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# Series 89 Nanominiature Connectors

## Key Features

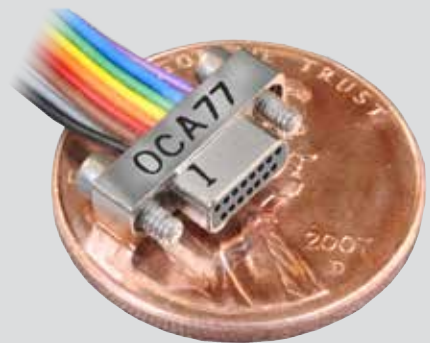
- 1 AMP Current Rating
- .025 Inch (0.64 mm.) Contact Spacing
- #30 and #32 Gage Wire Accommodation
- Single and Double Row
- Metal Shell, Aluminum, Titanium or Stainless Steel
- TwistPin Contact System
- Gold Alloy Contact, Unplated
- Thru-Hole and Surface Mount PCB Versions



## 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.



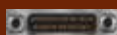
### How Small Are They?



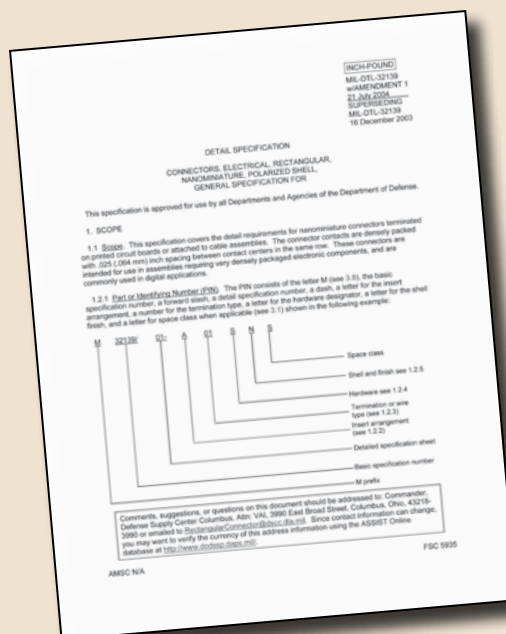
**D-Subminiature Connector**  
 Contacts on 0.109 Inch Spacing



**Micro-D Connector**  
 Contacts on 0.050 Inch Spacing



**Nano Connector**  
 Contacts on 0.025 Inch Spacing

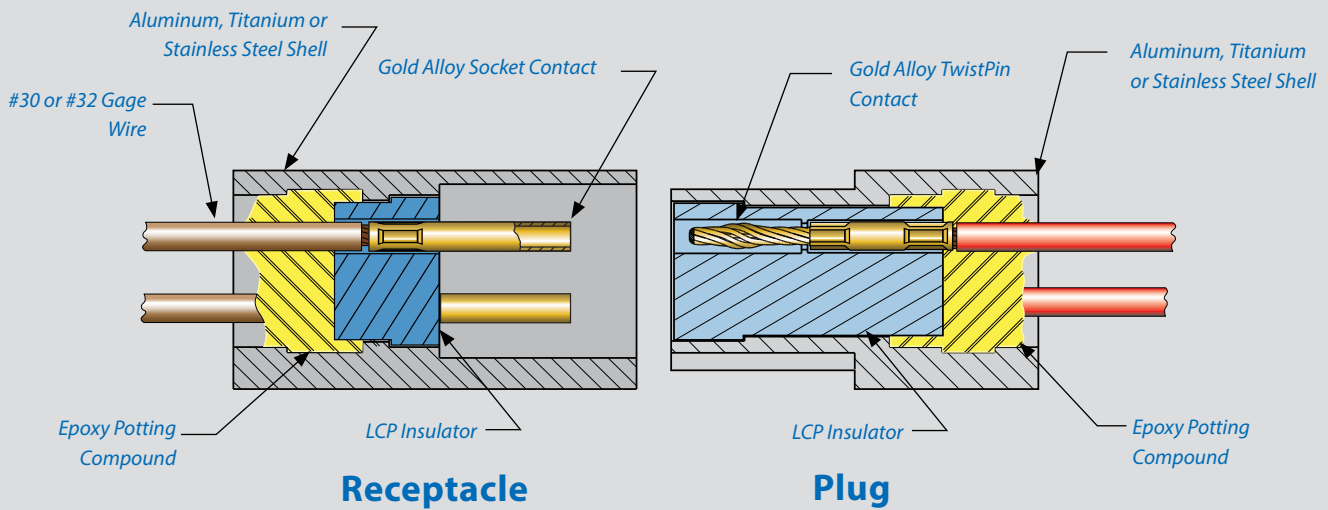


### MIL-DTL-32139 At-A-Glance

High reliability nanominiature connectors are covered by military 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

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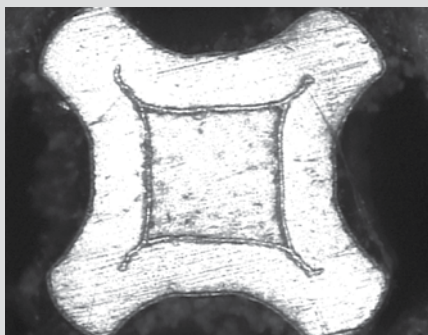


## The Nano TwistPin Advantage



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.

### Three Reasons to Choose TwistPins



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

#### 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.