

MIL-DTL-38999 Series III Type Space-Grade Connectors

253-047 & -048 Mis-alignment capable plug and receptacle

HIGH-SPEED CONNECTORS

Part Number Development	
Sample Part Number	253-047 D0 ME 25-8 A N -909 A
Series / Basic Part No.	253 = Blind-mate connector with adjustable assisted separation force -047 = Plug (fixed mount) -048 = Receptacle (float mount)
Connector Style	-D0 = Wall mount, round holes
Material/Finish	ME = Aluminum, electroless nickel ZL = CRES, electrodeposited nickel MT = Aluminum, nickel PTFE Z1 = CRES, passivated
Shell Size-Insert Arrangement	Per MIL-STD-1560
Contact Type	P = Pin, crimp removable S = Socket, crimp removable
Alternate Polarization (Per L°)	A = 40°, B = 65°, C = 80°, D = 210°, E = 250°, F = 280°, G = 310°, H = 330°, N = 135° (Normal)
Optional Mod Code	909** = Supplies connector with contacts
Adjustment Ring Material	(Available for 253-048 receptacle only) A = Aluminum C = Corrosion-resistant steel

*Refer to section A for complete details. Refer to Space-Grade Guidelines material (IAW NASA EEE INST-002) for outgassing and screening modification codes, on pages 60 and 61. Modification codes may be added directly to the end of any valid part number

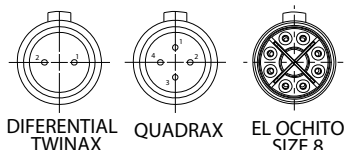
Modification code 909xx is used to supply D38999 Series III Type connectors featuring crimp removable type contacts with high-speed contact kits. Kits include spares, tools, and sealing plugs. See example below.

253-045-07ME25-8ANNS -909 C P

- Basic Connector Part Number: 253-045-07ME25-8ANNS
- Basic Modification Code: 909
- Contact Type Symbol (See Contact Type Table): C, D, E*, Q, P, T
- Contact Gender (Optional): P = Pin, S = Skt

*For El Ochito see Contact Configuration Table on following page for appropriate code and dash number symbol.

FIGURE 2: REFERENCE ORIENTATION OF INNER PINS RELATIVE TO CONNECTOR MAIN KEY/KEYWAY



Contact Type					
Sym	Description	Glenair P/N	Wire Type	Grommet Follower	Application Notes
C	Size 16, contact for coax cable, per M39029/76 & /77;	Pin: 852-008-16-424 Skt: 852-009-16-428	RG174, RG316, RG179	N/A	Analog radio frequency or microwave applications
	Size 12, contact for coax cable, per M39029/102 & /103	Pin: 852-004-12-558 Skt: 852-005-12-559	RG174, RG316, RG179	N/A	
	Size 8, contact for coax cable, per M39029/59 & /60	Pin: 852-007-08-367 Skt: 852-006-08-366	M17 /95-RG180	859-042-02	
C1	Size 8, contact for 75 ohm coax cable	Pin: 852-056-01 Skt: 852-057-01	V73263, V75268, V76261	859-042-01	aerospace-grade digital video
D	Size 8, diff. twinax contact for 24 AWG twinax cable	Pin: 853-014-05 Skt: 853-013-05	M17 /176-00002	859-042-01	1553 databus / differential signal
E*	Size 8, El Ochito® contact for 26 AWG	White Pin: 858-003-02 Skt: 858-004-02	963-003-26 963-033-26	687-643-8-2	1G/10G Base-T Ethernet (white)
	Size 8, El Ochito® contact for 24/26-30 AWG Cable	Blue Pin: 858-028-02 Skt: 858-029-02	963-110 & 963-118	687-643-8-2	USB 3.0 (Blue)
	Size 8, El Ochito® contact for 26-30 AWG Cable	Red Pin: 858-030-02 Skt: 858-031-02	963-033-26	687-643-8-2	SATA 3.0 General High Speed (red)
Q	Size 8, contact for 24 AWG Quadrax	Pin: 854-001-02 Skt: 854-002-02	963-020	859-042-02	10/100Base-T ethernet
P	Size 8, power contact for 8 AWG	Pin: 850-014 Skt: 850-013	M22759/11 or equivalent	859-042-03	Power
T	Size 8, triax/ concentric twinax for twinax cable	Pin: 853-003-08-625 Skt: 853-004-08-628	M17 /176-00002	859-042-01	1553 Databus

* See Table II for Contact Positions. See Figure 2 for orientation of inner pins relative to connector main key/keyway.

SuperNine® High-Speed Series



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EI Ochito Protocols		
WHITE	BLUE	RED
10GBASE-T	USB 3.0	Multi Gigabit 100 ohm protocols HDMI, SATA, DisplayPort

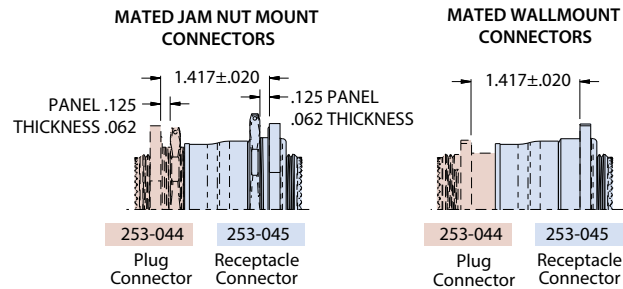


Example Code E7



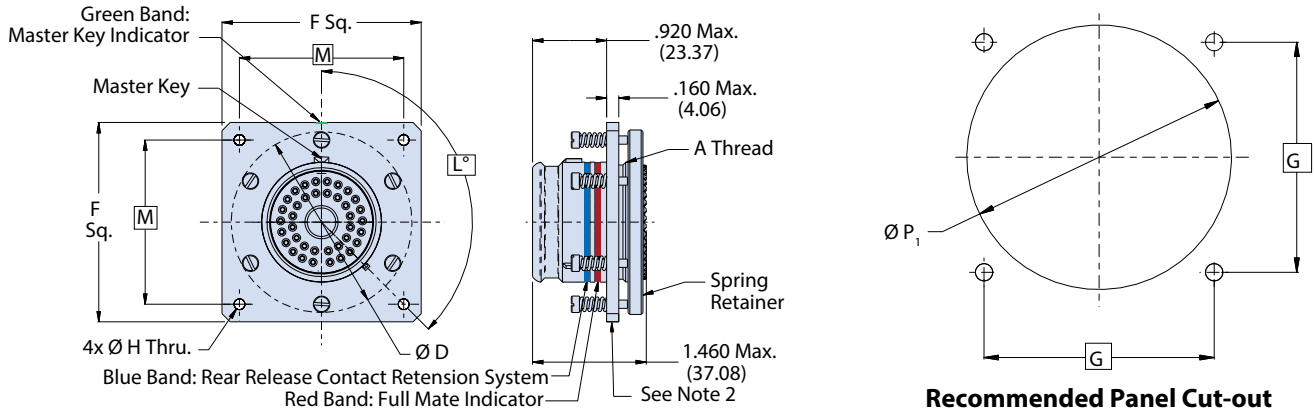
Example Code E5

PANEL TO PANEL DIMENSIONS

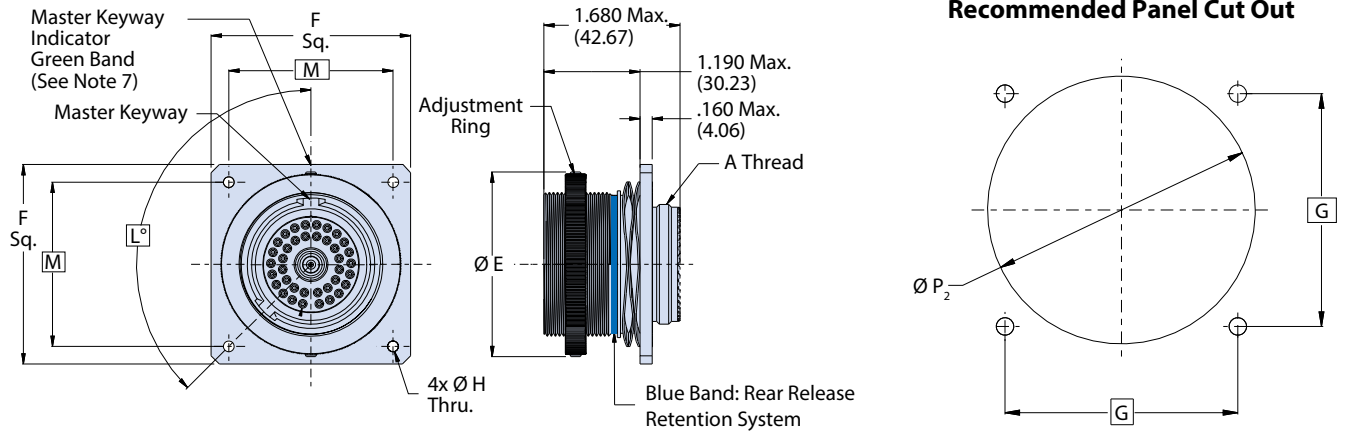


EI Ochito Contact Configuration								
SYM	CAVITY A	CAVITY B	CAVITY C	CAVITY D	CAVITY E	CAVITY F	CAVITY G	CAVITY H
E	W	W	W	W	W	W	W	W
E2	B	W	W	W	W	W	W	W
E3	R	W	W	W	W	W	W	W
E4	B	B	W	W	W	W	W	W
E5	R	B	W	W	W	W	W	W
E6	R	R	W	W	W	W	W	W
E7	B	B	B	W	W	W	W	W
E8	R	B	B	W	W	W	W	W
E9	R	R	B	W	W	W	W	W
E10	R	R	R	W	W	W	W	W
E11	B	B	B	B	W	W	W	W
E12	R	B	B	B	W	W	W	W
E13	R	R	B	B	W	W	W	W
E14	R	R	R	B	W	W	W	W
E15	R	R	R	R	W	W	W	W
E16	B	B	B	B	B	W	W	W
E17	R	B	B	B	B	W	W	W
E18	R	R	B	B	B	W	W	W
E19	R	R	R	B	B	W	W	W
E20	R	R	R	R	B	W	W	W
E21	R	R	R	R	R	W	W	W
E22	B	B	B	B	B	B	W	W
E23	R	B	B	B	B	B	W	W
E24	R	R	B	B	B	B	W	W
E25	R	R	R	B	B	B	W	W
E26	R	R	R	R	B	B	W	W
E27	R	R	R	R	R	B	W	W
E28	R	R	R	R	R	R	W	W
E29	B	B	B	B	B	B	B	W
E30	R	B	B	B	B	B	B	W
E31	R	R	B	B	B	B	B	W
E32	R	R	R	B	B	B	B	W
E33	R	R	R	R	B	B	B	W
E34	R	R	R	R	R	B	B	W
E35	R	R	R	R	R	R	B	W
E36	R	R	R	R	R	R	R	W
E37	B	B	B	B	B	B	B	B
E38	R	B	B	B	B	B	B	B
E39	R	R	B	B	B	B	B	B
E40	R	R	R	B	B	B	B	B
E41	R	R	R	R	B	B	B	B
E42	R	R	R	R	R	B	B	B
E43	R	R	R	R	R	R	B	B
E44	R	R	R	R	R	R	R	B
E45	R	R	R	R	R	R	R	R

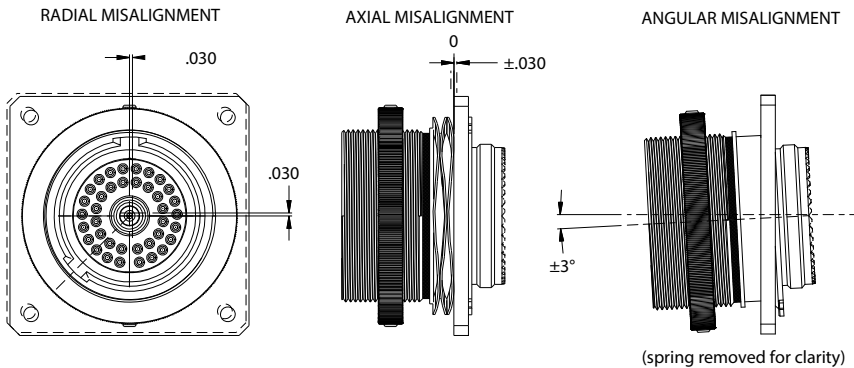
253-047-D0 FIXED WALL MOUNT PLUG WITH SPRING ASSIST (ZERO SEPARATION FORCE)



253-048-D0 FLOATING WALL MOUNT RECEPTACLE WITH ADJUSTABLE SEPARATION FORCE AND MISALIGNMENT ACCOMMODATION

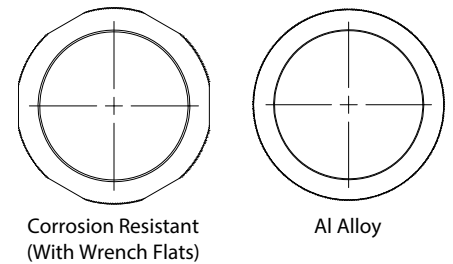


253-017 Misalignment Capabilities

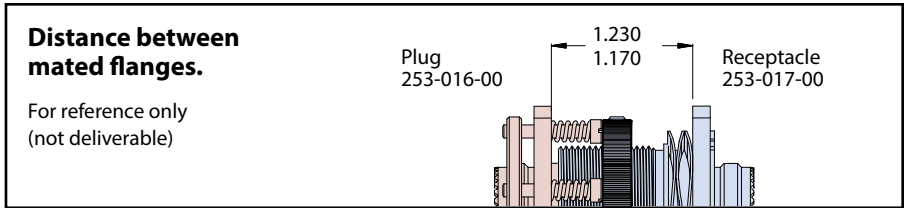


Adjustment Ring Geometry and Material Options

Contact manufacturer for other options



Dimensions for 253-047 and 253-048									
Shell Size	F Flange ±.010 (±.25)	M Square	Ø H ±.005 (±.13)	Ø D, Max.	Ø E Max.	A Thread	Ø P ₁ ±.005 (±.13)	Ø P ₂ ±.005 (±.13)	G Square
9	1.430(36.32)	1.150 (29.21)	.128(3.25)	1.250(31.75)	1.300 (33.02)	M12 X 1.0-6g-0.100R	1.300(33.02)	1.330 (33.78)	1.150 (29.21)
11	1.555(39.50)	1.200(30.48)	.128(3.25)	1.375(34.93)	1.425 (36.20)	M15 X 1.0-6g-0.100R	1.425(36.20)	1.455 (36.96)	1.200 (30.48)
13	1.680(42.67)	1.250(31.75)	.128(3.25)	1.500(38.10)	1.550 (39.37)	M18 X 1.0-6g-0.100R	1.550(39.37)	1.580 (40.13)	1.250 (31.75)
15	1.805(45.85)	1.375(34.93)	.128(3.25)	1.625(41.28)	1.675 (42.55)	M22 X 1.0-6g-0.100R	1.675(42.55)	1.705 (43.31)	1.375 (34.92)
17	1.930(49.02)	1.500(38.10)	.128(3.25)	1.750(44.45)	1.800 (45.72)	M25 X 1.0-6g-0.100R	1.800(45.72)	1.830 (46.48)	1.500 (38.10)
19	2.055(52.20)	1.625(41.28)	.128(3.25)	1.875(47.63)	1.925 (48.90)	M28 X 1.0-6g-0.100R	1.925(48.90)	1.955 (49.66)	1.625 (41.28)
21	2.180(55.37)	1.750(44.45)	.128(3.25)	2.000(50.80)	2.050 (52.07)	M31 X 1.0-6g-0.100R	2.050(52.07)	2.080 (52.83)	1.750 (44.45)
23	2.305(58.55)	1.875(47.63)	.154(3.91)	2.125(53.98)	2.175 (55.25)	M34 X 1.0-6g-0.100R	2.175(55.25)	2.205 (56.01)	1.875 (47.63)
25	2.430(61.72)	2.000(50.80)	.150(3.81)	2.250(57.15)	2.300 (58.42)	M37 X 1.0-6g-0.100R	2.300(58.42)	2.330 (59.18)	2.000 (50.80)



NOTES:

- 253-047 mates with 253-048 fixed series.
- Distance between mated mounting flanges: 1.170/1.230. Consult manufacturer other distance between mounting flanges is required
- Separation force of 253-048 is adjustable ± 5 lbs when mated with 253-047. Contact factory for additional force tolerances as they are based on insert arrangements per MIL-DTL-1560
- See Space-Grade guidelines material, in this section, for outgassing/screening options available
- Spares: pin or socket contacts IAW AS39029 or per Glenair part number if controlled force contacts
- Contact factory for PC tail versions
- Ground plane option only available for insert arrangements where all contacts are shielded type
- 253-047 and 253-048 connectors are rear panel mount only. Tolerance is as shown
- Material/finish
 - Shell (016 and 017), ring (017), retainer ring (016): see P/N development, finish
 - Wave spring (017), springs and spring retainer (016): CRES/passivated
 - Insulators: high grade rigid dielectric/N.A.
 - Seals: fluorosilicone blend/N.A.