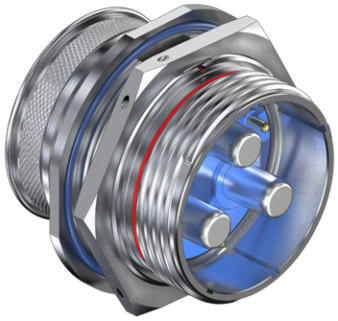
POWER TRIP®

Jam Nut Receptacles

970-031 Jam Nut Receptacle with Banding Platform



970-031 jam nut receptacle has integral banding platform. Terminate cable shield directly to connector with Band-Master ATS® banding strap, sold separately. Coupling threads are triple-start ACME quick-disconnect. EMI protected with ground spring on plug. Aluminum or stainless steel shell has five polarizing keyways. Crimp rear-release contacts are packaged with connector. PowerTrip connectors feature low resistance LouverBand contacts and are designed to withstand extreme environments.

- Quick-disconnect, high shock, high vibration, self-locking connector
- 2000 VAC (DWV)
- -65° to +200 °C
- Plug has EMI ground spring
- Crimp, rear-release contacts
- Advanced IP68+ sealing

INSERT ARRANGEMENTS

Insert Arr.	Contact Size and Quantity					
	#16	#12	#8	#4	#1/0	#2/0
18-2			2			
18-4		2	2			
20-3			3			
20-4			4			
20-5		2	3			
20-7	4		3			
24-1					1	
24-2				2		
24-3				3		
24-5			5			
24-6		4		2		
24-A1						1
24-A6		3		3		
28-12	6		6			
28-15	15					
28-4				4		
28-8		1	7			
28-9	5			4		
32-12	2		10			
32-2					2	
32-20	1	19				
32-3					3	
32-4				2	2	
32-5				5		
32-6		3			3	
32-7				7		
32-A22		22				
36-16	3		13			
36-2						2
36-4					4	
36-9	14	14	2	1		
36-A8				8		
36-B8	4				4	
40-10	16		9	4		
40-21			21			
40-5					5	

HOW TO ORDER

Sample Part Number →	970-031	TZ	36-4	P1	-1

Basic Part Number	**970-031** Jam Nut Receptacle with Banding Platform
Material/Finish	**ME** = Aluminum / Electroless Nickel **MT** = Aluminum / Nickel PTFE **NF** = Aluminum / Olive Drab Cadmium **TZ** = Aluminum / Tin-Zinc **ZR** = Aluminum / Black Zinc-Nickel **Z1** = Stainless Steel / Passivated
Shell Size-Insert Arr.	See "Insert Arrangements" Table
Contact Gender and Plating	**A** = Pin Connector, without Contacts **B** = Socket Connector, without Contacts **P1** = Pin Contacts, Silver Plating* **P2** = Pin Contacts, Gold Plating **S1** = Socket Contacts, Silver Plating* **S2** = Socket Contacts, Gold Plating * Size 12 and 16 contacts are gold-plated. Size 8, 4, 1/0 and 2/0 are silver plated.
Keyway Position	**-1**, **-2**, **-3**, **-4**, **-5**, or **-6**

RATINGS

Voltage (DWV): 2000 Volts AC
Current: Size 16 contact 13 amps
Size 12 contact 23 amps
Size 8 contact 60 amps
Size 4 contact 100 amps
Size 1/0 contact 175 amps
Size 2/0 contact 205 amps
Operating temperature:
Matl/Finish Codes ME, Z1: -65° to +200°C
Codes MT,NF, TZ, ZR: -65 to +175 °C
Durability: 500 mating cycles
EMI shielding effectiveness: 65 dB min. 100 MHz to 10 GHz
Shock: 50 g
Vibration: per MIL-DTL-38999 Series III
MIL-S-901 high impact shock: Grade A
Blowing sand and dust: MIL-STD-810, method 510.5
Altitude immersion: 75,000 feet
Ingress protection: IP67
Water pressure: 6 feet, 48 hours

CONSTRUCTION

Contacts: size #8 and larger: high conductivity copper alloy, gold or silver plated.
Size #12, #16: copper alloy, gold plated
Shell: Aluminum or stainless steel, see How to Order
Insulator: Glass-filled thermoset epoxy
Wire grommet, face seal: Fluorosilicone/ silicone blend
Contact Retention clip: Beryllium copper
Insert retainer ring: High-temperature thermoplastic
O-ring: Fluorosilicone

RECOMMENDED JAM NUT TORQUE

Shell Size	Min-Max (in-lb.)	Shell Size	Min-Max (in-lb.)
18	80-85	32	170-180
20	100-110	36	190-200
24	110-120	40	210-220
28	145-155		

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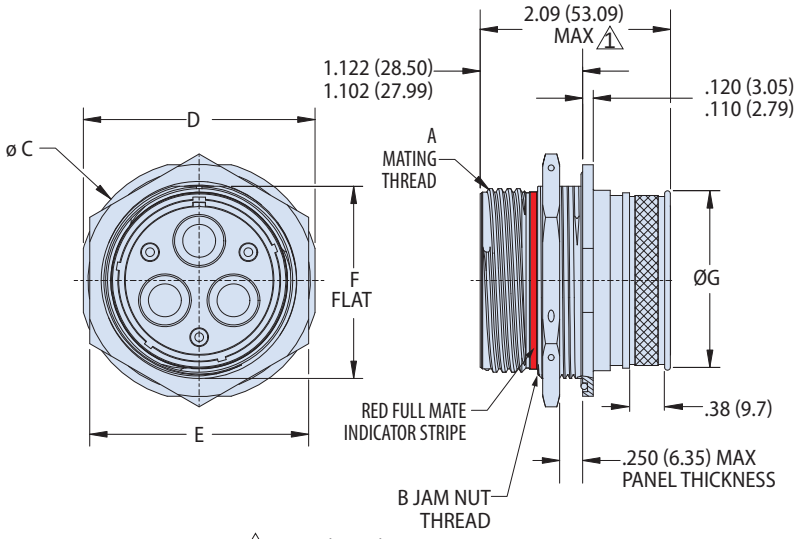


1 2.223 (56.46) MAX FOR INSERT ARRANGEMENTS WITH #2/0 CONTACTS. GROMMET PROTRUDES FROM SHELL.

DIMENSIONS

Shell Size	A Mating Thd	B Jam Nut Thd	ø C		D		E		F		ø G	
			In.	mm.	In.	mm.	In.	mm.	In.	mm.	In.	mm.
18	1.125-0.1P-0.3L-TS-2A	1.250-18UNEF-2A	1.733	44.02	1.639	41.63	1.438	36.53	1.212	30.78	1.037	26.34
20	1.250-0.1P-0.3L-TS-2A	1.4375-18UNEF-2A	1.921	48.79	1.827	46.41	1.625	41.28	1.399	35.53	1.163	29.54
24	1.500-0.1P-0.3L-TS-2A	1.625-18UNEF-2A	2.108	53.54	2.014	51.16	1.822	46.28	1.587	40.31	1.350	34.29
28	1.750-0.1P-0.3L-TS-2A	1.9375-16UN-2A	2.425	61.60	2.327	59.11	2.188	55.58	1.899	48.23	1.670	42.42
32	2.000-0.1P-0.3L-TS-2A	2.125-16UN-2A	2.607	66.22	2.513	63.83	2.375	60.33	2.084	52.93	1.945	49.40
36	2.250-0.1P-0.3L-TS-2A	2.375-16UN-2A	2.857	72.57	2.763	70.18	2.625	66.68	2.323	59.00	2.176	55.27
40	2.500-0.1P-0.3L-TS-2A	2.625-16UN-2A	3.107	78.92	3.013	76.53	2.875	73.03	2.548	64.72	2.350	59.69

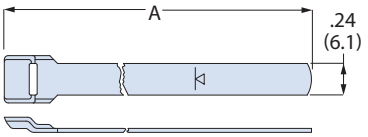
SHIELD BAND

Shield band is not included with connector. Order separately.

Use banding strap to terminate cable braid directly to connector. Stainless steel band strap provides fast, cost-effective and highly reliable termination of braided metallic shielding. The Band-Master ATS® Advanced Cable Shield Termination System is the overwhelming favorite throughout the military aerospace and defense industries, providing excellent static loading and corrosion resistance in electrical wire interconnect systems.

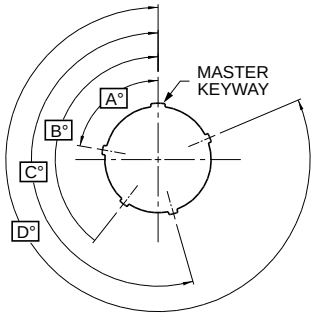
Band Strap

Banding Tool
601-100



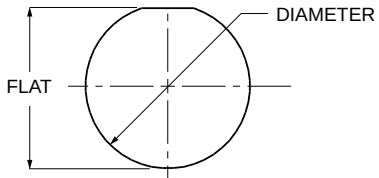
A Length		Fits up to Dia.		Band Strap (pre-coiled) Part Number
in	mm	in	mm	
14	355	1.80	45.7	601-041
18	457	2.50	63.5	601-050

KEY POSITIONS



Position	A°	B°	C°	D°
1	80	142	196	293
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

PANEL CUTOUT



Shell Size	Diameter In. -0.0/+.010	Diameter mm. -0.0/+0.25	Flat In. -0.0/+.010	Flat mm. -0.0/+0.25
18	1.265	32.13	1.217	30.91
20	1.452	36.88	1.409	35.79
24	1.640	41.66	1.596	40.54
28	1.952	49.58	1.910	48.51
32	2.140	54.36	2.092	53.14
36	2.390	60.71	2.342	59.49
40	2.640	67.06	2.557	64.95

SHRINK BOOT

Shrink boot,ordered separately, provides cable strain relief and environmental protection. Type 1 high-performance semi-rigid elastomer resists fuels and oils and withstands temperature extremes. Available with W1 hot melt adhesive pre-coat. Operating temperature range -75 to +150 °C (no adhesive), -55 to +125 °C (with W1 adhesive).

Shell Size	Shrink Boot P/N	Adhesive Lined Shrink Boot P/N
18	770-001S106	770-001S106W1
20	770-001S106	770-001S106W1
24	770-001S107	770-001S107W1
28	770-001S108	770-001S108W1
32	770-001S108	770-001S108W1
36	770-001S109	770-001S109W1
40	770-001S109	770-001S109W1