Hermetic Military

How to Order

MILITARY	DESCRIPTION	COMMERCIAL
D38999/21	Hermetic Box Mounting Receptacle	TVPS02Y, TVPS02YN
D38999/23	Hermetic Jam Nut Receptacle	TVS07Y, TVS07YN
D38999/25	Hermetic Solder Mount Receptacle	TVSI
D38999/27	Hermetic Weld Mounted Receptacle	TVSHI

HOW TO ORDER: MILITARY

1. Connector Type	2. Shell Style	3. Service Class	4. Shell Size– Insert Arrangement	5. Contact Type	6. Alternate Keying Position
D38999/	21	Y	G35	P	N

1. CONNECTOR TYPE

38999/	MIL-DTL-38999 III

2. SHELL STYLE

21	Box Mount Receptacle Hermetic
23	Jam Nut Receptacle Hermetic
25	Solder Mount Receptacle Hermetic
27	Weld Mounted Receptacle Hermetic

3. SERVICE CLASS

Military	Finish	RoHS	Material	Material/ Description
N	Stainless Steel w/ Nickel Plate	•	Stainless Steel	Hermetic connectors, corrosion resistant steel, 200°C
Y	Stainless Steel	•	Stainless Steel	Hermetic seal, 200°C passivated stainless steel

4. SHELL SIZE & INSERT ARRANGEMENTS

Shell Size & Insert Arrangements are on pages 5-6. First number represents Shell Size, second number is the Insert Arrangement.

TRIPLE START THREADS

A	B	C	D	E	F	G	H	J	Mil Shell Size
9	11	13	15	17	19	21	23	25	Amphenol Shell size

5. CONTACT TYPE

P	500 Cycle Pin Contacts
X	Pin Contacts - Eyelet
C	PC Tail

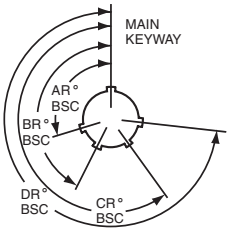
6. ALTERNATE KEYING POSITION

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Master key stays fixed, minor keys rotate. Inserts are not rotated in conjunction with the master key/keyway.

Shell Size	Key & Keyway Arrangement Identification Letter	AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
A (9)	N*	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
	E	91	131	197	240
B (11) C (13) D (15)	N*	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
	D	119	146	176	298
	E	51	141	184	242
E (17) F (19)	N*	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
	E	79	153	197	272
G (21) H (23) J (25)	N*	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
	E	79	153	197	272

RECEPTACLE

(FRONT FACE SHOWN)



Hermetic MIL-DTL-38999, Series III TV

How to Order (Commercial)

1. Type & Class	2. Shell Size-Insert Arrg.	3. Contact Type	4. Alternate Position
TVS07Y	11-4	P	N

1. SELECT A TYPE & CLASS

		Passivated (Non-Firewall)	Nickel Plated (Non-Firewall)
RATES	Temperature	200˚C	200˚C
	Salt Spray	500 Hrs	500 Hrs
	EMI Shielding	-65dB @ 10GHz	-50dB @ 10GHz
	RoHS		
Hermetic	Box Mounting Receptacle	TVPS02Y-	TVPS02YN-
	Jam Nut Receptacle	TVS07Y-	TVS07YN-
	Solder Mount	TVSIY-	TVSIYN-
	Weld Mounting Receptacle	TVSHIY-	TVSHIYN-

2. SHELL SIZE & INSERT ARRANGEMENTS

See table on page 5-6. First number represents Shell Size, second number is the Insert Arrangement.

3. CONTACT TYPE

P	500 Cycle Pin Contacts
X	Pin Contacts - Eyelet

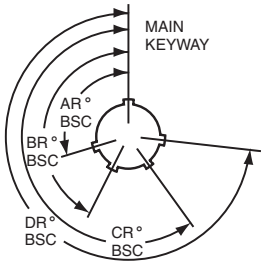
See pages 16-20 for PCB Hermetic Connector options

4. ALTERNATE KEYING POSITION

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The angles for a given connector are the same whether it contains pins or sockets. Master key stays fixed, minor keys rotate. Inserts are not rotated in conjunction with the master key/keyway.

RECEPTACLE

(FRONT FACE SHOWN)



Shell Size	Key & Keyway Arrangement Identification Letter	AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
9	N*	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
	E	91	131	197	240
11, 13, and 15	N*	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
	D	119	146	176	298
	E	51	141	184	242
17 and 19	N*	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
	E	79	153	197	272
21, 23, and 25	N*	80	142	196	293
	A	135	170	200	310
	B	49	169	200	244
	C	66	140	200	257
	D	62	145	180	280
	E	79	153	197	272

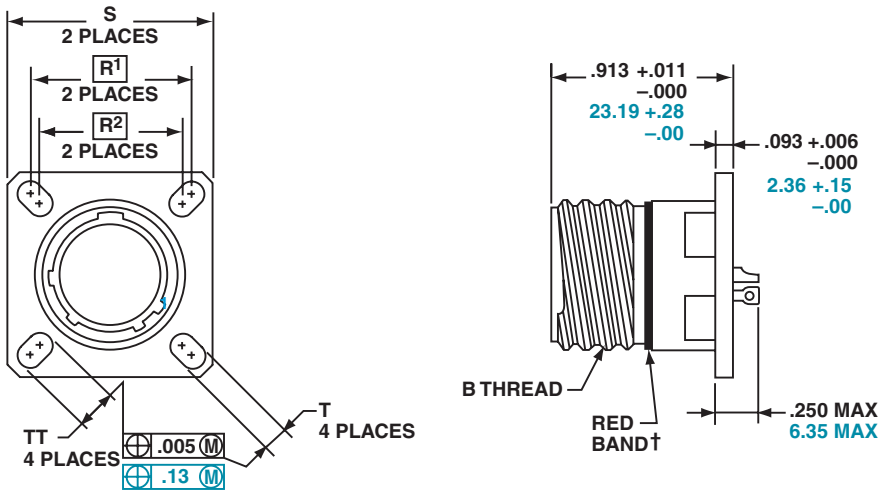
Hermetic Box Mounting Receptacle

Military (D38999/21), Commercial (TVPS02)

PART NUMBER BUILDER Page 12
ONLINE CONFIGURATOR www.amphenol-aerospace.com

MILITARY
D38999/21

COMMERCIAL SS
TVPS02Y
TVPS02YN



† Red band indicates fully mated
NOTE: Consult Amphenol Aerospace for availability of non-glass-sealed versions with printed circuit tail contacts.

Inches

Shell Size	MS Shell Size Coded	B Thread 0.1P-0.3L-TS (Plated)	R1	R2	S ±.010	T ±.008	TT ±.008
9	A	.6250	.719	.594	.938	.128	.216
11	B	.7500	.812	.719	1.031	.128	.194
13	C	.8750	.906	.812	1.125	.128	.194
15	D	1.0000	.969	.906	1.219	.128	.173
17	E	1.1875	1.062	.969	1.312	.128	.194
19	F	1.2500	1.156	1.062	1.438	.128	.194
21	G	1.3750	1.250	1.156	1.562	.128	.194
23	H	1.5000	1.375	1.250	1.688	.154	.242
25	J	1.6250	1.500	1.375	1.812	.154	.242

Millimeters

Shell Size	MS Shell Size Coded	R1	R2	S ±.25	T ±.20	TT ±.20
9	A	18.26	15.09	23.83	3.25	5.49
11	B	20.62	18.26	26.19	3.25	4.93
13	C	23.01	20.62	28.58	3.25	4.93
15	D	24.61	23.01	30.96	3.25	4.39
17	E	26.97	24.61	33.32	3.25	4.93
19	F	29.36	26.97	36.53	3.25	4.93
21	G	31.75	29.36	39.67	3.25	4.93
23	H	34.93	31.75	42.88	3.91	6.15
25	J	38.10	34.93	46.02	3.91	6.15

All dimensions for reference only

Designates true position dimensioning

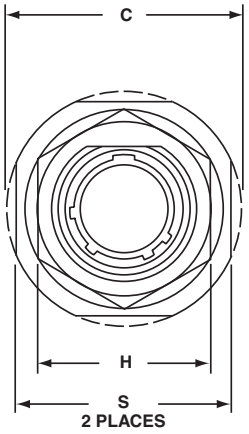
Hermetic Jam Nut Receptacle

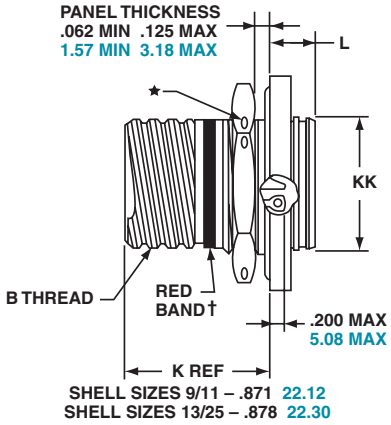
Military (D38999/23), Commercial (TVS07)

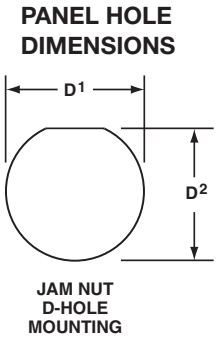
Amphenol Aerospace

HOW TO ORDER Page 12
ONLINE CONFIGURATOR www.amphenol-aerospace.com

MILITARY	COMMERCIAL SS
D38999/23	TVS07Y
	TVS07YN







†Red band indicates fully mated
⋆.059 dia min. 1.5 dia. min. 3 lockwire holes Formed lockwire hole design (6 holes) is optional.

Inches

Shell Size	MS Shell Size code	B Thread Class 2A 0.1P-0.3L-TS (Plated)	C Max	D¹ +.010 –.000	D² +.000 –.010	H Hex +.017 –.016	L Max	S ±.010	KK +.011 –.000
9	A	.6250	1.199	.693	.657	.875	.357	1.062	.642
11	B	.7500	1.386	.825	.770	1.000	.357	1.250	.766
13	C	.8750	1.511	1.010	.955	1.188	.357	1.375	.892
15	D	1.0000	1.636	1.135	1.085	1.312	.357	1.500	1.018
17	E	1.1875	1.761	1.260	1.210	1.438	.357	1.625	1.142
19	F	1.2500	1.949	1.385	1.335	1.562	.381	1.812	1.268
21	G	1.3750	2.073	1.510	1.460	1.688	.381	1.938	1.392
23	H	1.5000	2.199	1.635	1.585	1.812	.381	2.062	1.518
25	J	1.6250	2.323	1.760	1.710	2.000	.381	2.188	1.642

Millimeters

Shell Size	MS Shell Size code	C Max	D¹ +.25 –.00	D² +.00 –.25	H Hex +.43 –.41	L Max	S ±.25	KK +.28 –.00
9	A	30.45	17.60	16.70	22.23	9.07	26.97	16.31
11	B	35.20	20.96	19.59	25.40	9.07	31.75	19.46
13	C	38.38	25.65	24.26	30.18	9.07	34.93	22.66
15	D	41.55	28.83	27.56	33.32	9.07	38.10	25.86
17	E	44.73	32.01	30.73	36.53	9.07	41.28	29.01
19	F	49.50	35.18	33.91	39.67	9.68	46.02	32.21
21	G	52.65	38.35	37.08	42.80	9.68	49.23	35.36
23	H	55.85	41.53	40.26	46.02	9.68	52.37	38.56
25	J	59.00	44.70	43.43	50.80	9.68	55.58	41.71

All dimensions for reference only

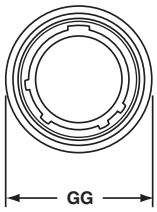
Hermetic Solder Mounting Receptacle

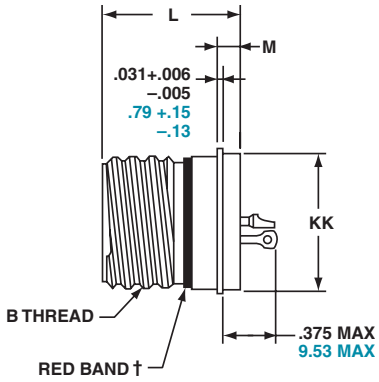
Military (D38999/25), Commercial (TVSI)

HOW TO ORDER Page 12
ONLINE CONFIGURATOR www.amphenol-aerospace.com

MILITARY
D38999/25

COMMERCIAL SS
TVSIY
TVSIYN





† Red band indicates fully mated

Inches

Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P-0.3L-TS (Plated)	L +.011 –.005	M +.006 –.005	GG Dia. +.011 –.010	KK Dia +.011 –.005
9	A	.6250	.806	.125	.750	.672
11	B	.7500	.806	.125	.844	.781
13	C	.8750	.806	.125	.969	.906
15	D	1.0000	.806	.125	1.094	1.031
17	E	1.1875	.806	.125	1.218	1.156
19	F	1.2500	.806	.125	1.312	1.250
21	G	1.3750	.806	.125	1.438	1.375
23	H	1.5000	.838	.156	1.563	1.500
25	J	1.6250	.838	.156	1.688	1.625

Millimeters

Shell Size	MS Shell Size Code	L +.28 –.00	M +.15 –.13	GG Dia. +.28 –.25	KK Dia +.03 –.13
9	A	20.47	3.18	19.05	17.07
11	B	20.47	3.18	21.44	19.84
13	C	20.47	3.18	24.61	23.01
15	D	20.47	3.18	27.79	26.19
17	E	20.47	3.18	30.94	29.36
19	F	20.47	3.18	33.32	31.75
21	G	20.47	3.18	36.53	34.93
23	H	21.29	3.96	39.70	38.10
25	J	21.29	3.96	42.88	41.28

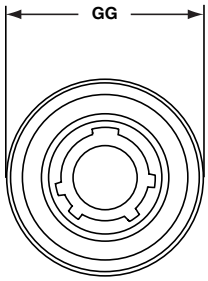
Hermetic Wall Mounting Receptacle

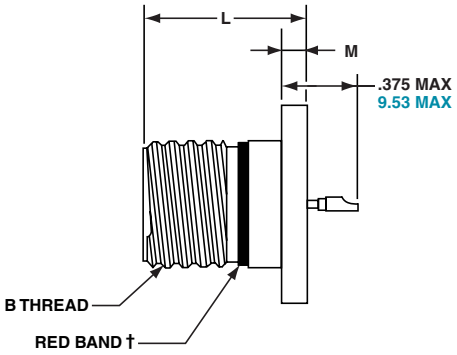
Military (D38999/27), Commercial (TVSHIY)

HOW TO ORDER Page 12
ONLINE CONFIGURATOR
www.amphenol-aerospace.com

MILITARY
D38999/27

COMMERCIAL SS
TVSHIY
TVSHIYN





† Red band indicates fully mated

Inches

Shell Size	MS Shell Size Code	B Thread Class 2A 0.1P-0.3L-TS (Plated)	L +.011 –.000	M +.006 –.005	GG Dia. +.011 –.010
9	A	.6250	.806	.125	.973
11	B	.7500	.806	.125	1.095
13	C	.8750	.806	.125	1.221
15	D	1.0000	.806	.125	1.347
17	E	1.1875	.806	.125	1.434
19	F	1.2500	.806	.125	1.579
21	G	1.3750	.806	.125	1.721
23	H	1.5000	.838	.156	1.886
25	J	1.6250	.838	.156	1.973

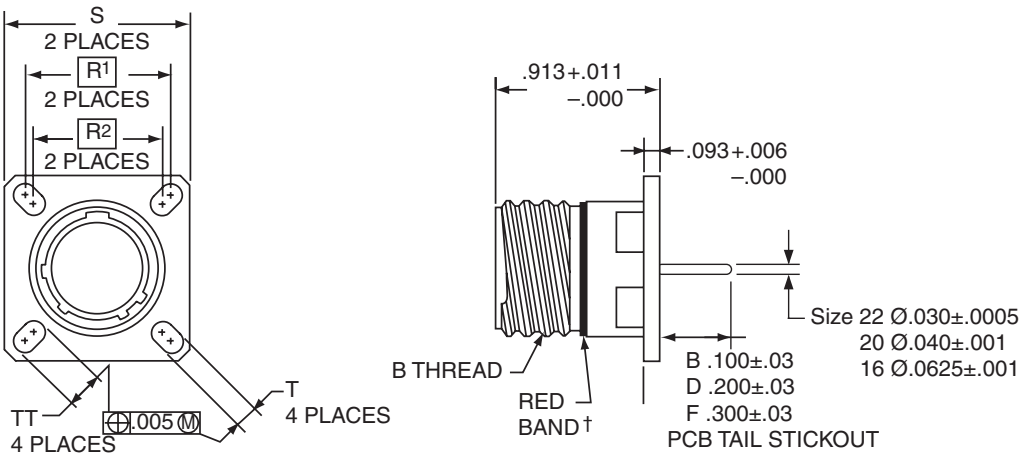
Millimeters

Shell Size	MS Shell Size Code	L +.28 –.00	M +.15 –.13	GG Dia. +.25 –.00
9	A	20.47	3.18	24.71
11	B	20.47	3.18	27.81
13	C	20.47	3.18	31.01
15	D	20.47	3.18	34.21
17	E	20.47	3.18	36.42
19	F	20.47	3.18	40.11
21	G	20.47	3.18	43.71
23	H	21.29	3.96	47.90
25	J	21.29	3.96	50.11

All dimensions for reference only

PCB Hermetic Box Mounting Receptacle

Commercial



	1.	2.	3.	4.	5.	6.
PART # See chart below	**Base Number**	**Coded Shell Size**	**Insert Arrg.**	**Contact Type/Alt. Keying**	**Shell Finish**	**Tail Length**
	10-626	501	-35	P	1	B

HOW TO ORDER

1. BASE NUMBER	
10-626	Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail

2. CODED SHELL SIZE
See chart below **501-509**, designates size **9-25** shell size.

3. INSERT ARRANGEMENT	
-35	Designates Insert Arrangement Number

Refer to insert availability chart on page 5-6.

4. CONTACT TYPE/ALTERNATE KEYING	
P	Designates Pin Contacts in Normal Position

Refer to page 12 for alternate rotation letters to use.

5. SHELL FINISH	
1	Hermetic seal, passivated Stainless Steel, 200°C
2	Hermetic seal, Stainless Steel w/Nickel Plate
3	Carbon Steel w/reflowed tin plate

6. TAIL LENGTH	
B	.100±.03
D	.200±.03
F	.300±.03

† Red band indicates fully mated

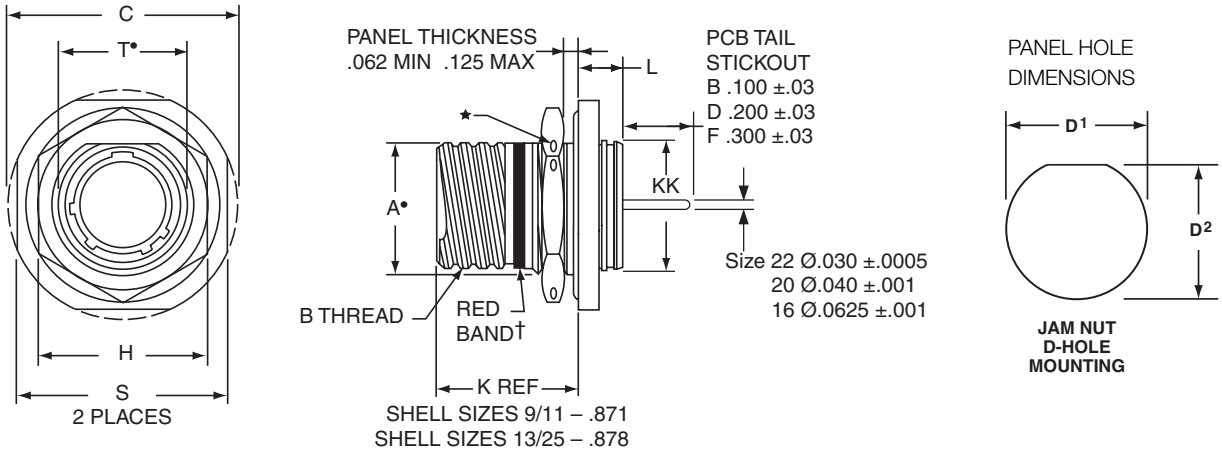
Shell Size	Part Number	B Thread 0.1P-0.3L-TS (Plated)	R1	R2	S ±.010	T ±.008	TT ±.008
9	10-626**501**-XXX	.6250	.719	.594	.938	.128	.216
11	**502-XXX**	.7500	.812	.719	1.031	.128	.194
13	**503-XXX**	.8750	.906	.812	1.125	.128	.194
15	**504-XXX**	1.0000	.969	.906	1.219	.128	.173
17	**505-XXX**	1.1875	1.062	.969	1.312	.128	.194
19	**506-XXX**	1.2500	1.156	1.062	1.438	.128	.194
21	**507-XXX**	1.3750	1.250	1.156	1.562	.128	.194
23	**508-XXX**	1.5000	1.375	1.250	1.688	.154	.242
25	**509-XXX**	1.6250	1.500	1.375	1.812	.154	.242

All dimensions for reference.

☐ Designates true position dimensioning

PCB Hermetic Jam Nut Receptacle

Commercial



	1.	2.	3.	4.	5.	6.
PART # See chart below	**Base Number**	**Coded Shell Size**	**Insert Arrg.**	**Contact Type/Alt. Keying**	**Shell Finish**	**Tail Length**
	10-626	471	-35	P	1	B

HOW TO ORDER

1. BASE NUMBER	
10-626	Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail

2. CODED SHELL SIZE
See chart below **471-479**, designates size **9-25** shell size.

3. INSERT ARRANGEMENT	
-35	Designates Insert Arrangement Number

Refer to insert availability chart on page 5-6.

4. CONTACT TYPE/ALTERNATE KEYING	
P	Designates Pin Contacts in Normal Position

Refer to page 12 for alternate rotation letters to use.

5. SHELL FINISH	
1	Hermetic seal, passivated Stainless Steel, 200°C
2	Hermetic seal, Stainless Steel w/Nickel Plate
3	Carbon Steel w/reflowed tin plate

6. TAIL LENGTH	
B	.100±.03
D	.200±.03
F	.300±.03

† Red band indicates fully mated

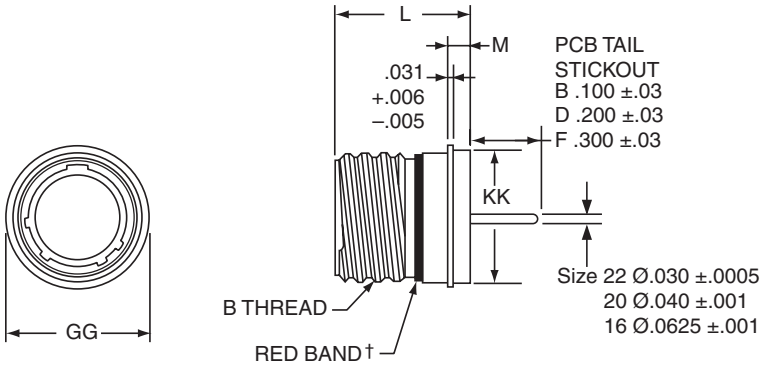
★ .059 dia. min. (1.5 dia. min.) 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.

Shell Size	Part Number	A+ +.000 –.010	B Thread Class 2A 0.1P-0.3L-TS (Plated)	C Max	D1 +.010 –.000	D1 +.000 –.010	H Hex +.017 –.016	L Max	S ±.010	T+ +.010 –.000	KK +.011 –.000
9	10-626**471**-XXX	.669	.6250	1.199	.700	.670	.875	.357	1.062	.697	.642
11	**472**-XXX	.769	.7500	1.386	.825	.770	1.000	.357	1.250	.822	.766
13	**473**-XXX	.955	.8750	1.511	1.010	.955	1.188	.357	1.375	1.007	.892
15	**474**-XXX	1.084	1.0000	1.636	1.135	1.085	1.312	.357	1.500	1.134	1.018
17	**475**-XXX	1.208	1.1875	1.761	1.260	1.210	1.438	.357	1.625	1.259	1.142
19	**476**-XXX	1.333	1.2500	1.949	1.385	1.335	1.562	.381	1.182	1.384	1.268
21	**477**-XXX	1.459	1.3750	2.073	1.510	1.460	1.688	.381	1.938	1.507	1.392
23	**478**-XXX	1.575	1.5000	2.199	1.635	1.585	1.812	.381	2.062	1.634	1.518
25	**479**-XXX	1.709	1.6250	2.323	1.760	1.710	2.000	.381	2.188	1.759	1.642

All dimensions for reference only.

PCB Hermetic Solder Mounting Receptacle

Commercial



	1.	2.	3.	4.	5.	6.
PART # See chart below	**Base Number**	**Coded Shell Size**	**Insert Arrg.**	**Contact Type/Alt. Keying**	**Shell Finish**	**Tail Length**
	10-626	481	-35	P	1	B

HOW TO ORDER

1. BASE NUMBER	
10-626	Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail

2. CODED SHELL SIZE
See chart below **481-489**, designates size **9-25** shell size.

3. INSERT ARRANGEMENT	
-35	Designates Insert Arrangement Number

Refer to insert availability chart on page 5-6.

4. CONTACT TYPE/ALTERNATE KEYING	
P	Designates Pin Contacts in Normal Position

Refer to page 12 for alternate rotation letters to use.

5. SHELL FINISH	
1	Hermetic seal, passivated Stainless Steel, 200°C
2	Hermetic seal, Stainless Steel w/Nickel Plate
3	Carbon Steel w/reflowed tin plate

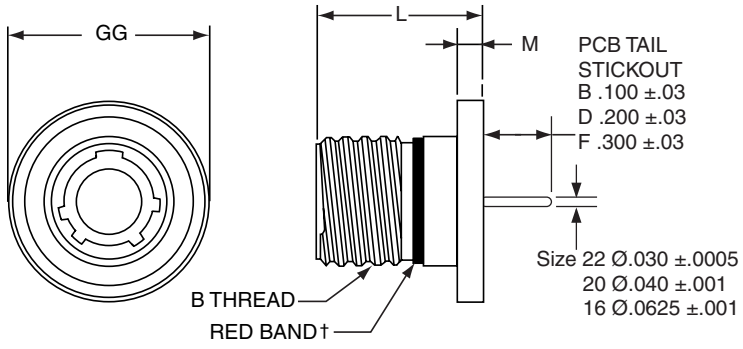
6. TAIL LENGTH	
B	.100±.03
D	.200±.03
F	.300±.03

† Red band indicates fully mated

Shell Size	Part Number	B Thread Class 2A 0.1P-0.3L-TS (Plated)	L +.011 –.005	M +.006 –.005	GG Dia. +.011 –.010	KK Dia +.011 –.005
9	10-626**481**-XXX	.6250	.806	.125	.750	.672
11	**482**-XXX	.7500	.806	.125	.844	.781
13	**483**-XXX	.8750	.806	.125	.969	.906
15	**484**-XXX	1.0000	.806	.125	1.094	1.031
17	**485**-XXX	1.1875	.806	.125	1.218	1.156
19	**486**-XXX	1.2500	.806	.125	1.312	1.250
21	**487**-XXX	1.3750	.806	.125	1.438	1.375
23	**488**-XXX	1.5000	.838	.156	1.563	1.500
25	**489**-XXX	1.6250	.838	.156	1.688	1.625

PCB Hermetic Weld Mounting Receptacle

Commercial



† Red band indicates fully mated

	1.	2.	3.	4.	5.	6.
PART # See chart below	**Base Number**	**Coded Shell Size**	**Insert Arrg.**	**Contact Type/Alt. Keying**	**Shell Finish**	**Tail Length**
	10-626	491	-35	P	1	B

HOW TO ORDER

1. BASE NUMBER	
10-626	Base Number for MIL-DTL-38999 Series III Hermetic with PCB Tail

2. CODED SHELL SIZE
See chart below **491-499**, designates size **9-25** shell size.

3. INSERT ARRANGEMENT	
-35	Designates Insert Arrangement Number

Refer to insert availability chart on page 5-6.

4. CONTACT TYPE/ALTERNATE KEYING	
P	Designates Pin Contacts in Normal Position

Refer to page 12 for alternate rotation letters to use.

5. SHELL FINISH	
1	Hermetic seal, passivated Stainless Steel, 200°C
2	Hermetic seal, Stainless Steel w/Nickel Plate
3	Carbon Steel w/reflowed tin plate

6. TAIL LENGTH	
B	.100±.03
D	.200±.03
F	.300±.03

Shell Size	Part Number	B Thread Class 2A 0.1P-0.3L-TS (Plated)	L +.011 –.000	M +.006 –.005	GG Dia. +.011 –.010
9	10-626**491**-XXX	.6250	.806	.125	.973
11	**492**-XXX	.7500	.806	.125	1.095
13	**493**-XXX	.8750	.806	.125	1.221
15	**494**-XXX	1.0000	.806	.125	1.347
17	**495**-XXX	1.1875	.806	.125	1.434
19	**496**-XXX	1.2500	.806	.125	1.579
21	**497**-XXX	1.3750	.806	.125	1.721
23	**498**-XXX	1.5000	.838	.156	1.886
25	**499**-XXX	1.6250	.838	.156	1.973

* Not available for weld mount. All dimensions for reference only.