

Military to Commercial Shell Style Conversion Table

How to Order (Military)

MILITARY	DESCRIPTION	COMMERCIAL
MS27475	Hermetic Wall Mounting Receptacle	JT00
MS27476	Hermetic Box Mounting Receptacle	JT02, JTS02
MS27477	Hermetic Jam Nut Receptacle	
MS27478	Hermetic Solder Mounting Receptacle	JTSIY

HOW TO ORDER - MILITARY SERIES II

1. MS Number	2. Service Class	3. Shell Size	4. Finishes	5. Insert Arrangement	6. Contact Style	7. Alternate Keying Position
MS27475	Y	14	A	18	P	A

1. MS NUMBER SERIES II JT

MS27475	Hermetic Wall Mounting Receptacle
MS27476	Hermetic Box Mounting Receptacle
MS27477	Hermetic Jam Nut Receptacle
MS27478	Hermetic Solder Mounting Receptacle

2. HERMETIC SERVICE CLASS

Y	Hermetic with interfacial seal
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3. SHELL SIZE & 5. INSERT ARRANGEMENT

See table on page 5-6

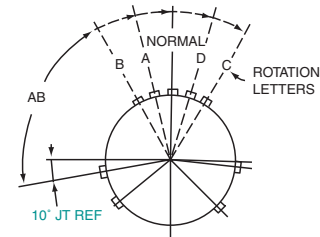
Shell Size & Insert Arrangement are on pages 5-6. First number represents Shell Size, second number is the Insert Arrangement. Place Shell Size in box 3 and Insert Arrangement in box 5.

4. HERMETIC FINISHES

Finish	Military Finish Data
Carbon steel shell tin plated & contacts	D
Stainless steel shell passivated	E
Stainless steel nickel plated	N

6. CONTACTS

P	Pin Contacts - Solder
X	Pin Contacts - Eyelet



RELATIVE POSSIBLE POSITION OF ROTATED MASTER KEYWAY (front face of receptacle shown)

JT Key/Keyway Rotation

Shell Size	AB ANGLE OF ROTATION (Degrees)				
	Normal	A	B	C	D
8	100°	82°	-	-	118°
10	100°	86°	72°	128°	114°
12	100°	80°	68°	132°	120°
14	100°	79°	66°	134°	121°
16	100°	82°	70°	130°	118°
18	100°	82°	70°	130°	118°
20	100°	82°	70°	130°	118°
22	100°	85°	74°	126°	115°
24	100°	85°	74°	126°	115°

7. ALTERNATE KEYING POSITION

"A" designates Alternate keying connector assembly. Other basic alternate keys are "B", "C" and "D". No letter required for normal rotation (no rotation) position.

A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The AB angle for a given connector is the same whether it contains pins or sockets. Only the master key/keyway rotates in the shell, and the minor keys are fixed.

AB angles shown are viewed from the front face of the connector, a receptacle is shown below. The angles for the plug are exactly the same except the direction of rotation is opposite of that shown for the receptacle.

The "N" designation is not referenced in part number, it is omitted.

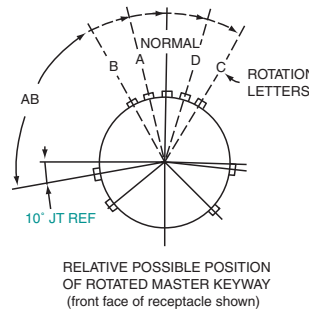
1.	2.	3.	4.	5.	6.
Type & Style	Service Class	Shell Size-Insert Arrg.	Contact Style	Alternate Keying Position	Finish Variation Suffix
JT00	Y	9-35	P	A	(SR)

2. HERMETIC SERVICE CLASS	
Y	Hermetic with interfacial seal
H	Hermetic applications- Fused compression glass sealed inserts. Leakage rate less than .01 micron cu. ft./hr. (1 x 10 ⁻⁷ cc/sec.) at 15 psi differential.

3. SHELL SIZE & INSERT ARRANGEMENTS
See table on page 5-6. First number represents Shell Size, second number is the Insert Arrangement.

4. CONTACTS	
P	Pin Contacts - Solder

5. ALTERNATE KEYING POSITION	
"A" designates Alternate keying connector assembly. Other basic alternate keys are "B", "C" and "D". No letter required for normal rotation (no rotation) position.	



A plug with a given rotation letter will mate with a receptacle with the same rotation letter. The AB angle for a given connector is the same whether it contains pins or sockets. Only the master key/keyway rotates in the shell, and the minor keys are fixed.

AB angles shown are viewed from the front face of the connector, a receptacle is shown below. The angles for the plug are exactly the same except the direction of rotation is opposite of that shown for the receptacle.

The "N" designation is not referenced in part number, it is omitted.

JT Key/Keyway Rotation

Shell Size	AB ANGLE OF ROTATION (Degrees)				
	Normal	A	B	C	D
8	100°	82°	-	-	118°
10	100°	86°	72°	128°	114°
12	100°	80°	68°	132°	120°
14	100°	79°	66°	134°	121°
16	100°	82°	70°	130°	118°
18	100°	82°	70°	130°	118°
20	100°	82°	70°	130°	118°
22	100°	85°	74°	126°	115°
24	100°	85°	74°	126°	115°

6. HERMETIC FINISHES	
Finish	Finish Suffix
Carbon steel shell tin plated & contacts	(468)
Stainless steel shell passivated	(162)
Stainless steel nickel plated	()

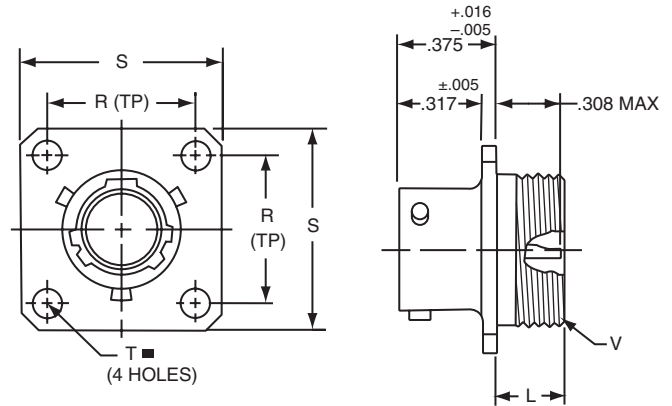
Wall Mounting Receptacle - Hermetic

Military (MS27475 & MS27482), Commercial (JT00 & JTS00)

PART NUMBER BUILDER Page 22-23

MILITARY
MS27475Y
MS27482Y

COMMERCIAL
JT00H, JT00Y
JTS00Y



COMMERCIAL

- * JT00H-XX-XXX
- ** JT00Y-XX-XXX
- *** JTS00Y-XX-XXX

MILITARY

- MS27475YXXDXXX
- MS27482YXXEXXX

■ ⊕ .005 DIA (M)

Shell Size	L Max.	N +.001 -.005	R (TP)	S ±.016	T ±.005	V Thread Class 2A
8	.234	.473	.594	.812	.120	.5625-24UNEF
10	.234	.590	.719	.938	.120	.6875-24UNEF
12	.234	.750	.812	1.031	.120	.8125-20UNEF
14	.234	.875	.906	1.125	.120	.9375-20UNEF
16	.234	1.000	.969	1.219	.120	1.0625-18UNEF
18	.234	1.125	1.062	1.312	.120	1.1875-18UNEF
20	.234	1.250	1.156	1.438	.120	1.3125-18UNEF
22	.234	1.375	1.250	1.562	.120	1.4375-18UNEF
24	.313	1.500	1.375	1.688	.147	1.5625-18UNEF

- * Standard Junior Tri-Lock
- ** Interfacial seal wafer
- *** High temperature version, interfacial seal wafer with stainless steel shell

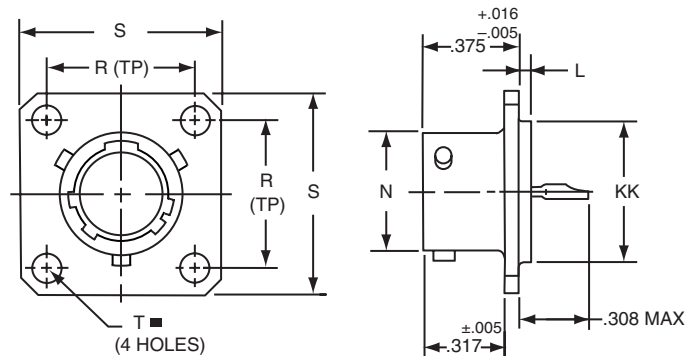
Box Mounting Receptacle - Hermetic

Military (MS27476), Commercial (JT02 & JTS02)

PART NUMBER BUILDER Page 22-23

MILITARY
MS27476Y

COMMERCIAL
JT02H, JT02Y
JTS02Y



COMMERCIAL

- * JT02H-XX-XXX
- ** JT02Y-XX-XXX
- *** JTS02Y-XX-XXX

MILITARY

- MS27476YXXDXXX
- MS27476YXXEXXX

■ ⊕ .005 DIA (M)

Shell Size	L +.006 -.015	N +.001 -.005	R (TP)	S ±.016	T ±.005	KK +.001 -.005
8	.051	.473	.594	.812	.120	.562
10	.051	.590	.719	.938	.120	.672
12	.051	.750	.812	1.031	.120	.781
14	.051	.875	.906	1.125	.120	.906
16	.051	1.000	.969	1.219	.120	1.031
18	.051	1.125	1.062	1.312	.120	1.156
20	.051	1.250	1.156	1.438	.120	1.250
22	.080	1.375	1.250	1.562	.120	1.375
24	.080	1.500	1.375	1.688	.147	1.500

- * Standard Junior Tri-Lock
- ** Interfacial seal wafer
- *** High temperature version, interfacial seal wafer with stainless steel shell

All dimensions for reference only.

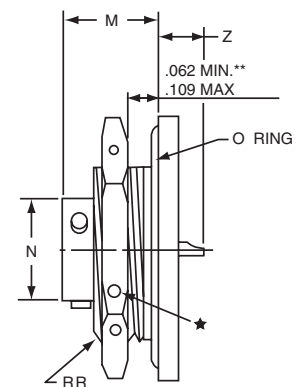
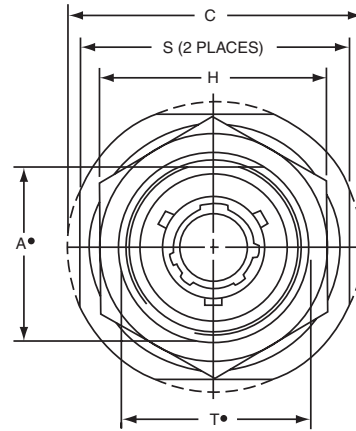
Jam Nut Receptacle - Hermetic

Military (MS27477 & MS27483), Commercial (JT07 & JTS07)

PART NUMBER BUILDER Page 22-23

MILITARY
MS27477Y
MS27483Y

COMMERCIAL
JT07H, JT07Y
JTS07Y



- * Standard Junior Tri-Lock
- ★ .059 Dia. Min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.
- + "D" shaped mounting hole dimensions.
- ** Panel Thickness
- *** Interfacial seal wafer
- **** High temperature version, interfacial seal wafer with stainless steel shell

COMMERCIAL

- * JT07H-XX-XXX
- *** JT07Y-XX-XX
- **** JTS07Y-XX-XXX

MILITARY

- MS27477YXXDXXX
- MS27483YXXEXXX

Shell Size	A+ +.000 -.010	C Max.	H +.017 -.016	M ±.005	N +.001 -.005	S ±.016	T+ +.010 -.000	Z Max.	RR Thread Class 2A
8	.830	1.390	1.062	.438	.473	1.250	.884	.244	.8750-20UNEF
10	.955	1.515	1.188	.438	.590	1.375	1.007	.244	1.0000-20UNEF
12	1.084	1.640	1.312	.438	.750	1.500	1.134	.244	1.1250-18UNEF
14	1.208	1.765	1.438	.438	.875	1.625	1.259	.244	1.2500-18UNEF
16	1.333	1.953	1.562	.438	1.000	1.781	1.384	.244	1.3750-18UNEF
18	1.459	2.031	1.688	.438	1.125	1.890	1.507	.244	1.5000-18UNEF
20	1.576	2.156	1.812	.464	1.250	2.016	1.634	.218	1.6250-18UNEF
22	1.701	2.280	2.000	.464	1.375	2.140	1.759	.218	1.7500-18UNS
24	1.826	2.405	2.125	.464	1.500	2.265	1.884	.218	1.8750-16UN

Solder Mounting Receptacle - Hermetic

Military (MS27478 & MS27503), Commercial (JTI & JTSI)

PART NUMBER BUILDER Page 22-23

MILITARY
MS27478Y
MS27503Y

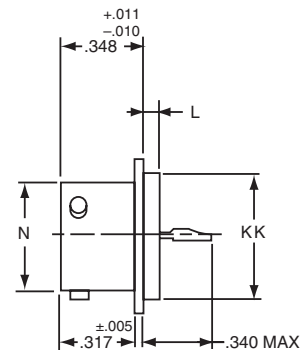
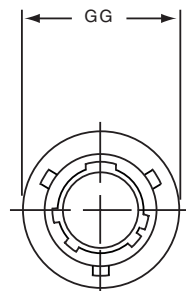
COMMERCIAL
JTIH, JTIY
JTSIY

COMMERCIAL

- * JTIH-XX-XXX
- ** JTIY-XX-XX
- *** JTSIY-XX-XXX

MILITARY

- MS27478YXXDXXX
- MS27503YXXEXXX



Shell Size	L +.011 -.010	N +.001 -.005	GG +.011 -.010	KK +.001 -.005
8	.078	.473	.687	.562
10	.078	.590	.797	.672
12	.078	.750	.906	.781
14	.078	.875	1.031	.906
16	.078	1.000	1.156	1.031
18	.078	1.125	1.281	1.156
20	.078	1.250	1.375	1.250
22	.107	1.375	1.500	1.375
24	.107	1.500	1.625	1.500

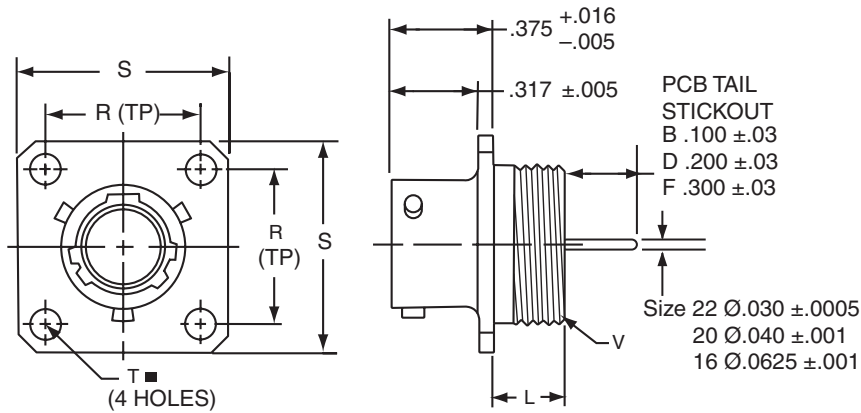
- * Standard Junior Tri-Lock
- ** Interfacial seal wafer
- *** High temperature version, interfacial seal wafer with stainless steel shell

All dimensions for reference only. Weld mounting hermetic receptacle also available. Consult Amphenol Aerospace for availability and dimensions.

38999 III
38999 II
38999 I
SJT
Aquacon
2M
83723
26482
26500

PCB Wall Mounting Receptacle Hermetic

Commercial (JT00)



	1.	2.	3.	4.	5.	6.
PART #	Base Number	Coded Shell Size	Insert Arrg.	Contact Type/Alt. Keying Position	Shell Finish	Tail Length
See chart below	10-626	431	-35	P	1	B

HOW TO ORDER

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

2. CODED SHELL SIZE	
	See chart below 431-439 , designates size 9-25 shell size. Example: 431 = Size 9 Shell

3. INSERT ARRANGEMENT	
-35	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 22 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

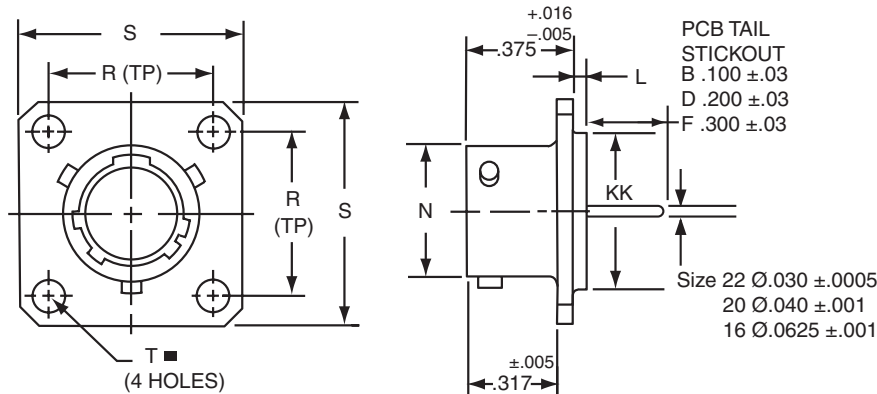
6. TAIL LENGTH	
B	.100±.03
D	.200±.03
F	.300±.03

⊕ .005 DIA (M)

Shell Size	Part Number	L Max.	N +.001 -.005	R (TP)	S ±.016	T ±.005	V Thread Class 2A
8	10-626 431 -XXX	.234	.473	.594	.812	.120	.5625-24UNEF
10	432 -XXX	.234	.590	.719	.938	.120	.6875-24UNEF
12	433 -XXX	.234	.750	.812	1.031	.120	.8125-20UNEF
14	434 -XXX	.234	.875	.906	1.125	.120	.9375-20UNEF
16	435 -XXX	.234	1.000	.969	1.219	.120	1.0625-18UNEF
18	436 -XXX	.234	1.125	1.062	1.312	.120	1.1875-18UNEF
20	437 -XXX	.234	1.250	1.156	1.438	.120	1.3125-18UNEF
22	438 -XXX	.234	1.375	1.250	1.562	.120	1.4375-18UNEF
24	439 -XXX	.313	1.500	1.375	1.688	.147	1.5625-18UNEF

PCB Box Mounting Receptacle Hermetic

Commercial JT02



PART #	1. Base Number	2. Coded Shell Size	3. Insert Arrg.	4. Contact Type/Alt. Keying Position	5. Shell Finish	6. Tail Length
See chart below	10-626	461	-35	P	1	B

HOW TO ORDER

1. BASE NUMBER

10-626 Base Number for MIL-DTL-38999 Series II Hermetic with PCB Tail

2. CODED SHELL SIZE

See chart below **461-469**, designates size 9-25 shell size. Example: **461** = Size 9 Shell

3. INSERT ARRANGEMENT

-35 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 22 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

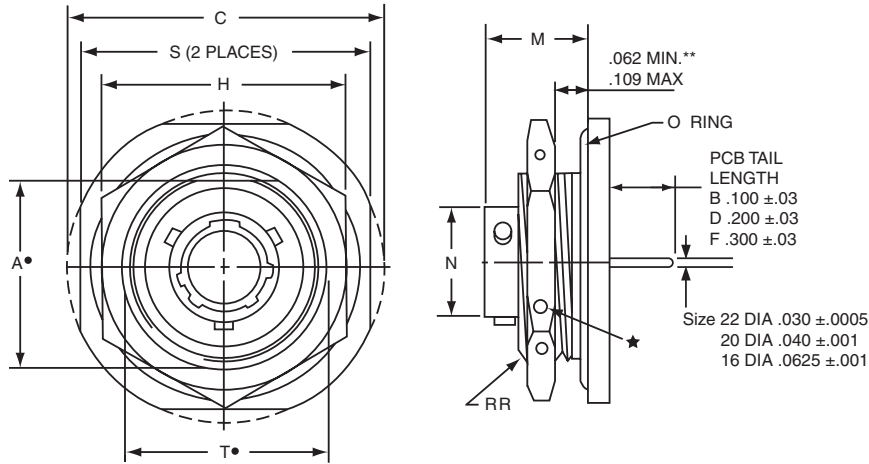
⊕ .005 DIA (M)

Shell Size	Part Number	L +.006 -.015	N +.001 -.005	R (TP)	S ±.016	T ±.005	KK +.001 -.005
8	10-626 461 -XXX	.051	.473	.594	.812	.120	.562
10	462 -XXX	.051	.590	.719	.938	.120	.672
12	463 -XXX	.051	.750	.812	1.031	.120	.781
14	464 -XXX	.051	.875	.906	1.125	.120	.906
16	465 -XXX	.051	1.000	.969	1.219	.120	1.031
18	466 -XXX	.051	1.125	1.062	1.312	.120	1.156
20	467 -XXX	.051	1.250	1.156	1.438	.120	1.250
22	468 -XXX	.080	1.375	1.250	1.562	.120	1.375
24	469 -XXX	.080	1.500	1.375	1.688	.147	1.500

All dimensions for reference only.

PCB Jam Nut Receptacle Hermetic

Commercial (JT07)



	1.	2.	3.	4.	5.	6.
PART #	Base Number	Coded Shell Size	Insert Arrg.	Contact Type/ Alt. Keying Position	Shell Finish	Tail Length
See chart below	10-626	441	-35	P	1	B

HOW TO ORDER

1. BASE NUMBER 10-626 Base Number for MIL-DTL-38999 Series II Hermetic with PCB Tail	2. CODED SHELL SIZE See chart below 441-449 , designates size 9-25 shell size. Example: 441 = Size 9 Shell
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 22 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

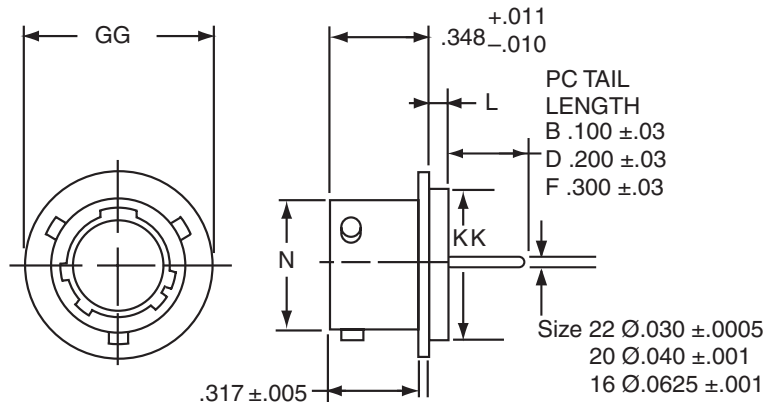
Shell Size	Part Number	A+ +.000 -.010	C Max.	H +.017 -.016	M ±.005	N +.001 -.005	S ±.016	T+ +.010 -.000	RR Thread Class 2A
8	10-626 441 -XXX	.830	1.390	1.062	.438	.473	1.250	.884	.8750-20UNEF
10	442 -XXX	.955	1.515	1.188	.438	.590	1.375	1.007	1.0000-20UNEF
12	443 -XXX	1.084	1.640	1.312	.438	.750	1.500	1.134	1.1250-18UNEF
14	444 -XXX	1.208	1.765	1.438	.438	.875	1.625	1.259	1.2500-18UNEF
16	445 -XXX	1.333	1.953	1.562	.438	1.000	1.781	1.384	1.3750-18UNEF
18	446 -XXX	1.459	2.031	1.688	.438	1.125	1.890	1.507	1.5000-18UNEF
20	447 -XXX	1.576	2.156	1.812	.464	1.250	2.016	1.634	1.6250-18UNEF
22	448 -XXX	1.701	2.280	2.000	.464	1.375	2.140	1.759	1.7500-18UNS
24	449 -XXX	1.826	2.405	2.125	.464	1.500	2.265	1.884	1.8750-16UN

★ .059 Dia. Min. 3 lockwire holes. Formed lockwire hole design (6 holes) is optional.
 + "D" shaped mounting hole dimensions.
 ** Panel Thickness

All dimensions for reference only.

PCB Solder Mounting Receptacle Hermetic

Commercial (JTI)



	1.	2.	3.	4.	5.	6.
PART #	Base Number	Coded Shell Size	Insert Arrg.	Contact Type/Alt. Keying Position	Shell Finish	Tail Length
See chart below	10-626	451	-35	P	1	B

HOW TO ORDER

1. BASE NUMBER

10-626 Base Number for MIL-DTL-38999 Series II Hermetic with PCB Tail

2. CODED SHELL SIZE

See chart below **451-459**, designates size 9-25 shell size. Example: **451** = Size 9 Shell

3. INSERT ARRANGEMENT

-35 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 22 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	L +.011 -.010	N +.001 -.005	GG +.011 -.010	KK +.001 -.005
8	10-626 451 -XXX	.078	.473	.687	.562
10	452 -XXX	.078	.590	.797	.672
12	453 -XXX	.078	.750	.906	.781
14	454 -XXX	.078	.875	1.031	.906
16	455 -XXX	.078	1.000	1.156	1.031
18	456 -XXX	.078	1.125	1.281	1.156
20	457 -XXX	.078	1.250	1.375	1.250
22	458 -XXX	.107	1.375	1.500	1.375
24	459 -XXX	.107	1.500	1.625	1.500

All dimensions for reference only.
Weld mounting hermetic receptacle also available.
Consult Amphenol Aerospace for availability and dimensions.

38999 III
38999 II
38999 I
SJT
Aquacon
2M
83723
26482
26500