

## 972-103 Crimp-contact jam-nut receptacle with banding platform and compression grommet for TurboFlex or tape-wrapped wire

POWERLOAD CONNECTORS - CRIMP CONTACTS



**972-103 Jam-Nut Receptacle**

### CONNECTOR FEATURES

- Socket towers for improved creep path performance
- Single-piece insulator eliminates bond lines that can lead to electrical failure
- High-temperature Crown Ring contact technology
- Patented wire sealing grommet
- Heavy-duty accessory interface

### POWER SPECIFICATIONS

- For applications up to 2000 VAC/ 1500 Hz, and from 150 – 800 Amps.
- 230°C maximum operating temperature (stainless steel bodies and shells)
- 100% DWV tested at 5,000 VAC (all arrangements)
- Up to 60% lower contact resistance than equivalent AS39029 contacts (normalized, less wire)

### MATERIAL SPECIFICATIONS

Insulators - PEEK thermoplastic, glass reinforced  
 Seals and o-ring- high-temperature silicone/N.A.  
 Contact body - high-conductivity copper alloy, gold plated  
 Socket contact hood, crown ring - stainless steel, passivated

HOW TO ORDER	
<b>Sample Part Number</b>	972-103 NF 32-3 P 1 A -LB
<b>Basic Part Number</b>	PowerLoad™ Jam-Nut receptacle with Banding Platform, Compression Grommet for TurboFlex or Tape-Wrapped wire
<b>Material/Finish</b>	ME, MT, NF, ZR, Z1, ZL (See Table)
<b>Shell Size / Contact Arrangement</b>	See PowerLoad contact arrangements table
<b>Contact Gender</b>	P = Pin S = Socket (supplied with contacts) A = Pin, less contacts B = Socket, less contacts (see table if ordering contacts separately)
<b>Polarization</b>	1, 2, 3, 4, 5, or 6 (see Keyway Positions table)
<b>Wire Diameter</b>	See Wire Diameter table
<b>Backshell</b>	-LB = Less Backshell Omit to include (if ordering -LB less backshell, a separate backshell must be used)

SHELL SIZE / CONTACT ARRANGEMENTS (FACE OF PIN INSERT)					
16-A1 1X #8	16-1 1X #4	20-A1 1X #2	20-1 1X #1/0	22-1* 1X #2/0	22-2 2X #8
22-3 3X #8	24-1* 1X #4/0	24-2 2X #4	24-4 4X #8	28-2 2X #2	28-3 3X #2
28-4 4X #4	28-6 6X #8	32-2 2X #1/0	32-3 3X #1/0	32-4 4X #2	
36-2* 2X #2/0	36-4 4X #1/0	40-3* 3X #2/0	Contact Size Key * Consult Factory		

Wire Gauge (AWG)	TURBOFLEX WIRE DIAMETER CODE AND WIRE PART NUMBER (COMPRESSION GROMMET)										
	Single-Wall Hookup Wire					Dual-Wall Interconnect Cable					
	961-102-2000	961-106-1500	961-106-2000	961-108-1500	961-108-2000	961-103-2000	961-104-2000	961-107-1500	961-107-2000	961-109-1500	961-109-2000
8	A	B	A	B	A	+	+	A	+	A	+
4	B	B	A	C	B	+	+	A	+	A	+
2	B	B	A	C	B	A	A	A	+	A	A
0	B	B	A	B	B	A	A	A	+	A	A
00	C	∅	B	∅	B	B	B	B	A	B	A
0000	C	∅	A	∅	B	B	A	A	+	A	+

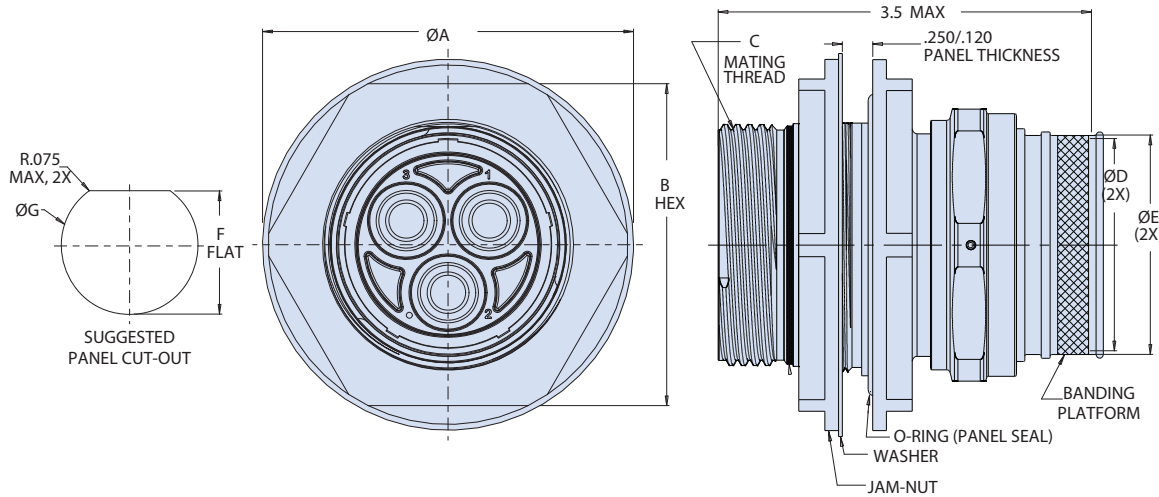
+: requires special termination, consult factory for how to order and terminate

# PowerLoad™ Connectors

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POWERLOAD CONNECTORS - CRIMP CONTACTS

**CONNECTOR DIMENSIONS**



Shell Size	A ±.030	B ±.010	C Mating Thread	ØD ±.015	ØE ±.015	ØF ±.005	ØG ±.005
16	2.125 (53.98)	1.750 (44.45)	1.000-0.1P-0.3L-TS-2A	.812 (20.62)	.875 (22.23)	1.103 (28.02)	1.178 (29.92)
20	2.375 (60.33)	2.000 (50.80)	1.250-0.1P-0.3L-TS-2A	1.062 (26.97)	1.125 (28.58)	1.353 (34.37)	1.428 (36.27)
22	2.500 (63.50)	2.125 (53.97)	1.375-0.1P-0.3L-TS-2A	1.187 (30.15)	1.250 (31.75)	1.478 (37.54)	1.553 (39.45)
24	2.625 (66.68)	2.250 (57.15)	1.500-0.1P-0.3L-TS-2A	1.312 (33.32)	1.375 (34.92)	1.603 (40.72)	1.675 (42.55)
28	2.875 (73.02)	2.500 (63.50)	1.750-0.1P-0.3L-TS-2A	1.562 (39.67)	1.625 (41.28)	1.853 (47.07)	1.928 (48.97)
32	3.200 (81.28)	2.750 (69.85)	2.000-0.1P-0.3L-TS-2A	1.812 (46.02)	1.875 (47.63)	2.103 (53.42)	2.178 (55.32)
36	3.375 (85.73)	3.000 (76.20)	2.250-0.1P-0.3L-TS-2A	2.062 (52.37)	2.125 (53.97)	2.353 (59.77)	2.428 (61.67)
40	3.625 (92.07)	3.250 (82.55)	2.500-0.1P-0.3L-TS-2A	2.187 (55.55)	2.250 (57.15)	2.603 (66.12)	2.678 (68.02)

MATERIAL / FINISH			
Code	Material	Finish	Temp. Rating
ME	Aluminum	Electroless Nickel	-54°-+200°C
MT		Nickel-PTFE	-54°-+200°C
NF		Cadmium, OD	-54°-+175°C
ZR		Zinc-Ni, Black (Tri-Valent CR)	-54°-+175°C
Z1	Stainless Steel	Passivate	-54°-+230°C
ZL		Electrodeposited Nickel	-54°-+230°C

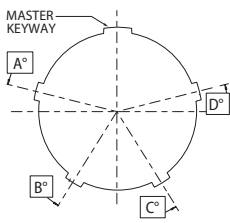
HOW TO ORDER CONTACTS AND CONTACT TOOLING (SOLD SEPARATELY)							
Contact Size	Contact P/N		Extraction Tool		Crimp Tool	Die Set	Locator
	Pin	Socket	Plastic	Metal			
8	850-150-08	850-151-08	859-136-08	859-139	859-025	859-026	859-029
4	850-150-04	850-151-04	859-136-04	859-138		859-027	859-030
2	850-150-02	850-151-02	N/A	859-171		859-169	859-170
1/0	850-150-0	850-151-0	N/A	859-137		859-028	859-031
2/0	850-150-00	850-151-00	N/A	859-225		859-230	859-231

EXAMPLE CONTACT ARRANGEMENT CURRENT RATINGS				
Ins. Arr.	#8AWG 145 A <sup>1</sup>	#4 AWG 270 A <sup>1</sup>	#2 AWG 360 A <sup>1</sup>	1/0 490 A <sup>1</sup>
28-3			3X (156 A <sup>2</sup> )	
28-4		4X (104 A <sup>2</sup> )		
28-6	6X (49 A <sup>2</sup> )			
32-3				3X (210 A <sup>2</sup> )

<sup>1</sup> Absolute maximum current rating per SAE AS50881: single conductor, sea level, 205° temp rise (25° ambient to 230° C max for "Z1" connectors)

<sup>2</sup> Derated current for typical applications per SAE AS50881: multiple conductors, 50,000 ft. altitude, 100°C temp rise

**RECEPTACLE KEYWAY POSITIONS**



Position	A°	B°	C°	D°
1	76	148	212	284
2	135	170	200	310
3	49	169	200	244
4	66	140	200	257
5	62	145	180	280
6	79	153	197	272