

# CRYOGENIC ThermaRex Cryo SuperNine® Connectors



## Solder Cup/PC Tail Termination Hermetic Receptacle 806-088

THERMAREX™ CRYO



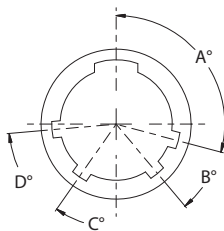
### MATERIALS/FINISH

- Shell & jam-nut: 304L CRES/per p/n dev
- Contacts, hermetic: Nickel-iron alloy/gold plate
- Contacts, sockets: Copper alloy/gold plate
- Hoods, sockets: 305 CRES/passivate
- Insulator, hermetic: Vitreous glass
- Insulator, Socket: High performance rigid dielectric
- Seals & O-Rings: Duraelectric™ K

### TEST CRITERIA

- Leak rate:  $<1 \times 10^{-7}$  ccHe/sec @ 1 ATM. delta pressure
- DWV: 1300 VAC (#22 Contacts)  
1800 VAC (#20, 16, 12, and 8 Contacts)
- I.R.: 5000 MEGOHMS MIN @ 500 VDC
- Current capacity: 3 A (#22), 5 A (#20), 10 A (#16), 17 AMPS (#12), 33 A (#8)

### 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°

### "ø T" ±.002 PC Tail

Cont. Size	Tail ø
22	.020
20	.030
16	.063
12	.094
8	.180

Series 806 cryogenic capable hermetic receptacles feature stainless steel shells and glass-to-metal seals. Rated for -195°C to +200°C temperature range. Series 806 connectors save size and weight compared to legacy aerospace-grade hermetic connectors. These parylene-compatible connectors are suitable for pressurized bulkhead applications subject to vibration, moisture, and temperature extremes.

### How To Order ThermaRex Series 806 Mil-Aero Jam-nut Receptacle

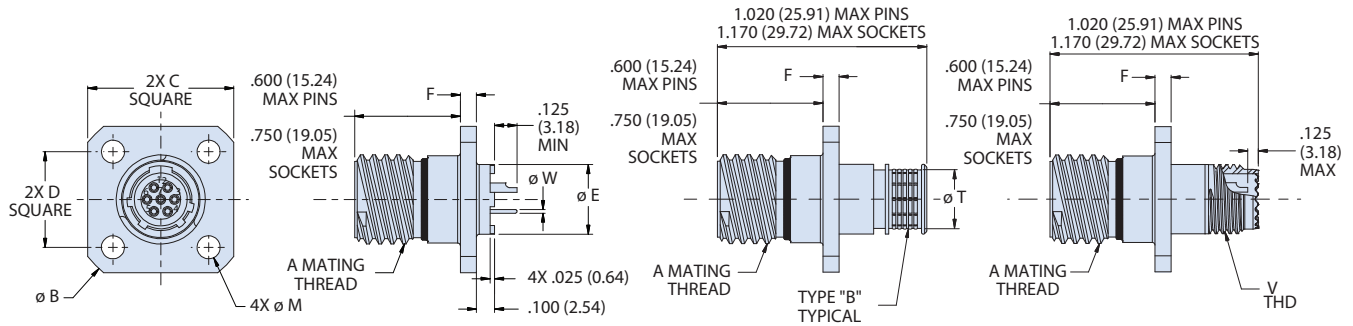
Sample Part Number	806-088	-B	07	Z1	8-7	C	A
Series / Basic Part No.	806-088 Solder Cup/PC Tail Termination Hermetic Receptacle						
Rear Configuration	B = Banding Porch T = Accessory Threads Omit for standoffs						
Mounting Type	02 = Box Mount 03 = Solder Mount 07 = Jam-Nut Mount 13 = Weld Mount						
Finish	Z1 = Passivated ZL = Nickel Plated						
Shell Size - Insert Arr.	See Table I						
Contact Style	C = PC Term., Pin (only available for standoff rear configuration style) D = PC Term., Skt (only available for standoff rear configuration style) P = Solder Cup, Pin S = Solder Cup, Socket						
Polarization	A, B, C, D						

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	8
7-3	3					22-69		69				18-3				3	
8-4	4					24-92		92				20-4				4	
8-7	7					8-1			1			22-5				5	
9-11	11					10-2			2			24-8				8	
10-15	15					11-4			4			10-8A	6		2		
11-19	19					12-5			5			11-13	11		2		
12-26	26					14-7			7			12-27	26		1		
14-39	39					16-12			12			14-21	17		4		
16-60	60					18-15			15			16-41	37		4		
18-85	85					20-22			22			18-59	55		4		
20-110	110					22-24			24			11-14	13			1	
22-140	140					24-35			35			12-14	12			2	
24-186	186					9-1				1		14-22	20			2	
8-3		3				12-2				2		16-32	28			4	
9-5		5				14-3				3		16-42	40			2	
10-8		8				16-4				4		18-62	60			2	
11-10		10				16-7				7		14-20A	19			1	
12-15		15				18-8				8		16-22	20			2	
14-20		20				20-11				11		18-21	18			3	
16-31		31				22-13				13		20-28	24			4	
18-41		41				24-19				19		22-44	40			4	
20-55		55				10-1					1	24-97	93			4	
						16-2					2						

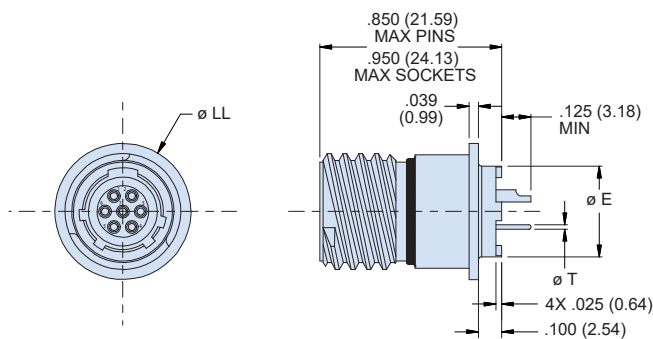
## Solder Cup/PC Tail Termination Hermetic Receptacle 806-088

806-088-02 Box Mount Receptacle Dimensions



Shell Size	"A" Thread Mating	" $\phi B$ " Max Flange	"C" Square Max Flange Flats	"D" Square BSC Mounting Holes	" $\phi E$ " $\pm 0.10$ Mounting Boss	"F" Max Flange	" $\phi M$ " Thru MTG Holes	" $\phi S$ " Thru
7	.4375-.067P-.2L-TS-2A	0.968 (24.59)	0.750 (19.05)	0.469 (11.91)	0.306 (7.77)	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)	0.387 (9.83)			0.509 (12.93)
9	.5625-.067P-.2L-TS-2A	1.130 (28.70)	0.885 (22.48)	0.594 (15.09)	0.468 (11.89)			0.577 (14.66)
10	.6250-.067P-.2L-TS-2A	1.174 (29.82)	0.913 (23.19)	0.625 (15.88)	0.546 (13.87)			0.645 (16.38)
11	.6875-.067P-.2L-TS-2A	1.240 (31.50)	0.960 (24.38)	0.670 (17.02)	0.586 (14.88)			0.712 (18.08)
12	.7500-.067P-.2L-TS-2A	1.354 (34.39)	1.040 (26.42)	0.765 (19.43)	0.663 (16.84)			0.768 (19.51)
14	.8750-.067P-.2L-TS-2A	1.510 (38.35)	1.133 (28.78)	0.859 (21.82)	0.743 (18.87)			0.890 (22.61)
16	1.0000-.067P-.2L-TS-2A	1.620 (41.15)	1.227 (31.17)	0.938 (23.83)	0.842 (21.39)			1.015 (25.78)
18	1.1250-.067P-.2L-TS-2A	1.784 (45.31)	1.320 (33.53)	1.016 (25.81)	0.959 (24.36)			1.125 (28.58)
20	1.2500-.067P-.2L-TS-2A	1.910 (48.51)	1.444 (36.68)	1.109 (28.17)	1.105 (28.07)			0.125 (3.18)
22	1.3750-.067P-.2L-TS-2A	2.083 (52.91)	1.570 (39.88)	1.203 (30.56)	1.215 (30.86)	1.400 (35.56)		
24	1.5000-.067P-.2L-TS-2A	2.200 (55.88)	1.696 (43.08)	1.312 (33.32)	1.335 (33.91)	1.525 (38.73)		

806-088-03 Solder Mount Receptacle Dimensions



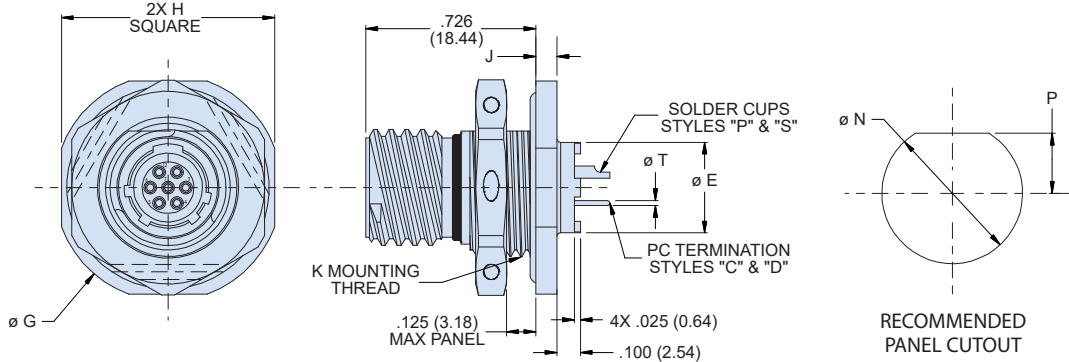
Shell Size	"A" Thread Mating	" $\phi E$ " $\pm 0.10$ Mounting Boss	" $\phi LL$ " Flange
7	.4375-.067P-.2L-TS-2A	0.306 (7.77)	0.520 (13.21)
8	.5000-.067P-.2L-TS-2A	0.387 (9.83)	0.581 (14.76)
9	.5625-.067P-.2L-TS-2A	0.468 (11.89)	0.649 (16.48)
10	.6250-.067P-.2L-TS-2A	0.546 (13.87)	0.717 (18.21)
11	.6875-.067P-.2L-TS-2A	0.586 (14.88)	0.784 (19.91)
12	.7500-.067P-.2L-TS-2A	0.663 (16.84)	0.841 (21.36)
14	.8750-.067P-.2L-TS-2A	0.743 (18.87)	0.962 (24.43)
16	1.0000-.067P-.2L-TS-2A	0.842 (21.39)	1.087 (27.61)
18	1.1250-.067P-.2L-TS-2A	0.959 (24.36)	1.197 (30.40)
20	1.2500-.067P-.2L-TS-2A	1.105 (28.07)	1.347 (34.21)
22	1.3750-.067P-.2L-TS-2A	1.215 (30.86)	1.472 (37.39)
24	1.5000-.067P-.2L-TS-2A	1.335 (33.91)	1.597 (40.56)

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Solder Cup/PC Tail Termination Hermetic Receptacle  
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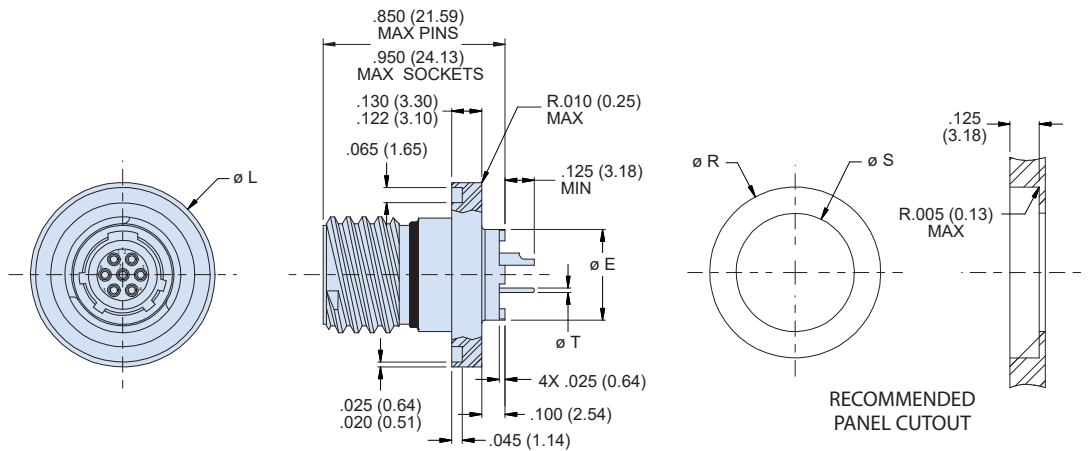
806-088-07 Jam-Nut Mount Receptacle Dimensions



Shell Size	"A" Thread Mating	"Ø E" ±.010 Mounting Boss	"Ø G" Max Flange	"H" Square Max Flange Flats	"J" Max Flange	"K" Thread Mounting	"Ø N" +.005/-0.000 Mounting Hole	"P" +.005/-0.000 Mounting Flat
7	.4375-.067P-.2L-TS-2A	0.306 (7.77)	0.848 (21.54)	0.908 (23.06)	0.100 (2.54)	M13 X 1-6g-.100R	0.522 (13.26)	0.224 (5.69)
8	.5000-.067P-.2L-TS-2A	0.387 (9.83)	0.980 (24.89)	0.920 (23.37)		M15 X 1-6g .100R	0.601 (15.27)	0.256 (6.50)
9	.5625-.067P-.2L-TS-2A	0.468 (11.89)	1.040 (26.42)	0.980 (24.89)		M16 X 1-6g .100R	0.640 (16.26)	0.287 (7.29)
10	.6250-.067P-.2L-TS-2A	0.546 (13.87)	1.110 (28.19)	1.050 (26.67)		M18 X 1-6g .100R	0.719 (18.26)	0.318 (8.08)
11	.6875-.067P-.2L-TS-2A	0.586 (14.88)	1.160 (29.46)	1.110 (28.19)		M19 X 1-6g .100R	0.759 (19.28)	0.350 (8.89)
12	.7500-.067P-.2L-TS-2A	0.663 (16.84)	1.230 (31.24)	1.170 (29.72)		M21 X 1-6g .100R	0.837 (21.26)	0.381 (9.68)
14	.8750-.067P-.2L-TS-2A	0.743 (18.87)	1.360 (34.54)	1.320 (33.53)		M24 X 1-6g .100R	0.955 (24.26)	0.443 (11.25)
16	1.0000-.067P-.2L-TS-2A	0.842 (21.39)	1.515 (38.48)	1.444 (36.68)		M27 X 1-6g .100R	1.073 (27.25)	0.505 (12.83)
18	1.1250-.067P-.2L-TS-2A	0.959 (24.36)	1.610 (40.89)	1.570 (39.88)		M30 X 1-6g .100R	1.192 (30.28)	0.568 (14.43)
20	1.2500-.067P-.2L-TS-2A	1.105 (28.07)	1.850 (46.99)	1.760 (44.70)		0.128 (3.25)	M34 X 1-6g .100R	1.349 (34.26)
22	1.3750-.067P-.2L-TS-2A	1.215 (30.86)	2.010 (51.05)	1.913 (48.59)	M37 X 1-6g .100R		1.467 (37.26)	0.693 (17.60)
24	1.5000-.067P-.2L-TS-2A	1.335 (33.91)	2.195 (55.75)	2.070 (52.58)	M41 X 1-6g .100R		1.624 (41.25)	0.755 (19.18)

**Solder Cup/PC Tail Termination Hermetic Receptacle  
 806-088**

**806-088-13 Weld Mount Receptacle Dimensions**



Shell Size	"A" Thread Mating	"∅ E" ±.005 Banding Porch	"∅ L" ±.002 Flange	"∅ R" ±.002 MTG Hole	"∅ S" Thru
7	.4375-.067P-.2L-TS-2A	0.265 (6.73)	0.725 (18.42)	0.730 (18.54)	0.445 (11.30)
8	.5000-.067P-.2L-TS-2A	0.327 (8.31)	0.788 (20.02)	0.793 (20.14)	0.509 (12.93)
9	.5625-.067P-.2L-TS-2A	0.406 (10.31)	0.912 (23.16)	0.917 (23.29)	0.577 (14.66)
10	.6250-.067P-.2L-TS-2A	0.484 (12.29)	0.975 (24.76)	0.980 (24.89)	0.645 (16.38)
11	.6875-.067P-.2L-TS-2A	0.524 (13.31)	1.038 (26.37)	1.043 (26.49)	0.712 (18.08)
12	.7500-.067P-.2L-TS-2A	0.603 (15.32)	1.100 (27.94)	1.105 (28.07)	0.768 (19.51)
14	.8750-.067P-.2L-TS-2A	0.681 (17.30)	1.225 (31.12)	1.230 (31.24)	0.890 (22.61)
16	1.0000-.067P-.2L-TS-2A	0.782 (19.86)	1.350 (34.29)	1.355 (34.42)	1.015 (25.78)
18	1.1250-.067P-.2L-TS-2A	0.899 (22.83)	1.475 (37.47)	1.480 (37.59)	1.125 (28.58)
20	1.2500-.067P-.2L-TS-2A	1.043 (26.49)	1.600 (40.64)	1.605 (40.77)	1.275 (32.39)
22	1.3750-.067P-.2L-TS-2A	1.155 (29.34)	1.725 (43.82)	1.730 (43.94)	1.400 (35.56)
24	1.5000-.067P-.2L-TS-2A	1.273 (32.33)	1.850 (46.99)	1.855 (47.12)	1.525 (38.73)

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