

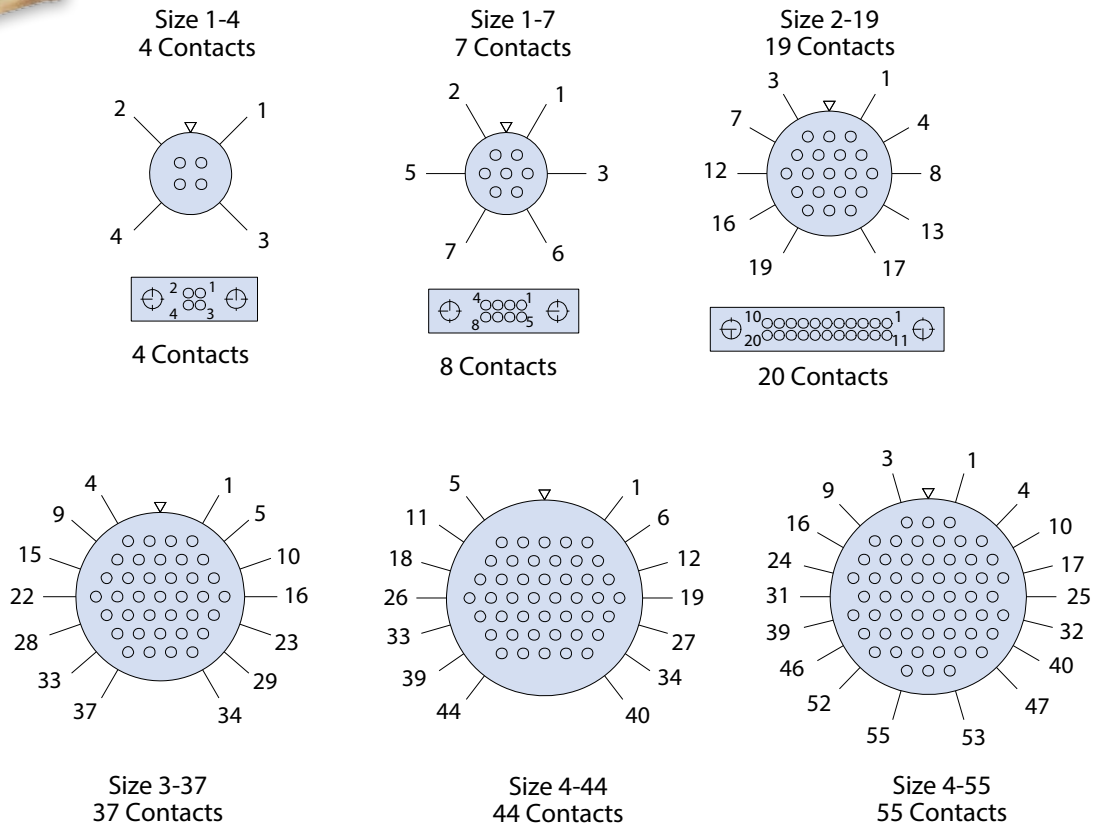


Circular Nano to AlphaLink flex jumper

### Circular Nano to AlphaLink Flex Jumpers

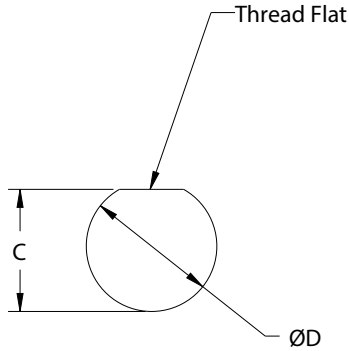
Glenair Series 89 Circular Nanominiature connectors available in 6 contact arrangements, terminated with rugged polyimide-based flex to AlphaLink board level connectors.

#### Recommended Circular Nano I/O to AlphaLink Contact Arrangements\* Receptacle Mating Face Views

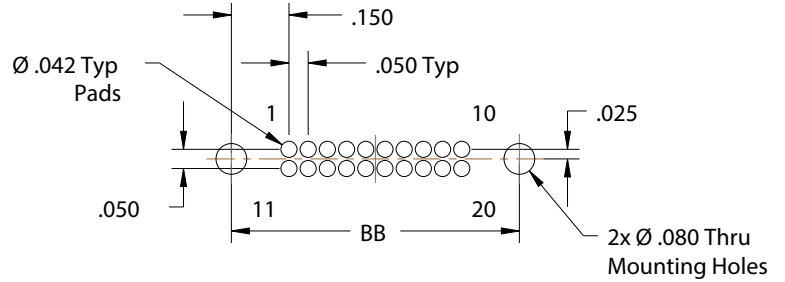


\* These are recommended contact arrangements only, but do offer best availability. Contacts are mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.

To optimize the 40-contact AlphaLink board level connector, 40 contacts of a 44- or 55-contact size Circular Nanominiature connector can be used.



Panel Cut-Out



Recommended PCB Layout

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

Table I: I/O Panel Mount Dimensions		
Arrangement	C +.002/-.001	ØD +.002/-.001
4	0.260 (6.6)	0.280 (7.1)
7	0.260 (6.6)	0.280 (7.1)
19	0.318 (8.1)	0.340 (8.6)
37	0.361 (9.2)	0.378 (9.6)
44	0.401 (10.2)	0.420 (10.7)
55	0.401 (10.2)	0.420 (10.7)

Table II: B/L AlphaLink Layout and Dimensions		
No. of contacts	AA	BB
4	0.527 (13.4)	0.350 (8.9)
8	0.627 (15.9)	0.450 (11.4)
10	0.677 (17.2)	0.500 (12.7)
12	0.727 (18.5)	0.550 (14.0)
16	0.827 (21.0)	0.650 (16.5)
20	0.927 (23.5)	0.750 (19.1)
24	1.027 (26.1)	0.850 (21.6)
28	1.127 (28.6)	0.950 (24.1)
30	1.177 (29.9)	1.000 (25.4)
32	1.227 (31.2)	1.050 (26.7)
36	1.327 (33.7)	1.150 (29.2)
40	1.427 (36.2)	1.250 (31.8)

I/O Shell Material/Finish		
Sym	Material	Finish
A2	Aluminum Alloy	Electroless Nickel
A5		Gold over Nickel
S1	Stainless Steel	Black Zinc Cobalt
S2		Passivate

# Circular Nanominiature breakaway rear-panel-mount receptacle connector to AlphaLink® SL flex jumper



893-012

## SERIES 89 CIRCULAR NANOMINIATURE INPUT/OUTPUT (I/O) BREAKAWAY RECEPTACLE TO ALPHALINK® SL SPRING LOADED CONTACT BOARD LEVEL (B/L) CONNECTOR

How To Order 893-012	
<b>Sample Part Number</b>	<b>893-012</b> -19    N    A2    -20    2    T    -12    S
<b>Series / Basic Part No.</b>	Series 89 Circular Nanominiature Breakaway I/O receptacle to Series 171 AlphaLink® SL
<b>I/O Contact Arrangement</b>	See Table I
<b>I/O Polarization</b>	<b>N</b> = Normal <b>A</b> = Alternate
<b>I/O Shell and Spanner Nut Material and Finish</b>	<b>A2</b> = Aluminum / Electroless Nickel <b>A5</b> = Aluminum / Gold over Nickel <b>S1</b> = Stainless Steel / Zinc Cobalt (Black) <b>S2</b> = Stainless Steel / Passivated
<b>AlphaLink® Layout</b>	See Table II
<b>AlphaLink® Finish</b>	<b>2</b> = Nickel <b>5</b> = Gold
<b>AlphaLink® Hardware Option</b>	<b>Omit</b> for .080+/- clearance hole in body, #0-80 UNF-2B threaded thru hole <b>T</b> = #0-80 UNF-2B Threaded Thru in Body, Contersink Clearance Hole in Cover
<b>Assembly Length (L)</b>	<b>3</b> = 3.00 ± .05 inches <b>6</b> = 6.00 ± .05 inches <b>12</b> = 12.00 ± .05 inches
<b>Optional Shielding</b>	<b>S</b> = With shielding <b>Omit</b> for none

### MATERIALS AND FINISHES

B/L connector shell: Aluminum alloy.  
 I/O shell, jam nut: See P/N development  
 I/O Insulator: LCP  
 I/O O-ring: Fluorosilicone  
 I/O Contacts: Gold Alloy per ASTM B477 and ASTM B541  
 B/L Insulator: High-temperature thermoplastic rated UL94 V-0  
 B/L Contact: Copper Alloy/Gold Plated

### NOTES

Input/Output Series 89 Nanominiature breakaway receptacle performance IAW MIL-DTL-32139  
 As a minimum, assembly identified with date code, and Pin 1 identifier. Bag and tag with Glenair part number, CAGE code, and date code.  
 Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.

Unused Cavities in I/O panel mount connector to be populated with contacts.

B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

Unused cavities in B/L connector to be populated with contacts.

#### Flex Performance:

Shielding - EMI shielding film will be used when shielding option is chosen

Bend radius is 6 to 10 times the flex thickness.

Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.

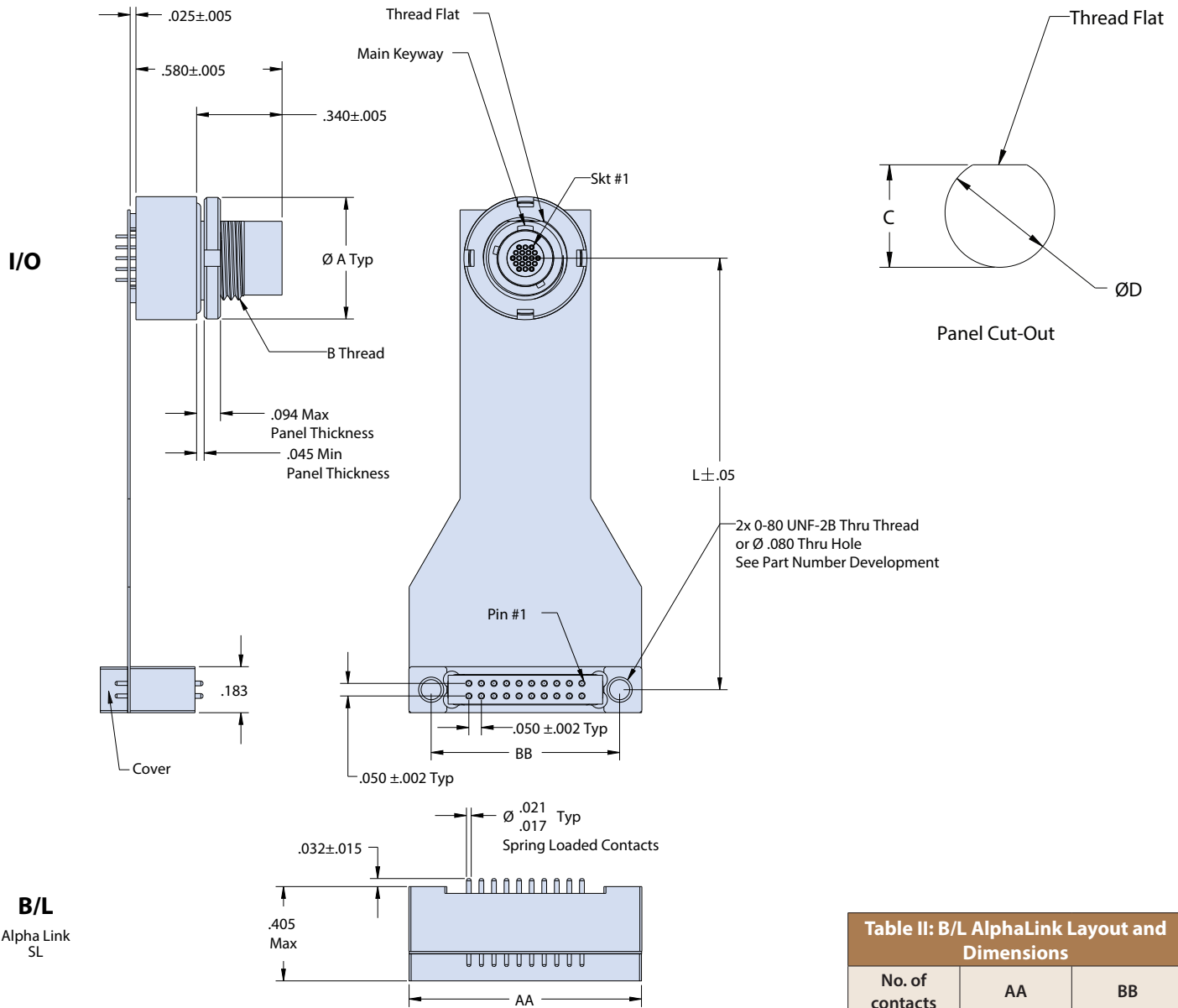
Flex cables are terminated from the I/O connector to the B/L connector on a 1 to 1 connection (unused B/L contacts are not connected)

Workmanship shall be IAW IPC-6013, Class 2.

Consult factory for more options and/or special designs and requirements

# Circular Nanominiature breakaway rear-panel-mount receptacle connector to AlphaLink SL flex jumper

893-012



Arrangement	ØA	B Thread	C +.002/- .001	ØD +.002/- .001
4	0.429 (10.9)	M7.0 X 0.75-6G	0.260 (6.6)	0.280 (7.1)
7	0.429 (10.9)	M7.0 X 0.75-6G	0.260 (6.6)	0.280 (7.1)
19	0.488 (12.4)	M8.5 X 0.75-6G	0.318 (8.1)	0.340 (8.6)
37	0.528 (13.4)	M9.5 X 0.75-6G	0.361 (9.2)	0.378 (9.6)
44	0.567 (14.4)	M10.5 X 0.75-6G	0.401 (10.2)	0.420 (10.7)
55	0.567 (14.4)	M10.5 X 0.75-6G	0.401 (10.2)	0.420 (10.7)

No. of contacts	AA	BB
4	0.527 (13.4)	0.350 (8.9)
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32	1.227 (31.2)	1.050 (26.7)
36	1.327 (33.7)	1.150 (29.2)
40	1.427 (36.2)	1.250 (31.8)

# Circular Nanominiature threaded coupling rear-panel-mount receptacle connector to AlphaLink® SL flex jumper

893-013

## SERIES 89 CIRCULAR NANOMINIATURE INPUT/OUTPUT (I/O) THREADED-COUPLING RECEPTACLE TO ALPHALINK® SL SPRING LOADED CONTACT BOARD LEVEL (B/L) CONNECTOR

How To Order 893-013	
<b>Sample Part Number</b>	<b>893-013</b> -19    N    A2    -20    2    T    -12    S
<b>Series / Basic Part No.</b>	Series 89 Circular Nanominiature Threaded Coupling I/O receptacle to Series 171 AlphaLink® SL
<b>I/O Contact Arrangement</b>	See Table I
<b>I/O Polarization</b>	<b>N</b> = Normal <b>A</b> = Alternate
<b>I/O Shell and Spanner Nut Material and Finish</b>	<b>A2</b> = Aluminum / Electroless Nickel <b>A5</b> = Aluminum / Gold over Nickel <b>S1</b> = Stainless Steel / Zinc Cobalt (Black) <b>S2</b> = Stainless Steel / Passivated
<b>AlphaLink® Layout</b>	See Table II
<b>AlphaLink® Finish</b>	<b>2</b> = Nickel <b>5</b> = Gold
<b>AlphaLink® Hardware Option</b>	<b>Omit</b> for .080+/- clearance hole in body, #0-80 UNF-2B threaded thru hole <b>T</b> = #0-80 UNF-2B Threaded Thru in Body, Contersink Clearance Hole in Cover
<b>Assembly Length (L)</b>	<b>3</b> = 3.00 ± .05 inches <b>6</b> = 6.00 ± .05 inches <b>12</b> = 12.00 ± .05 inches
<b>Optional Shielding</b>	<b>S</b> = With shielding <b>Omit</b> for none

### MATERIALS AND FINISHES

B/L connector shell: Aluminum alloy.  
 I/O shell, jam nut: See P/N development  
 I/O Insulator: LCP  
 I/O O-ring: Fluorosilicone  
 I/O Contacts: Gold Alloy per ASTM B477 and ASTM B541  
 B/L Insulator: High-temperature thermoplastic rated UL94 V-0  
 B/L Contact: Copper Alloy/Gold Plated

### NOTES

Input/Output Series 89 Nanominiature breakaway receptacle performance IAW MIL-DTL-32139  
 As a minimum, assembly identified with date code, and Pin 1 identifier. Bag and tag with Glenair part number, CAGE code, and date code.  
 Contacts mapped 1-to-1 from I/O to B/L connector (unused B/L contacts not connected). For alternative wire schedules, please consult factory.

Unused Cavities in I/O panel mount connector to be populated with contacts.

B/L AlphaLink® SL interface dimensions IAW Glenair drawing 171-134-02. Interface shown for reference.

Unused cavities in B/L connector to be populated with contacts.

#### Flex Performance:

Shielding - EMI shielding film will be used when shielding option is chosen

Bend radius is 6 to 10 times the flex thickness.

Typical flex will be .01 ± .005 thick, rugged, potted, polyimide-based flex.

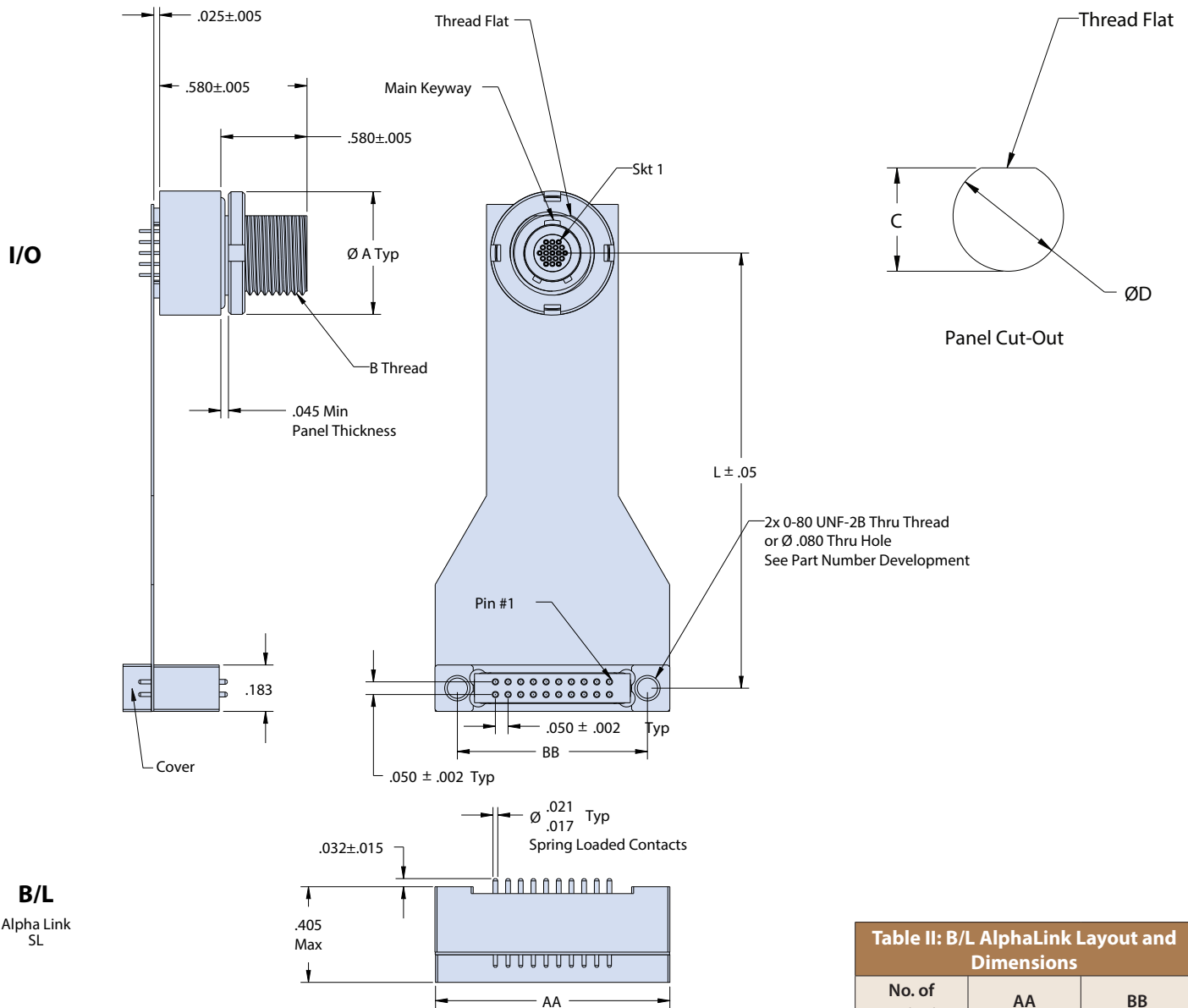
Flex cables are terminated from the I/O connector to the B/L connector on a 1 to 1 connection (unused B/L contacts are not connected)

Workmanship shall be IAW IPC-6013, Class 2.

Consult factory for more options and/or special designs and requirements

# Circular Nanominiature threaded coupling rear-panel-mount receptacle connector to AlphaLink SL flex jumper

893-013



**Table I: I/O Panel Mount Arrangement And Dimensions**

Arrangement	ØA	B Thread	C +.002/- .001	ØD +.002/- .001
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**Table II: B/L AlphaLink Layout and Dimensions**

No. of contacts	AA	BB
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8	0.627 (15.9)	0.450 (11.4)
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