AquaMouse Connectors and Cables

Hermetic Receptacle with High-Speed RF or Power Contacts

Series 802 Hermetic Receptacles feature stainless steel shells for excellent corrosion resistance, fused glass insulators and gold plated, nickel-iron alloy contacts. 1000 PSI open face rated. 100% tested to meet 1 X 10-7 ccHe/sec @ 1 atm helium leak rate. 9 size #16 or 8 size #12 hybrid RF contact arrangements. Four Shell Styles including front panel mount jam-nut, front panel mount square flange, weld mount, and rear panel mount jam-nut. Cable adapters are provided with crimp rings for reliable cable termination.

NOTES

1. Mates to 802 series plugs with same size, arrangement, polarization, and opposite contact gender.
2. Performance capabilities:
   - Hydrostatic pressure rating: 1000 PSI open face or 3500 PSI fully mated and properly molded
   - Insulation resistance: 5,000 megohms minimum
   - DWV: see DWV Rating Table
   - Hermeticity: 1 x 10^-7 ccHe/sec @ atm
3. Parker O-ring, compound V709-90 or equivalent
4. Electrical safety limits to be set by user peak voltages, switching surges, transients etc. should be used to determine safe application
5. After cable is terminated and adapters inserted in contact rear, the rear of the connector must be potted to cover adapters
6. See page F-8 for panel cut-out dimensions

How to Order

Sample Part Number	802-040	-07	Z1	14	D	-206	P	A	-75	-02
Series	**802-040** = Hermetic Receptacle									
Shell Style (See Table I)	**-00** = Jam-Nut, FPM **-02** = Sq Flange, FPM **-03** = Weld Mount **-07** = Jam-Nut, RPM									
Material and Finish[6]	**Z1** = Stainless Steel / Passivated **ZL** = Stainless Steel / Nickel Plated									
Shell Size	See Dimensions Table for Available Sizes									
High-Speed Contact	**Omit** = Co-Ax **Q** = Quadrax **P** = Power **D** = Differential Twin-Ax* **T** = Conc. Twin-Ax* * = Size 8 Only									
Contact Arrangement	See Contact Arrangements pages M-8 thru M-32									
Configuration	**P** = Pin Face **S** = Socket Face									
Polarization (Table II)	**A** = Normal, **B**, **C**, **D**, **E**, **F**; (See Keyway Positions)									
Nom. Impedance	**#12 & #8 Co-Ax** **-75** = 75 Ohm; Omit for 50 Ohm (Std) **#8 Quadrax** **-150** = 150 Ohm; Omit for 100 Ohm (Std)									
Cable Adapter	Per Table III									

Table I: Shell Style

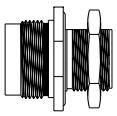	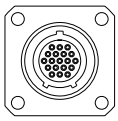	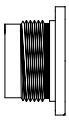	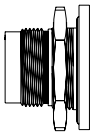
-00 Front Panel Mount, Jam-Nut	**-02** Square Flange	**-03** Weld Mount	**-07** Rear Panel Mount, Jam-Nut

Table II: Keyway Positions

Key Position	Key Rotation A°	Key Rotation B°
A Norm.	150°	210°
B	75°	210°
C	95°	230°
D	140°	275°
E	75°	275°
F	95°	210°

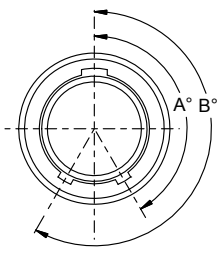

Table III: Cable Adapter

Dash No.	Cables Accommodated
-01	M17/113-RG316
-02	M17/152-00001 (RG316DS)
-03	M17/93-RG178
-04	RG-178 double shield per DSCC 06017
-05	M17/94-RG179
-06	PIC 73263, 75 OHM cable

DWV Rating

Contact Sizes	Test Voltage
23	750 VAC
20 HD	1000 VAC
16, 12, 8	1800 VAC
16 CO-AX**	800 VAC
12 CO-AX**	1000 VAC
**Inner contact to outer contact	

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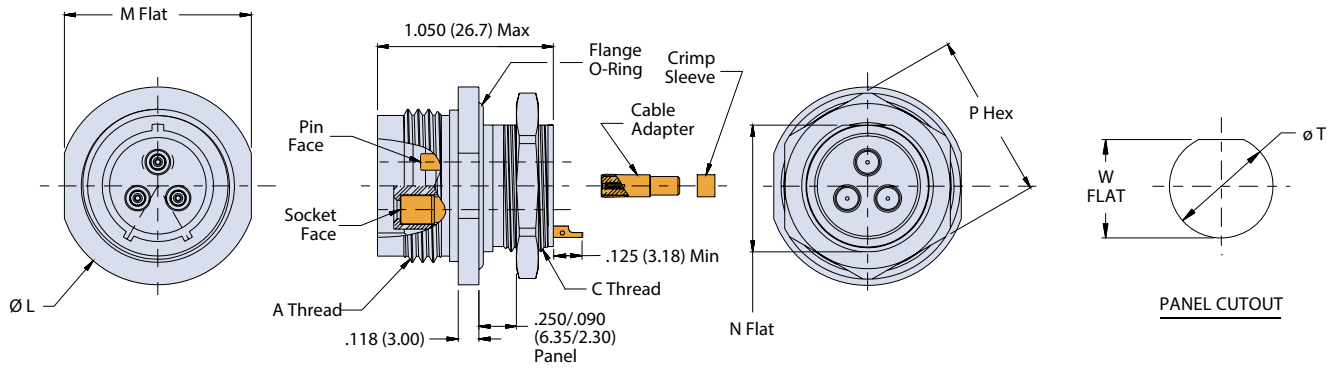
REV. 03.11.24

Hermetic Receptacle with RF Contacts; 1000 PSI Open Face Rated

HERMETIC JAM-NUT, FRONT PANEL MOUNT RECEPTACLE - SHELL STYLE 00



Dimensions								
Shell Size	L Max.	M Flat	A Mating Threads	C Threads	N Flat	P Hex	Piston O-ring	Flange O-ring
5	.72 (18.29)	.625 (15.88)	.4375-28 UNEF	.312-28 UN	.281 (7.14)	.500 (12.70)	2-009	2-012
6	.78 (19.81)	.750 (19.05)	.5625-20 UN	.438-28 UN	.406 (10.31)	.625 (15.88)	5-052	2-014
7	.91 (23.11)	.812 (20.62)	.6250-20 UN	.500-32 UN	.469 (11.91)	.688 (17.48)	2-012	2-015
8	.96 (24.38)	.875 (22.23)	.6875-20 UN	.562-28 UN	.531 (13.49)	.750 (19.05)	5-212	2-016
9	1.03 (26.16)	.937 (23.80)	.7500-20 UNEF	.625-20 UN	.594 (15.09)	.812 (20.62)	2-014	2-017
10	1.09 (27.69)	1.000 (25.40)	.8125-20 UNEF	.687-28 UN	.656 (16.66)	.875 (22.23)	2-015	2-018
12	1.16 (29.46)	1.062 (26.97)	.8750-20 UNEF	.750-28 UN	.719 (18.26)	.938 (23.83)	2-016	2-019
14	1.34 (34.04)	1.250 (31.75)	1.0625-20 UN	.938-28 UN	.893 (22.68)	1.125 (28.58)	2-019	2-022
15	1.41 (35.81)	1.312 (33.32)	1.1250-20 UN	1.000-28 UN	.955 (24.26)	1.188 (30.18)	2-020	2-023
19	1.63 (41.40)	1.530 (38.86)	1.3125-20 UN	1.250-28 UN	1.235 (31.37)	1.438 (36.53)	2-022	2-027
21	1.70 (43.18)	1.562 (39.67)	1.4375-20 UN	1.312-28 UN	1.257 (31.93)	1.500 (38.10)	2-023	2-028

Material/finish
- Shell, jam-nut: SST / See How to Order Table
- Insulator, hermetic: full glass
- Insulator, socket: high grade rigid dielectric
- Interfacial seal: fluorosilicone blend
- Contact, hermetic: nickel-iron alloy / gold plate
- Contact, socket: copper alloy / gold plated per ASTM B 488, Type II Class 1.25, over a suitable underplate
- O-ring: Viton
- Cable adapter, crimp sleeve: copper alloy / gold plated

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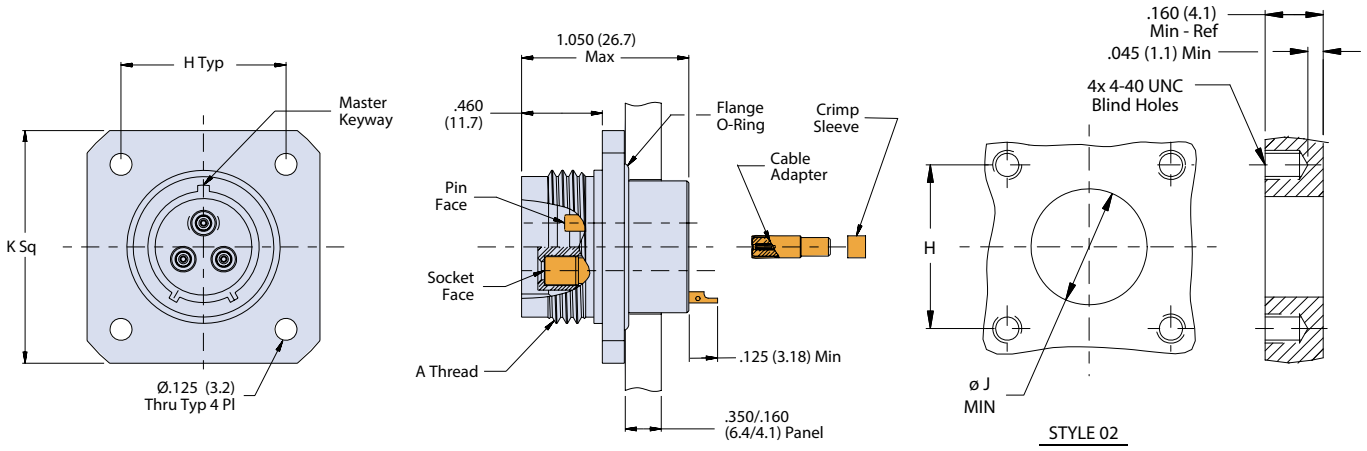
Hermetic Receptacle with RF Contacts; 1000 PSI Open Face Rated

HERMETIC SQUARE FLANGE, FRONT PANEL MOUNT RECEPTACLE - SHELL STYLE 02



Dimensions					
Shell Size	K Square	H Bsc.	A Mating Threads	Piston O-ring	Flange O-ring
5	.885 (22.48)	.500 (12.70)	.4375-28 UNEF	2-009	2-012
6	1.010 (25.65)	.625 (15.88)	.5625-20 UN	5-052	2-014
7	1.072 (27.23)	.688 (17.48)	.6250-20 UN	2-012	2-015
8	1.135 (28.83)	.750 (19.05)	.6875-20 UN	5-212	2-016
9	1.195 (30.35)	.812 (20.62)	.7500-20 UNEF	2-014	2-017
10	1.260 (32.00)	.875 (22.23)	.8125-20 UNEF	2-015	2-018
12	1.323 (33.60)	.938 (23.83)	.8750-20 UNEF	2-016	2-019
14	1.510 (38.35)	1.125 (28.58)	1.0625-20 UN	2-019	2-022
15	1.573 (39.95)	1.188 (30.18)	1.1250-20 UN	2-020	2-023
19	1.625 (41.28)	1.250 (31.75)	1.3125-20 UN	2-022	2-027
21	1.750 (44.45)	1.375 (34.92)	1.4375-20 UN	2-023	2-028

Material/finish
- Shell : SST / See How to Order Table
- Insulator, hermetic: full glass
- Insulator, socket: high grade rigid dielectric
- Interfacial seal: fluorosilicone blend
- Contact, hermetic: nickel-iron alloy / gold plate
- Contact, socket: copper alloy / gold plated per ASTM B 488, Type II Class 1.25, over a suitable underplate
- O-ring: Viton
- Cable adapter, crimp sleeve: copper alloy / gold plated

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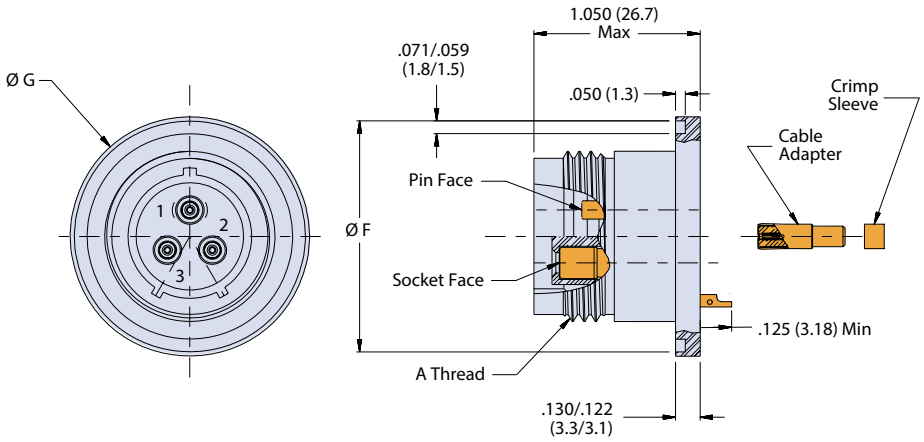
Hermetic Receptacle with RF Contacts; 1000 PSI Open Face Rated

HERMETIC WELD MOUNT RECEPTACLE - SHELL STYLE 03



Dimensions				
Shell Size	A Mating Threads	Ø G	Ø F	Piston O-ring
5	.4375-28 UNEF	.790 (20.07)/.786 (19.96)	.751 (19.08)/.739 (18.77)	2-009
6	.5625-20 UN	.914 (23.22)/.910 (23.11)	.875 (22.23)/.863 (21.92)	5-052
7	.6250-20 UN	.977 (24.82)/.973 (24.71)	.939 (23.85)/.927 (23.55)	2-012
8	.6875-20 UN	1.040 (26.42)/1.036 (26.31)	1.001 (25.43)/.989 (25.12)	5-212
9	.7500-20 UNEF	1.102 (27.99)/1.098 (27.89)	1.063 (27.00)/1.051 (26.70)	2-014
10	.8125-20 UNEF	1.164 (29.57)/1.160 (29.46)	1.125 (28.58)/1.113 (28.27)	2-015
12	.8750-20 UNEF	1.227 (31.17)/1.223 (31.06)	1.188 (30.18)/1.176 (29.87)	2-016
14	1.0625-20 UN	1.414 (35.92)/1.410 (35.81)	1.375 (34.92)/1.363 (34.62)	2-019
15	1.1250-20 UN	1.477 (37.52)/1.473 (37.41)	1.438 (36.53)/1.426 (36.22)	2-020
19	1.3750-20 UN	1.667 (42.34)/1.663 (42.24)	1.626 (41.30)/1.614 (41.00)	2-022
21	1.4375-20 UN	1.797 (45.64)/1.793 (45.54)	1.750 (44.45)/1.744 (44.30)	2-023

Material/finish
- Shell: SST / See How to Order Table
- Insulator, hermetic: full glass
- Insulator, socket: high grade rigid dielectric
- Interfacial seal: fluorosilicone blend
- Contact, hermetic: nickel-iron alloy / gold plate
- Contact, socket: copper alloy / gold plated per ASTM B 488, Type II Class 1.25, over a suitable underplate
- O-ring: Viton
- Cable adapter, crimp sleeve: copper alloy / gold plated

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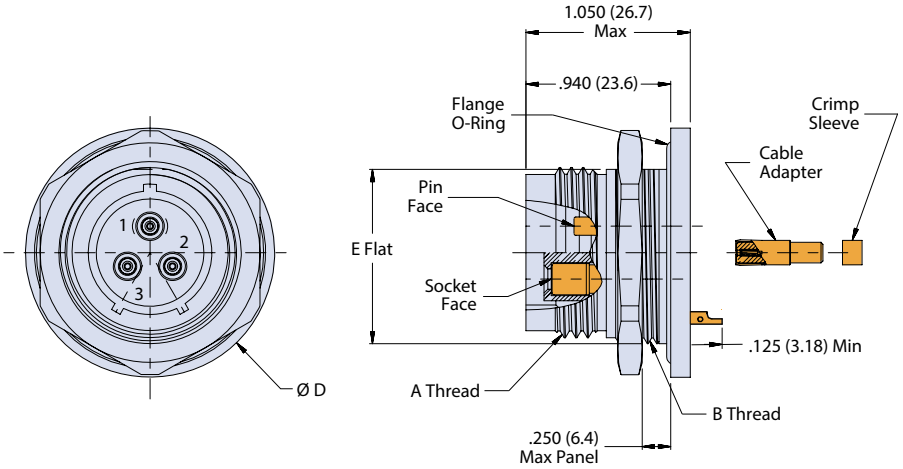
Hermetic Receptacle with RF Contacts; 1000 PSI Open Face Rated

HERMETIC JAM-NUT, REAR PANEL MOUNT RECEPTACLE - SHELL STYLE 07



Dimensions						
Shell Size	A Mating Threads	B Threads	D Max.	E Flat	Piston O-ring	Flange O-ring
5	.4375-28 UNEF	.500-32 UN	.885 (22.48)	.469 (11.91)/.463 (11.76)	2-009	2-015
6	.5625-20 UN	.625-20 UN	1.010 (25.65)	.594 (15.09)/.588 (14.94)	5-052	2-017
7	.6250-20 UN	.687-28 UN	1.072 (27.23)	.656 (16.66)/.650 (16.51)	2-012	2-019
8	.6875-20 UN	.750-28 UN	1.135 (28.83)	.729 (18.52)/.725 (18.42)	5-212	2-019
9	.7500-20 UNEF	.812-28 UN	1.195 (30.35)	.781 (19.84)/.775 (19.68)	2-014	2-020
10	.8125-20 UNEF	.875-28 UN	1.260 (32.00)	.830 (21.08)/.824 (20.93)	2-015	2-021
12	.8750-20 UNEF	.938-28 UN	1.322 (33.58)	.893 (22.68)/.887 (22.53)	2-016	2-022
14	1.0625-20 UN	1.125-28 UN	1.510 (38.35)	1.080 (27.43)/1.074 (27.28)	2-019	2-025
15	1.1250-20 UN	1.188-28 UN	1.572 (39.93)	1.143 (29.03)/1.137 (28.88)	2-020	2-026
19	1.3125-20 UN	1.3750-20 UN	1.940 (49.28) 1.790 (45.47)	1.345 (34.16)/1.341 (34.06)	2-022	2-029
21	1.4375-20 UN	1.500-28 UN	1.940 (49.28)	1.467 (37.26)/1.463 (37.16)	2-023	2-030

Material/finish
- Shell, jam-nut: SST / See How to Order Table
- Insulator, hermetic: full glass
- Insulator, socket: high grade rigid dielectric
- Interfacial seal: fluorosilicone blend
- Contact, hermetic: nickel-iron alloy / gold plate
- Contact, socket: copper alloy / gold plated per ASTM B 488, Type II Class 1.25, over a suitable underplate
- O-ring: Viton
- Cable adapter, crimp sleeve: copper alloy / gold plated

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