

MIL-DTL-38999 Series III Type Environmental Connectors

Signal, power, and RF contacts plus insert arrangements

HIGH-SPEED CONNECTORS

Crimp Contacts										
Size #22 - #12 Contacts										
Contact Size	#23		#22D		#20		#16		#12	
Wire Gauge	#22 - #28 AWG		#22 - #28 AWG		#20-#24 AWG		#16 - #20 AWG		#12 - #14 AWG	
Max Current	5 amps		5 amps		7.5 amps		13 amps		23 amps	
Pin	857-189		857-151-22		857-151-20		857-151-16		857-151-12	
Socket	857-190		857-150-22		857-150-20		857-150-16		857-150-12	
Size #8 Contacts										
Contact Size	#8 Coax 50Ω	#8 Coax 75Ω*	#12 Coax	#16 Coax	#8 Conc. Twinax	#8 Diff. Twinax	#8 Quadrax	#12 Pneumatic	#8 Optoelectronic	
Pin	Depends on Cable	Depends on Cable	Depends on Cable	852-008	853-003	853-014	854-001	830-003	050-301 Tx	
Socket	Depends on Cable	Depends on Cable	Depends on Cable	852-009	853-004	853-013	854-002	830-005	050-301 Rx	
Size #8 El Ochito Contacts										
Contact Size	#8 El Ochito White, Type I		#8 El Ochito White, Type II		#8 El Ochito Blue, Type I		#8 El Ochito Blue, Type II		#8 El Ochito Red, Type I	
Pin	858-003		858-005		858-028		858-069		858-030	
Socket	858-004		858-006		858-029		858-070		858-031	

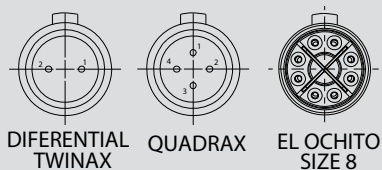
*Contact factory for ordering details

Size 8 High-Speed Insert Arrangements*		
Shell Size	#8	Shell Size - Insert Arr.
9	1	9G5
11	1	11-1
17	2	17-75
19	4	19-4
21	4	21-75
23	5	23-5
23	6	23-6
25	8	25-8

*Note that any size #8 High-Speed contact can be substituted for size #8 power contact. See page C-4 for typical High-Speed contact applications.

Combo High-Speed Insert Arrangements*							
Shell Size	Number of Contacts						Shell Size - Insert Arr.
	#23	#22D	#20	#16	#12	#8	
13	14					1	13-14
17		38		2		1	17-2
17					2	2	17-22
17		8				2	17-60
19		10	1	4		2	19-17
19		14				4	19-18
25		97				2	25-7
25		36				6	25-17
25			10	13	4	3	25-20
25			16		5	4	25-26
25		22	3	11	2	3	25-41
25			40	4		2	25-46

FIGURE 2: CONTACT INNER PIN ORIENTATION



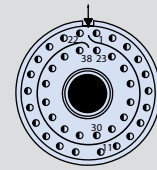
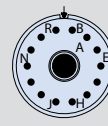
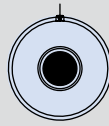
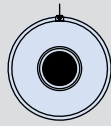
MIL-DTL-38999 Series III Type Environmental Connectors

Signal, power, and RF contact layouts

HIGH-SPEED CONNECTORS

Contact Legend

#23	•	#22D	◦
#16	⊕	#20	⊖
#12	◐	#10	◑
#8	●		

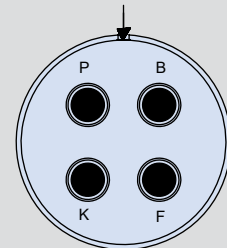
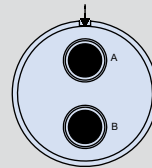
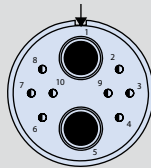
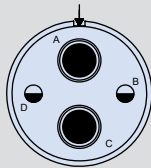


Insert Arrangement	9G5*	11-1	13-14	17-2
No. of Contacts	1x #8	1x #8	1x #8 14x #23	1x #8 38x #22D

*Only available with ground plane option

Contact Legend

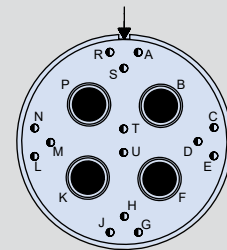
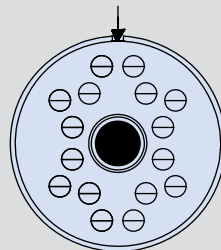
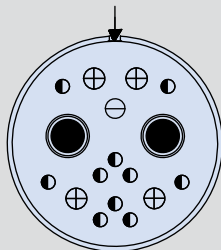
#23	•	#22D	◦
#16	⊕	#20	⊖
#12	◐	#10	◑
#8	●		



Insert Arrangement	17-22	17-60	17-75	19-4
No. of Contacts	2x #8 2x #12	2x #8 8x #22D	2x #8	4x #8

Contact Legend

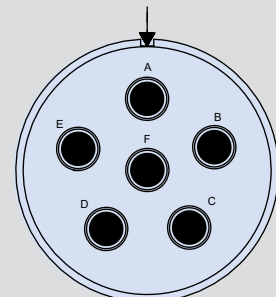
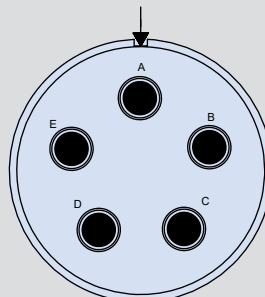
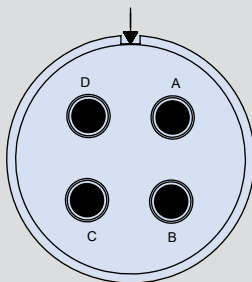
#23	•	#22D	◦
#16	⊕	#20	⊖
#12	◐	#10	◑
#8	●		



Insert Arrangement	19-17	19A-17	19-18
No. of Contacts	2x #8 4x #16 1x #20 10x #22D	1x #8 16x #20	4x #8 14x #22D

Contact Legend

#23	•	#22D	◦
#16	⊕	#20	⊖
#12	◐	#10	◑
#8	●		



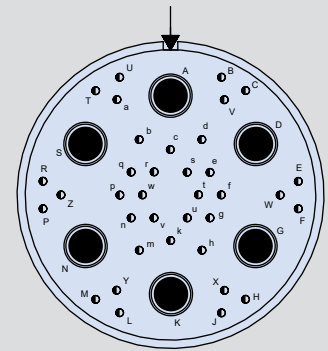
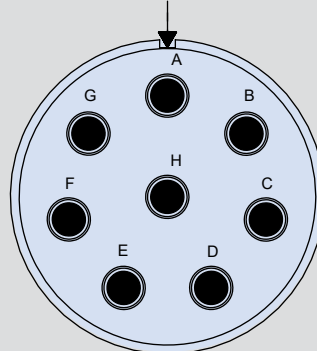
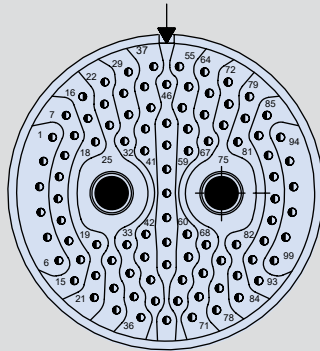
Insert Arrangement	21-75	23-5	23-6
No. of Contacts and Size	4x #8	5x #8	6x #8

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Signal, power, and RF contact layouts

HIGH-SPEED CONNECTORS

- Contact Legend**
- #23 ● #22D ◦
 - #16 ⊕ #20 ⊖
 - #12 ◐ #10 ◑
 - #8 ●



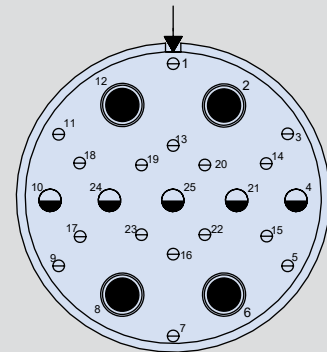
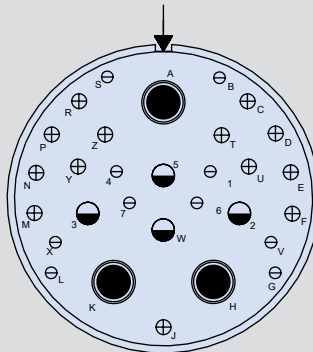
Insert Arrangement
No. of Contacts and Size

25-7
2x #8 | 97x #22D

25-8
8x #8

25-17
6x #8 | 36x #22D

- Contact Legend**
- #23 ● #22D ◦
 - #16 ⊕ #20 ⊖
 - #12 ◐ #10 ◑
 - #8 ●

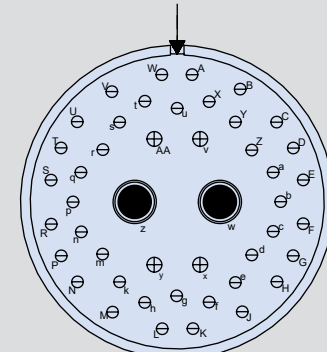
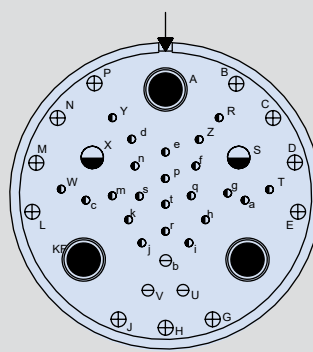


Insert Arrangement
No. of Contacts and Size

25-20
3x #8 | 4x #12 | 13x #16 | 10x #20

25-26
4x #8 | 5x #12 | 16x #20

- Contact Legend**
- #23 ● #22D ◦
 - #16 ⊕ #20 ⊖
 - #12 ◐ #10 ◑
 - #8 ●



Insert Arrangement
No. of Contacts and Size

25-41
3x #8 | 2x #12 | 11x #16 | 3x #20 | 22x #22D

25-46 and 25-90
2x #8 | 4x #16 | 40x #20