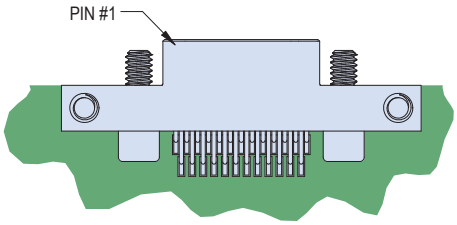
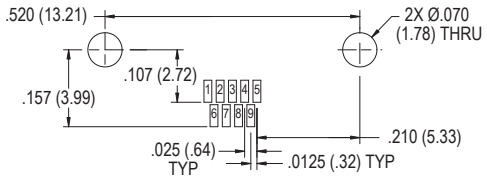
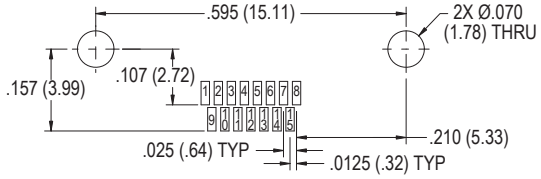
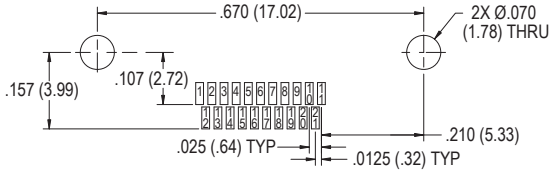




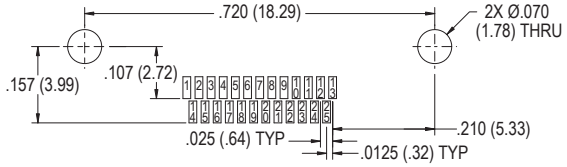
9 Contacts



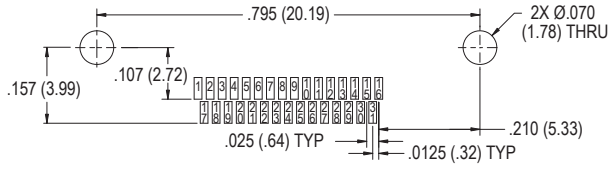
15 Contacts



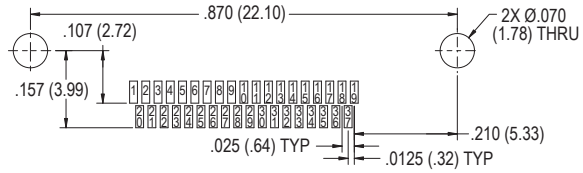
21 Contacts



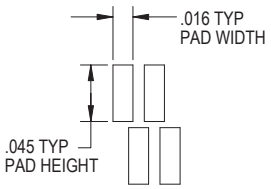
25 Contacts



31 Contacts



37 Contacts



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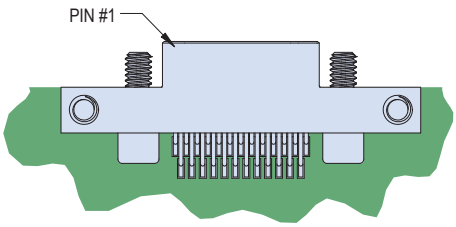
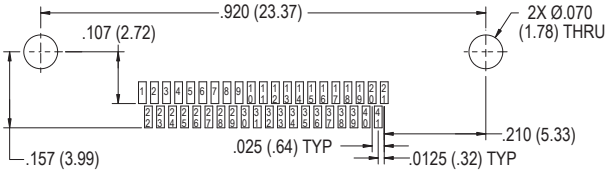
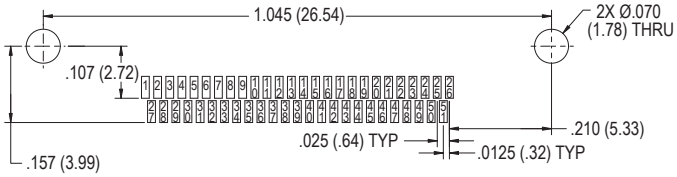
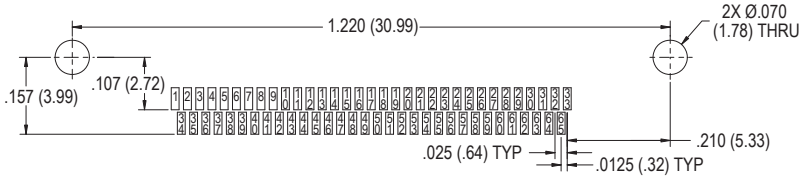




41 Contacts



51 Contacts



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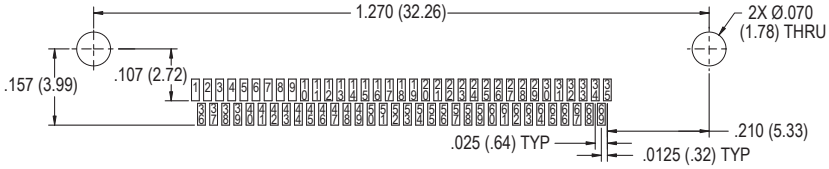

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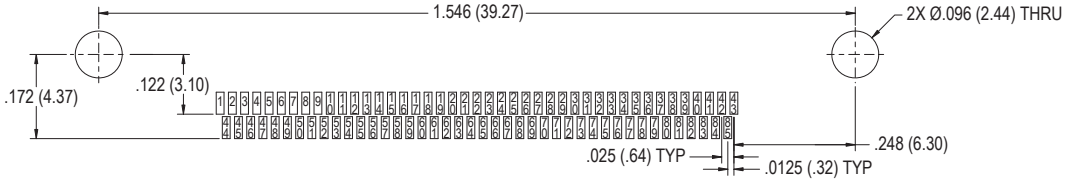

85 Contacts

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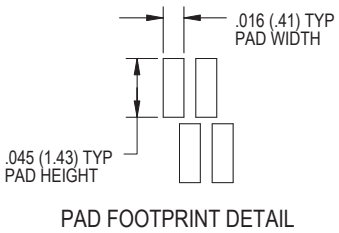

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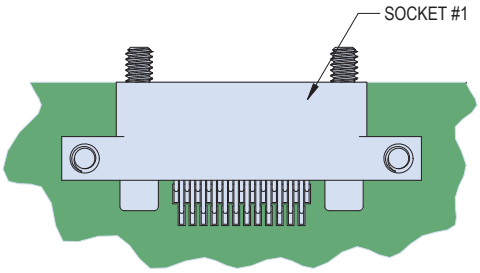

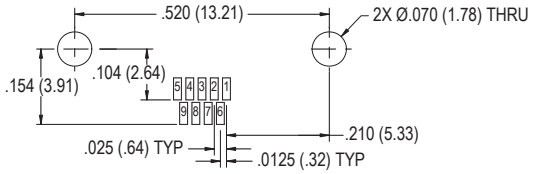

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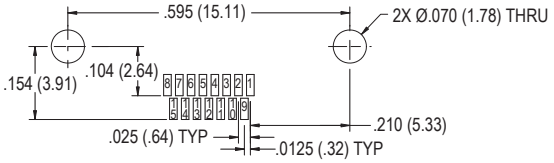

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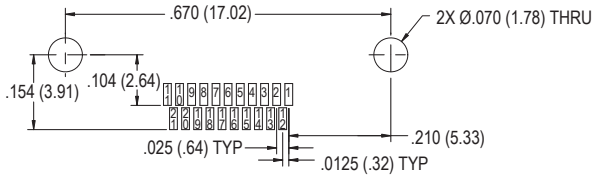

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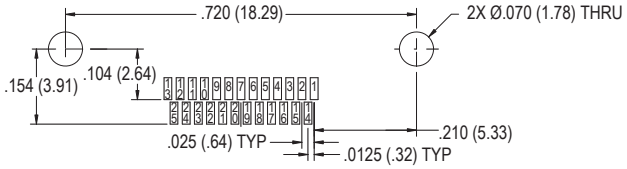

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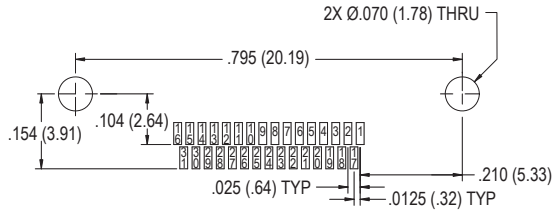

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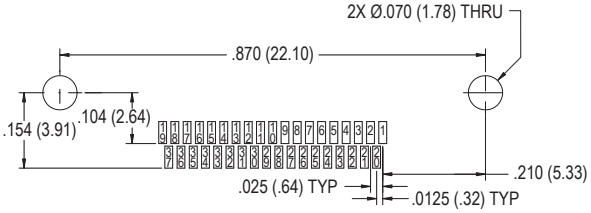
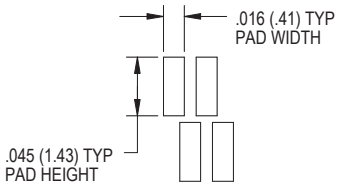


37 Contacts



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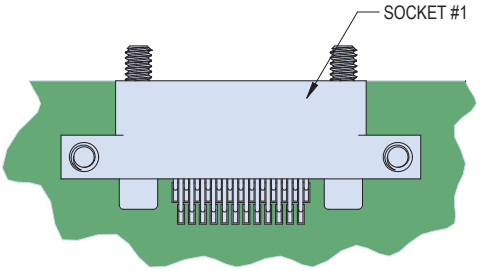
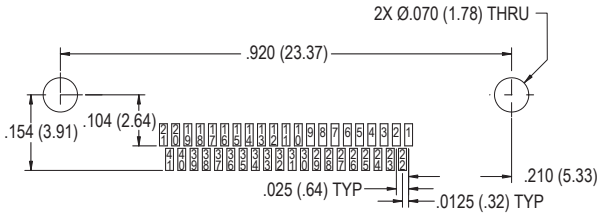
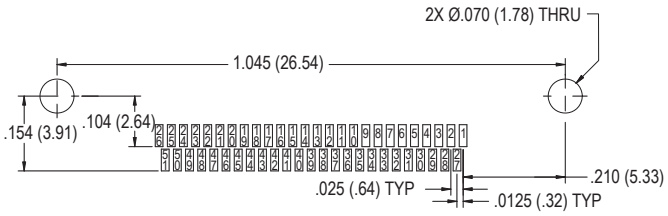




41 Contacts



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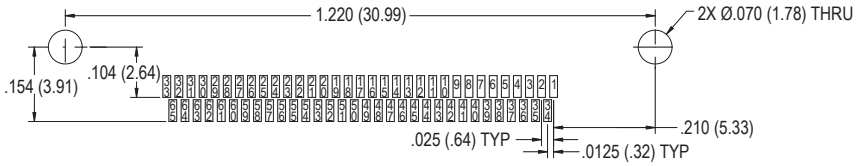

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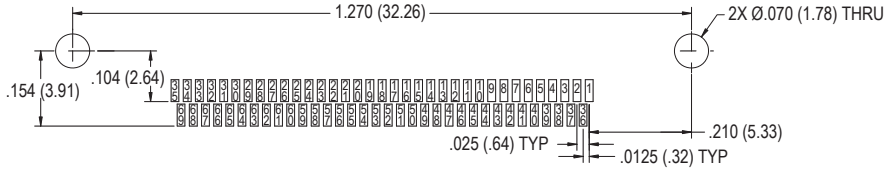
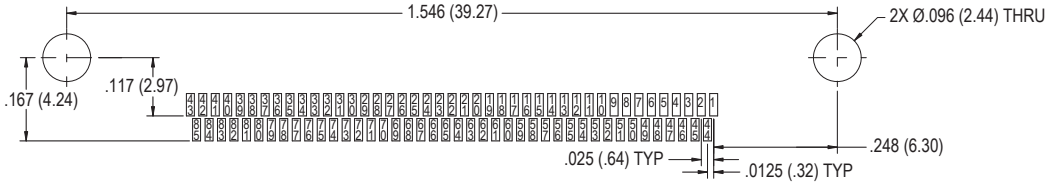


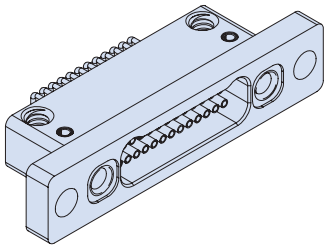
69 Contacts



85 Contacts

Dual Row Connectors

Front Panel Mount, Right Angle Surface Mount PCB Receptacle - How to Order



Front Panel Mount PCB Surface Mount Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with female threads for board level applications.

Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

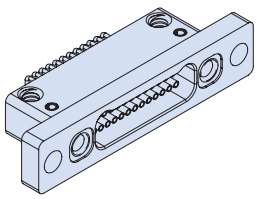
Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. MIL-DTL-32139 type connectors are intermateable with any corresponding Glenair Series 891 Dual row metal shell nanominiature connector.

How to Order

Sample Part Number	891-052	-25S	A2	-BRS	T	C
Series	**891-052** Receptacle, Front Panel Mount Right Angle PCB Surface Mount					
Insert Arrangement/Contact Type	Sockets (891-052 Receptacle): **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**					
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating; **A2** - Aluminum Shell, Eletroless Nickel Plating; **T** - Titanium Shell, Unplated; **S** - Stainless Steel Shell, Passivated					
Termination Type	**BRS** - Board Right Angle Surface Mount					
Hardware	**T** - Female Thread (#0-80 for size 9-69, #2-56 for size 85)					
Mounting Hole Option	**C** - Clearance Hole; **T** - Female Thread					

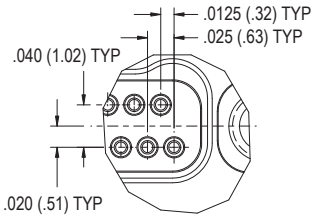
D

Receptacle (Socket)



T - Female Thread

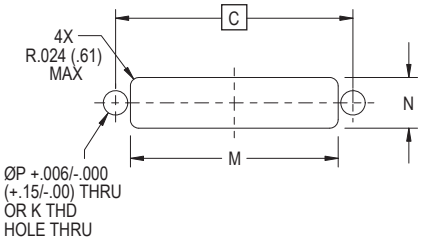
DETAIL A



Panel Mount Connector Mounting Matrix

Connector Holes	Panel Holes	Mounting Location
Tapped	Clearance	Rear Panel Mount
Clearance	Tapped	Front Panel Mount
Clearance	Clearance	Front or Rear Panel Mount with screw and nut

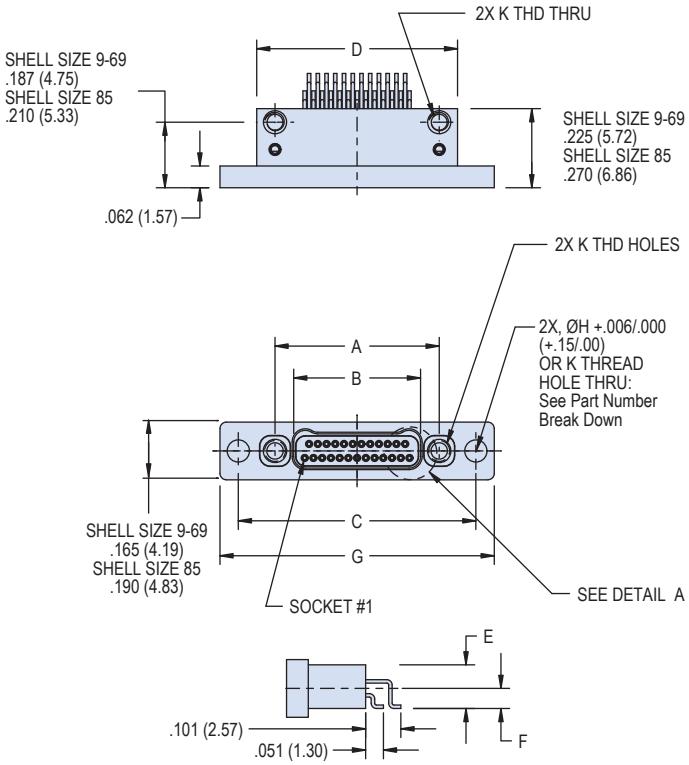
PANEL CUT-OUT DIMENSIONS



Shell Size	C	K	M	N	P
9	.480 (12.19)	#0-80 UNF-2B	.395 (10.03)	.145 (3.68)	.070 (1.78)
15	.555 (14.10)	#0-80 UNF-2B	.470 (11.94)		
21	.630 (16.00)	#0-80 UNF-2B	.545 (13.84)		
25	.680 (17.27)	#0-80 UNF-2B	.595 (15.11)		
31	.755 (19.17)	#0-80 UNF-2B	.670 (17.02)		
37	.830 (21.08)	#0-80 UNF-2B	.745 (18.92)		
41	.880 (22.35)	#0-80 UNF-2B	.795 (20.19)		
51	1.005 (25.53)	#0-80 UNF-2B	.920 (23.37)		
65	1.180 (29.97)	#0-80 UNF-2B	1.095 (27.81)		
69	1.230 (31.24)	#0-80 UNF-2B	1.145 (29.08)		
85	1.527 (38.79)	#2-56 UNC-2B	1.397 (35.48)	.170 (4.31)	.096 (2.44)

Dimensions

891-052 Receptacle (Socket) Connectors

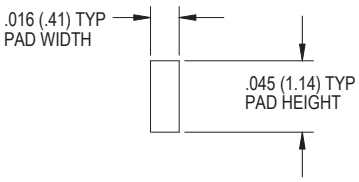


Layout	A BSC		B BSC.		C BSC.		D		E		F BSC		G		H		K
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	
9S	.270	6.86	.163	4.14	.480	12.19	.375	9.53	.125	3.18	.0575	1.46	.585	14.86	.0635	1.61	#0-80 UNF-2B
15S	.345	8.76	.238	6.05	.555	14.10	.450	11.43	.125	3.18	.0575	1.46	.660	16.76	.0635	1.61	#0-80 UNF-2B
21S	.420	10.67	.313	7.95	.630	16.00	.525	13.34	.125	3.18	.0575	1.46	.735	18.67	.0635	1.61	#0-80 UNF-2B
25S	.470	11.94	.363	9.22	.680	17.27	.575	14.61	.125	3.18	.0575	1.46	.785	19.94	.0635	1.61	#0-80 UNF-2B
31S	.545	13.84	.438	11.13	.755	19.18	.650	16.51	.125	3.18	.0575	1.46	.860	21.84	.0635	1.61	#0-80 UNF-2B
37S	.620	15.75	.513	13.03	.830	21.08	.725	18.42	.125	3.18	.0575	1.46	.935	23.75	.0635	1.61	#0-80 UNF-2B
41S	.670	17.02	.563	14.30	.880	22.35	.775	19.69	.125	3.18	.0575	1.46	.985	25.02	.0635	1.61	#0-80 UNF-2B
51S	.795	20.19	.688	17.48	1.005	25.53	.900	22.86	.125	3.18	.0575	1.46	1.110	28.19	.0635	1.61	#0-80 UNF-2B
65S	.970	24.64	.863	21.92	1.180	29.97	1.075	27.31	.125	3.18	.0575	1.46	1.285	32.64	.0635	1.61	#0-80 UNF-2B
69S	1.020	25.91	.913	23.19	1.230	31.24	1.125	28.58	.125	3.18	.0575	1.46	1.335	33.91	.0635	1.61	#0-80 UNF-2B
85S	1.246	31.65	1.113	28.27	1.527	38.79	1.377	34.98	.150	3.81	.0700	1.78	1.677	42.60	.0890	2.26	#2-56 UNC-2B

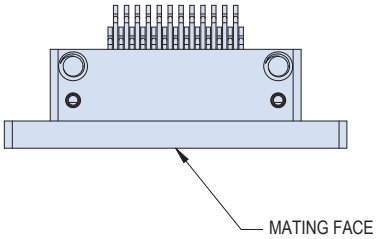
NOTES

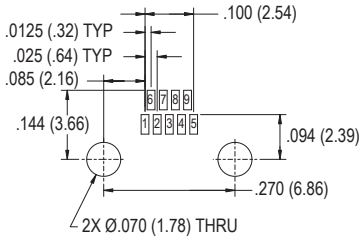
1. Inspect and Test IAW MIL-DTL-32139
2. Interface dimensions per MIL-DTL-32139/4
3. Panel cutout will allow for lobe up or down connector mounting.
4. Front or rear panel mounting dependent on selected mounting hole option
5. Recommended panel thickness: .100 (2.54) max

Front Panel Mount, Right Angle Surface Mount PCB Receptacle - PCB Pad Footprint

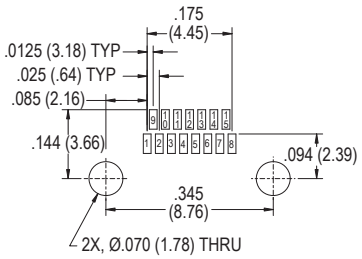


PAD FOOTPRINT DETAIL

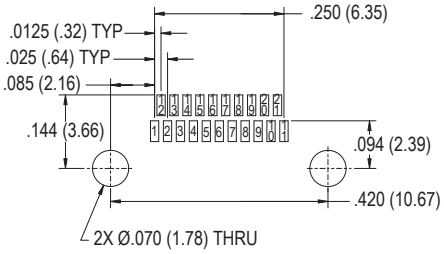




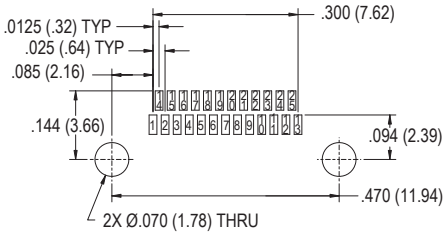
9 Contacts



15 Contacts



21 Contacts



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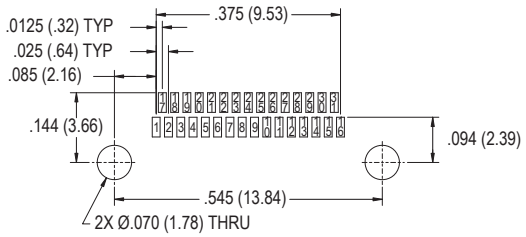
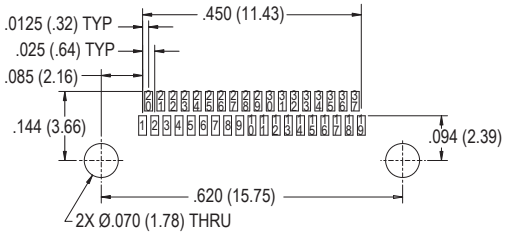
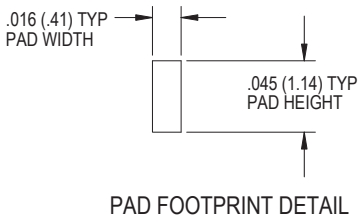


31 Contacts



37 Contacts



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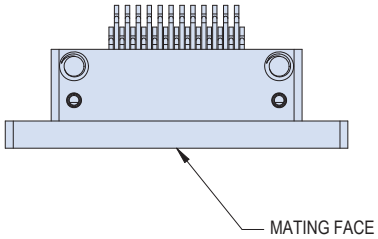
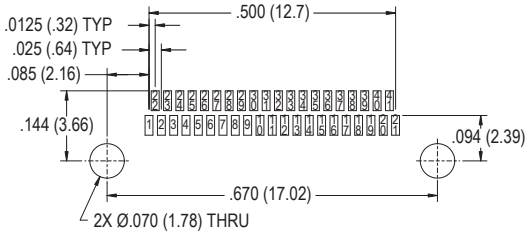
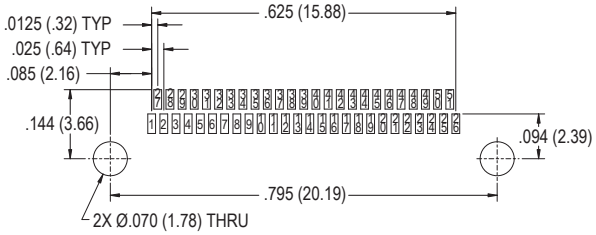
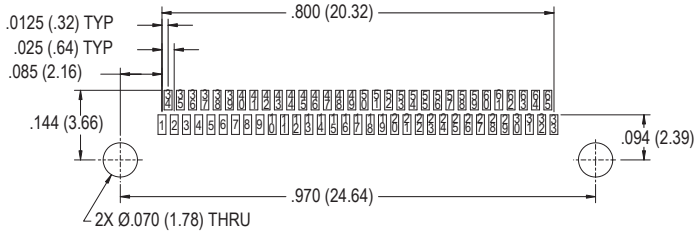




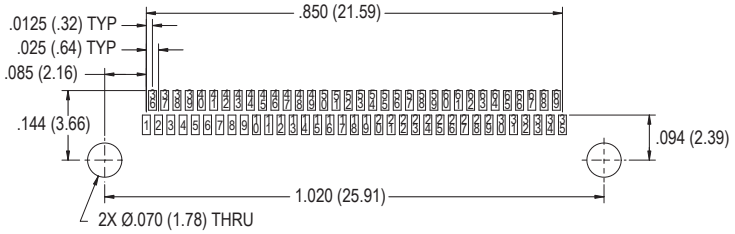
41 Contacts



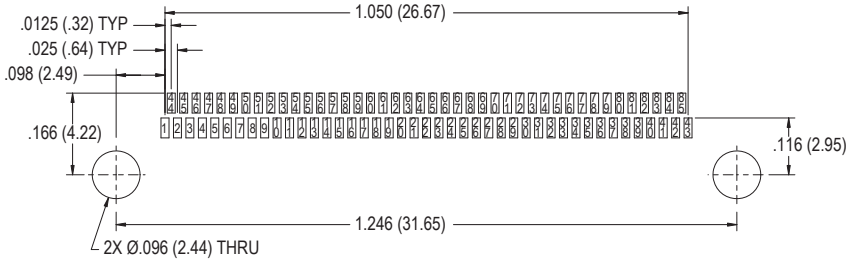
51 Contacts



65 Contacts



69 Contacts

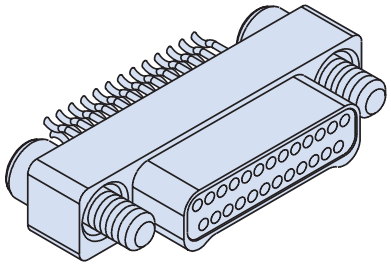


85 Contacts

D

Dual Row Connectors

Straddle Mount Connectors
How to Order

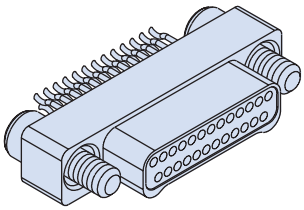
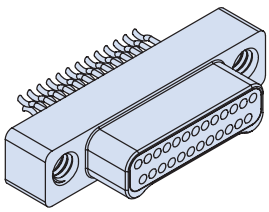
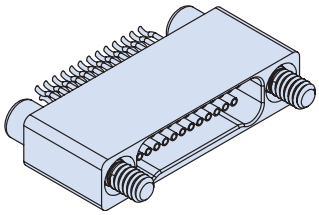
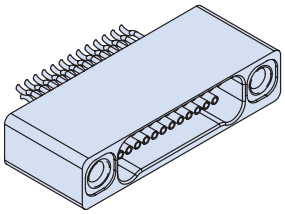


Straddle Mount PCB Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with female threads, or with jackscrews for use with flexible circuits.

Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. Complies to the requirements of MIL-DTL-32139. These connectors are intermateable with any MIL-DTL-32139 compliant connector or Glenair Series 891 Dual row metal shell nanominiature connector.

How to Order						
Sample Part Number		**891-014**	**-25P**	**A2**	**-STM**	**J**
Series	**891-014** = Plug **891-015** = Receptacle					
Insert Arrangement/Contact Type	Pins (891-014 Plug): **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Sockets (891-015 Receptacle): **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**					
Shell Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium Shell, Unplated **S** = Stainless Steel Shell, Passivated					
Termination Type	**STM** = Straddle Mount					
Hardware	**J** = Jackscrew **T** = Female Threads* *Female threads are available on plug connectors only if the shell material is titanium or stainless steel.					

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option

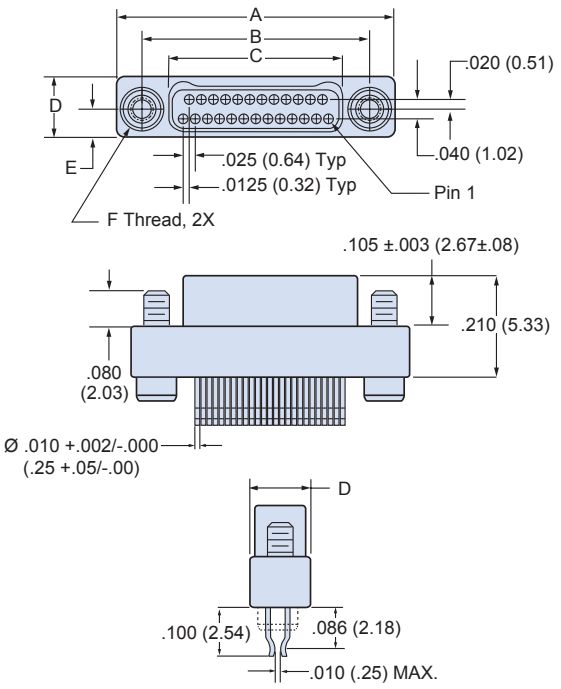
D

NOTES

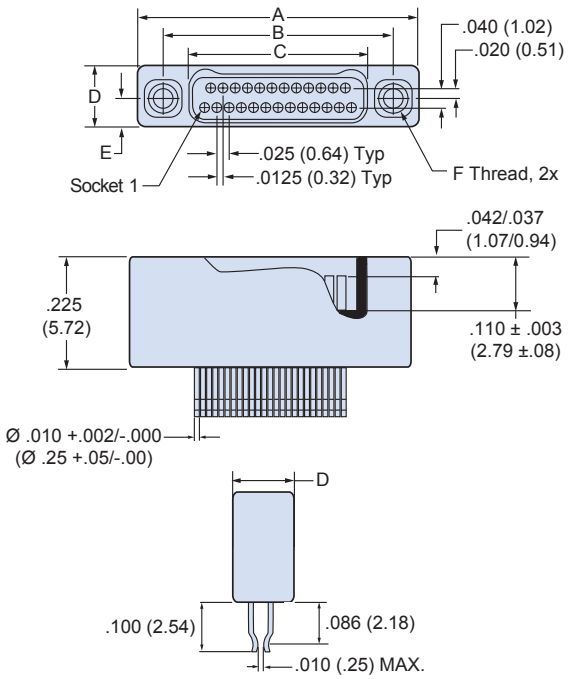
1. Material and Finish
   - Shell: see part number break down
   - Insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Hardware: passivated stainless steel
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 and /4

Dimensions

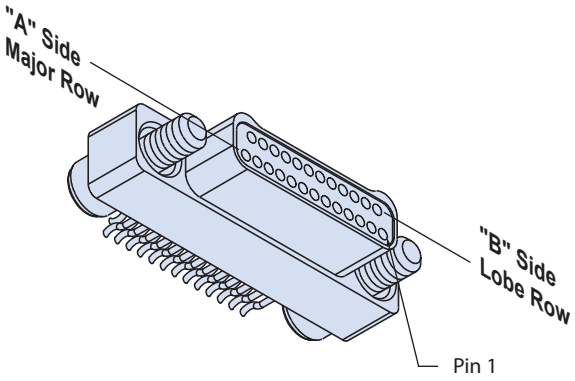
891-014 Plug (Pin) Connectors

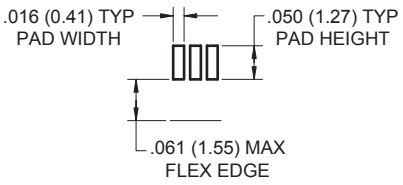


891-015 Receptacle (Socket) Connectors

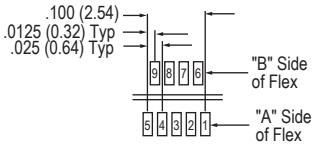


Layout	A		B BSC.		C BSC.		D		E BSC		F Thread
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm	In. ± .005	mm ±.003	In.	mm	
9P	.375	9.52	.270	6.86	.160	4.06	.125	3.18	.0575	1.46	#0-80 UNF
9S	.375	9.52	.270	6.86	.163	4.14	.125	3.18	.0575	1.46	#0-80 UNF
15P	.450	11.43	.345	8.76	.235	5.97	.125	3.18	.0575	1.46	#0-80 UNF
15S	.450	11.43	.345	8.76	.238	6.04	.125	3.18	.0575	1.46	#0-80 UNF
21P	.525	13.33	.420	10.67	.310	7.87	.125	3.18	.0575	1.46	#0-80 UNF
21S	.525	13.33	.420	10.67	.313	7.95	.125	3.18	.0575	1.46	#0-80 UNF
25P	.575	14.60	.470	11.94	.360	9.14	.125	3.18	.0575	1.46	#0-80 UNF
25S	.575	14.60	.470	11.94	.363	9.22	.125	3.18	.0575	1.46	#0-80 UNF
31P	.650	16.51	.545	13.84	.435	11.05	.125	3.18	.0575	1.46	#0-80 UNF
31S	.650	16.51	.545	13.84	.438	11.12	.125	3.18	.0575	1.46	#0-80 UNF
37P	.725	18.41	.620	15.75	.510	12.95	.125	3.18	.0575	1.46	#0-80 UNF
37S	.725	18.41	.620	15.75	.513	13.03	.125	3.18	.0575	1.46	#0-80 UNF
41P	.775	19.69	.670	17.02	.560	14.23	.125	3.18	.0575	1.46	#0-80 UNF
41S	.775	19.69	.670	17.02	.563	14.30	.125	3.18	.0575	1.46	#0-80 UNF
51P	.900	22.86	.795	20.19	.685	17.40	.125	3.18	.0575	1.46	#0-80 UNF
51S	.900	22.86	.795	20.19	.688	17.47	.125	3.18	.0575	1.46	#0-80 UNF
65P	1.075	27.30	.970	24.64	.860	21.84	.125	3.18	.0575	1.46	#0-80 UNF
65S	1.075	27.30	.970	24.64	.863	21.92	.125	3.18	.0575	1.46	#0-80 UNF
69P	1.125	28.57	1.020	25.91	.910	23.11	.125	3.18	.0575	1.46	#0-80 UNF
69S	1.125	28.57	1.020	25.91	.913	23.19	.125	3.18	.0575	1.46	#0-80 UNF
85P	1.377	34.97	1.246	31.65	1.110	28.19	.150	3.81	.0700	1.78	#2-56 UNC
85S	1.377	34.97	1.246	31.65	1.113	28.27	.150	3.81	.0700	1.78	#2-56 UNC

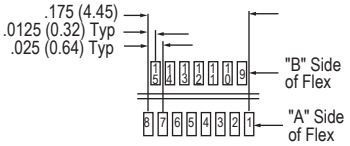




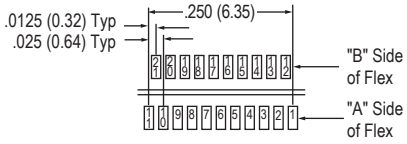
PAD DETAIL



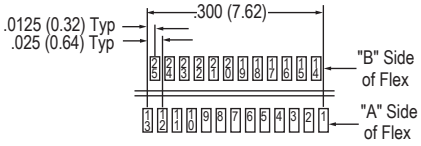
9 Contacts



15 Contacts



21 Contacts



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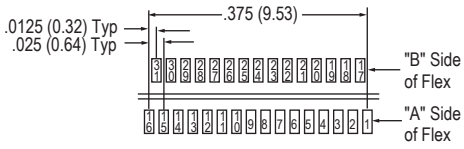
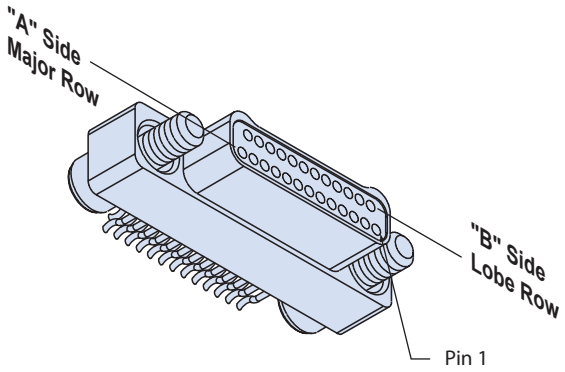
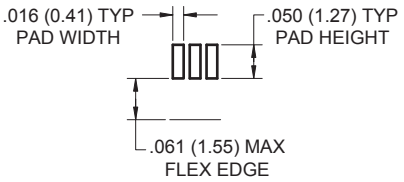


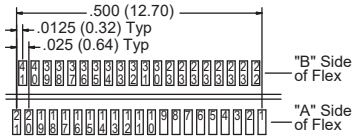
31 Contacts

37 Contacts



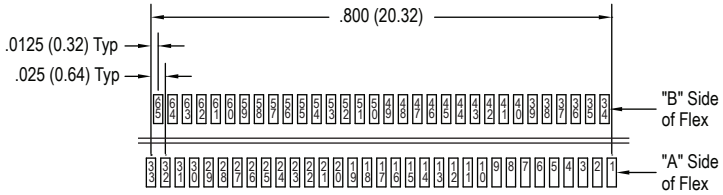


PAD DETAIL



41 Contacts

51 Contacts



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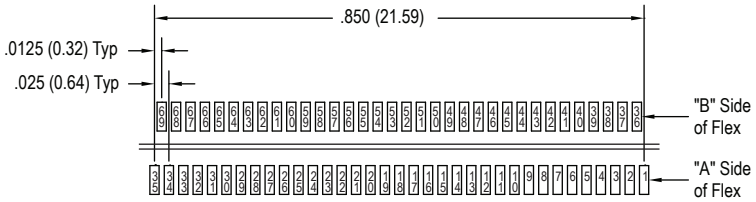

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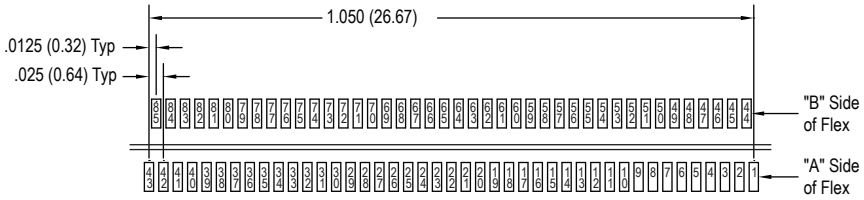
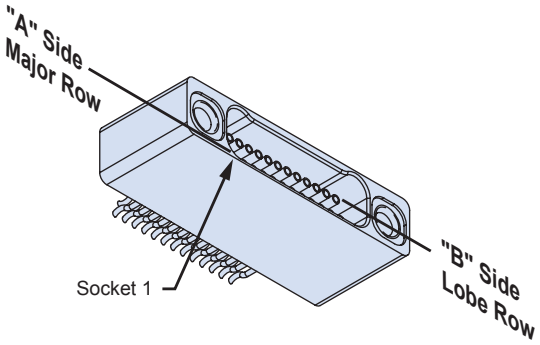
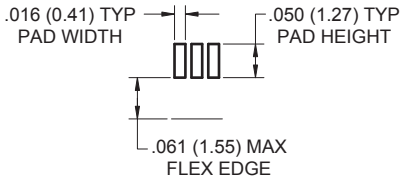


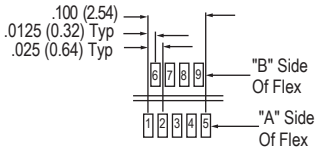
85 Contacts

D





PAD DETAIL



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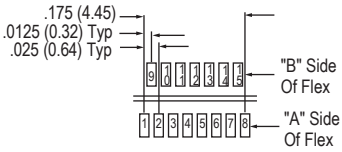

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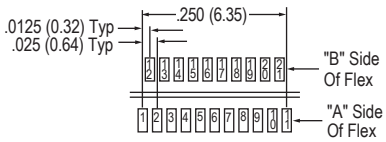

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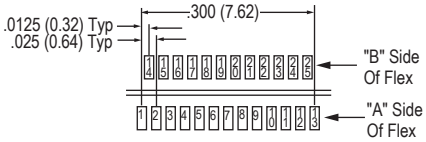

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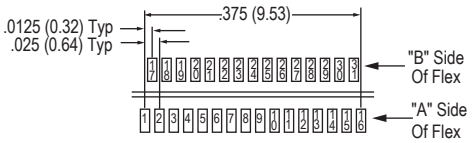

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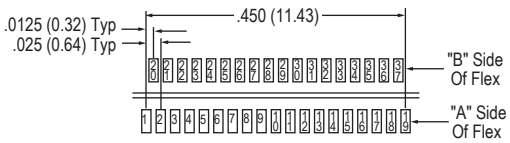

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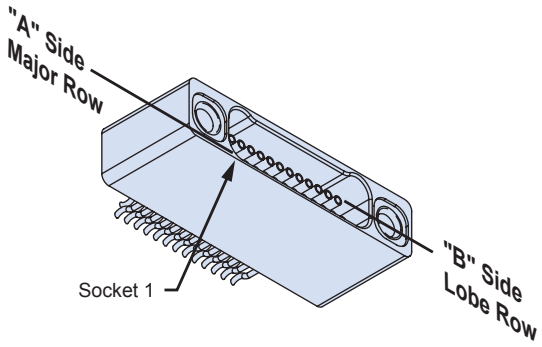
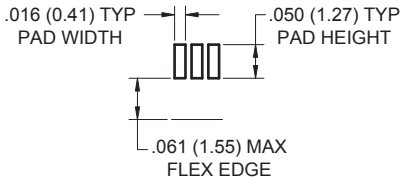
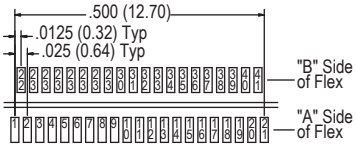
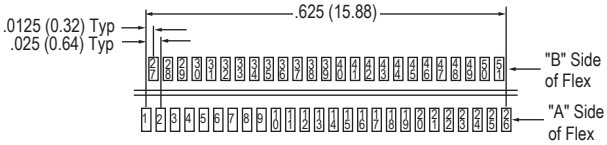




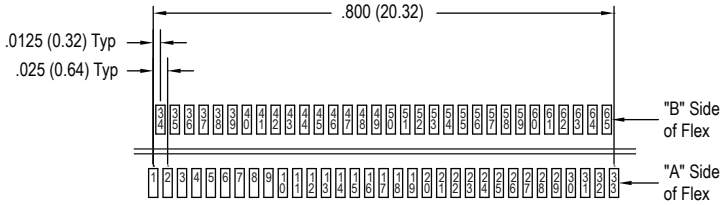
PAD DETAIL



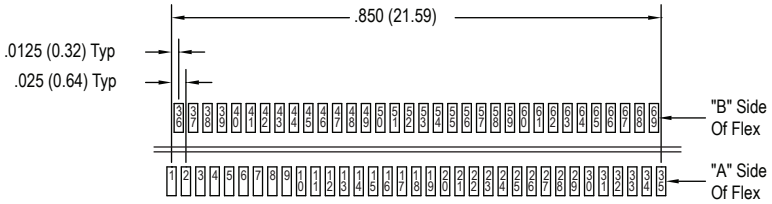


41 Contacts

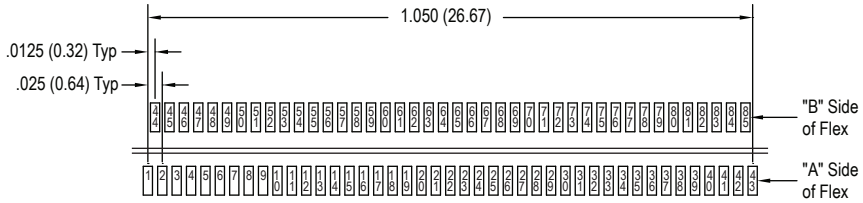
51 Contacts



65 Contacts



69 Contacts

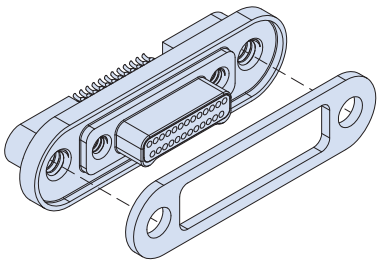


85 Contacts

D

Dual Row Connectors

Rear Panel Mount, Straddle Mount Connector and Gasket Seal - How to Order



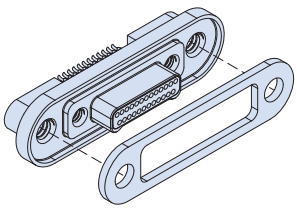
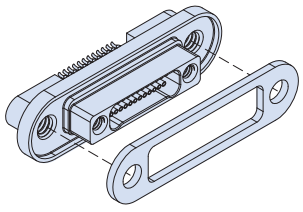
Rear Panel Mount, Straddle Mount PCB Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with female threads for use with flexible circuits.

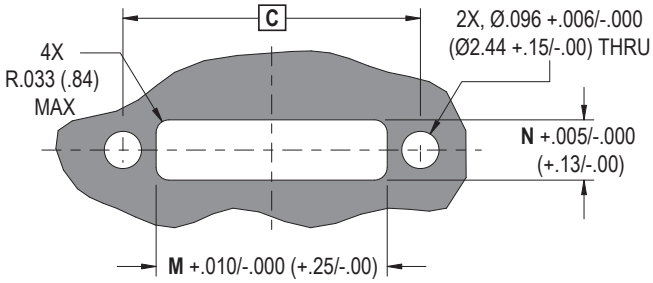
Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. MIL-DTL-32139 type connectors are intermateable with any corresponding Glenair Series 891 Dual row metal shell nanominiature connector.

Gasket Seals fuorosilicone, Cho-Seal 1298 and Cho-Seal 6503 available. For replacement gaskets see 899-015.

How to Order							
Sample Part Number	**891-035**	**-25P**	**S**	**-STM**	**T**	**-01**	**M**
Series	**891-035** Plug, Straddle Mount Connector **891-036** Receptacle, Straddle Mount Connector						
Insert Arrangement/Contact Type	Pins (891-035 Plug): **9P**, **15P**, **21P**, **25P**, **31P**, **37P**, **41P**, **51P**, **65P**, **69P**, **85P** Sockets (891-036 Receptacle): **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**						
Shell Material and Finish	**T** - Titanium Shell, Unplated **S** - Stainless Steel Shell, Passivated						
Termination Type	**STM** - Straddle Mount						
Hardware	**T** - Female Thread (#0-80 for size 9-69, #2-56 for size 85)						
Gasket Material	**Omit** for No Gasket **01** - Fluorosilicone IAW MIL-DTL25988 Type II, Class I, Grade 70 **02** - Passivated Silver Plated Aluminum Filled Fluorosilicone IAW MIL-DTL-83528 **03** - Nickel Plated Aluminum Filled Fluorosilicone, (Cho-Seal 6503 or Equivalent)						
Mounting Thread Option	**Omit** for #2-56 UNC-2B **M** - M2X0.4 6H						

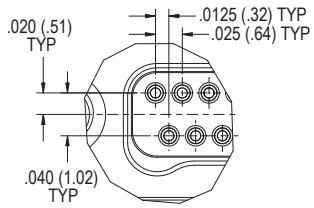
Plug (Pin)	Receptacle (Socket)
	
T - Female Thread	



- Panel cutout is sized to allow connector mounting with either lobe up or down orientation.
- Recommended panel thickness .100 (2.54)

Panel Cut-out Dimensions			
Shell Size	C	M	N
9	.566 (14.38)	.395 (10.03)	.155 (3.93)
15	.641 (16.28)	.470 (11.94)	.155 (3.93)
21	.716 (18.19)	.545 (13.84)	.155 (3.93)
25	.766 (19.46)	.595 (15.11)	.155 (3.93)
31	.841 (21.36)	.670 (17.02)	.155 (3.93)
37	.916 (23.27)	.745 (18.92)	.155 (3.93)
41	.966 (24.54)	.795 (20.19)	.155 (3.93)
51	1.091 (27.71)	.920 (23.37)	.155 (3.93)
65	1.266 (32.16)	1.095 (27.81)	.155 (3.93)
69	1.316 (33.43)	1.145 (29.08)	.155 (3.93)
85	1.568 (39.83)	1.397 (34.48)	.180 (4.57)

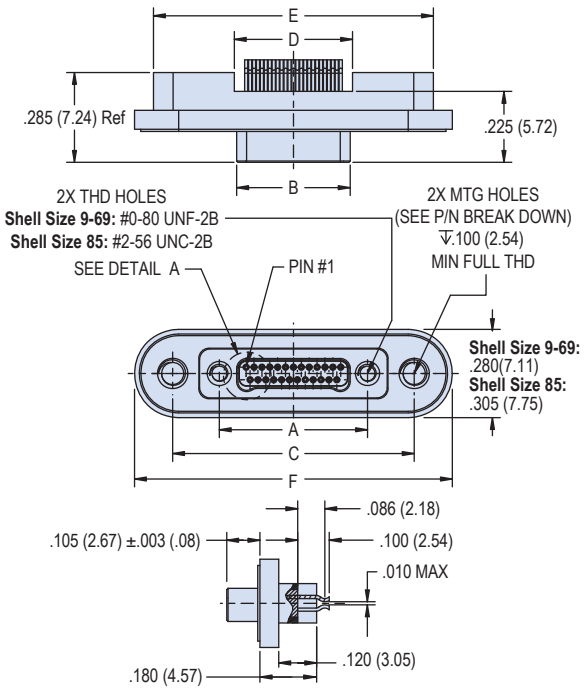
DETAIL A



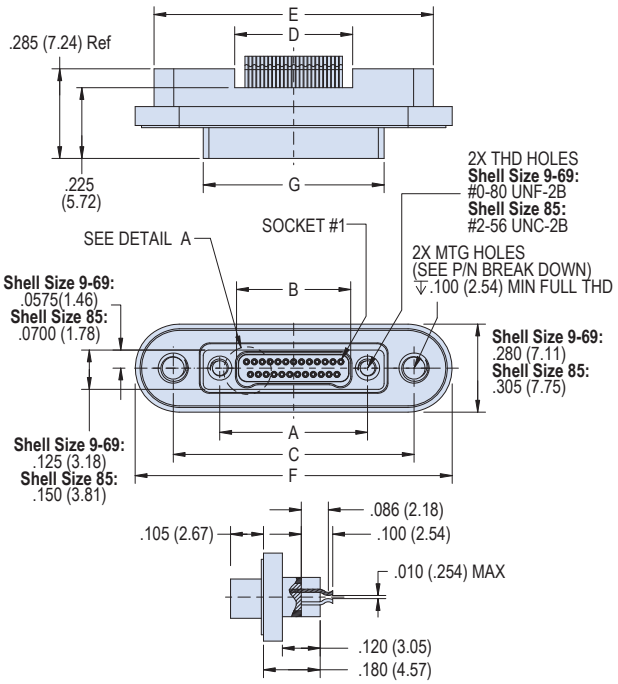
Rear Panel Mount, Straddle Mount Connector and Gasket Seal - Dimensions

Dimensions

891-035 Plug (Pin) Connectors



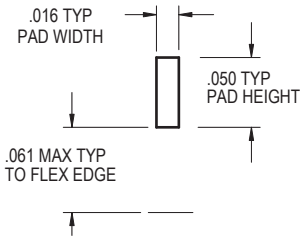
891-036 Receptacle (Socket) Connectors



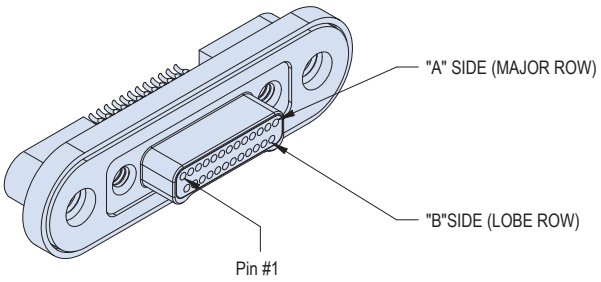
Layout	A BSC		B BSC.		C BSC.		D		E		F		G	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
9P	.270	6.86	.160	4.06	.566	14.38	.175	4.45	.688	17.48	.808	20.52	--	--
9S	.270	6.86	.163	4.14	.566	14.38	.175	4.45	.688	17.48	.808	20.52	.375	9.53
15P	.345	8.76	.235	5.97	.641	16.28	.250	6.35	.763	19.38	.883	22.43	--	--
15S	.345	8.76	.238	6.05	.641	16.28	.250	6.35	.763	19.38	.883	22.43	.450	11.43
21P	.420	10.67	.310	7.87	.716	18.19	.325	8.26	.838	21.29	.958	24.33	--	--
21S	.420	10.67	.313	7.95	.716	18.19	.325	8.26	.838	21.29	.958	24.33	.525	13.34
25P	.470	11.94	.360	9.14	.766	19.46	.375	9.53	.888	22.56	1.008	25.60	--	--
25S	.470	11.94	.363	9.22	.766	19.46	.375	9.53	.888	22.56	1.008	25.60	.575	14.61
31P	.545	13.84	.435	11.05	.841	21.36	.450	11.43	.963	24.46	1.083	27.51	--	--
31S	.545	13.84	.438	11.13	.841	21.36	.450	11.43	.963	24.46	1.083	27.51	.650	16.51
37P	.620	15.75	.510	12.95	.916	23.27	.525	13.34	1.038	26.37	1.158	29.41	--	--
37S	.620	15.75	.513	13.03	.916	23.27	.525	13.34	1.038	26.37	1.158	29.41	.725	18.42
41P	.670	17.02	.560	14.22	.966	24.54	.575	14.61	1.088	27.64	1.208	30.68	--	--
41S	.670	17.02	.563	14.30	.966	24.54	.575	14.61	1.088	27.64	1.208	30.68	.775	19.69
51P	.795	20.19	.685	17.40	1.091	27.71	.700	17.78	1.213	30.81	1.333	33.86	--	--
51S	.795	20.19	.688	17.48	1.091	27.71	.700	17.78	1.213	30.81	1.333	33.86	.900	22.86
65P	.970	24.64	.860	21.84	1.266	32.16	.875	22.23	1.388	35.26	1.508	38.30	--	--
65S	.970	24.64	.863	21.92	1.266	32.16	.875	22.23	1.388	35.26	1.508	38.30	1.075	27.31
69P	1.020	25.91	.910	23.11	1.316	33.43	.925	23.50	1.438	36.53	1.558	39.57	--	--
69S	1.020	25.91	.913	23.19	1.316	33.43	.925	23.50	1.438	36.53	1.558	39.57	1.125	28.58
85P	1.246	31.65	1.110	28.19	1.568	39.83	1.125	28.58	1.690	42.93	1.810	45.97	--	--
85S	1.246	31.65	1.113	28.27	1.568	39.83	1.125	28.58	1.690	42.93	1.810	45.97	1.377	34.98

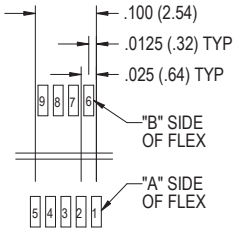
Dual Row Connectors

Rear Panel Mount, Straddle Mount Connector with Gasket Seal - Plug Pad Footprint

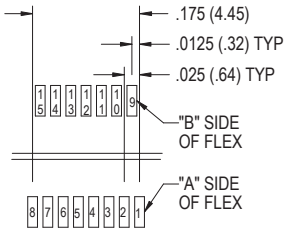


PAD FOOTPRINT DETAIL

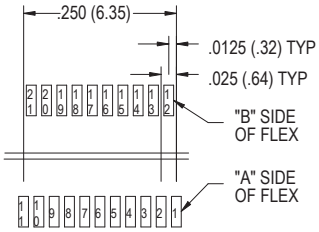




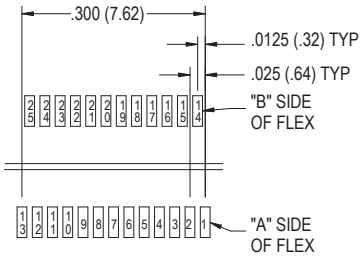
9 Contacts



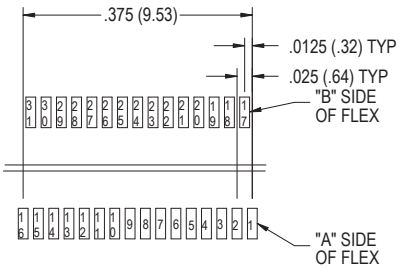
15 Contacts



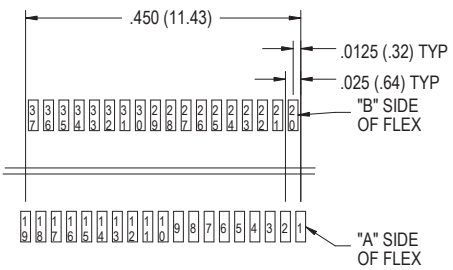
21 Contacts



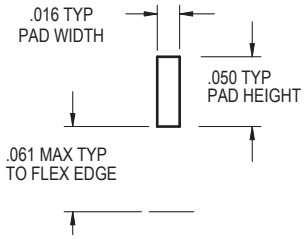
25 Contacts



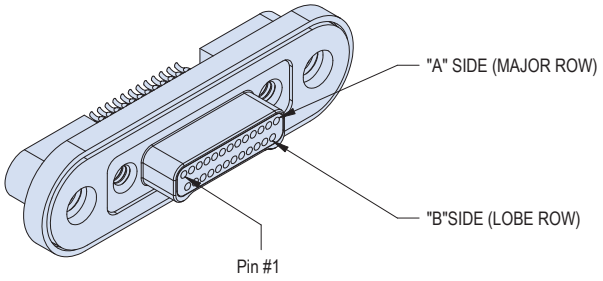
31 Contacts

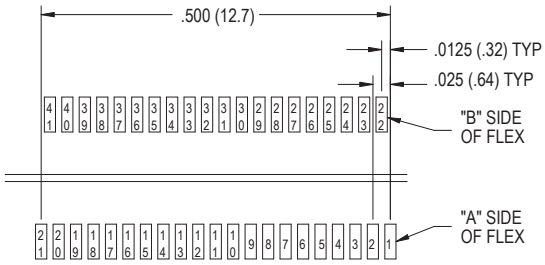


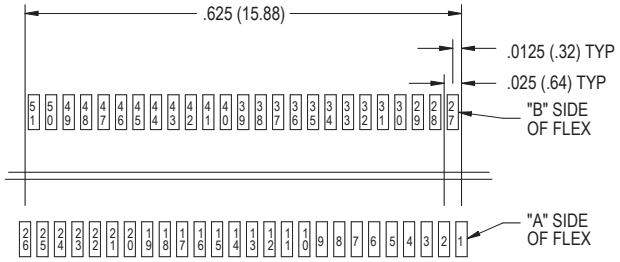
37 Contacts



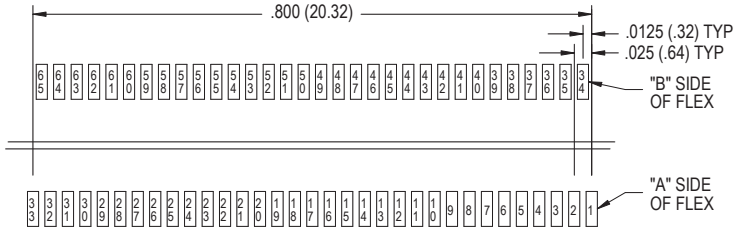
PAD FOOTPRINT DETAIL





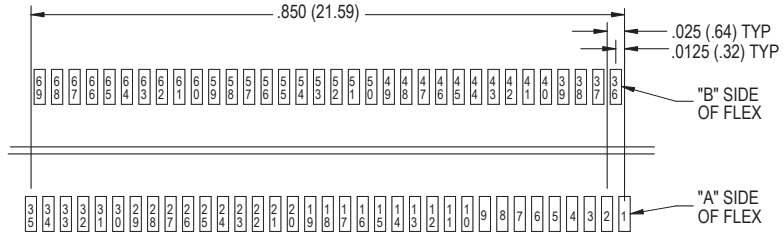


41 Contacts

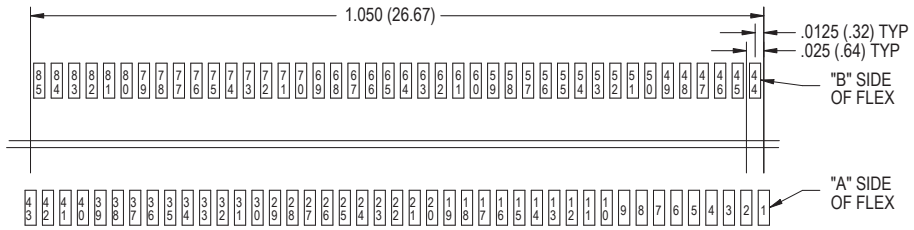


51 Contacts

65 Contacts



69 Contacts

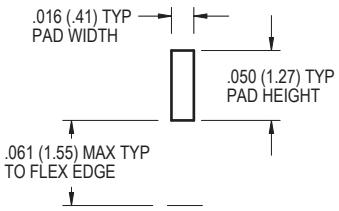


85 Contacts

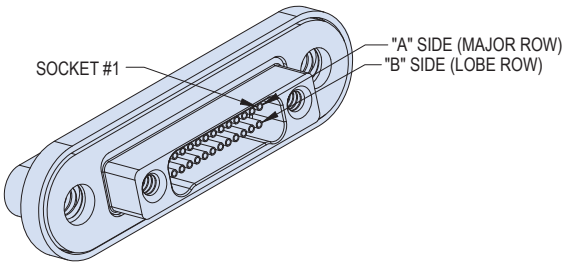
D

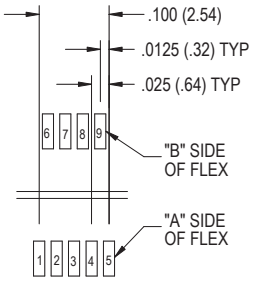
Dual Row Connectors

Rear Panel Mount, Straddle Mount Connector with Gasket Seal - Receptacle Pad Footprint

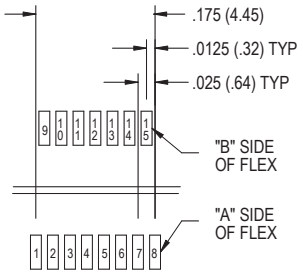


PAD FOOTPRINT DETAIL

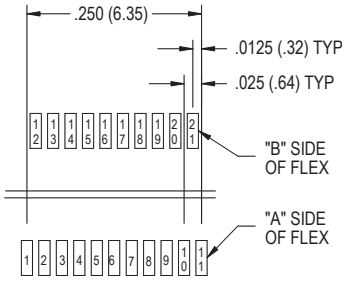




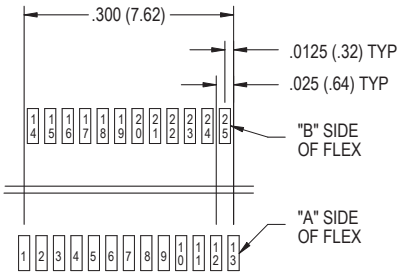
9 Contacts



15 Contacts



21 Contacts



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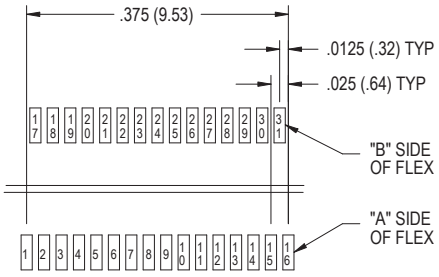
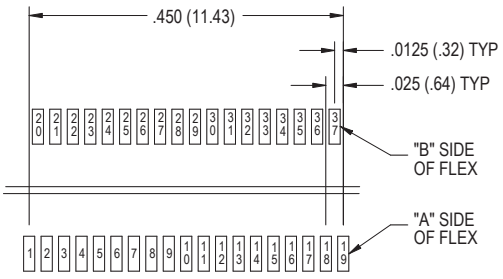


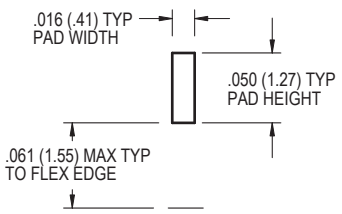
31 Contacts



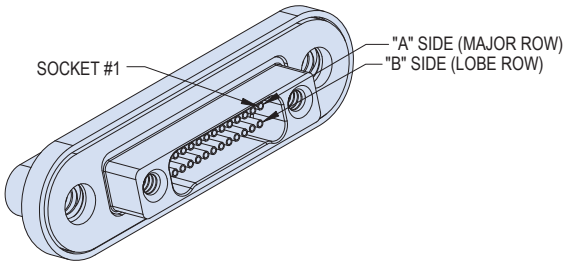
37 Contacts

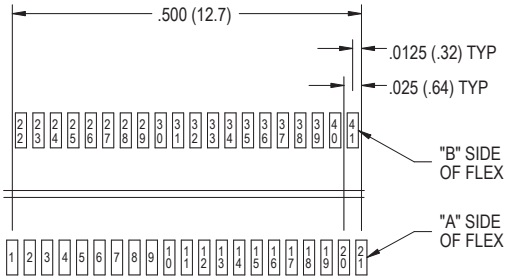
Dual Row Connectors

Rear Panel Mount, Straddle Mount Connector with Gasket Seal - Receptacle Pad Footprint

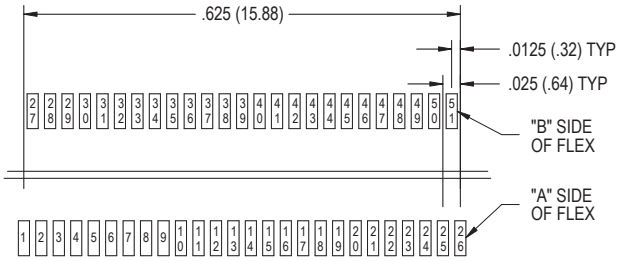


PAD FOOTPRINT DETAIL

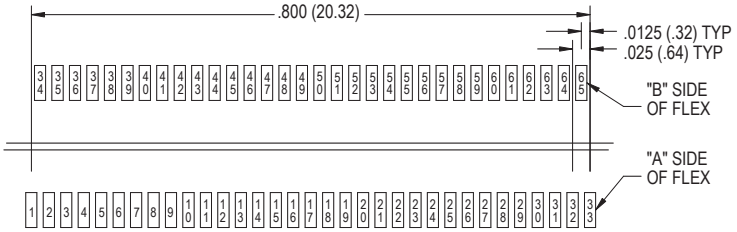




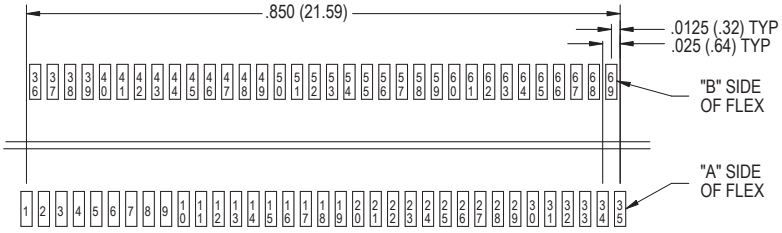
41 Contacts



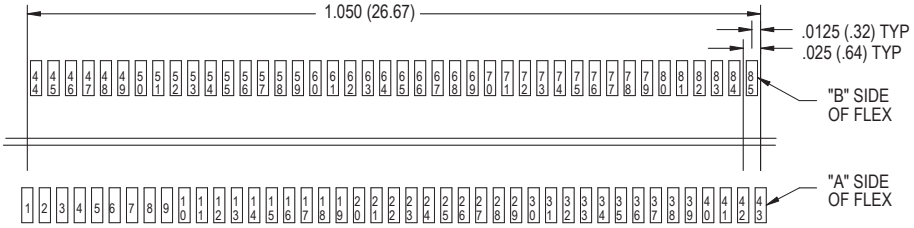
51 Contacts



65 Contacts



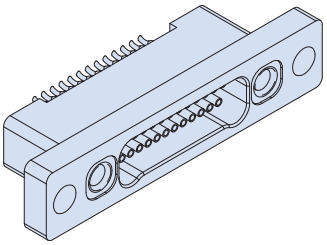
69 Contacts



85 Contacts

Dual Row Connectors

Front Panel Mount, Straddle Mount Receptacle
How to Order



Front Panel Mount, Straddle Mount Connectors feature gold alloy TwistPin contacts, offering premium performance and reliability for demanding applications. Available with female threads for use with flexible circuits.

Pre-Tinned PC Tails are coated with Sn63Pb37 or Sn60Pb40 tin-lead for excellent solderability.

Choose Aluminum, Titanium or Stainless Steel Shells in eleven layouts from 9 to 85 contacts. MIL-DTL-32139 type connectors are intermateable with any corresponding Glenair Series 891 Dual row metal shell nanominiature connector.

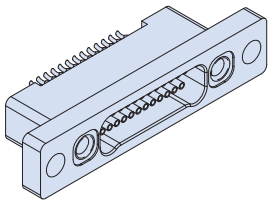
How to Order

Sample Part Number	891-051	-25S	A2	-STM	T	C

Series	**891-051** Receptacle, Straddle Mount
Insert Arrangement/Contact Type	Sockets (Receptacle): **9S**, **15S**, **21S**, **25S**, **31S**, **37S**, **41S**, **51S**, **65S**, **69S**, **85S**
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **T** - Titanium Shell, Unplated **A2** - Aluminum Shell, Eletroless Nickel Plating **S** - Stainless Steel Shell, Passivated
Termination Type	**STM** - Straddle Mount
Hardware	**T** - Female Thread (#0-80 for size 9-69, #2-56 for size 85)
Mounting Hole Option	**C** - Clearance Hole **T** - Female Thread

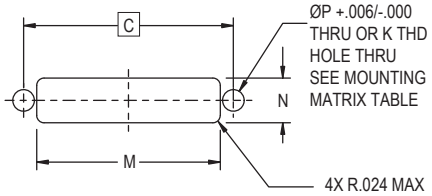
D

Receptacle (Socket)



T - Female Thread

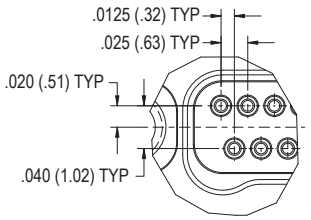
PANEL CUT-OUT DIMENSIONS



Panel Mount Connector Mounting Matrix

Connector Holes	Panel Holes	Mounting Location
Tapped	Clearance	Rear Panel Mount
Clearance	Tapped	Front Panel Mount
Clearance	Clearance	Front or Rear Panel Mount with screw and nut

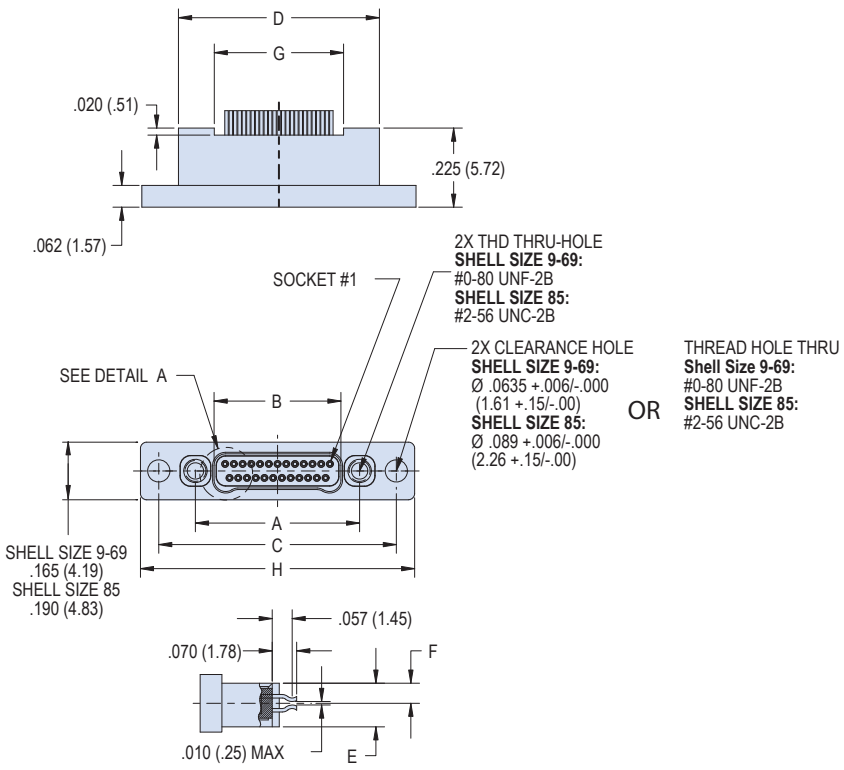
DETAIL A



Shell Size	C	K	M	N	P
9	.480 (12.19)	#0-80 UNF-2B	.395 (10.03)	.145 (3.68)	.070 (1.78)
15	.555 (14.10)	#0-80 UNF-2B	.470 (11.94)		
21	.630 (16.00)	#0-80 UNF-2B	.545 (13.84)		
25	.680 (17.27)	#0-80 UNF-2B	.595 (15.11)		
31	.755 (19.17)	#0-80 UNF-2B	.670 (17.02)		
37	.830 (21.08)	#0-80 UNF-2B	.745 (18.92)		
41	.880 (22.35)	#0-80 UNF-2B	.795 (20.19)		
51	1.005 (25.53)	#0-80 UNF-2B	.920 (23.37)		
65	1.180 (29.97)	#0-80 UNF-2B	1.095 (27.81)		
69	1.230 (31.24)	#0-80 UNF-2B	1.145 (29.08)		
85	1.527 (38.79)	#2-56 UNC-2B	1.397 (35.48)	.170 (4.31)	.096 (2.44)

Dimensions

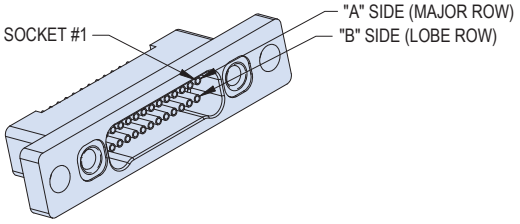
891-051 Receptacle (Socket)

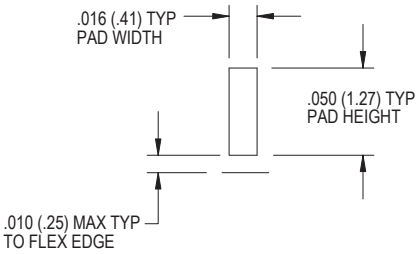


Layout	A BSC		B BSC.		C BSC.		D		E		F		G		H	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
9S	.270	6.86	.163	4.14	.480	12.19	.375	9.53	.125	3.18	.0575	1.46	.170	4.32	.585	14.86
15S	.345	8.76	.238	6.05	.555	14.10	.450	11.43	.125	3.18	.0575	1.46	.245	6.22	.660	16.76
21S	.420	10.67	.313	7.95	.630	16.00	.525	13.34	.125	3.18	.0575	1.46	.320	8.13	.735	18.67
25S	.470	11.94	.363	9.22	.680	17.27	.575	14.61	.125	3.18	.0575	1.46	.370	9.40	.785	19.94
31S	.545	13.84	.438	11.13	.755	19.18	.650	16.51	.125	3.18	.0575	1.46	.445	11.30	.860	21.84
37S	.620	15.75	.513	13.03	.830	21.08	.725	18.42	.125	3.18	.0575	1.46	.520	13.21	.935	23.75
41S	.670	17.02	.563	14.30	.880	22.35	.775	19.69	.125	3.18	.0575	1.46	.570	14.48	.985	25.02
51S	.795	20.19	.688	17.48	1.005	25.53	.900	22.86	.125	3.18	.0575	1.46	.695	17.65	1.110	28.19
65S	.970	24.64	.863	21.92	1.180	29.97	1.075	27.31	.125	3.18	.0575	1.46	.870	22.10	1.285	32.64
69S	1.020	25.91	.913	23.19	1.230	31.24	1.125	28.58	.125	3.18	.0575	1.46	.920	23.37	1.335	33.91
85S	1.246	31.65	1.113	28.27	1.527	38.79	1.377	34.98	.150	3.81	.0700	1.78	1.120	28.45	1.677	42.60

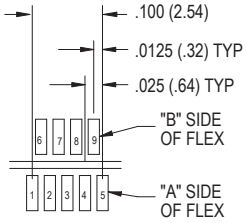
NOTES

1. Inspect and Test IAW MIL-DTL-32139
2. Interface dimensions per MIL-DTL-32139/4
3. Panel cutout is sized to allow connector mounting with either lobe up or down orientation.
4. Connector may be mounted to front or back of panel depending on selected mount hole option
5. Recommended panel thickness: .100 (2.54)
6. Material and Finish
   - Shell: see part number break down
   - insulator: LCP/N/A
   - Contacts: gold alloy / unplated
   - Wire: see part number break down
   - Jacking hardware: see part number break down

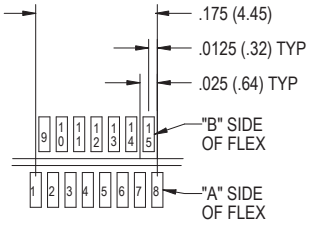




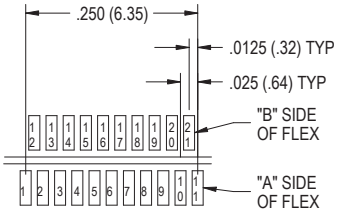
PAD FOOTPRINT DETAIL



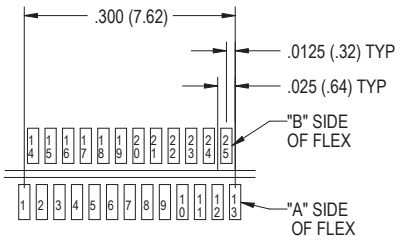
9 Contacts



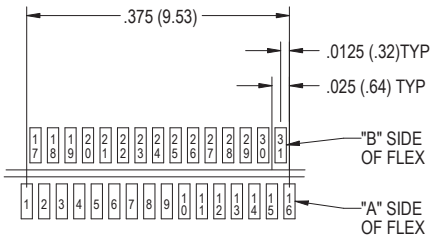
15 Contacts



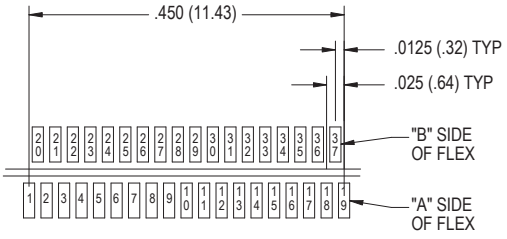
21 Contacts



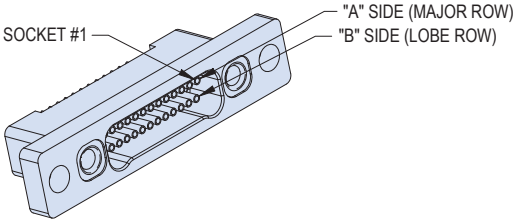
25 Contacts

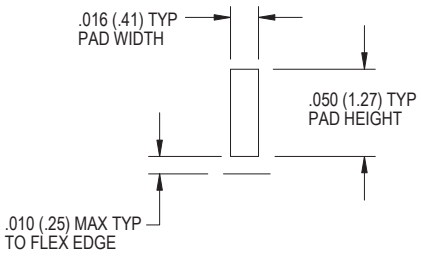


31 Contacts

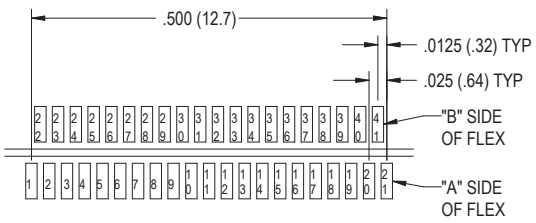


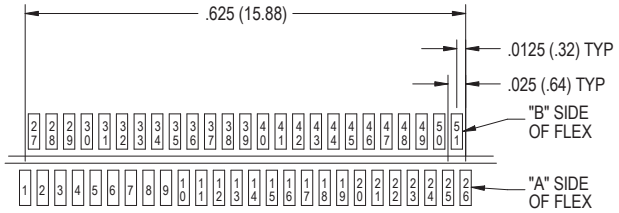
37 Contacts





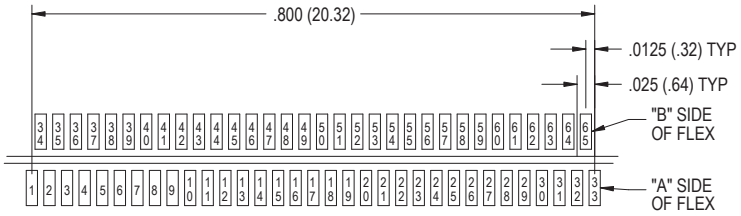
PAD FOOTPRINT DETAIL



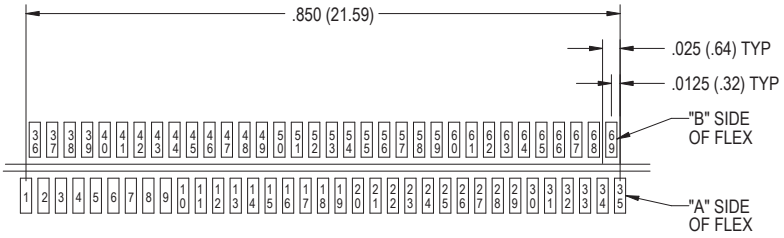


41 Contacts

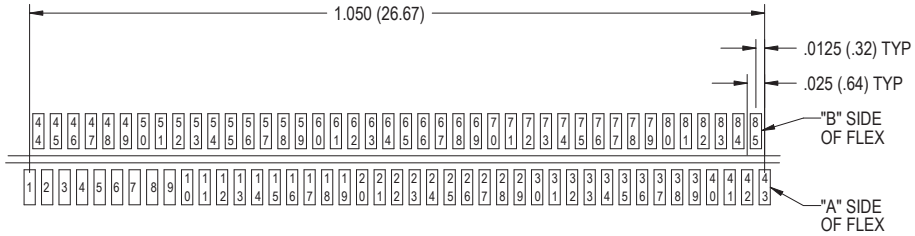
51 Contacts



65 Contacts



69 Contacts

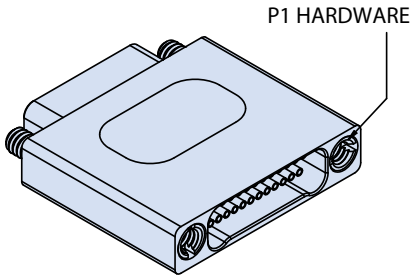


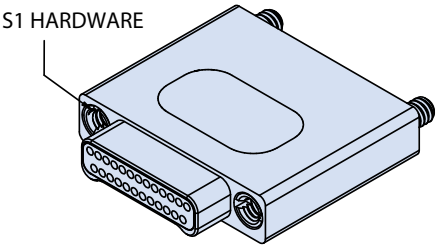
85 Contacts

D

Dual Row Connectors

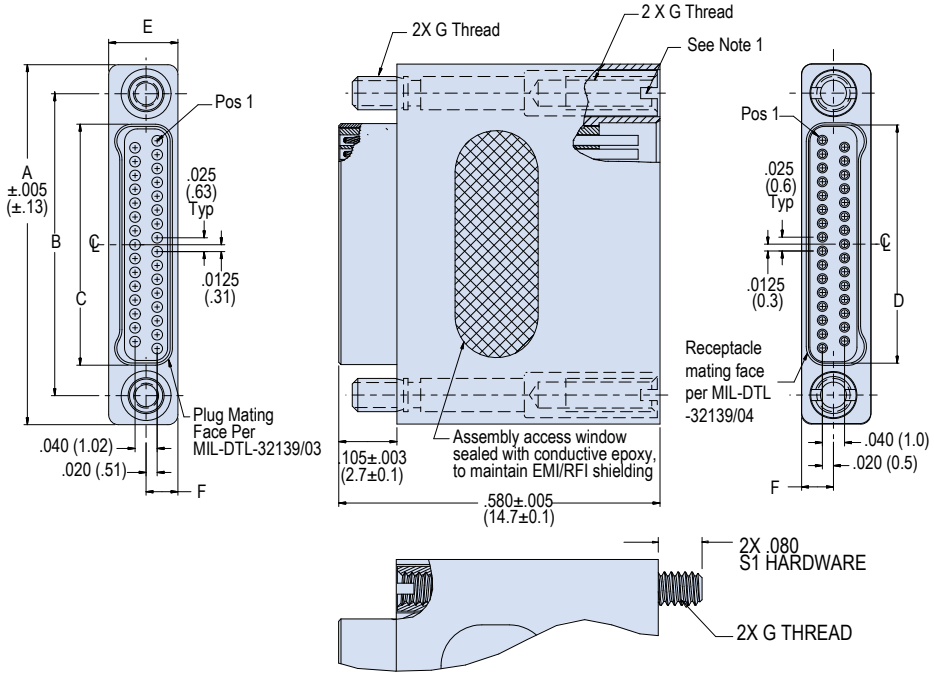
Sav-Con® Connector Saver
How to Order and Dimensions





Glenair Connector Savers protect expensive connector contacts with Glenair Connector Savers. Once installed this device will reduce wear on vital contacts and eliminate downtime due to fouled or damaged connectors.

How to Order				
Sample Part Number	**891-016**	**-31**	**US**	**P1**
Series	**891-016** Dual Row Connector Saver			
Number of Contacts	**9, 15, 21, 25, 31, 37, 41, 51, 65, 69, 85**			
Connector Type	**US** - Plug to Socket One Piece Shell			
Hardware	**P1** - Permanently Installed Jackscrew/Jackpost Male Thread on Plug Side **S1** = Permanently installed Jackscrew/Jackpost Male Thread on Receptacle Side			



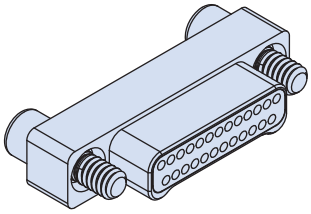
NOTES

1. Jack post head has a slot drive. Use slotted blade miniature screwdriver. #0-80 Blade tip .018" Thick x .080" Wide. #2-56 Blade tip .025" Thick x .105" wide. Jackscrew/jackpost recommended torque: #0-80 0.5 - 1.0 in-lbs, #2-56 0.75 - 1.5 in-lbs.
2. Aluminum shell, electroless nickel plated

Dimensions							
Size	**A**	**B Bsc**	**C Bsc**	**D Bsc**	**E**	**F**	**G Thrd**
9	.375 (9.5)	.270 (6.9)	.160 (4.1)	.163 (4.1)	.125 (3.18)	.0575 (1.46)	#0-80 UNF
15	.450 (11.4)	.345 (8.8)	.235 (6.0)	.238 (6.0)	.125 (3.18)	.0575 (1.46)	#0-80 UNF
21	.525 (13.3)	.420 (10.7)	.310 (7.9)	.313 (8.0)	.125 (3.18)	.0575 (1.46)	#0-80 UNF
25	.575 (14.6)	.470 (11.9)	.360 (9.1)	.363 (9.2)	.125 (3.18)	.0575 (1.46)	#0-80 UNF
31	.650 (16.5)	.545 (13.8)	.435 (11.0)	.438 (11.1)	.125 (3.18)	.0575 (1.46)	#0-80 UNF
37	.725 (18.4)	.620 (15.7)	.510 (13.0)	.513 (13.0)	.125 (3.18)	.0575 (1.46)	#0-80 UNF
41	.775 (19.7)	.670 (17.0)	.560 (14.2)	.563 (14.3)	.125 (3.18)	.0575 (1.46)	#0-80 UNF
51	.900 (22.9)	.795 (20.2)	.685 (17.4)	.688 (17.5)	.125 (3.18)	.0575 (1.46)	#0-80 UNF
65	1.075 (27.3)	.970 (24.6)	.860 (21.8)	.863 (21.9)	.125 (3.18)	.0575 (1.46)	#0-80 UNF
69	1.125 (28.6)	1.020 (25.9)	.910 (23.1)	.913 (23.2)	.125 (3.18)	.0575 (1.46)	#0-80 UNF
85	1.377 (34.98)	1.246 (31.65)	1.110 (28.19)	1.113 (28.27)	.150 (3.81)	.0700 (1.78)	#2-56 UNC

Dual Row Connectors

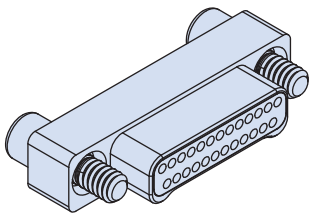
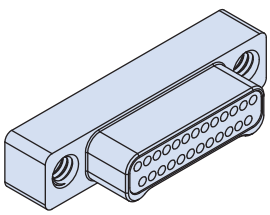
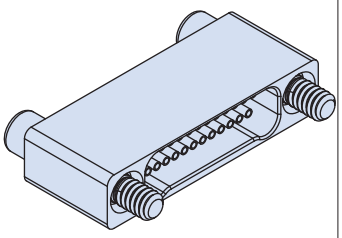
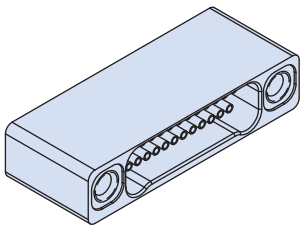
Plug and Receptacle Shorting Connector
How to Order



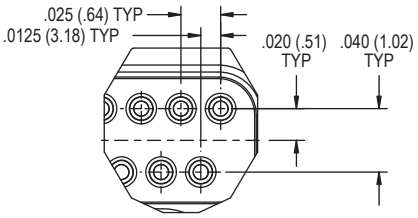
Nano Plug, Dual Row Shorting Connectors feature gold alloy TwistPin contacts. These nanominiature shorting connectors provide ESD protection for sensitive instrumentation. Available with #0-80 or #2-56 female threads or jackscrews.

Typical Applications shorting plugs and receptacles protect unmated connectors from stray EMI and ESD which could lead to damage of sensitive components.

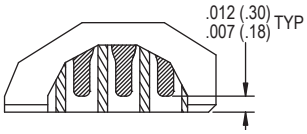
How to Order						
Sample Part Number		**891-037**	**-25P**	**A2**	**-C**	**-J**
Series	**891-037** Plug Shorting Connector **891-038** Receptacle Shorting Connector					
Insert Arrangement/ Contact Type	Plugs (891-037): **9P, 15P, 21P, 25P, 31P, 37P, 41P, 51P, 65P, 69P, 85P** Receptacles (891-038): **9S, 15S, 21S, 25S, 31S, 37S, 41S, 51S, 65S, 69S, 85S**					
Shell Material and Finish	**A1** - Aluminum Shell, Cadmium Plating **T** - Titanium Shell, Unplated **A2** - Aluminum Shell, Electroless Nickel Plating **S** - Stainless Steel Shell, Passivated					
Shorting Combination	**C** = All contacts shorted together, isolated from the shell **G** = All contacts shorted together, and grounded to the shell					
Hardware	**J** - Hex Head Jackscrew **T** - Female Thread* * Female threads available for plug connectors only if shell material is titanium or stainless steel.					

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option

DETAIL A



DETAIL B



NOTES

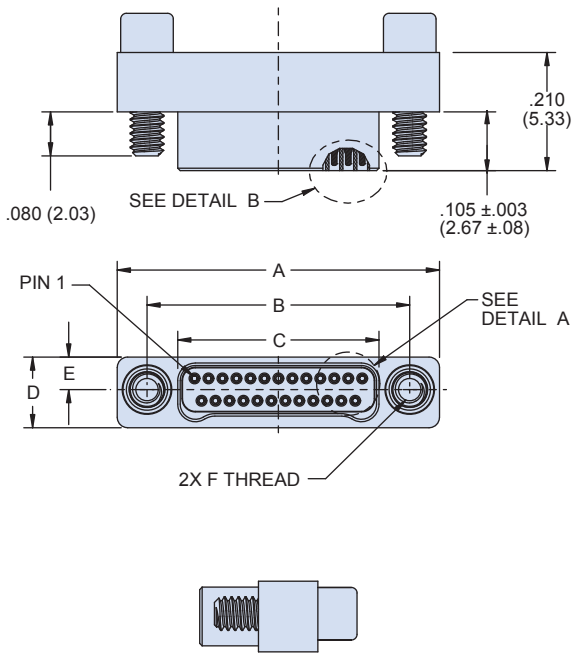
1. Inspect and Test IAW MIL-DTL-32139
2. Interface dimensions per MIL-DTL-32139/3 and MIL-DTL-32139/4

D

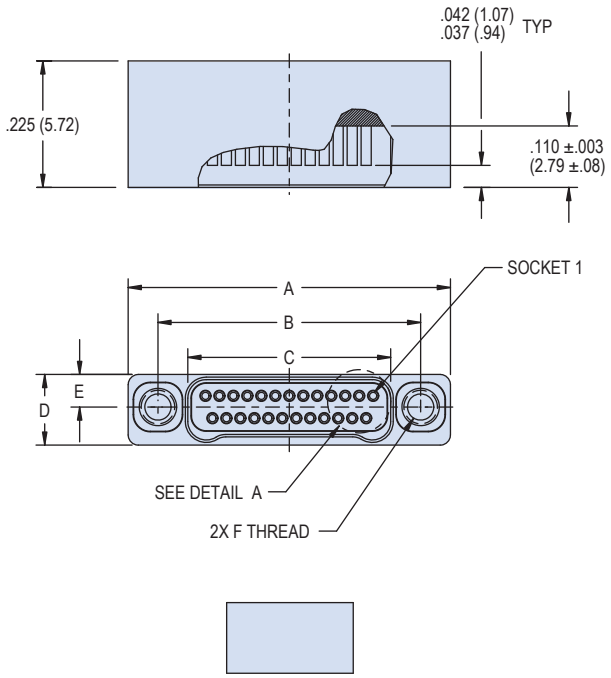
Plug and Receptacle Shorting Connector Dimensions

Dimensions

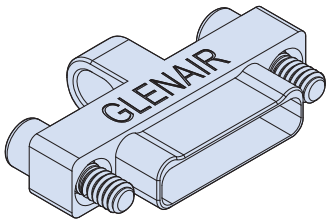
891-037 Plug (Pin) Connector



891-038 Receptacle (Socket) Connector



Layout	A		B BSC.		C BSC.		D		E BSC.		F Thread
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.	In. ±.005	mm ±0.13	In.	mm	
9P	.375	9.52	.270	6.86	.160	4.06	.125	3.18	.0575	1.46	#0-80 UNF
9S	.375	9.52	.270	6.86	.163	4.14	.125	3.18	.0575	1.46	#0-80 UNF
15P	.450	11.43	.345	8.76	.235	5.97	.125	3.18	.0575	1.46	#0-80 UNF
15S	.450	11.43	.345	8.76	.238	6.04	.125	3.18	.0575	1.46	#0-80 UNF
21P	.525	13.33	.420	10.67	.310	7.87	.125	3.18	.0575	1.46	#0-80 UNF
21S	.525	13.33	.420	10.67	.313	7.95	.125	3.18	.0575	1.46	#0-80 UNF
25P	.575	14.60	.470	11.94	.360	9.14	.125	3.18	.0575	1.46	#0-80 UNF
25S	.575	14.60	.470	11.94	.363	9.22	.125	3.18	.0575	1.46	#0-80 UNF
31P	.650	16.51	.545	13.84	.435	11.05	.125	3.18	.0575	1.46	#0-80 UNF
31S	.650	16.51	.545	13.84	.438	11.12	.125	3.18	.0575	1.46	#0-80 UNF
37P	.725	18.41	.620	15.75	.510	12.95	.125	3.18	.0575	1.46	#0-80 UNF
37S	.725	18.41	.620	15.75	.513	13.03	.125	3.18	.0575	1.46	#0-80 UNF
41P	.775	19.69	.670	17.02	.560	14.23	.125	3.18	.0575	1.46	#0-80 UNF
41S	.775	19.69	.670	17.02	.563	14.30	.125	3.18	.0575	1.46	#0-80 UNF
51P	.900	22.86	.795	20.19	.685	17.40	.125	3.18	.0575	1.46	#0-80 UNF
51S	.900	22.86	.795	20.19	.688	17.47	.125	3.18	.0575	1.46	#0-80 UNF
65P	1.075	27.30	.970	24.64	.860	21.84	.125	3.18	.0575	1.46	#0-80 UNF
65S	1.075	27.30	.970	24.64	.863	21.92	.125	3.18	.0575	1.46	#0-80 UNF
69P	1.125	28.57	1.020	25.91	.910	23.11	.125	3.18	.0575	1.46	#0-80 UNF
69S	1.125	28.57	1.020	25.91	.913	23.19	.125	3.18	.0575	1.46	#0-80 UNF
85P	1.377	34.97	1.246	31.65	1.110	28.19	.150	3.81	.0700	1.78	#2-56 UNC
85S	1.377	34.97	1.246	31.65	1.113	28.27	.150	3.81	.0700	1.78	#2-56 UNC



Glenair EMI Covers offer the same EMI protection as a mated connector from electromagnetic interference as a result of electromagnetic induction emitted from intended external sources such as radio transmissions or electromagnetic radiation from unintentional sources such as electric power transmission lines. These covers feature a solid one piece construction machined from your choice of aluminum, stainless steel or titanium. Standard aluminum finishes include cadmium or electroless nickel plating. Available with or without lanyard attachment. Covers are in accordance with interface dimensions for MIL-DTL-32139/3 and /4.

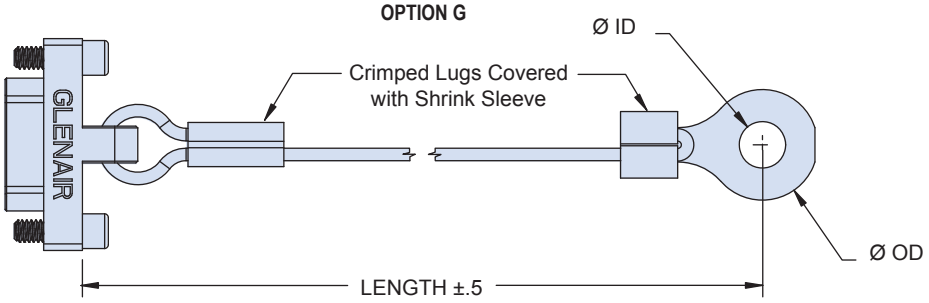
How to Order Nano Dual Row EMI Cover

Sample Part Number	899-011	-25	P	S	J	F	3	-126

Series	**899-011** = Plug or Receptacle Cover
Insert Arrangement	**9**, **15**, **21**, **25**, **31**, **37**, **41**, **51**, **65**, **69**, **85**; See Dimensions Table
Body Style	**P** = Plug **S** = Receptacle
Cover Material and Finish	**A1** = Aluminum Shell, Cadmium Plating **S** = Stainless Steel, Passivated **A2** = Aluminum Shell, Electroless Nickel Plating **T** = Titanium, Unplated
Hardware	**J** = Jacksrew **T** = Female Thread Female threads are available on plug covers only if cover material is titanium or stainless steel.
Attachment Type	**N** = No Lanyard **F** = Stainless Steel Wire Rope, Nylon Jacket, Black, Ø .034 **G** = Flexable Dacron Cord, MIL-DTL-5040, Type 1, Natural, (Dia)1/16 **H** = Stainless Steel Wire Rope, Teflon Jacket, Black, Ø .034 **K** = No Lanyard/No Eyelet Attachment Point
Attachment Length	Attachment Length in Inches; **Omit** for No Lanyard
Attachment Diameter	See Attachment Diameter Table; **Omit** for No Lanyard

OPTION K

OPTION G



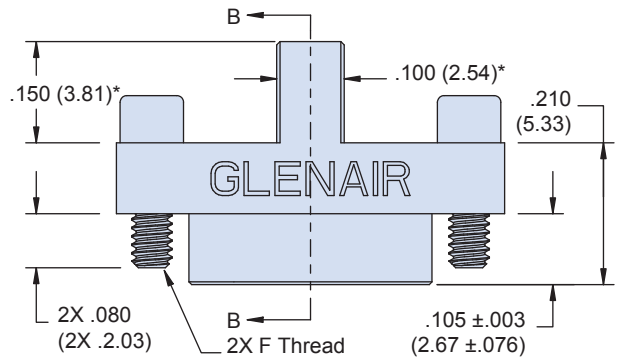
Attachment Diameter

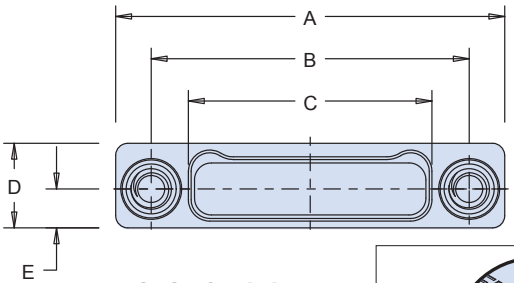
Attachment Diameter Dash No.	-098	-126	-140	-156	-167	-188	-197	-218
ID	Ø .098 (2.49)	Ø .126 (3.20)	Ø.140 (3.56)	Ø.156 (3.96)	Ø .167 (4.24)	Ø.188 (4.78)	Ø.197 (5.00)	Ø.223/.218 (5.66/5.54)
OD	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)	Ø .300 (7.62)

D

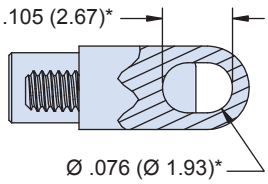
Dimensions

Plug Cover

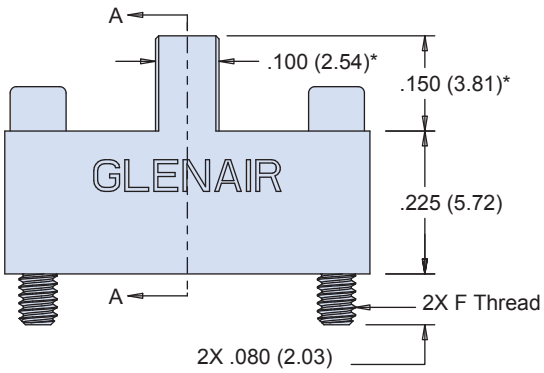


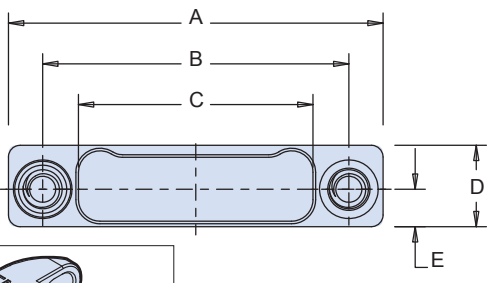


SECTION B-B

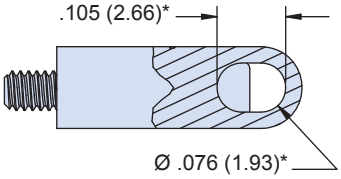


Receptacle Cover

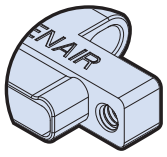




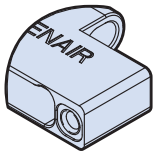
SECTION A-A



*** Dimensions are not applicable if attachment type "K" is chosen in part number.**



Plug With "T" Female Thread Option
2X F Thread Titanium or Stainless Steel Shells Only



Receptacle With "T" Female Thread Option
2X F Thread

Layout	A		B BSC.		C BSC.		D		E		F Thread
	In.	mm.	In.	mm.	In.	mm.	In. ±.005	mm ±0.13	In.	mm	
9P	.375	9.52	.270	6.86	.160	4.06	.125	3.18	.0575	1.46	#0-80 UNF
9S	.375	9.52	.270	6.86	.163	4.14	.125	3.18	.0575	1.46	#0-80 UNF
15P	.450	11.43	.345	8.76	.235	5.97	.125	3.18	.0575	1.46	#0-80 UNF
15S	.450	11.43	.345	8.76	.238	6.04	.125	3.18	.0575	1.46	#0-80 UNF
21P	.525	13.33	.420	10.67	.310	7.87	.125	3.18	.0575	1.46	#0-80 UNF
21S	.525	13.33	.420	10.67	.313	7.95	.125	3.18	.0575	1.46	#0-80 UNF
25P	.575	14.60	.470	11.94	.360	9.14	.125	3.18	.0575	1.46	#0-80 UNF
25S	.575	14.60	.470	11.94	.363	9.22	.125	3.18	.0575	1.46	#0-80 UNF
31P	.650	16.51	.545	13.84	.435	11.05	.125	3.18	.0575	1.46	#0-80 UNF
31S	.650	16.51	.545	13.84	.438	11.12	.125	3.18	.0575	1.46	#0-80 UNF
37P	.725	18.41	.620	15.75	.510	12.95	.125	3.18	.0575	1.46	#0-80 UNF
37S	.725	18.41	.620	15.75	.513	13.03	.125	3.18	.0575	1.46	#0-80 UNF
41P	.775	19.69	.670	17.02	.560	14.23	.125	3.18	.0575	1.46	#0-80 UNF
41S	.775	19.69	.670	17.02	.563	14.30	.125	3.18	.0575	1.46	#0-80 UNF
51P	.900	22.86	.795	20.19	.685	17.40	.125	3.18	.0575	1.46	#0-80 UNF
51S	.900	22.86	.795	20.19	.688	17.47	.125	3.18	.0575	1.46	#0-80 UNF
65P	1.075	27.30	.970	24.64	.860	21.84	.125	3.18	.0575	1.46	#0-80 UNF
65S	1.075	27.30	.970	24.64	.863	21.92	.125	3.18	.0575	1.46	#0-80 UNF
69P	1.125	28.57	1.020	25.91	.910	23.11	.125	3.18	.0575	1.46	#0-80 UNF
69S	1.125	28.57	1.020	25.91	.913	23.19	.125	3.18	.0575	1.46	#0-80 UNF
85P	1.377	34.97	1.246	31.65	1.110	28.19	.150	3.81	.0700	1.78	#2-56 UNC
85S	1.377	34.97	1.246	31.65	1.113	28.27	.150	3.81	.0700	1.78	#2-56 UNC

SERIES 89

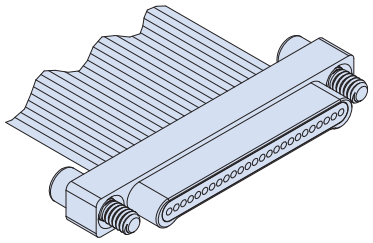
MIL-DTL-32139 Connectors

Product Selection Guide

E

MIL-DTL-32139 Connectors

Plug (/01) and Receptacle (/02), Single Row Connectors with Insulated Wire - How to Order



M32139/01 and /02 Insulated Wire Nano Connectors feature gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. These nanomimiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC.

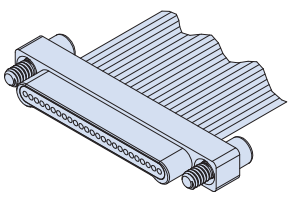
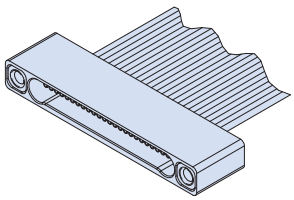
TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

M32139 Wire Type			
Wire Type	Specification	Color	Length Inches (mm)
01	NEMA HP3-ETXBBB	White	6 (152)
02	NEMA HP3-ETXBBB	White	18 (457)
03	NEMA HP3-ETXBBB	White	36 (914)
04	NEMA HP3-ETXBBB	10 Color[2]	6 (152)
05	NEMA HP3-ETXBBB	10 Color[2]	18 (457)
06	NEMA HP3-ETXBBB	10 Color[2]	36 (914)
07	M22759/33-30	White	6 (152)
08	M22759/33-30	White	18 (457)
09	M22759/33-30	White	36 (914)
10	M22759/33-30	10 Color[2]	6 (152)
11	M22759/33-30	10 Color[2]	18 (457)
12	M22759/33-30	10 Color[2]	36 (914)
13	04047-30A[1]	White	6 (152)
14	04047-30A[1]	White	18 (457)
15	04047-30A[1]	White	36 (914)
16	04047-30A[1]	10 Color[2]	6 (152)
17	04047-30A[1]	10 Color[2]	18 (457)
18	04047-30A[1]	10 Color[2]	36 (914)

1. DSCC 04047 is a special composite wire subject to additional cost and longer delivery.
2. Color coding per MIL-STF-681, System 1, except using ten solid colors in repeating sequence.

How to Order							
Sample Part Number:	**M32139/01**	**-D**	**01**	**S**	**N**	**S**	
Series	**M32139/01** = Plug, Pin Contacts, Single Row, Nanominiature **M32139/02** = Receptacle, Socket Contacts, Single Row, Nanominiature						
Insert Arrangements	**A** = 9 contacts **B** = 15 contacts **C** = 21 contacts **D** = 25 contacts **E** = 31 contacts **F** = 37 contacts **G** = 51 contacts						
Wire Type	All wire types specify 30 AWG stranded wire. See M32139 Wire Type Table						
Hardware	**S** = Jackscrew M32139/01 Plug Only **T** = Threaded Hole M32139/02 Receptacle Only						
Shell Material and Finish	**C** = Aluminum, Cadmium Finish (Not for Space) **S** = Stainless Steel, Passivated Finish **N** = Aluminum, Electroless Nickel Finish **T** = Titanium (Unplated)						
Space Class	**Leave Blank** for Non-Space Applications **S** = Space Grade						

Plug (Pin) Connector	Receptacle (Socket) Connector
	
S - Jackscrew	T - Female Thread

NOTES

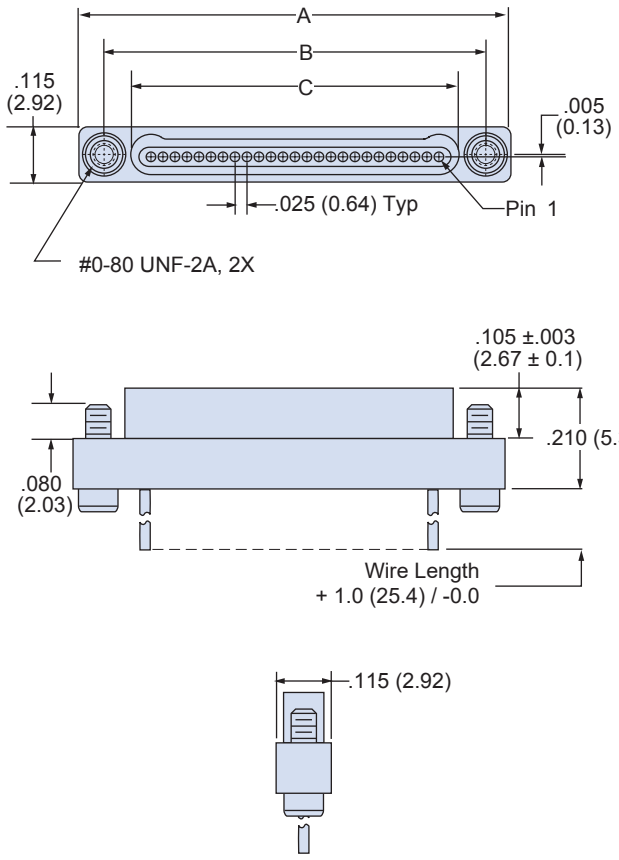
1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP N/A
   - Contacts: gold alloy/unplated
   - Wire: see part number breakdown
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/1 & MIL-DTL-32139/2

MIL-DTL-32139 Connectors

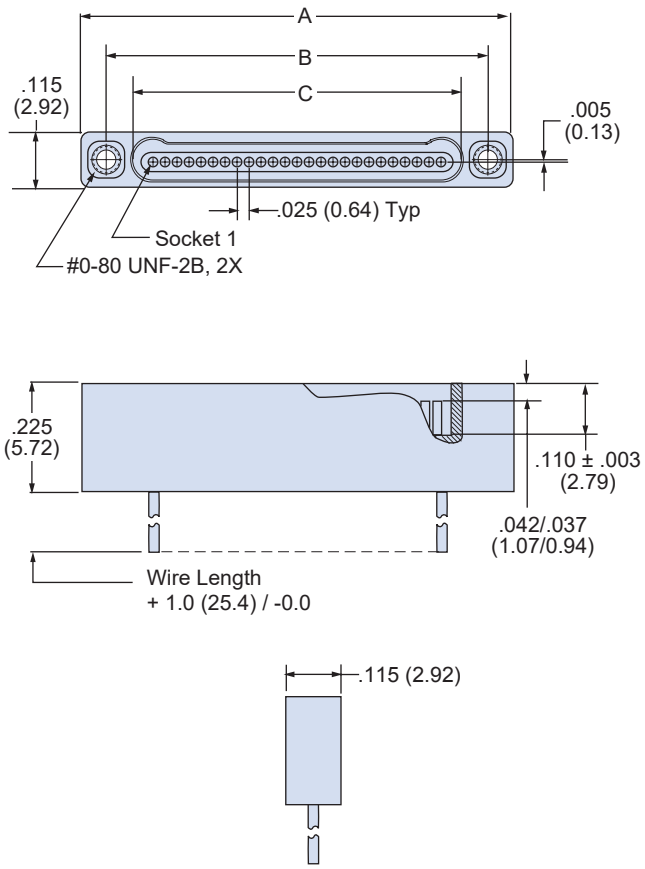
Plug (/01) and Receptacle (/02), Single Row Connectors with Insulated Wire - Dimensions

Single Row Nano Insulated Wire Dimensions

32139/01 Plug (Pin) Connectors



32139/02 Receptacle (Socket) Connectors

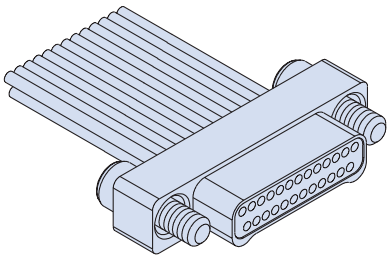


Layout	A		B BSC.		C BSC.	
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.
9P	.500	12.70	.395	10.03	.284	7.21
9S	.500	12.70	.395	10.03	.285	7.24
15P	.650	16.51	.545	13.84	.434	11.02
15S	.650	16.51	.545	13.84	.435	11.05
21P	.800	20.32	.695	17.65	.584	14.83
21S	.800	20.32	.695	17.65	.585	14.86
25P	.900	22.86	.795	20.19	.684	17.37
25S	.900	22.86	.795	20.19	.685	17.40
31P	1.050	26.67	.945	24.00	.834	21.18
31S	1.050	26.67	.945	24.00	.835	21.21
37P	1.200	30.48	1.095	27.81	.984	24.99
37S	1.200	30.48	1.095	27.81	.985	24.02
51P	1.550	39.37	1.445	36.70	1.334	33.88
51S	1.550	39.37	1.445	36.70	1.335	33.91

E

MIL-DTL-32139 Connectors

Plug (/03) and Receptacle (/04), Dual Row Connectors with Insulated Wire, How to Order



M32139/03 and /04 Insulated Wire Connectors feature gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. These nanomimiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC.

TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

M32139 Wire Type

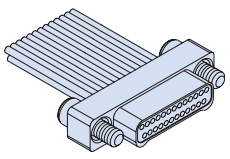
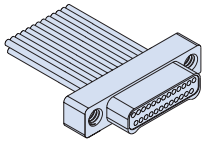
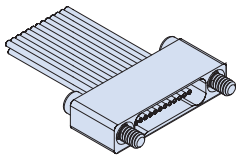
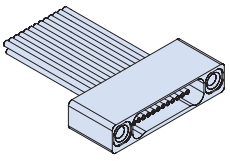
Wire Type	Specification	Color	Length Inches (mm)
01	NEMA HP3-ETXBBB	White	6 (152)
02	NEMA HP3-ETXBBB	White	18 (457)
03	NEMA HP3-ETXBBB	White	36 (914)
04	NEMA HP3-ETXBBB	10 Color[2]	6 (152)
05	NEMA HP3-ETXBBB	10 Color[2]	18 (457)
06	NEMA HP3-ETXBBB	10 Color[2]	36 (914)
07	M22759/33-30	White	6 (152)
08	M22759/33-30	White	18 (457)
09	M22759/33-30	White	36 (914)
10	M22759/33-30	10 Color[2]	6 (152)
11	M22759/33-30	10 Color[2]	18 (457)
12	M22759/33-30	10 Color[2]	36 (914)
13	04047-30A[1]	White	6 (152)
14	04047-30A[1]	White	18 (457)
15	04047-30A[1]	White	36 (914)
16	04047-30A[1]	10 Color[2]	6 (152)
17	04047-30A[1]	10 Color[2]	18 (457)
18	04047-30A[1]	10 Color[2]	36 (914)

1. DSCC 04047 is a special composite wire subject to additional cost and longer delivery.
2. Color coding per MIL-STF-681, System 1, except using ten solid colors in repeating sequence.

How To Order

Sample Part Number	M32139/03	-D	01	S	N	S

Series	**M32139/03** = Plug, Pin Contacts, Dual Row, Nanominiature **M32139/04** = Receptacle, Socket Contacts, Dual Row, Nanominiature
Insert Arrangements	**A** = 9 contacts **B** =15 contacts **C** = 21 contacts **D** = 25 contacts **E** = 31 contacts **F** = 37 contacts **G** = 51 contacts **H** = 65 contacts **J** = 69 contacts **K** = 85 contacts
Wire Type	All wire types specify 30 AWG stranded wire. See M32139 Wire Type Table
Hardware	**S** = Jackscrew **T** = Threaded Hole female threads available for plug connectors only if shell material is titanium or stainless steel
Shell Material and Finish	**C** = Aluminum, Cadmium Finish (Not for Space) **S** = Stainless Steel, Passivated Finish **N** = Aluminum, Electroless Nickel Finish **T** = Titanium (Unplated)
Space Class	**(Omit)** = for non-space applications **S** = Space Grade

Plug (Pin) Connector		Receptacle (Socket) Connector	
			
J - Jackscrew Option	T - Female Thread Option	J - Jackscrew Option	T - Female Thread Option

NOTES

1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP/N/A
   - Contacts: gold alloy/unplated
   - Wire: see part number breakdown
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/3 & MIL-DTL-32139/4

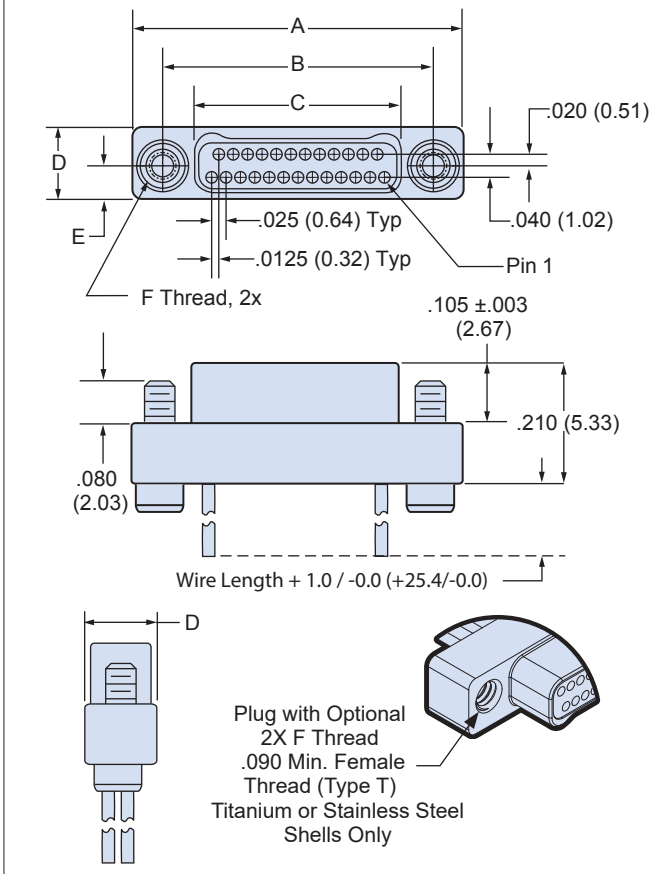
E

MIL-DTL-32139 Connectors

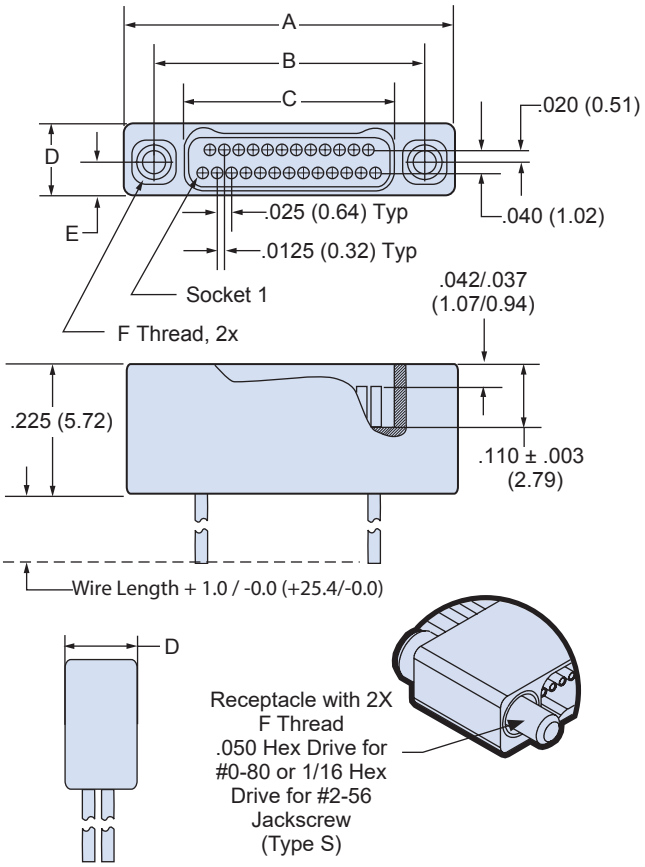
Plug (/03) and Receptacle (/04), Dual Row Connectors with Insulated Wire, Dimensions

Dimensions

M32139/03 Plug (pin) Connector



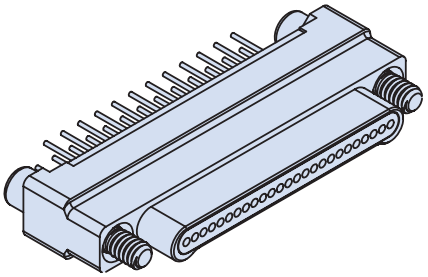
M32139/04 Receptalcle (Socket) Connector



Layout	A		B BSC.		C BSC.		D		E BSC.		F Thread
	In. ± .005	mm. ± 0.13	In.	mm.	In.	mm.	In. ±.005	mm ±0.13	In.	mm	
9P	.375	9.52	.270	6.86	.160	4.06	.125	3.18	.0575	1.46	#0-80 UNF
9S	.375	9.52	.270	6.86	.163	4.14	.125	3.18	.0575	1.46	#0-80 UNF
15P	.450	11.43	.345	8.76	.235	5.97	.125	3.18	.0575	1.46	#0-80 UNF
15S	.450	11.43	.345	8.76	.238	6.04	.125	3.18	.0575	1.46	#0-80 UNF
21P	.525	13.33	.420	10.67	.310	7.87	.125	3.18	.0575	1.46	#0-80 UNF
21S	.525	13.33	.420	10.67	.313	7.95	.125	3.18	.0575	1.46	#0-80 UNF
25P	.575	14.60	.470	11.94	.360	9.14	.125	3.18	.0575	1.46	#0-80 UNF
25S	.575	14.60	.470	11.94	.363	9.22	.125	3.18	.0575	1.46	#0-80 UNF
31P	.650	16.51	.545	13.84	.435	11.05	.125	3.18	.0575	1.46	#0-80 UNF
31S	.650	16.51	.545	13.84	.438	11.12	.125	3.18	.0575	1.46	#0-80 UNF
37P	.725	18.41	.620	15.75	.510	12.95	.125	3.18	.0575	1.46	#0-80 UNF
37S	.725	18.41	.620	15.75	.513	13.03	.125	3.18	.0575	1.46	#0-80 UNF
51P	.900	22.86	.795	20.19	.685	17.40	.125	3.18	.0575	1.46	#0-80 UNF
51S	.900	22.86	.795	20.19	.688	17.47	.125	3.18	.0575	1.46	#0-80 UNF
65P	1.075	27.30	.970	24.64	.860	21.84	.125	3.18	.0575	1.46	#0-80 UNF
65S	1.075	27.30	.970	24.64	.863	21.92	.125	3.18	.0575	1.46	#0-80 UNF
69P	1.125	28.57	1.020	25.91	.910	23.11	.125	3.18	.0575	1.46	#0-80 UNF
69S	1.125	28.57	1.020	25.91	.913	23.19	.125	3.18	.0575	1.46	#0-80 UNF
85P	1.377	34.97	1.246	31.65	1.110	28.19	.150	3.81	.0700	1.78	#2-56 UNC
85S	1.377	34.97	1.246	31.65	1.113	28.27	.150	3.81	.0700	1.78	#2-56 UNC

MIL-DTL-32139 Connectors

Plug (/05) and Receptacle (/06), Single Row, Vertical Mount Thru Hole PCB Connectors - How to Order

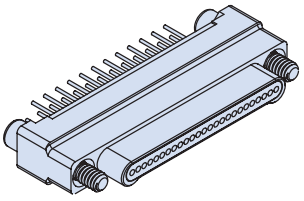
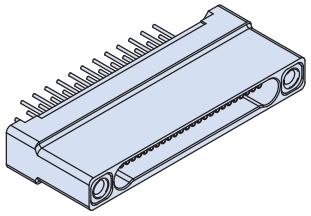


M32139/05 and /06 Single Row Connectors feature gold alloy TwistPin contacts. Contacts are precision-crimped to 30 AWG copper wire PC tails with gold over nickel plating. These nanominiature connectors offer premium performance and reliability for demanding applications and are in accordance with MIL-DTL-32139. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC.

TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

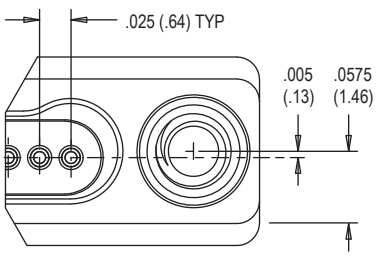
How To Order							
Sample Part Number	**M32139/05**	**-D**	**01**	**S**	**N**	**S**	
Series	**M32139/05** = Plug, Pin Contacts, Single Row, Nanominiature **M32139/06** = Receptacle, Socket Contacts, Single Row, Nanominiature						
Insert Arrangements	**A** = 9 contacts **B** =15 contacts **C** = 21 contacts **D** = 25 contacts **E** = 31 contacts **F** = 37 contacts **G** = 51 contacts						
PC Tail Finish	**01** = Tin/Lead (Sn63Pb37 or Sn60Pb40) **02** = Gold						
Hardware	**S** = Jackscrew M32139/05 (Plug Only) **T** = Threaded Hole M32139/06 (Receptacle Only)						
Shell Material and Finish	**C** = Aluminum, Cadmium Finish (Not for Space) **N** = Aluminum, Electroless Nickel Finish **S** = Stainless Steel, Passivated Finish **T** = Titanium (Unplated)						
Space Class	**S** = Space Grade **Omit** for non-space applications						

Plug (Pin) Connector	Receptacle (Socket) Connector
	
S - Jackscrew	T - Female Thread

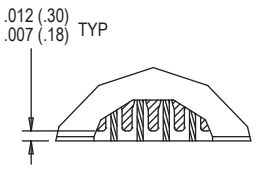
NOTES

1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP/N/A
   - Contacts: gold alloy/unplated
   - PC tails: 30 AWG copper wire with gold over nickel plating
   - Hardware: stainless steel, passivated
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/5 & MIL-DTL-32139/6

DETAIL A



DETAIL B



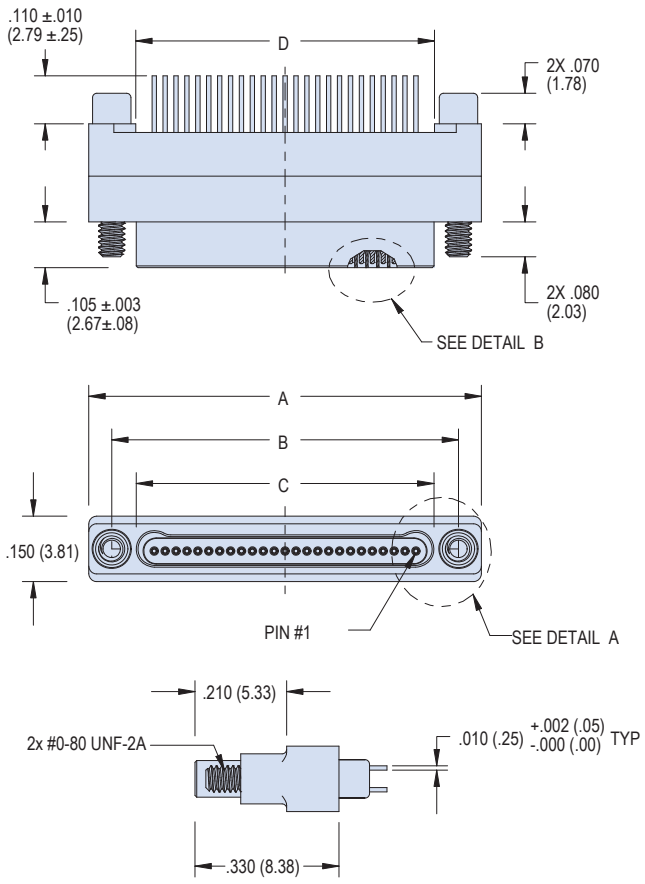
DETAIL B

MIL-DTL-32139 Connectors

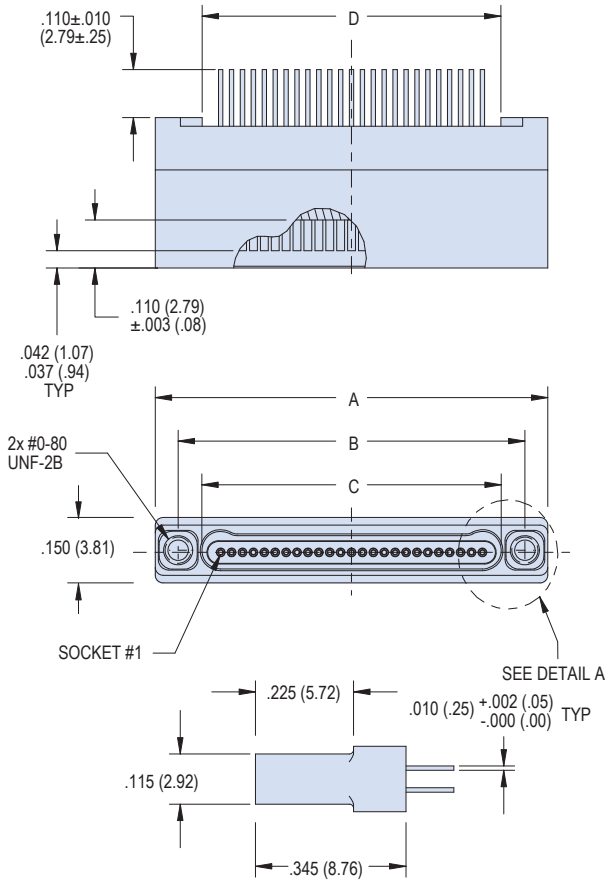
Plug (/05) and Receptacle (/06), Single Row, Vertical Mount Thru Hole PCB Connectors - Dimensions

Dual Row Insulated Wire Dimensions

32139/05 Plug (Pin) Connectors



32139/06 Receptacle (Socket) Connectors



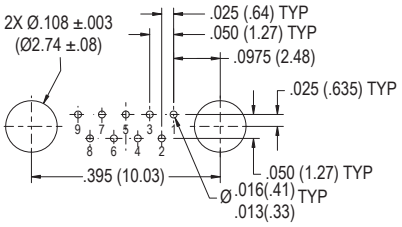
Layout	A		B BSC.		C BSC.		D Max	
	In	mm	In	mm	In	mm	In	mm
9P	.500	12.70	.395	10.03	.284	7.21	.295	7.49
9S	.500	12.70	.395	10.03	.285	7.24	.295	7.49
15P	.650	16.51	.545	13.84	.434	11.02	.445	11.30
15S	.650	16.51	.545	13.84	.435	11.05	.445	11.30
21P	.800	20.32	.695	17.65	.584	14.83	.595	15.11
21S	.800	20.32	.695	17.65	.585	14.86	.595	15.11
25P	.900	22.86	.795	20.19	.684	17.37	.695	17.65
25S	.900	22.86	.795	20.19	.685	17.40	.695	17.65
31P	1.050	26.67	.945	24.00	.834	21.18	.845	21.46
31S	1.050	26.67	.945	24.00	.835	21.21	.845	21.46
37P	1.200	30.48	1.095	27.81	.984	24.99	.995	25.27
37S	1.200	30.48	1.095	27.81	.985	25.02	.995	25.27
51P	1.550	39.37	1.445	36.70	1.334	33.88	1.345	34.16
51S	1.550	39.37	1.445	36.70	1.335	33.91	1.345	34.16

E

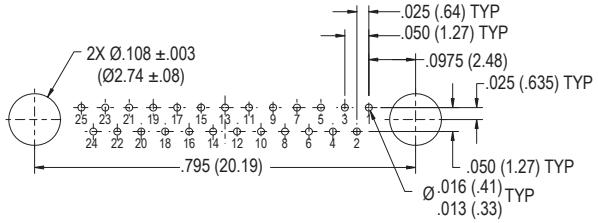
U.S. CAGE code 06324/0CA77 • Dimensions in Inches (millimeters) are subject to change without notice.

MIL-DTL-32139/05 Single Row Plug (Pin) PCB Footprint

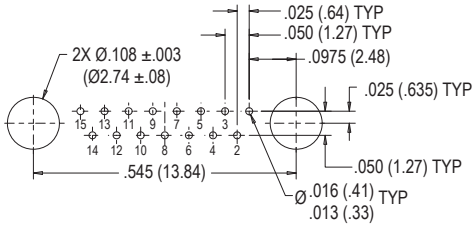
PCB layout patterns shown are for the connector mounting side of PC board



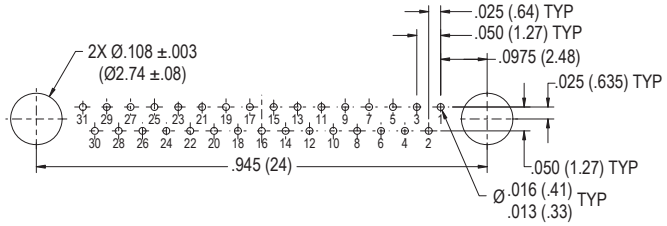
9 Contacts



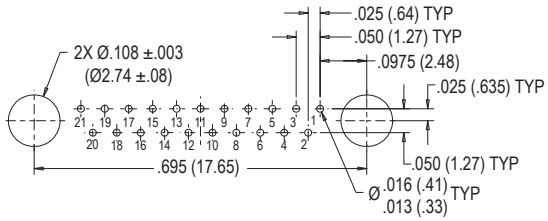
25 Contacts



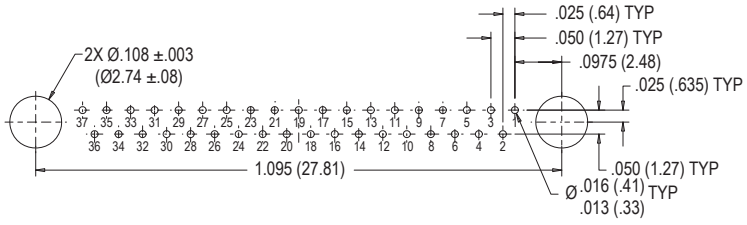
15 Contacts



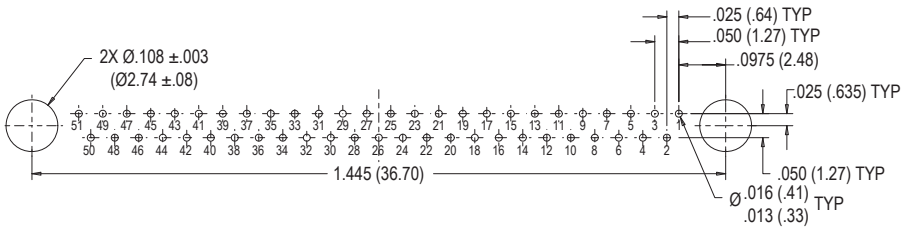
31 Contacts

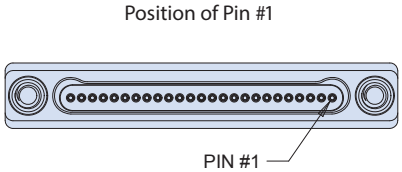


21 Contacts



37 Contacts

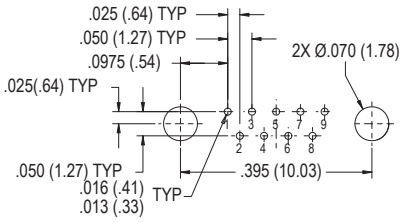




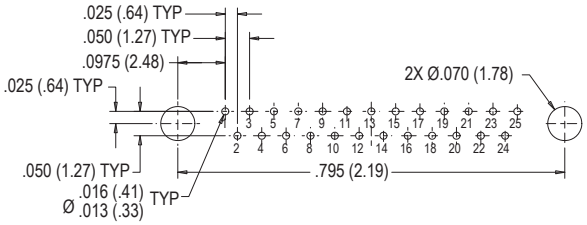
51 Contacts

MIL-DTL-32139/06 Single Row Receptacle (Socket) PCB Footprint

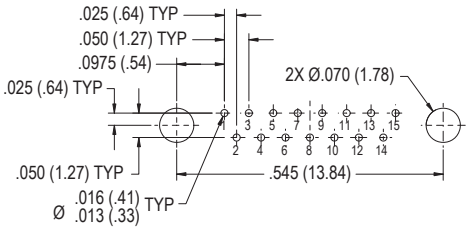
PCB layout patterns shown are for the connector mounting side of PC board



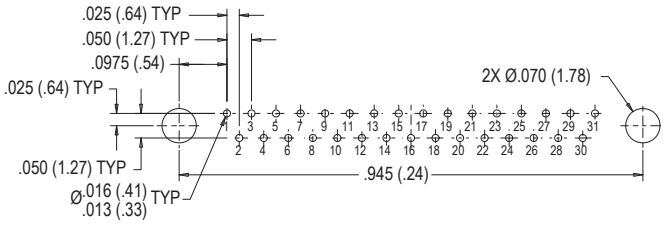
9 Contacts



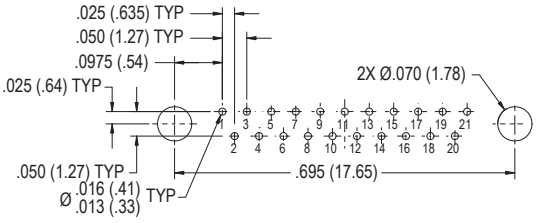
25 Contacts



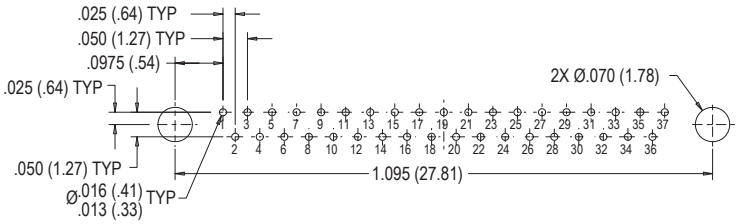
15 Contacts



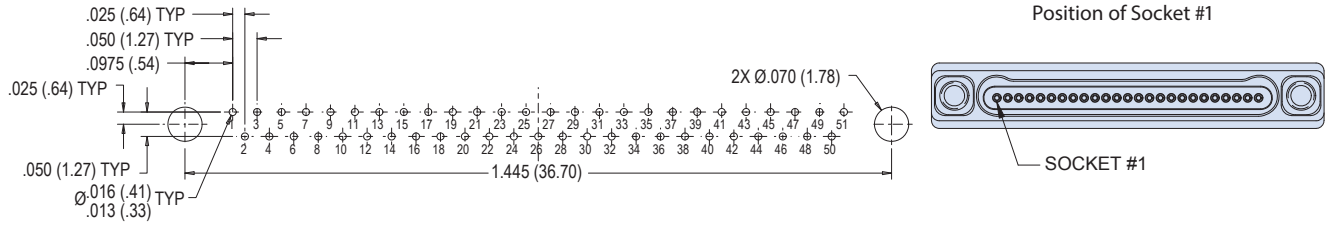
31 Contacts



21 Contacts



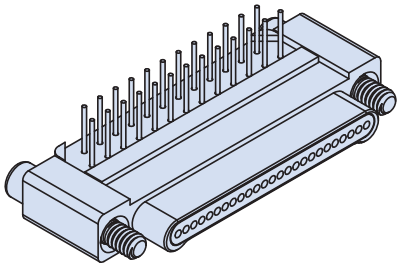
37 Contacts



51 Contacts

MIL-DTL-32139 Connectors

Plug (/07) and Receptacle (/08), Single Row, Right Angle Mount Thru Hole PCB Connectors - How to Order



M32139/07 and /08 Single Row Connectors feature gold alloy TwistPin contacts. Contacts are precision-crimped to 30 AWG copper wire PC tails with gold over nickel plating. These nanominiature connectors offer premium performance and reliability for demanding applications and are in accordance with MIL-DTL-32139. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC.

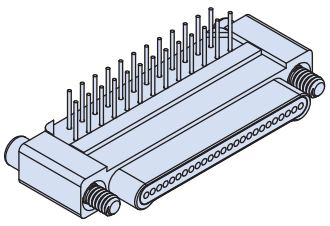
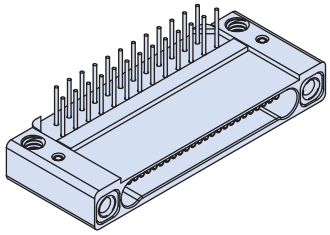
TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

How To Order

Sample Part Number	M32139/07	-A	01	S	N	S

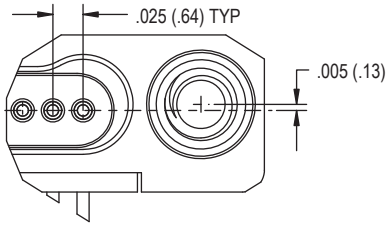
Series	**M32139/07** = Plug, Pin Contacts, Single Row, Nanominiature **M32139/08** = Receptacle, Socket Contacts, Single Row, Nanominiature
Insert Arrangements	**A** = 9 contacts **B** =15 contacts **C** = 21 contacts **D** = 25 contacts **E** = 31 contacts **F** = 37 contacts **G** = 51 contacts
PC Tail Finish	**01** = Tin/Lead (Sn63Pb37 or Sn60Pb40) **02** = Gold
Hardware	**S** = Jackscrew (M32139/07 Plug Only) **T** = Threaded Hole (M32139/08 Receptacle Only)
Shell Material and Finish	**C** = Aluminum, Cadmium Finish (Not for Space) **N** = Aluminum, Electroless Nickel Finish **S** = Stainless Steel, Passivated Finish **T** = Titanium (No Finish)
Space Class	**S** = Space Grade **Omit** = non-space applications

Plug (Pin) Connector	Receptacle (Socket) Connector
	
S - Jackscrew	T - Female Thread

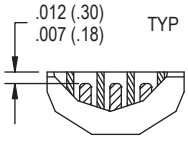
NOTES

1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP/N/A
   - Contacts: gold alloy/unplated
   - PC tails: 30 AWG copper wire with gold over nickel plating
   - Hardware: passivated stainless steel
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/7 & MIL-DTL-32139/8

DETAIL A



DETAIL B



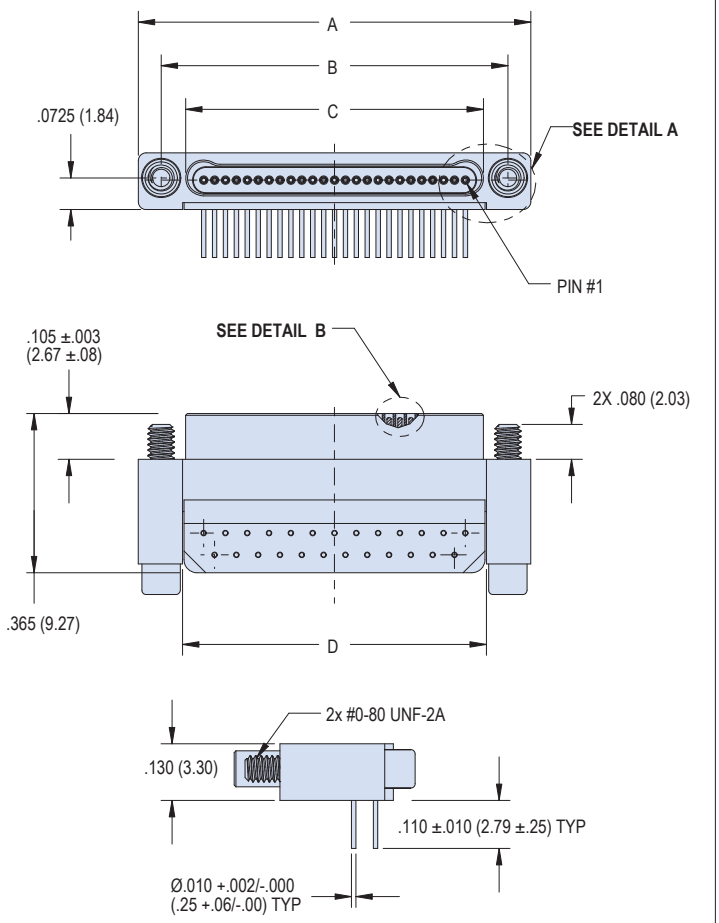
E

MIL-DTL-32139 Connectors

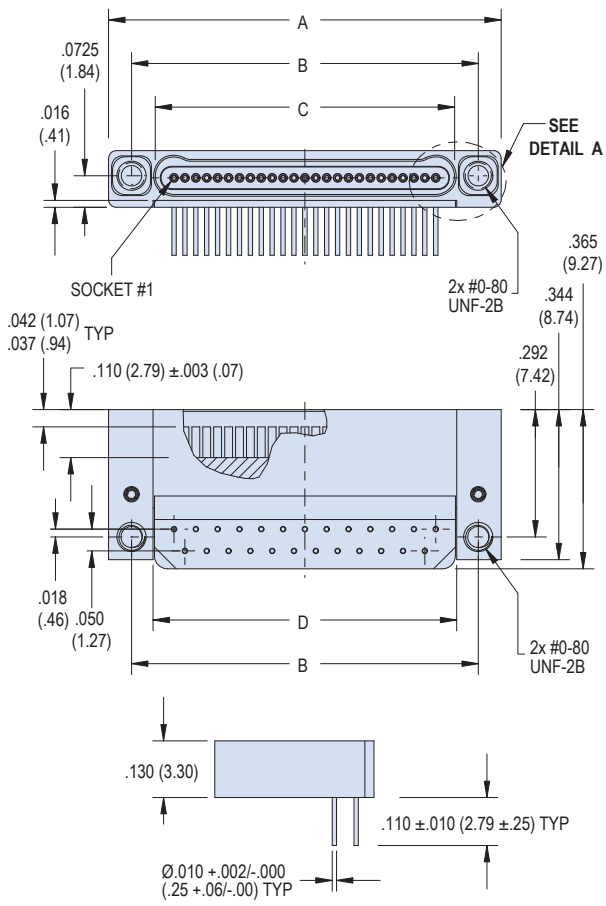
Plug (/07) and Receptacle (/08), Single Row, Right Angle Mount Thru Hole PCB Connectors - Dimensions

Dimensions

32139/07 Plug (Pin) Connectors



32139/08 Receptacle (Socket) Connectors



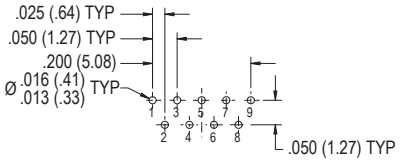
Layout	A		B BSC.		C BSC.		D Max	
	In	mm	In	mm	In	mm	In	mm
9P	.500	12.70	.395	10.03	.284	7.21	.295	7.49
9S	.500	12.70	.395	10.03	.285	7.24	.295	7.49
15P	.650	16.51	.545	13.84	.434	11.02	.445	11.30
15S	.650	16.51	.545	13.84	.435	11.05	.445	11.30
21P	.800	20.32	.695	17.65	.584	14.83	.595	15.11
21S	.800	20.32	.695	17.65	.585	14.86	.595	15.11
25P	.900	22.86	.795	20.19	.684	17.37	.695	17.65
25S	.900	22.86	.795	20.19	.685	17.40	.695	17.65
31P	1.050	26.67	.945	24.00	.834	21.18	.845	21.46
31S	1.050	26.67	.945	24.00	.835	21.21	.845	21.46
37P	1.200	30.48	1.095	27.81	.984	24.99	.995	25.27
37S	1.200	30.48	1.095	27.81	.985	25.02	.995	25.27
51P	1.550	39.37	1.445	36.70	1.334	33.88	1.345	34.16
51S	1.550	39.37	1.445	36.70	1.335	33.91	1.345	34.16

E

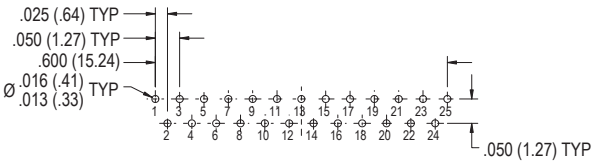
MIL-DTL-32139 Connectors

MIL-DTL-32139/07 Single Row Plug (Pin)
Right Angle Mount Thru Hole PCB Footprint

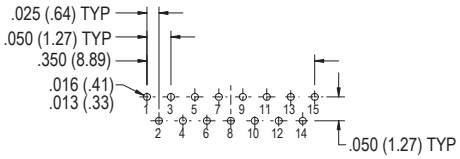
Vertical PCB plug (pin) connector layout patterns shown are for the connector mounting side of PC board



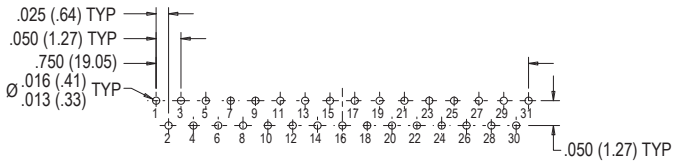
9 Contacts



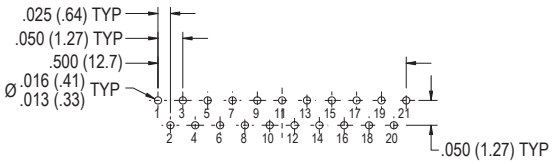
25 Contacts



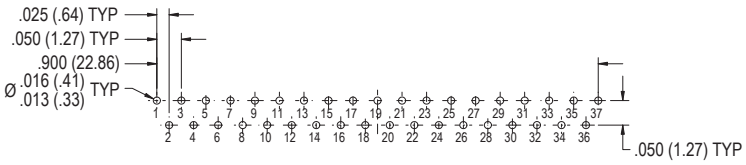
15 Contacts



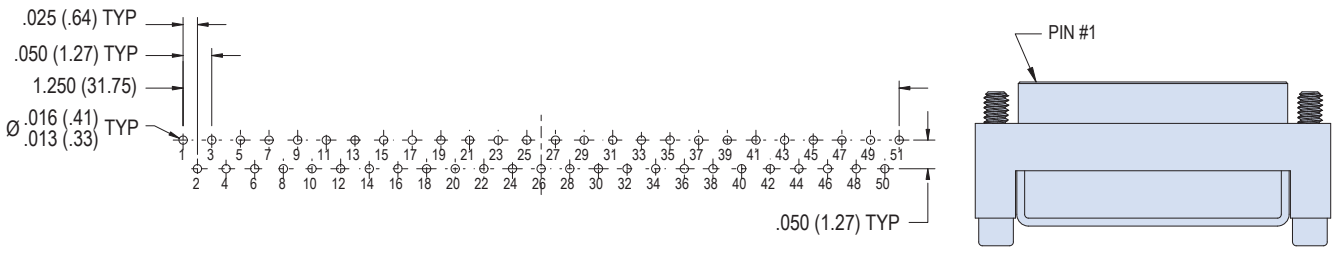
31 Contacts



21 Contacts



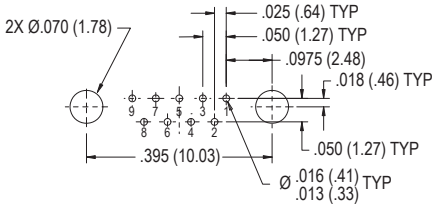
37 Contacts



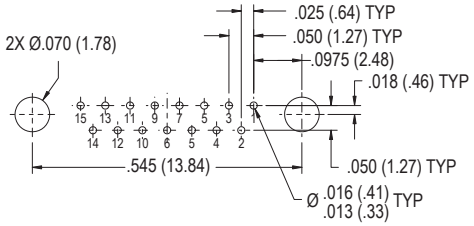
51 Contacts

MIL-DTL-32139/08 Single Row Receptacle (Socket) Right Angle Mount Thru Hole PCB Footprint

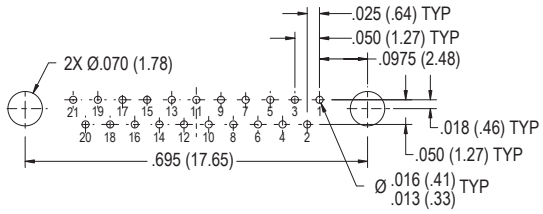
Vertical PCB Receptacle (socket) connector layout patterns shown are for the connector mounting side of PC board



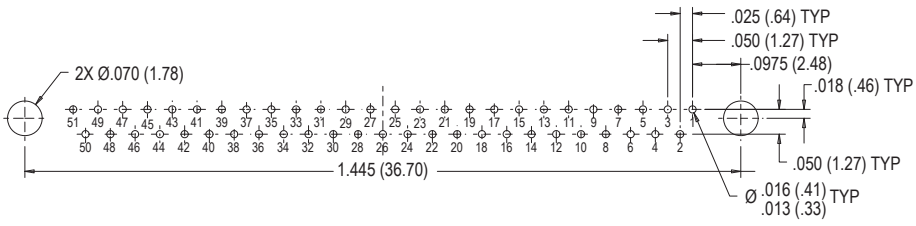
9 Contacts



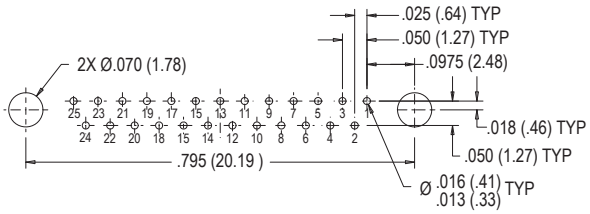
15 Contacts



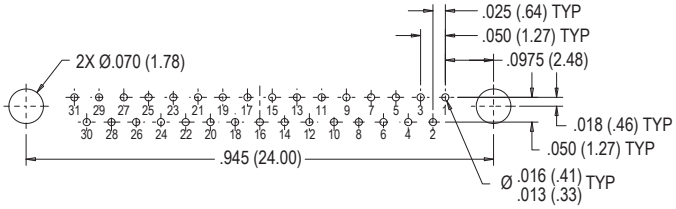
21 Contacts



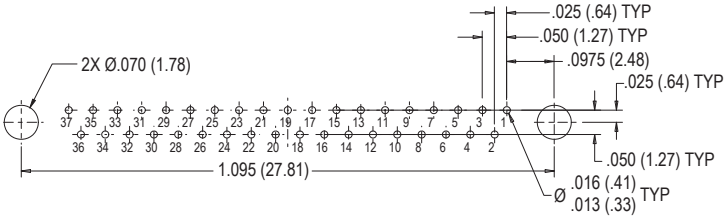
51 Contacts



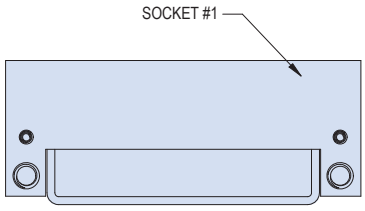
25 Contacts



31 Contacts

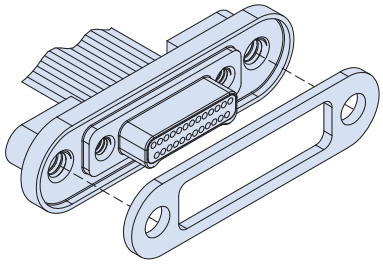


37 Contacts



MIL-DTL-32139 Connectors

Plug (/09) and Receptacle (/10), Dual Row Connectors with Insulated Wire - How to Order



M32139/09 and /10 Insulated Wire Connectors feature gold alloy TwistPin contacts. Contacts are precision-crimped to insulated, stranded wire. These nanomimiature connectors offer premium performance and reliability for demanding applications. Contact spacing is .025 inches. 1 amp current rating, DWV rating 250 volts AC. For replacement gasket see 899-015.

TwistPin Contact System assures premium performance in demanding environments. The gold alloy contacts will stand up to years of exposure without corrosion.

Typical Applications include UAV's, satellites, missile systems and geophysical instruments.

How To Order

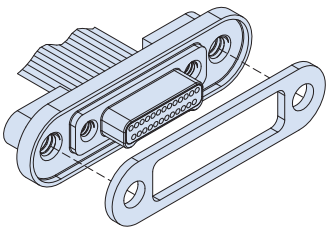
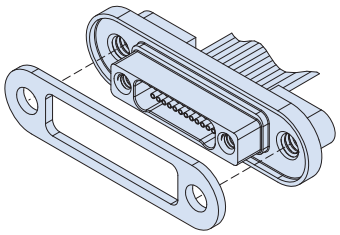
Sample Part Number	M32139/09	-D	01	T	S	S	01	M

Series	**M32139/09** = Plug, Pin Contacts, Dual Row, Nanominiature **M32139/10** = Receptacle, Socket Contacts, Dual Row, Nanominiature
Insert Arrangements	**A** = 9 contacts **B** =15 contacts **C** = 21 contacts **D** = 25 contacts **E** = 31 contacts **F** = 37 contacts **G** = 51 contacts **H** = 65 contacts **J** = 69 contacts **K** = 85 contacts
Wire Type	All wire types specify 30 AWG stranded wire. See M32139 Wire Type Table
Hardware	**T** = Threaded Hole
Shell Material and Finish	**S** = Stainless Steel, Passivated Finish **T** = Titanium (Unplated)
Space Class	**(Omit)** = for non-space applications **S** = Space Grade
Gaske Material	Omit for no gasket **01** = Fluorocilicone IAW MIL-DTL25988 Type II, Class I, Grade 70 **02** = Passivated, silver plated aluminum filled fluorosilicone IAW MIL-DTL-83528, Type "D" (CHO-SEAL 1298 or equivalent) **03** = Nickel plated, aluminum filled fluorosilicone, (CHO-SEAL 6503 or equivalent)
Mounting Thread Option	**Omit** for #2-56 UNC-2B **M** = M2x0.4 6H

M32139 Wire Type

Wire Type	Specification	Color	Length Inches (mm)
01	NEMA HP3-ETXBBB	White	6 (152)
02	NEMA HP3-ETXBBB	White	18 (457)
03	NEMA HP3-ETXBBB	White	36 (914)
04	NEMA HP3-ETXBBB	10 Color[2]	6 (152)
05	NEMA HP3-ETXBBB	10 Color[2]	18 (457)
06	NEMA HP3-ETXBBB	10 Color[2]	36 (914)
07	M22759/33-30	White	6 (152)
08	M22759/33-30	White	18 (457)
09	M22759/33-30	White	36 (914)
10	M22759/33-30	10 Color[2]	6 (152)
11	M22759/33-30	10 Color[2]	18 (457)
12	M22759/33-30	10 Color[2]	36 (914)
13	04047-30A[1]	White	6 (152)
14	04047-30A[1]	White	18 (457)
15	04047-30A[1]	White	36 (914)
16	04047-30A[1]	10 Color[2]	6 (152)
17	04047-30A[1]	10 Color[2]	18 (457)
18	04047-30A[1]	10 Color[2]	36 (914)

1. DSCC 04047 is special composite wire subject to additional cost and longer delivery times.
2. Color coding per MIL-STF-681, System 1, except using ten solid colors in repeating sequence.

Plug (Pin) Connector	Receptacle (Socket) Connector
	

NOTES

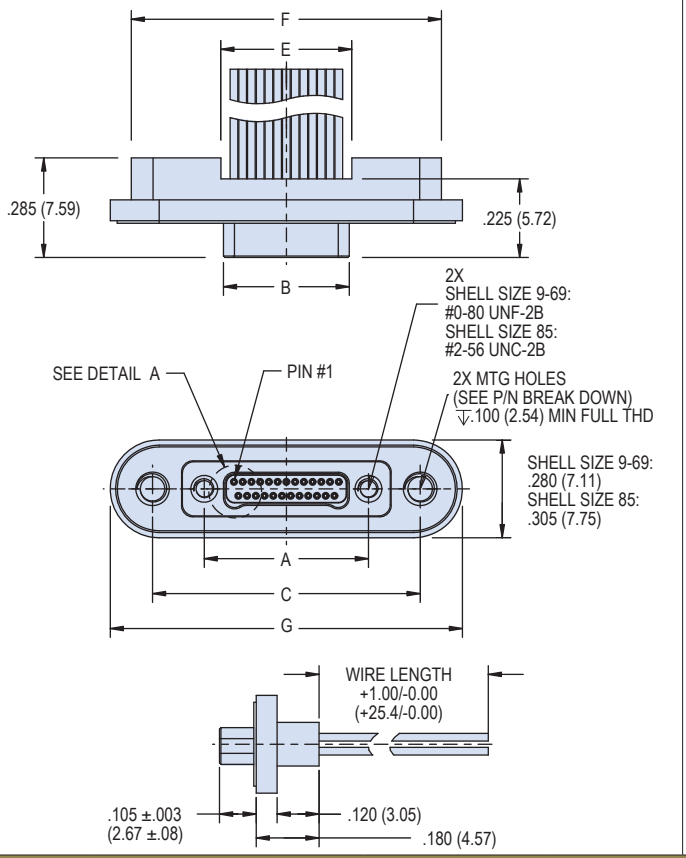
1. Material and finish:
   - Shell: see part number breakdown
   - Insulator: LCP/N/A
   - Contacts: gold alloy/unplated
   - Wire: see M32139 wire type table
2. Inspect and Test IAW MIL-DTL-32139
3. Interface dimensions per MIL-DTL-32139/9 & MIL-DTL-32139/10
4. Panel cutout is sized to allow conector mounting with lobes in either up or down orientation
5. Recommended panel thickness .100 (2.5) max

E

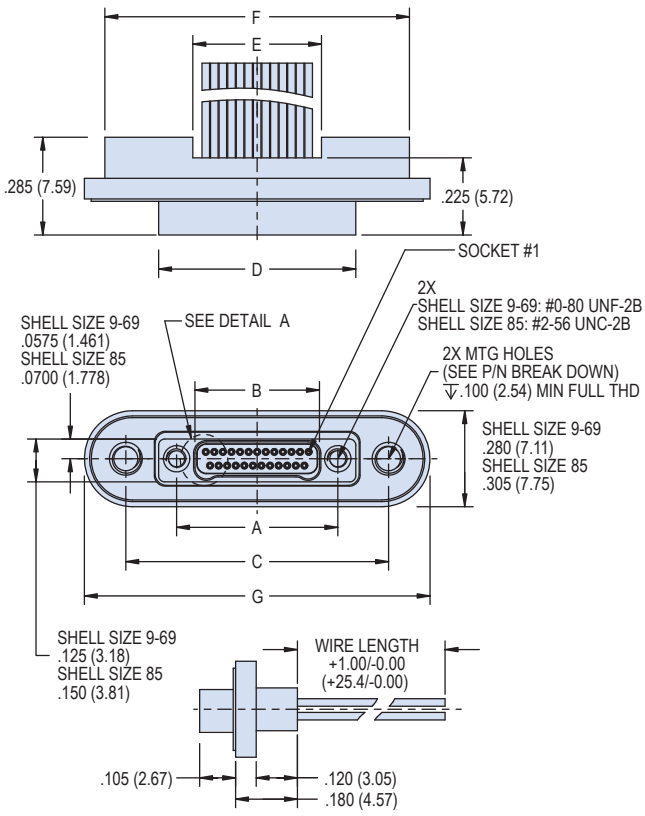
MIL-DTL-32139 Connectors

Plug (/09) and Receptacle (/10), Dual Row Connectors with Insulated Wire - How to Order

M32139/09 Plug (Pin) Connectors



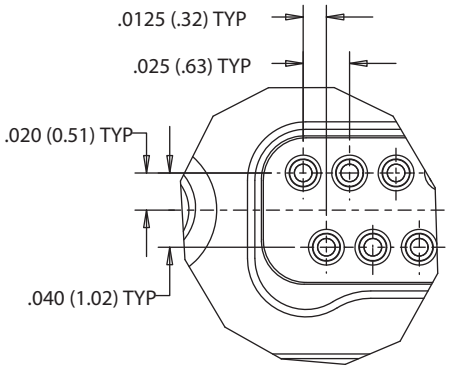
M32139/10 Receptacle (Socket) Connectors



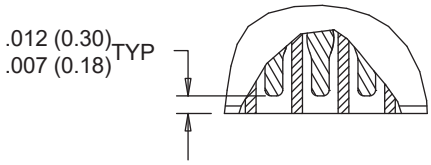
Dimensions

Layout	A BSC.		B BSC.		C BSC.		D		E		F		G	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
9P	.270	6.86	.160	4.06	.566	14.38	--	--	.175	4.45	.688	17.48	.808	20.52
9S	.270	6.86	.163	4.14	.566	14.38	.375	9.53	.175	4.45	.688	17.48	.808	20.52
15P	.345	8.76	.235	5.97	.641	16.28	--	--	.250	6.35	.763	19.38	.883	22.43
15S	.345	8.76	.238	6.05	.641	16.28	.450	11.43	.250	6.35	.763	19.38	.883	22.43
21P	.420	10.67	.310	7.87	.716	18.19	--	--	.325	8.26	.838	21.29	.958	24.33
21S	.420	10.67	.313	7.95	.716	18.19	.525	13.34	.325	8.26	.838	21.29	.958	24.33
25P	.470	11.94	.360	9.14	.766	19.46	--	--	.375	9.53	.888	22.56	1.008	25.60
25S	.470	11.94	.363	9.22	.766	19.46	.575	14.61	.375	9.53	.888	22.56	1.008	25.60
31P	.545	13.84	.435	11.05	.841	21.36	--	--	.450	11.43	.963	24.46	1.083	27.51
31S	.545	13.84	.438	11.13	.841	21.36	.650	16.51	.450	11.43	.963	24.46	1.083	27.51
37P	.620	15.75	.510	12.95	.916	23.27	--	--	.525	13.34	1.038	26.37	1.158	29.41
37S	.620	15.75	.513	13.03	.916	23.27	.725	18.42	.525	13.34	1.038	26.37	1.158	29.41
51P	.795	20.19	.685	17.40	1.091	27.71	--	--	.700	17.78	1.213	30.81	1.333	33.86
51S	.795	20.19	.688	17.48	1.091	27.71	.900	22.86	.700	17.78	1.213	30.81	1.333	33.86
65P	.970	24.64	.860	21.84	1.266	32.16	--	--	.875	22.23	1.388	35.26	1.508	38.30
65S	.970	24.64	.863	21.92	1.266	32.16	1.075	27.31	.875	22.23	1.388	35.26	1.508	38.30
69P	1.020	25.91	.910	23.11	1.316	33.43	--	--	.925	23.50	1.438	36.53	1.558	39.57
69S	1.020	25.91	.913	23.19	1.316	33.43	1.125	28.58	.925	23.50	1.438	36.53	1.558	39.57
85P	1.246	31.65	1.110	28.19	1.568	39.83	--	--	1.125	28.58	1.690	42.93	1.810	45.97
85S	1.246	31.65	1.113	28.27	1.568	39.83	1.377	34.98	1.125	28.58	1.690	42.93	1.810	45.97

DETAIL A

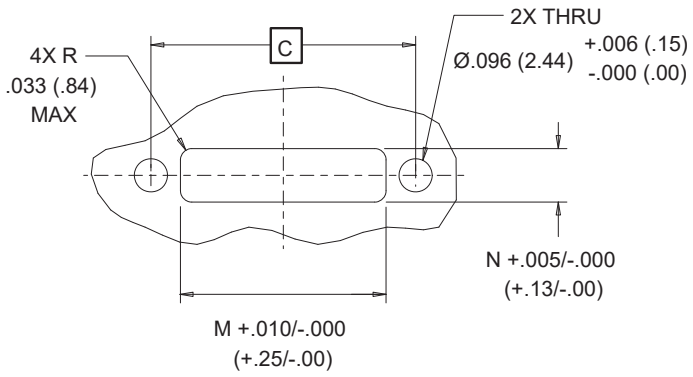


DETAIL B



M32139 PLUG AND RECEPTACLE PANEL CUTOUT

Panel Cutout Dimensions			
Shell Size	C	M	**N**
SIZE-9	.566 (14.38)	.395 (10.03)	.155 (3.94)
SIZE-15	.641 (16.28)	.470 (11.94)	.155 (3.94)
SIZE-21	.716 (18.19)	.545 (13.84)	.155 (3.94)
SIZE-25	.766 (19.46)	.595 (15.11)	.155 (3.94)
SIZE-31	.841 (21.36)	.670 (17.02)	.155 (3.94)
SIZE-37	.916 (23.27)	.745 (18.92)	.155 (3.94)
SIZE-51	1.091 (27.71)	.920 (23.37)	.155 (3.94)
SIZE-65	1.266 (32.16)	1.095 (27.81)	.155 (3.94)
SIZE-69	1.316 (33.43)	1.145 (29.08)	.155 (3.94)
SIZE-85	1.568 (39.83)	1.397 (35.48)	.180 (4.57)



E

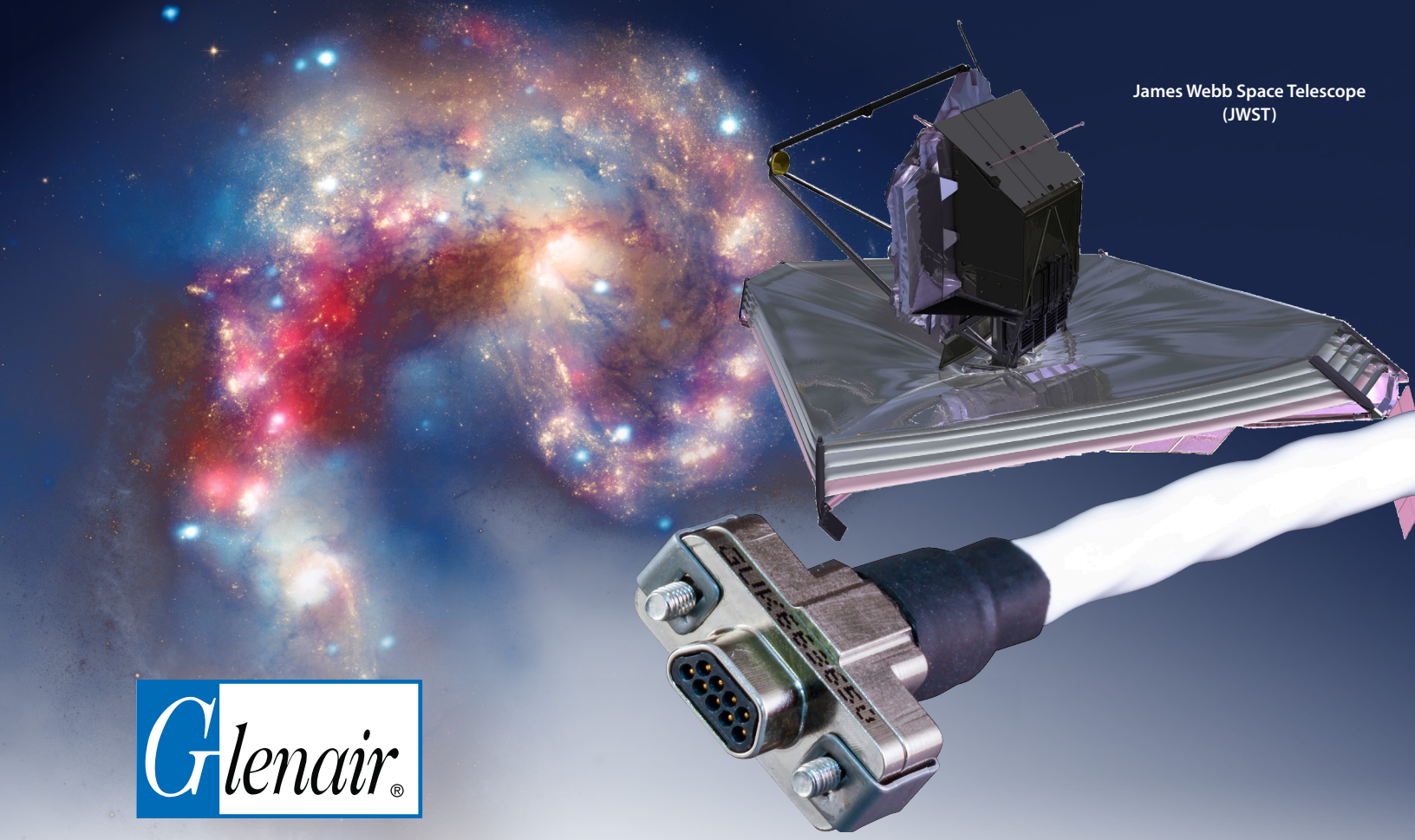
Part Number	Page No.
000-01-05-174	A-13
000-01-09-174	A-13
000-01-15-174	A-13
000-01-21-174	A-13
000-01-25-174	A-13
000-01-31-174	A-13
000-01-37-174	A-13
000-01-51-174	A-13
000-01-05-175	A-13
000-01-09-175	A-13
000-01-15-175	A-13
000-01-21-175	A-13
000-01-25-175	A-13
000-01-31-175	A-13
000-01-37-175	A-13
000-01-51-175	A-13
000-01-09-176	A-13
000-01-15-176	A-13
000-01-21-176	A-13
000-01-25-176	A-13
000-01-31-176	A-13
000-01-37-176	A-13
000-01-41-176	A-13
000-01-51-176	A-13
000-01-65-176	A-13
000-01-69-176	A-13
000-01-85-176	A-13
000-01-09-177	A-13
000-01-15-177	A-13
000-01-21-177	A-13
000-01-25-177	A-13
000-01-31-177	A-13
000-01-37-177	A-13
000-01-41-177	A-13
000-01-51-177	A-13
000-01-65-177	A-13
000-01-69-177	A-13

Part Number	Page No.
000-01-85-177	A-13
890-001	C-2
890-002	C-2
890-003	C-6
890-004	C-6
890-005	C-4
890-006	C-8
890-007	C-8
890-008	C-18
890-009	C-18
890-010	C-28
890-011	C-28
890-012	C-38
890-013	C-38
890-016	C-48
890-017	C-32
890-018	C-32
890-019	C-42
890-020	C-42
890-037	C-50
890-038	C-50
890-039	C-12
890-040	C-12
890-043	C-22
890-044	C-22
891-001	D-3
891-002	D-3
891-003	D-29
891-004	D-29
891-005	D-9
891-006	D-33
891-007	D-33
891-008	D-51
891-009	D-51
891-010	D-69
891-011	D-69
891-012	D-81

F

Nanominature Connectors

Part Number Index



James Webb Space Telescope (JWST)

Spacewire

Reduced Cost of Ownership, Easy Integration, and High-Performance for Flight and Lab Grade Cable Assemblies.

The success of any space mission begins with reliable data transmission and Glenair Spacewire cables, built to meet the strict standards set forth by ECSS-E-ST-50-12C, make this a reality. Our Spacewire cables offer bidirectional, high speed data transmission rates up to 400 Mbits/s while significantly reducing cross talk, skew, and signal attenuation. By incorporating a serial, point-to-point cable, with low voltage differential signaling (LVDS) reduced costs are realized through an easily integrated data transmission cable. These features allow Spacewire cables to be incorporated across various satellite programs without the expense of costly design customization.

Spacewire: The Space Industry Data Transmission Standard

Glenair Spacewire assemblies begin with a high performance cable built with expanded polytetraflouroethylene (ePTFE) insulation. This material allows for low-loss transmission of LVDS signals maximizing data-rates while allowing for the implementation of standard hardware protocols, thus eliminating the need for design customization and long lead time cable projects.

Typical Uses Include

- EGSE applications
- Radar sensor systems
- Hi-resolution camera equipment
- Sensor, mass-memory unit, and telemetry subsystem interconnections

Approved for Use by:

- ESA
- NASA
- JAXA
- RKA

Connector/Cable

- **Laboratory and Space Grade Versions Available**
- **Qualified MIL-DTL-83513 Micro-D Connector**
- **Gold Plated Copper Alloy TwistPin Contacts**
- **Basic Cable, 4 Twisted Pair Cables and a Ground**
- **Epoxy Resin Potting**
- **EMI Banding Backshell**

Performance

- **3 Amps**
- **Temperature Tolerance -200 to 180° C**
- **100 Ω Impedance Shielded Signal Pair**
- **Very Low Skew, Signal Attenuation and Cross Talk**
- **65dB Minimum Attenuation Shielding Effectiveness**
- **Low Magnetic Permeability IAW EIA-364-54**

Spacewire

TECHNICAL SPECIFICATIONS

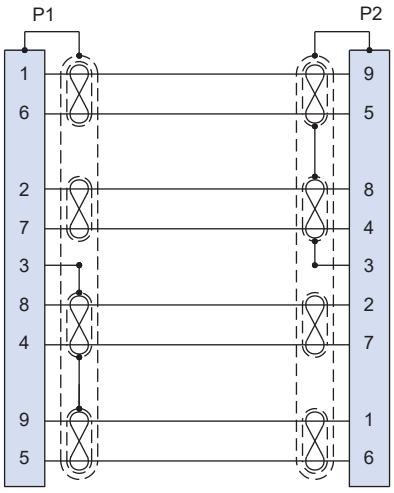
Notes:

1. Flight grade (cable Type F) assemblies to be screened IAW NASA EEE-INST-002, Table 2. Level 1 with 100% thermal vacuum outgassing (24 hours/+125°C/10^{-6} torr). Reference Glenair Mod Code 429C.
2. Operating temperature - 200°C to +180°C. Reference Glenair Mod Code 428.
3. Electrical performance:
   Dielectric withstanding voltage: 600 VAC.
   Insulation resistance: 5000 megohms @500 VDC.
4. Assembly to be identified with Glenair's name, Part Number, Cage Code and Date Code or ESCC Component Part Marking Standards.

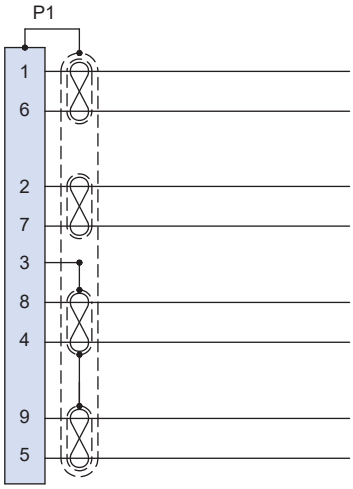
Materials/finish:

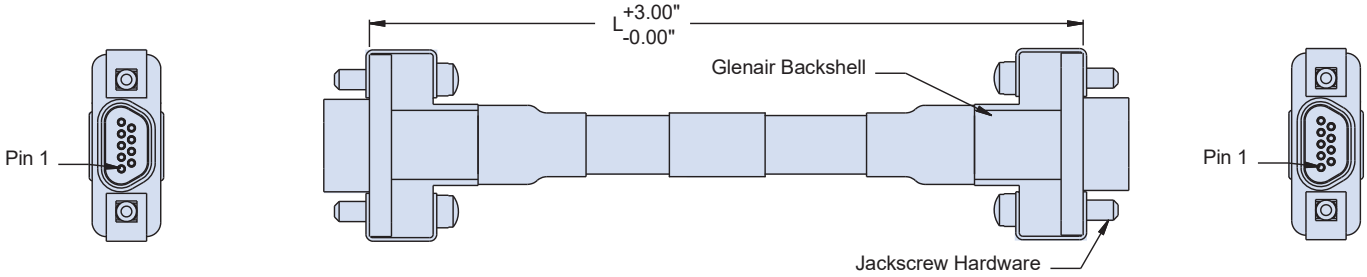
- Shells/backshells - aluminum alloy/electroless nickel.
- Insulators - high grade rigid dielectric/N.A.
- Contacts - copper alloy, gold plated.
- Hardware - stainless steel/passivated.

Back To Back Wiring
Diagram (GP)



Single Ended Wiring
Diagram (P)





How To Order Spacewire											
Sample Part Number	GSWM	2	L	-9	GP	-6	F	B	-16	S
Product Series	**GSWM**–Glenair Spacewire Micro-D									
Shell Plating	**2**–Electroless Nickel **5**–Gold									
Insulator Material	**L**–LCP									
Shell Size	**-9**									
Connector Type	**P**–Single Ended Pin (Plug) **GP**–Pin (Plug) Connector Both Ends									
Wire Gauge	**-6**–26 AWG **-8**–28 AWG **-0**–30 AWG (30 AWG–Lab Only)									
Cable Type	**F**–Flight Grade **L**–Lab Grade									
Termination Option	**B**–Backshell									
Cable Length In Inches	**-16** = 16 inches (12 inches minimum)									
Hardware	**S**–Male Slotted Jackscrew **P**–Female Jackpost									

Why Choose GLENAIR?

Plenty of Raw Materials!

Outstanding Customer Service!

In-House Assembly!

Abundant Machining Capacity!

Huge "Same-Day" Inventory!

One of North America's and Machining