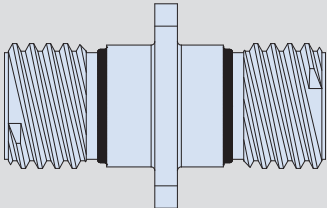


# Series 806 Mil-Aero Connectors

## 806-081 Hermetic Bulkhead Feedthrough



Series 806 hermetic bulkhead feedthroughs feature stainless steel shells and glass-to-metal seals. Rated for -65°C to +200°C temperature range. Micro miniature Series 806 connectors save size and weight compared to legacy aerospace-grade circular hermetic connectors. These high performance connectors are suitable for use on pressurized bulkheads and vacuum chamber applications subject to vibration, moisture, and temperature extremes.

### Features

- Glass-to-metal seal
- High density #20HD and #22HD arrangements for reduced size and weight plus size #16, 12, and #8 standard and hybrid layouts
- Aerospace-grade materials, construction

### Specifications

- Operating temperature: -65°C to +200°C
- Leak Rate: 1E-7 cm<sup>3</sup>/s at 1 ATM pressure differential
- Dielectric withstanding voltage  
#22HD contacts: 1300 VAC  
#20HD contacts: 1800 VAC  
#16 contacts: 1800 VAC  
#12 contacts: 1800 VAC  
#8 contacts: 1000 VAC
- I.R.: 5000 megOhms min at 500 VDC
- Shell-to-Shell Conductivity: 10 mV max.
- Mating durability: 500 cycles
- Mechanical shock: EIA-364-27, 300g.
- Vibration (sine): MIL-DTL-38999M, 60g.
- Vibration (random) EIA-364-28 Condition VI, Letter J, 43.92 Grms, +200°C
- High Impact shock: MIL-S-901 Grade A
- Indirect Lightning Strike: EIA-364-75 Type B Level 2 10kA Peak

### Connector Construction

- Shell and jam-nut: 300 series CRES
- Hermetic contacts: nickel-iron alloy, gold plated
- Socket contacts: copper alloy, gold plated
- Socket Hood: 300 series CRES
- Insulator, hermetic: vitreous glass
- Interfacial seal, peripheral seal, O-ring: fluorosilicone
- Insulator, socket: high grade rigid dielectric
- Seals and O-rings: Fluorosilicone

How To Order								
SAMPLE PART NUMBER		806-081	-07	Z1	9-1	P	A	-01
Product	806-081 = Hermetic Bulkhead Feedthrough Connector							
Mounting Type	02 = Box Mount		13 = Weld Mount					
	07 = Jam-nut Mount							
Shell Finish	Z1 = Passivated		ZL = Nickel Plated					
Shell Size-Insert Arrangement	See Table 1							
Contact Style	P = Pin on Panel Side, Socket Opposite S = Socket on Panel Side, Pin Opposite PP = Pin-Pin Feedthrough SS = Socket-Socket Feedthrough; -01 length increases by .25"							
Keyway Polarization	Per Detail							
Panel Thickness	-01 = .125	-02 = .250	-03 = .500					

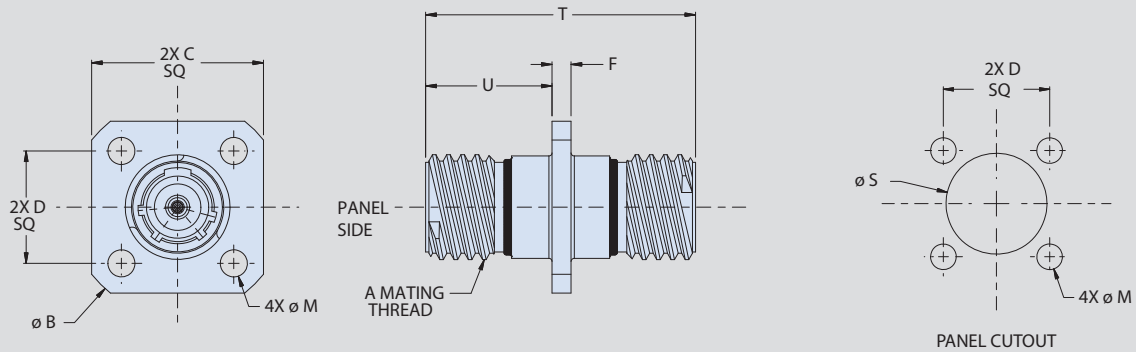
Table I: Shell Size - Insert Arrangement																
Contact Layout	Number of Contacts					Contact Layout	Number of Contacts					Contact Layout	Number of Contacts			
	22HD	20HD	16	12	8		22HD	20HD	16	12	8		22HD	20HD	16	12
7-3	3					22-69	69				16-2					2
8-4	4					24-92	92				18-3					3
8-7	7					8-1		1			20-4					4
9-11	11					10-2		2			22-5					5
10-15	15					11-4		4			24-8					8
11-19	19					12-5		5			10-8A	6		2		
12-26	26					14-7		7			11-13	11		2		
14-39	39					16-12		12			12-27	26		1		
16-60	60					18-15		15			14-21	17		4		
18-85	85					20-22		22			16-41	37		4		
20-110	110					22-24		24			18-59	55		4		
22-140	140					24-35		35			11-14	13			1	
24-186	186					9-1			1		12-14	12			2	
8-3		3				12-2			2		14-22	20			2	
9-5		5				14-3			3		12-14	12			2	
10-8		8				16-4			4		16-42	40			2	
11-10		10				16-7			7		18-62	60			2	
12-15		15				18-8			8		14-20A	19				1
14-20		20				20-11			11		16-22	20				2
16-31		31				22-13			13		18-21	18				3
18-41		41				24-19			19		20-28	24				4
20-55		55				10-1				1	22-44	40				4
											24-97	93				4

# Series 806 Mil-Aero Connectors

## 806-081 Hermetic Bulkhead Feedthrough



### 806-081-02 Box Mount Dimensions

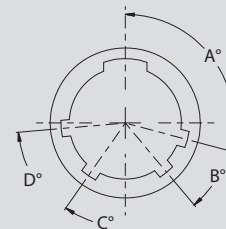


SHELL SIZES	A THREAD MATING	ø B MAX FLANGE	C SQ MAX FLANGE FLATS	D SQUARE BSC MOUNTING HOLES	F MAX FLANGE	ø M THRU MOUNTING HOLES	ø S THRU
7	.4375-.067P-.2L-TS-2A	0.968 (24.59)	0.750 (19.05)	0.469 (11.91)	0.100 (2.54)	0.128 (3.25)	0.445 (11.30)
8	.5000-.067P-.2L-TS-2A	1.040 (26.42)	0.822 (20.88)	0.531 (13.49)	0.100 (2.54)	0.128 (3.25)	0.509 (12.93)
9	.5625-.067P-.2L-TS-2A	1.130 (28.70)	0.885 (22.48)	0.594 (15.09)	0.100 (2.54)	0.128 (3.25)	0.577 (14.66)
10	.6250-.067P-.2L-TS-2A	1.174 (29.82)	0.913 (23.19)	0.625 (15.88)	0.100 (2.54)	0.128 (3.25)	0.645 (16.38)
11	.6875-.067P-.2L-TS-2A	1.240 (31.50)	0.960 (24.38)	0.670 (17.02)	0.100 (2.54)	0.128 (3.25)	0.712 (18.08)
12	.7500-.067P-.2L-TS-2A	1.354 (34.39)	1.040 (26.42)	0.765 (19.43)	0.100 (2.54)	0.128 (3.25)	0.768 (19.51)
14	.8750-.067P-.2L-TS-2A	1.510 (38.35)	1.133 (28.78)	0.859 (21.82)	0.100 (2.54)	0.128 (3.25)	0.890 (22.61)
16	1.0000-.067P-.2L-TS-2A	1.620 (41.15)	1.227 (31.17)	0.938 (23.83)	0.100 (2.54)	0.128 (3.25)	1.015 (25.78)
18	1.1250-.067P-.2L-TS-2A	1.784 (45.31)	1.320 (33.53)	1.016 (25.81)	0.100 (2.54)	0.128 (3.25)	1.125 (28.58)
20	1.2500-.067P-.2L-TS-2A	1.910 (48.51)	1.444 (36.68)	1.109 (28.17)	0.125 (3.18)	0.154 (3.91)	1.275 (32.39)
22	1.3750-.067P-.2L-TS-2A	2.083 (52.91)	1.570 (39.88)	1.203 (30.56)	0.125 (3.18)	0.154 (3.91)	1.400 (35.56)
24	1.5000-.067P-.2L-TS-2A	2.200 (55.88)	1.696 (43.08)	1.312 (33.32)	0.125 (3.18)	0.154 (3.91)	1.525 (38.73)

### Dimensions Based on Panel Thickness Option

DASH NO	T MAX	U MAX
-01	1.275 (32.39)	0.750 (19.05)
-02	1.400 (35.56)	0.875 (22.23)
-03	1.650 (41.91)	1.125 (28.58)

### Polarization Key Code



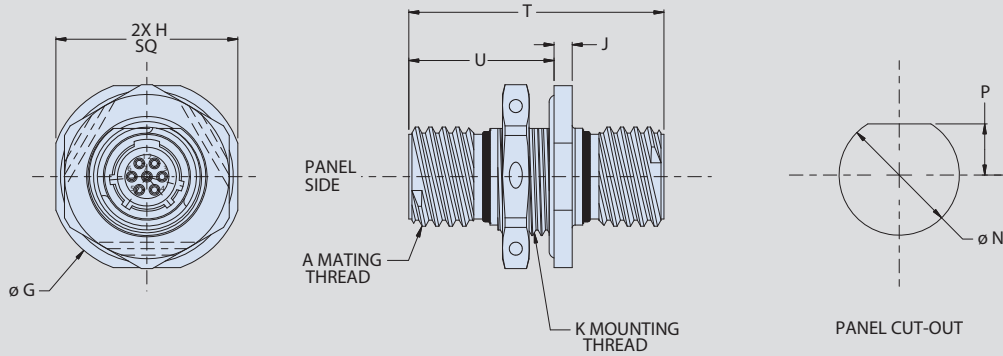
POS	A°	B°	C°	D°
A	105°	140°	215°	265°
B	102°	170°	248°	305°
C	80°	150°	230°	295°
D	68°	140°	205°	275°
E	64°	155°	234°	304°
F	72°	120°	200°	298°

# Series 806 Mil-Aero Connectors

## 806-081 Hermetic Bulkhead Feedthrough



### 806-081-07 Jam-Nut Mount Dimensions

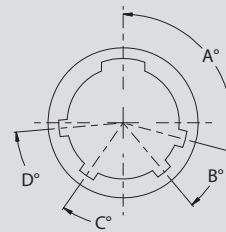


SHELL SIZES	A THREAD MATING	$\phi G$ MAX FLANGE	H SQUARE MAX FLANGE FLATS	J MAX FLANGE	$\phi N$ +.005/-0.000 (+0.13/- .000) MTG HOLE	P +.005/-0.000 (+0.13/- .000)MNTG FLAT
7	.4375-.067P-.2L-TS-2A	0.848 (21.54)	0.908 (23.06)	0.100 (2.54)	0.522 (13.26)	0.224 (5.69)
8	.5000-.067P-.2L-TS-2A	0.980 (24.89)	0.920 (23.37)	0.100 (2.54)	0.601 (15.27)	0.256 (6.50)
9	.5625-.067P-.2L-TS-2A	1.040 (26.42)	0.980 (24.89)	0.100 (2.54)	0.640 (16.26)	0.287 (7.29)
10	.6250-.067P-.2L-TS-2A	1.110 (28.19)	1.050 (26.67)	0.100 (2.54)	0.719 (18.26)	0.318 (8.08)
11	.6875-.067P-.2L-TS-2A	1.160 (29.46)	1.110 (28.19)	0.100 (2.54)	0.759 (19.28)	0.350 (8.89)
12	.7500-.067P-.2L-TS-2A	1.230 (31.24)	1.170 (29.72)	0.100 (2.54)	0.837 (21.26)	0.381 (9.68)
14	.8750-.067P-.2L-TS-2A	1.360 (34.54)	1.320 (33.53)	0.100 (2.54)	0.955 (24.26)	0.443 (11.25)
16	1.0000-.067P-.2L-TS-2A	1.515 (38.48)	1.444 (36.68)	0.100 (2.54)	1.073 (27.25)	0.505 (12.83)
18	1.1250-.067P-.2L-TS-2A	1.610 (40.89)	1.570 (39.88)	0.100 (2.54)	1.192 (30.28)	0.568 (14.43)
20	1.2500-.067P-.2L-TS-2A	1.850 (46.99)	1.760 (44.70)	0.128 (3.25)	1.349 (34.26)	0.630 (16.00)
22	1.3750-.067P-.2L-TS-2A	2.010 (51.05)	1.913 (48.59)	0.128 (3.25)	1.467 (37.26)	0.693 (17.60)
24	1.5000-.067P-.2L-TS-2A	2.195 (55.75)	2.070 (52.58)	0.128 (3.25)	1.624 (41.25)	0.755 (19.18)

### Dimensions Based on Panel Thickness Option

DASH NO	T MAX	U MAX
-01	1.275 (32.39)	0.750 (19.05)
-02	1.400 (35.56)	0.875 (22.23)
-03	1.650 (41.91)	1.125 (28.58)

### Polarization Key Code



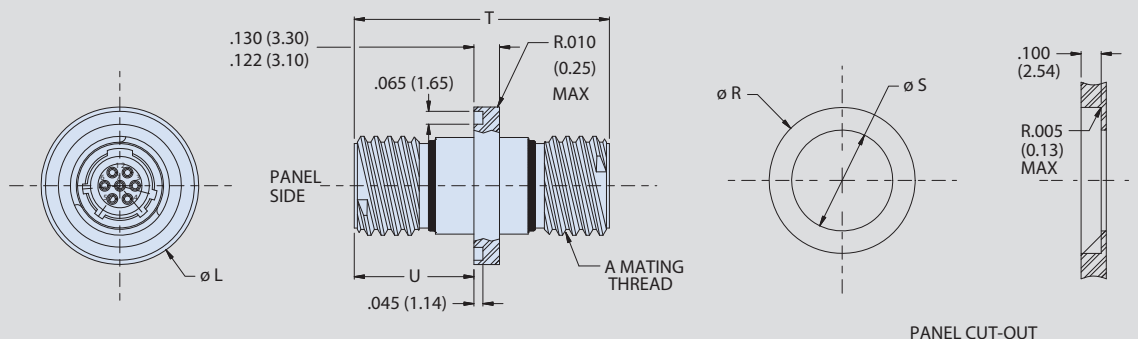
POS	A°	B°	C°	D°
A	105°	140°	215°	265°
B	102°	170°	248°	305°
C	80°	150°	230°	295°
D	68°	140°	205°	275°
E	64°	155°	234°	304°
F	72°	120°	200°	298°

# Series 806 Mil-Aero Connectors

## 806-081 Hermetic Bulkhead Feedthrough



### 806-081-13 Weld Mount Dimensions

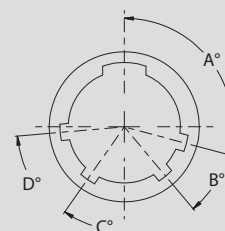


SHELL SIZES	A THREAD MATING	$\phi$ L $\pm$ .002 (0.05) FLANGE	$\phi$ R $\pm$ .002 (0.05) MTG HOLE	$\phi$ S THRU
7	.4375-.067P-.2L-TS-2A	0.725 (18.42)	0.730 (18.54)	0.445 (11.30)
8	.5000-.067P-.2L-TS-2A	0.788 (20.02)	0.793 (20.14)	0.509 (12.93)
9	.5625-.067P-.2L-TS-2A	0.912 (23.16)	0.917 (23.29)	0.577 (14.66)
10	.6250-.067P-.2L-TS-2A	0.975 (24.76)	0.980 (24.89)	0.645 (16.38)
11	.6875-.067P-.2L-TS-2A	1.038 (26.37)	1.043 (26.49)	0.712 (18.08)
12	.7500-.067P-.2L-TS-2A	1.100 (27.94)	1.105 (28.07)	0.768 (19.51)
14	.8750-.067P-.2L-TS-2A	1.225 (31.12)	1.230 (31.24)	0.890 (22.61)
16	1.0000-.067P-.2L-TS-2A	1.350 (34.29)	1.355 (34.42)	1.015 (25.78)
18	1.1250-.067P-.2L-TS-2A	1.475 (37.47)	1.480 (37.59)	1.125 (28.58)
20	1.2500-.067P-.2L-TS-2A	1.600 (40.64)	1.605 (40.77)	1.275 (32.39)
22	1.3750-.067P-.2L-TS-2A	1.725 (43.82)	1.730 (43.94)	1.400 (35.56)
24	1.5000-.067P-.2L-TS-2A	1.850 (46.99)	1.855 (47.12)	1.525 (38.73)

### Dimensions Based on Panel Thickness Option

DASH NO	T MAX	U MAX
-01	1.275 (32.39)	0.750 (19.05)
-02	1.400 (35.56)	0.875 (22.23)
-03	1.650 (41.91)	1.125 (28.58)

### Polarization Key Code



POS	A°	B°	C°	D°
A	105°	140°	215°	265°
B	102°	170°	248°	305°
C	80°	150°	230°	295°
D	68°	140°	205°	275°
E	64°	155°	234°	304°
F	72°	120°	200°	298°