

MIL-DTL-38999

SERIES III PRODUCT CATALOG



HIREL Connectors, Inc. – a global leader in the engineering and manufacturing of highly reliable connectors. Products – that by design have been proven to exceed the diverse requirements of both commercial and military applications.

HIREL Connectors has achieved this by incorporating a patented Locking System into our plugs and backshells that have proven not to loosen and shake under vibration. This ensures HIRELCO Plugs and Backshells **“absolutely stay locked”** even in the most extreme conditions.

By specifying HIREL Plugs and Backshells for any extreme application such as that on engines and nacelle harnesses, you will change from the familiar mode of inspect, clean, maintain, repair, and replace to **“fly and forget”**.



PERFORMANCE SPECIFICATIONS:

All performance characteristics in accordance with the requirements specified for the applicable class contained in Paragraph 3 of MIL-DTL-38999 for metal connectors. The following performance characteristics are derived directly from that specification, unless otherwise noted.

• Test Dielectric Withstanding Voltage

Altitude		Service Rating		
ft.	m	M	I	II
Sea Level	0	1300	1800	2300
50,000	15,240	800	1000	1000
70,000	21,336	800	1000	1000
100,000	30,480	800	1000	1000

• Contact Information and Specifications

Contact Size	Test Current	Contact Retention		Available Wire Size for Contact
	DC Test Amperage	Axial Load		
		lb	N	
22D	1.5	10	44.5	28
22D	2.0	10	44.5	26
22D	3.0	10	44.5	24
22D	5.0 (3.0)	10	44.5	22
20	3.0	15	66.7	24
20	5.0	15	66.7	22
20	7.5 (5.0)	15	66.7	20
16	13.0 (10.0)	25	111.2	20
16	13.0 (10.0)	25	111.2	18
16	13.0 (10.0)	25	111.2	16
12	23.0 (17.0)	25	111.2	14
12	23.0 (17.0)	25	111.2	12

(*.) = Hermetic Classes H, N, and Y

Note: Current ratings can vary greatly dependant on system requirements and thermal heat-rise.

• Test description & Parameters

- Durability

Minimum of 500 mating cycles. (Except for H & J Pins and Sockets that are a minimum of 1500 mating cycles.)

- Operating Temperature Range

-65°C to +200°C (-85°F to +392°F)

- Vibration

Mated connectors are vibrated harnessed to the following levels:

Sine Vibration: Up to 60 G's at rated temperature
 Random Vibration: 43.7 Grms at rated temperature
 49.5 Grms at ambient temperature

- EMI Shielding Effectiveness

Class F:

EMI leakage attenuation, greater than 90dB at 100 MHz, greater than 65dB at 10 GHz. (Shell to shell conductivity, 1.0 milliohms max. resistance)

Class W:

EMI leakage attenuation, greater than 90dB at 100 MHz, greater than 50 dB at 10 GHz. (Shell to shell conductivity, 2.5 milliohms max. resistance)

- Corrosion Resistance

Classes C, K, W, and Y will withstand 500 hours salt spray.

- Fluid Immersion

Connectors are fluid resistant to many different fuels, solvents, coolants, and oils.

- Hermetic Leak Rate

Less than 1E-7 cm³/s

- High Impact Shock

Wired and mated connectors with environmentally sealed backshells will withstand high impact shock per Mil-S-901.

- Other Environments

Mated connectors will withstand sand and dust per method 110 of Mil-Std-202 and be ice resistant.

Note: For specific Hermetic or other test data, please consult HIRELCO in Claremont, CA.

MATERIAL SPECIFICATIONS:

All material in accordance with requirements specified for the applicable class in Paragraph 3.3.1 & 3.3.2 of MIL-DTL-38999 for metal connectors.

Finishes shall be in accordance with requirements specified for the applicable class in Paragraph 3.3.6.2 of MIL-DTL-38999.

For specifics, see different available connector Classes in "ORDERING INFORMATION" section.

Configuration/Description	Military Basic Number	HIRELCO Basic Number
Receptacle, Environment Resisting, Square Flange Wall Mount	D38999/20	85010
Receptacle, Hermetic, Square Flange Mount	D38999/21	85000
Receptacle, Hermetic, Jam Nut Mount	D38999/23	86000
Receptacle, Environment Resisting, Jam Nut Mount	D38999/24	86010
Receptacle, Hermetic, Solder Mount	D38999/25	84000
Plug, Environment Resisting, EMI/RFI (<i>Patented Self-Locking</i>)	D38999/26	59000
Receptacle, Hermetic, Weld Flange Mount	D38999/27	87000
Jam Nut, Connector Mounting	D38999/28	D38999/28
Receptacle, Environmental, Custom Mount	NONE	*Custom
Receptacle, Hermetic, Custom Mount	NONE	*Custom

*** Consult Factory for a configuration to suit your application!**



HIRELCO 90° Soft Jaw Connector Installation/Removal Pliers
(Order PN 28MT035)



ORDERING INFORMATION - CONNECTORS

MIL-DTL-38999
Series III – Threaded Coupling

D38999/26 **K - B - 35** **P N** • Military Designation

59000 **K - 11 - 35** **P N** • HIRELCO Designation

						Polarization Style per MIL-DTL-38999, Series III	
						N, A, B, C, D, E ("N" Required for Normal)	
						Contact Style Designator	
						All Styles	Hermetic Only
						P - Pin (500 Cycles)	C - Feed Thru
						S - Socket (500 Cycles)	X - Pin with Eyelet
						H - Pin (1,500 Cycles)	Z - Socket with Eyelet
						J - Socket (1,500 Cycles)	
						Insert Arrangement per MIL-STD-1560	
						Shell Size Designator	
A-9 B-11 C-13 D-15 E-17 F-19 G-21 H-23 J-25							
Connector Class per MIL-DTL-38999, Series III							
C - Environment Resisting Nonconductive Plating							
F - Environment Resisting Conductive Plating (Nickel Plate)							
K - Environment Resisting, Corrosion Resistant Steel with Firewall Insert							
N - Hermetically Sealed, Corrosion Resistant Steel with Electrodeposited Nickel							
S - Corrosion Resistant Steel with Electrodeposited Nickel Plating and Firewall							
T - Titanium, Natural Finish (<i>Not</i> a MIL-DTL-38999 Material)							
W - Environment Resisting Corrosion Resistant Plating (Olive Drab Cadmium)							
Y - Hermetically Sealed, Corrosion Resistant Steel, Passivated							
Shell Style per MIL-DTL-38999, Series III							
Military	HIRELCO	Description					
<i>D38999/20</i>	85010	Receptacle, Wall Mount Flange (Removable Crimp Contacts)					
<i>D38999/22</i>	85000	Receptacle, Box Mount Flange (Hermetic Solder Contacts) <1>					
<i>D38999/23</i>	86000	Receptacle, Jam Nut Mount (Hermetic Solder Contacts) <1>					
<i>D38999/24</i>	86010	Receptacle, Jam Nut Mount (Removable Crimp Contacts)					
<i>D38999/25</i>	84000	Receptacle, Solder Mount (Hermetic Solder Contacts) <1>					
<i>D38999/26</i>	59000	Plug, Self-Locking, Straight w/EMI (Removable Crimp Contacts) <2>					
<i>D38999/27</i>	87000	Receptacle, Weld Mount (Hermetic Solder Contacts) <1>					

<1> NOT AVAILABLE IN TITANIUM

<2> HIRELCO HAS INCORPORATED A PATENTED SELF-LOCKING MECHANISM INTO OUR PLUGS THAT HAVE PROVEN TO STAY LOCKED UNDER EXTREME VIBRATION

e. Contact styles:

(1) Contact designators for connectors using standard contact arrangements as specified in MIL-STD-1560 are as follows:

- P - Pin - Including hermetics with solder cups, 500-cycle contact.
- S - Socket - Including hermetics with solder cups, 500-cycle contact.
- H - Pin - 1500-cycle contact.
- J - Socket - 1500-cycle contact.
- X - Pin - With eyelet (hermetic).
- Z - Socket - With eyelet (hermetic).
- C - Pin - Feedthrough.
- D - Socket - Feedthrough.
- R - Pin - Rhodium plating.
- M - Socket - Rhodium plating.
- G - Pin - Heavy gold plating.
- U - Socket - Heavy gold plating.

The P, S, H, J, X, Z, C, D R, M, G and U designators are used to indicate that connectors will be supplied with a full complement of the applicable standard contacts as specified in MIL-STD-1560. These designators are part of the connector Part or Identifying Number (PIN) and should be marked on the connectors. Contacts shall be obtained from a qualified AS39029 supplier.

(2) Contact designators for connectors supplied without contacts that are for use with separately sourced military specification contacts or non-standard contact complements as specified in MIL-STD-1560 are as follows:

- A - Pin contact insert.
- B - Socket contact insert.

The A and B designators are used to indicate that the connectors will be used with other than standard contacts as specified in MIL-STD-1560 (example: shielded, coaxial thermocouple, fiber optic contacts). The A and B designators are part of the connector PIN and should be marked on the connectors.

When A and B designators are used, standard contacts should not be supplied with the connectors. The contacts that will be used with the connectors must be specified separately (see [3.4.1.1](#), [3.52](#), and [6.2](#)).

Note: If contacts other than standard power contacts are used, then the connectors may not meet the requirements stated herein.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this specification, whether or not they are listed.



JAM NUTS – ORDERING INFORMATION

D38999/28 - 4 F • HIRELCO & Military Designation

Material and Finish <i>per MIL-DTL-38999, Series III</i>
F - Electroless nickel coating (conductive) -65°C to +200°C
K - Corrosion resistant steel, passivated, (conductive), -65°C to +200°C
S - Corrosion Resistant Steel with Electrodeposited Nickel Plating (conductive), -65°C to +200°C
W - Olive-drab cadmium plate over a suitable underplate, (conductive), -65°C to +175°C
Dash Number - Shell Size and (Letter Designator), <i>per MIL-DTL-38999, Series III</i>
1-9(A) 2-11(B) 3-13(C) 4-15(D) 6-17(E) 8-19(F) 9-21(G) 10-23(H) 11-25(J)
Mil Number Prefix/Specification Sheet Number <i>per MIL-DTL-38999, Series III</i>

MIL REPLACEMENT O-RINGS AND JAM NUTS

SHELL SIZE	SHELL SIZE CODE	O-Ring MIL P/N <1>	Jam Nut MIL P/N (Less "M" Finish)	Jam Nut Recommended Torque Values (In/Lbs)
9	A	MS9021-019	D38999/28-1*	30/36
11	B	MS9021-022	D38999/28-2*	40/46
13	C	MS9021-024	D38999/28-3*	55/60
15	D	MS9021-026	D38999/28-4*	70/75
17	E	MS9021-028	D38999/28-6*	80/85
19	F	MS9021-128	D38999/28-8*	90/95
21	G	MS9021-130	D38999/28-9*	100/110
23	H	MS9021-132	D38999/28-10*	110/120
25	J	MS9021-134	D38999/28-11*	120/130

<1> = ALTERNATIVE O-RING MATERIAL MAY BE AMS 3325

MIL SEALING PLUGS

Size	MIL Seal Plug P/N	Plug Color
22	MS27488-22-1	Black
20	MS27488-20-1	Red
16	MS27488-16-1	Blue
12	MS27488-12-1	Yellow
10	M85049/81-10	Green
8	MS27488-8-1	Red

MIL STANDARD CONTACTS and INSTALLATION/REMOVAL TOOLS

Type	MIL Pin P/N	Size	MIL Socket P/N	MIL Installing and Removal Tool P/N	Installing Tool Tip Color	Removal Tool Tip Color
Crimp-Removable	M39029/58-361	22D	M39029/56-349	M81969/14-02	Green	White
Crimp-Removable	M39029/58-363	20	M39029/56-351	M81969/14-10	Red	Orange
Crimp-Removable	M39029/58-364	16	M39029/56-352	M81969/14-03	Blue	White
Crimp-Removable	M39029/58-365	12	M39029/56-353	M81969/14-04	Yellow	White
Twinax	02004-936	12	02003-926	M81969/14-04	Yellow	White
Coax	M39029/28-211	12	M39029/75-416	M81969/14-04	Yellow	White
Crimp-Removable	M39029/58-528	10	M39029/56-527	M81969/14-05	Gray	White
Twinax	M39029/90-529	8	M39029/91-530	M81969/14-12	N/A	Green
Coax	M39029/60-367	8	M39029/59-366	M81969/14-12	N/A	Green



INSERT ARRANGEMENTS DETAILS

MIL-DTL-38999
Series III – Threaded Coupling

Shell Size(s)	Insert Arrangement					Contact Size						See Note(s)
	Series I	Series II	Series III	Service Rating	Total Contacts	22D	20	16	12	10	8	
9	-	-	9-02	I	2		2					✱
8 & 9	9-35	8-35	A35	M	6	6						
8 & 9	9-98	8-98	A98	I	3		3					
11	11-2	-	B2	I	2			2				
11	11-4	-	B4	I	4		4					
10 & 11	11-5	10-5	B5	I	5		5					
10 & 11	11-35	10-35	B35	M	13	13						
10 & 11	11-98	10-98	B98	I	6		6					
10 & 11	11-99	10-99	B99	I	7		7					
13	-	-	CA	I	2				2			✱
13	-	-	CB	M	6	4			2			✱
12 & 13	13-4	12-4	C4	I	4			4				
12 & 13	13-8	12-8	C8	I	8		8					
12 & 13	13-35	12-35	C35	M	22	22						
12 & 13	13-98	12-98	C98	I	10		10					
14 & 15	15-5	14-5	D5	II	5			5				
14 & 15	15-15	14-15	D15	I	15		14	1				
14 & 15	15-18	14-19	D18	I	18		18					
15	15-19	-	D19	I	19		19					
14 & 15	15-35	14-35	D35	M	37	37						
14 & 15	15-97	14-97	D97	I	12		8	4				
17	-	-	EA	M	19	10	3	2	4			✱
17	-	-	EB	M	13	6		4	3			✱
17	-	-	EC	M	41	32	9					✱
17	17-2	-	E2	M, Twinax	39	38					1⊙	
16 & 17	17-6	16-6	E6	I	6				6			
16 & 17	17-8	16-8	E8	II	8			8				
16 & 17	17-11	16-11 ✱	E11	N, Coax, Twinax	11		8		1⊙ 2⊙			Only 16-11 is non-std
16 & 17	17-26	16-26	E26	I	26		26					
16 & 17	17-35	16-35	E35	M	55	55						
16 & 17	17-99	16-99	E99	I	23		21	2				
19	-	-	FA	M	23	6	8	7	2			✱
19	-	-	FB	M	28	16	8	4				✱
19	-	-	FC	M	27	16	4	7				✱
19	-	-	FD	M	23		15	8				✱
18 & 19	19-11	18-11	F11	II	11			11				
19	-	-	19-17	M, Twinax	17	10	1	4			2⊙	✱
19	19-18	-	F18	M, Twinax	18	14					4⊙	
18 & 19	19-28	18-28	F28	I	28		26	2				
18 & 19	19-30	18-30	F30	I	30		29	1				
18 & 19	19-32	18-32	F32	I	32		32					
18 & 19	19-35	18-35	F35	M	66	66						
19	19-45	18-45	F45	M	67	67						
21	-	-	21-04	P	4						4	✱
21	21-11	-	G11	I	11				11			
20 & 21	21-16	20-16	G16	II	16			16				
21	21-24	-	G24	I	24		24					
21	21-25	-	G25	I	25		25					



INSERT ARRANGEMENT DETAILS

MIL-DTL-38999
Series III – Threaded Coupling

Shell Size(s)	Insert Arrangement					Contact Size						See Note(s)
	Series I	Series II	Series III	Service Rating	Total Contacts	22D	20	16	12	10	8	
21	21-27	-	G27	I	27		27					
20 & 21	21-35	20-35	G35	M	79	79						
20 & 21	21-39	20-39	G39	I	39		37	2				
20 & 21	21-41	20-41	G41	I	41		41					
21	21-75	-	G75	M	4						4⊙*	
22 & 23	23-21	22-21	H21	II	21			21				
22 & 23	23-32	22-32	H32	I	32		32					
23	23-34	-	H34	I	34		34					
22 & 23	23-35	22-35	H35	M	100	100						
23	23-36	-	H36	I	36		36					
22 & 23	23-53	22-53	H53	I	53		53					
22 & 23	23-55	22-55	H55	I	55		55					
23	23-97	-	H97	I	16			16				
23	23-99	-	H99	II	11			11				
25	-	-	JA	M	39	32		3	4			⊙*
25	-	-	JB	M	69	56		4	9			⊙*
25	-	-	JC	M	218	128						⊙*
25	-	-	JD	M	65	41	8	10	6			⊙*
25	-	-	JE	M	88	40	44					⊙*
24 & 25	25-4	24-4	J4	I	56		48	8				
25	25-7	-	J7	M, Twinax	99	97					2⊙	
25	25-8	-	J8	Twinax	8						8⊙	
25	25-11	-	J11	Inst.	11		2			9		
25	25-19	-	J19	I	19				19			
25	25-20	-	J20	N	30		10	13	4●		3⊙	
24 & 25	25-24	24-24	J24	I	24			12	12			
24 & 25	25-29	24-29	J29	I	29			29				
24 & 25	25-35	24-35	J35	M	128	128						
25	25-43	-	J43	I	43		23	20				
25	25-46	-	J46	I, Coax	46		40	4			2●*	
24 & 25	25-61	24-61	J61	I	61		61					
25	25-90	-	J90	I, Twinax	46		40	4			2⊙	

Legend:

☒	= Inactive for new Design
●	= Coax
⊙	= Twinax
⊗	= Coax/ Twinax
*	= For RG180/U & RG195U cables only
⊙*	= Hirelco Custom Arrangement

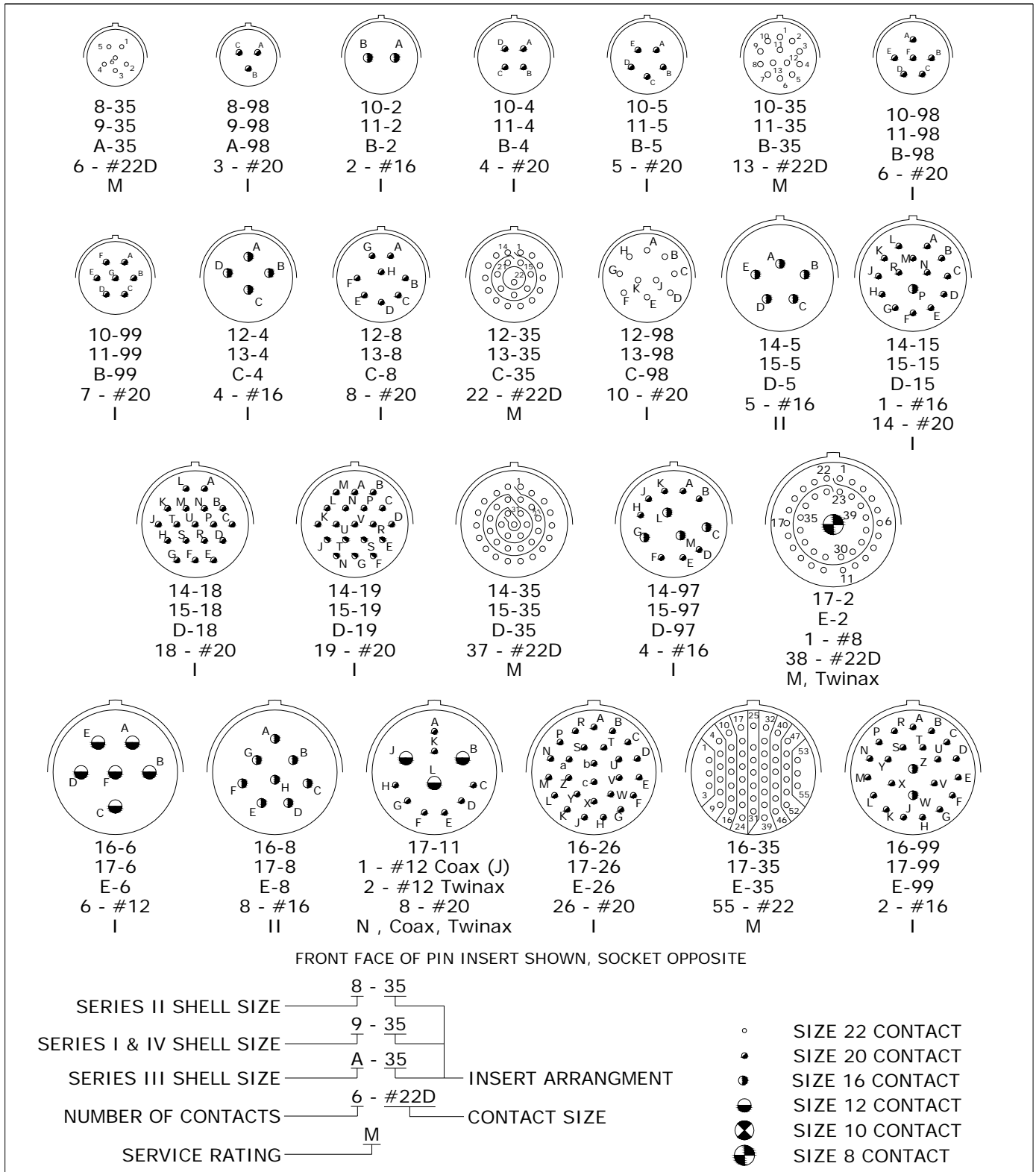
For Service Rating and Contact performance details, see the Performance and Material Specifications page

HIREL CONNECTORS INC.

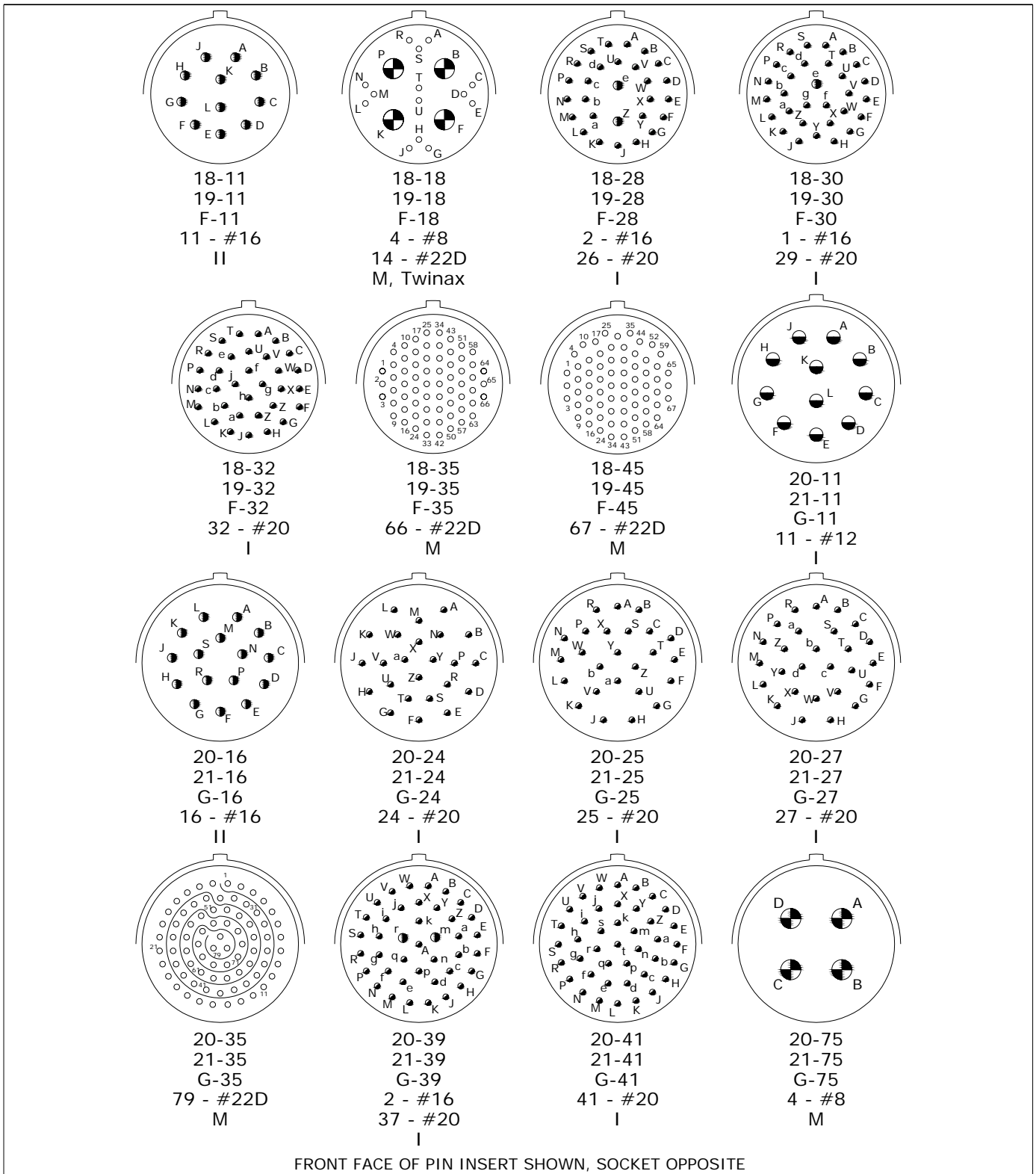


INSERT ARRANGEMENTS PER MIL-STD-1560

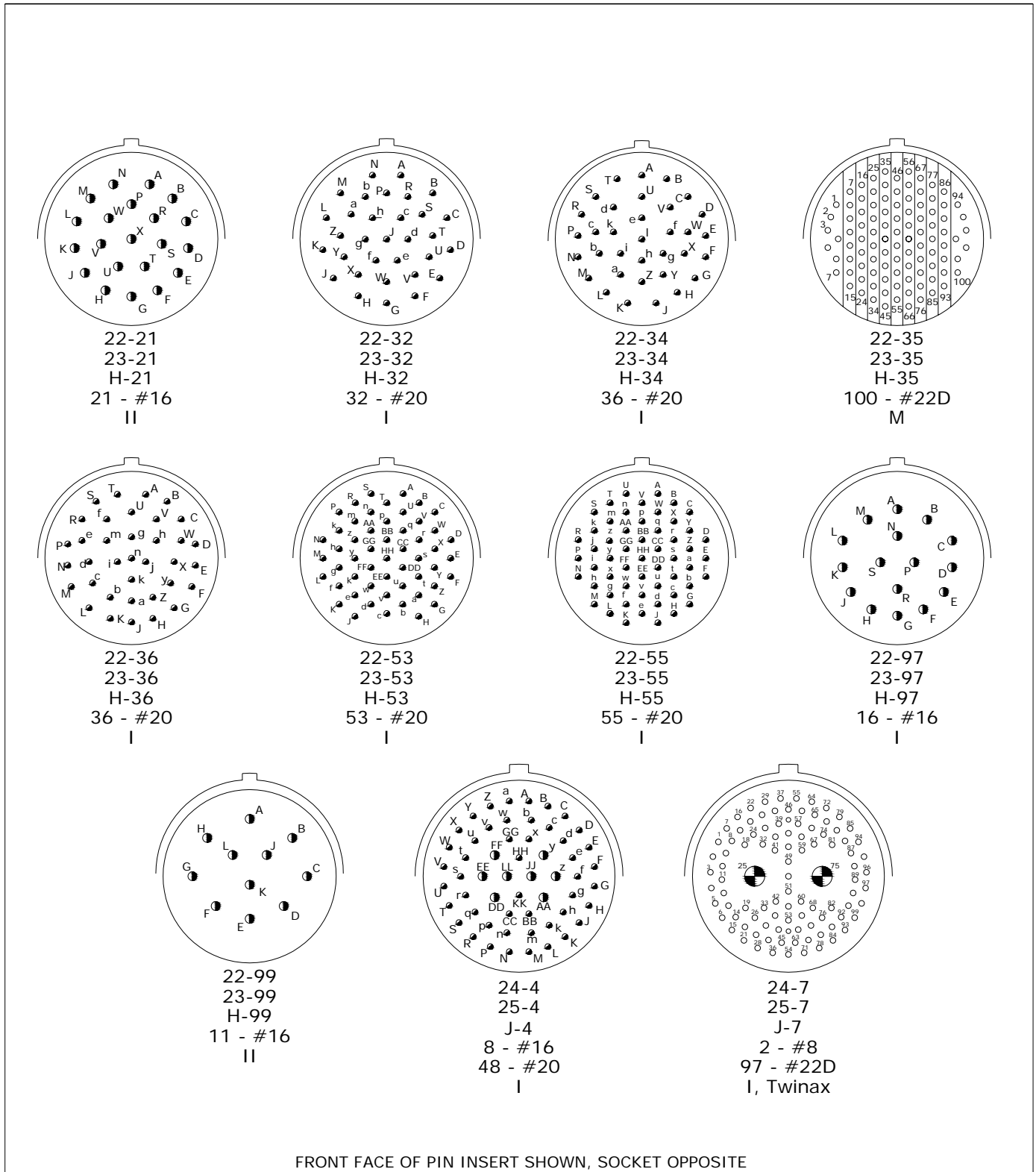
MIL-DTL-38999
Series III – Threaded Coupling



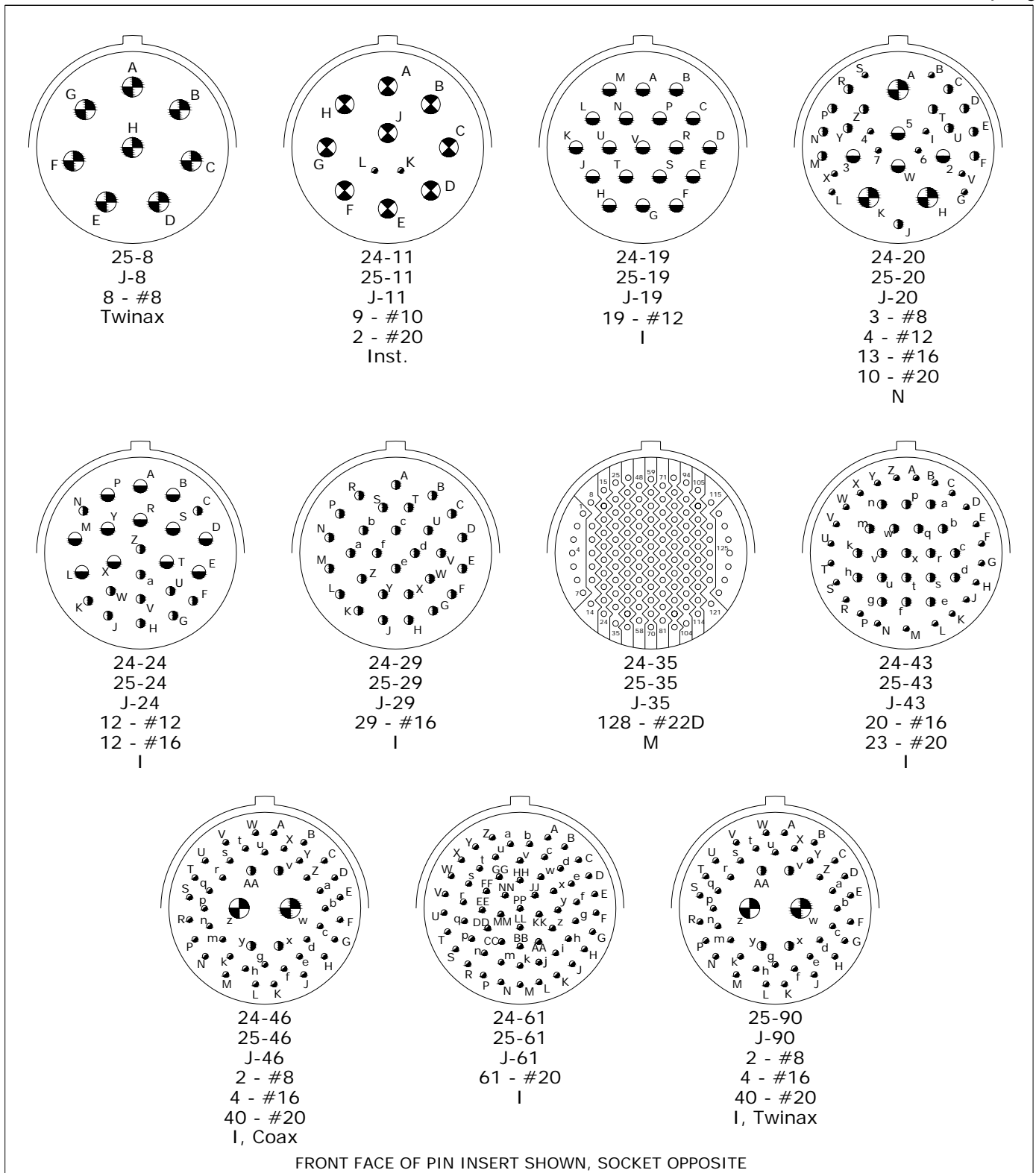
United States – 760 W. Wharton Drive, Claremont CA. 91711 • Ph: 909-626-1820 • FAX: 909-399-0626 • Web: www.HIRELCO.com
 Europe – 5 Rue Des Longues Raies, Z.I. Des Garennes, 78440; Gargenville, France • Ph: 33(0) 1-309-38999 or U.K. 44(0)1-980-843887 • FAX 33(0) 1-309-38913 • Web: www.HIRELCO.com

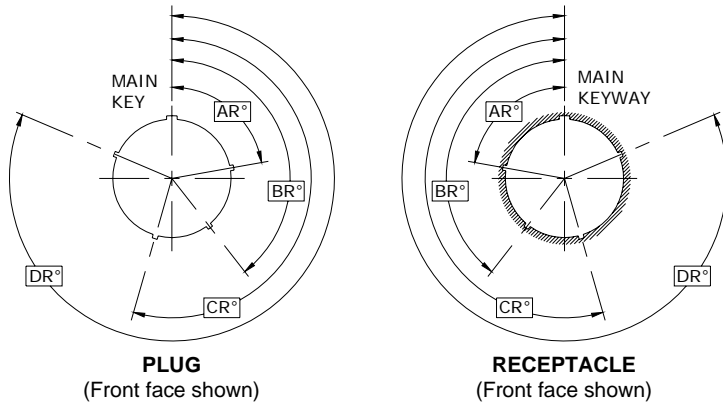


FRONT FACE OF PIN INSERT SHOWN, SOCKET OPPOSITE



FRONT FACE OF PIN INSERT SHOWN, SOCKET OPPOSITE

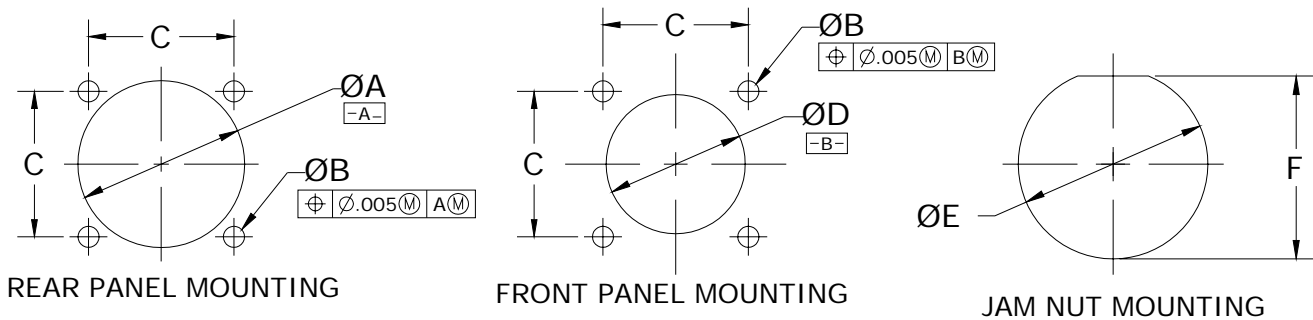




SHELL SIZE	KEY & KEYWAY IDENTIFICATION LETTER	AR°	BR°	CR°	DR°
9	N	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
E	91	131	197	240	
11 13 and 15	N	95	141	182	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
	D	119	146	176	298
E	51	141	184	242	
17 19 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	

POLARIZING POSITIONS

(IDENTIFICATION LETTERS ARE AS DEPICTED ON ORDERING INFORMATION PAGE)



SHELL SIZE	SHELL SIZE CODE	ØA MIN	ØB ±.005 [±0.13]	C BASIC	ØD MIN	ØE +.010/- .000 [+0.25/-0.00]	F Flat +.000/- .010 [+0.00/-0.25]
9	A	.656 [16.66]	.128 [3.25]	.719 [18.26]	.516 [13.11]	.700 [17.78]	.670 [17.02]
11	B	.796 [20.22]	.128 [3.25]	.812 [20.62]	.625 [15.88]	.825 [20.96]	.771 [19.59]
13	C	.922 [23.42]	.128 [3.25]	.906 [23.01]	.750 [19.05]	1.010 [25.65]	.955 [24.26]
15	D	1.047 [26.59]	.128 [3.25]	.969 [24.61]	.906 [23.01]	1.135 [28.83]	1.085 [27.56]
17	E	1.219 [30.96]	.128 [3.25]	1.062 [26.97]	1.016 [25.81]	1.260 [32.01]	1.210 [30.73]
19	F	1.297 [32.94]	.128 [3.25]	1.156 [29.36]	1.141 [28.98]	1.385 [35.18]	1.335 [33.91]
21	G	1.422 [36.12]	.128 [3.25]	1.250 [31.75]	1.266 [32.16]	1.510 [38.85]	1.460 [37.08]
23	H	1.547 [39.29]	.154 [3.91]	1.375 [34.93]	1.375 [34.93]	1.635 [41.53]	1.585 [40.26]
25	J	1.672 [42.47]	.150 [3.81]	1.500 [38.10]	1.484 [37.69]	1.760 [44.70]	1.720 [43.43]

PANEL CUTOUTS

DIMENSIONS ARE IN INCHES [MILLIMETERS]

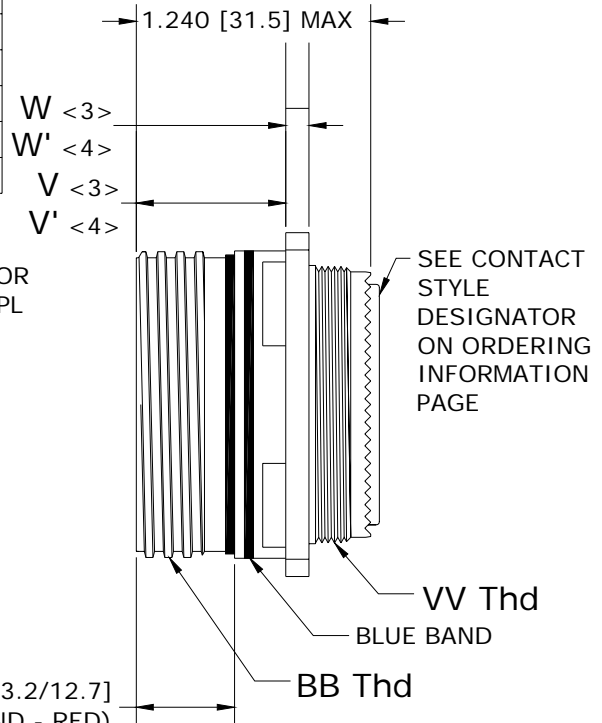
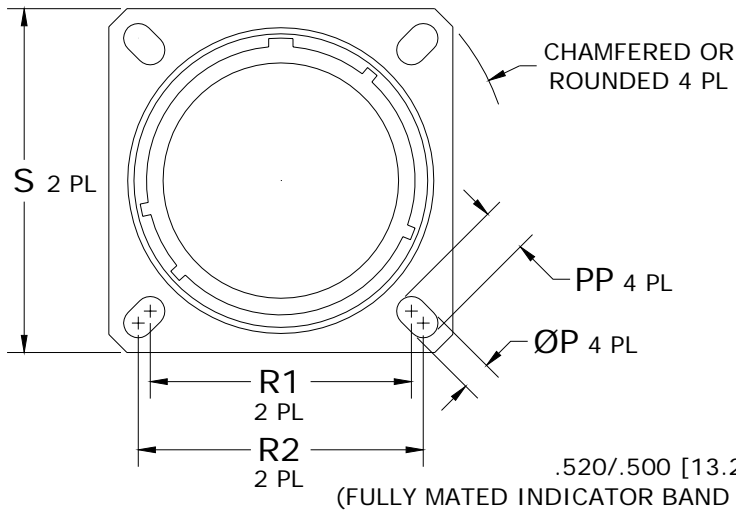
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MIL-DTL-38999

Square Flange Wall Mount Environment Resistant Receptacle

Series III – Threaded Coupling

SHELL SIZE	SHELL SIZE CODE	W	W'	VV Thd -6g 0.100R
9	A	.098/.083 [2.5/2.1]	.144/.083 [3.65/2.10]	M12 x 1.0
11	B	.098/.083 [2.5/2.1]	.144/.083 [3.65/2.10]	M15 x 1.0
13	C	.098/.083 [2.5/2.1]	.144/.083 [3.65/2.10]	M18 x 1.0
15	D	.098/.083 [2.5/2.1]	.144/.083 [3.65/2.10]	M22 x 1.0
17	E	.098/.083 [2.5/2.1]	.144/.083 [3.65/2.10]	M25 x 1.0
19	F	.098/.083 [2.5/2.1]	.144/.083 [3.65/2.10]	M28 x 1.0
21	G	.126/.083 [3.2/2.1]	.171/.083 [4.35/2.10]	M31 x 1.0
23	H	.126/.083 [3.2/2.1]	.171/.083 [4.35/2.10]	M34 x 1.0
25	J	.126/.083 [3.2/2.1]	.171/.083 [4.35/2.10]	M37 x 1.0



SHELL SIZE	SHELL SIZE CODE	BB Thd CLASS 2A 0.1P-0.3L-TS	ØP ±.008 [±0.20]	PP ±.008 [±0.20]	R1 <1>	R2 <2>	S ±.012 [±0.3]	V +.000/-0.049 [+0.00/-1.25]	V' +.055/-0.000 [+1.4/-0.0]
9	A	.6250	.128 [3.25]	.216 [5.49]	.719 [18.26]	.594 [15.09]	.938 [23.8]	.820 [20.83]	.768 [19.5]
11	B	.7500	.128 [3.25]	.194 [4.93]	.812 [20.62]	.719 [18.26]	1.031 [26.2]	.820 [20.83]	.768 [19.5]
13	C	.8750	.128 [3.25]	.194 [4.93]	.906 [23.01]	.812 [20.62]	1.125 [28.6]	.820 [20.83]	.768 [19.5]
15	D	1.0000	.128 [3.25]	.194 [4.93]	.969 [24.61]	.906 [23.01]	1.219 [31.0]	.820 [20.83]	.768 [19.5]
17	E	1.1875	.128 [3.25]	.194 [4.93]	1.062 [26.97]	.969 [24.61]	1.312 [33.3]	.820 [20.83]	.768 [19.5]
19	F	1.2500	.128 [3.25]	.194 [4.93]	1.156 [29.36]	1.062 [26.97]	1.438 [36.5]	.820 [20.83]	.768 [19.5]
21	G	1.3750	.128 [3.25]	.194 [4.93]	1.250 [31.75]	1.156 [29.36]	1.562 [39.7]	.790 [20.07]	.736 [18.7]
23	H	1.5000	.154 [3.91]	.242 [6.15]	1.375 [34.93]	1.250 [31.75]	1.688 [42.9]	.790 [20.07]	.736 [18.7]
25	J	1.6250	.154 [3.91]	.242 [6.15]	1.500 [38.10]	1.375 [34.93]	1.812 [46.0]	.790 [20.07]	.736 [18.7]

- <1> = FRONT OR REAR PANEL MOUNTING
- <2> = REAR PANEL MOUNTING ONLY
- <3> = FOR CLASS F, G, K, S, & W
- <4> = FOR CLASS J & M

DIMENSIONS ARE IN INCHES [MILLIMETERS]