

SPACE-GRADE MIL-DTL-38999 TYPE SuperNine® Blind-Mate / ASF Connectors



253-045 High-Speed Receptacle, Float-Mount Series, Environmental High-Speed data and RF insert arrangements



253-045 high-speed float-mount receptacle series with chamfered nose, misalignment accommodation, and external environmental seal

ADAPTER CODE **F**

"F" adapter code accessories (D38999 Series I, imperial thread) fit this connector

Glenair recommends the use of 4470-1130 SplayMaster backshells for alignment of shielded contacts and cables

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

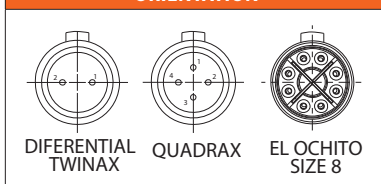
Basic Modification Code
909

Contact Type Symbol
(See Contact Type Table)
C, C1, D, E*, Q, P, T

Contact Gender (Optional)
P = Pin, S = Skt

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

FIGURE 2: CONTACT INNER PIN ORIENTATION



HOW TO ORDER

Sample Part No.	253-045	-	07	ME	25	-	8	A	N	NS	-909CP
Basic Part No.	253-045 = Blind-mate receptacle (float mnt)										
Accessory Style	B = Integral Backshell - (Dash) = Accessory Thread										
Connector Style	L7 = Jam nut (locating pin)] 00 = Panel-mount rcpt; slotted holes 07 = Jam nut mount (flat thread) D0 = Panel-mount rcpt; through holes										
Material/Finish	MN = Al Alloy, MegaNickel ME = Al/electroless nickel MT = Al/nickel PTFE ZL = CRES/electrodeposited nickel Z1 = CRES/passivated										
Shell Size	11 13 17 19 21 23 25										
Ground Option	G = Common ground - (dash) = None										
Insert Arrangement	Insert Arrangement number per MIL-STD-1560 High-Speed or Combo Contact Arrangement (see table).										
Insert Designator	A = Pin insert, less contacts B = Socket insert, less contacts										
Alternate Polarization (L°)	A = 40°, B = 65°, C = 80°, D = 210°, E = 250°, N = 135° Normal										
Non Sealing	NS = Non sealing version Omit = Sealing version										
Optional Mod Code	-909** = See Mod Code specifications below										

253-045 High-Speed Receptacle mates with 253-044 Plug

Space-grade modification codes may be added directly to the end of any valid part number

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.

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EL OCHITO PROTOCOLS		
		
WHITE	BLUE	RED
10GBASE-T	USB 3.0	Multi Gigabit 100 ohm protocols HDMI, SATA, DisplayPort



Example Code E7



Example Code E5

COMPATIBLE SPEEDLINE HIGH-SPEED CABLE		
Part No.	High-Speed Protocol	El Ochito contact type
963-066-24	Ethernet	El Ochito White
963-066-26	Ethernet	El Ochito White
963-089-24	SpaceWire	El Ochito White
963-089-26	SpaceWire	El Ochito White
963-077-26	High-speed USB	El Ochito Blue
963-127-3	HDMI, DisplayPort, DVI	El Ochito Red
963-072-24	SATA / eSATA	El Ochito Red

MIL-STD-1560 HIGH-SPEED AND COMBO CONTACT ARRANGEMENTS								
Contact Type	Number of Contacts							Shell Size - Ins. Arr.
	#23	#22D	#20	#16	#12	#10	#8	
High-Speed Contact Arrangements							1	11-1
							2	17-75
							4	19-4
							4	21-75
							5	23-5
							6	23-6
							8	25-8
Combo High-Speed Contact Arrangements	14							13-14
		38		2				17-2
					2		2	17-22
		8						17-60
		10	1	4				19-17
			16				1	19A-17
		14						19-18
		97						25-7
		36						25-17
			10	13	4		3	25-20
				16		5	4	25-26
			22	3	11	2	3	25-41
				40	4		2	25-46

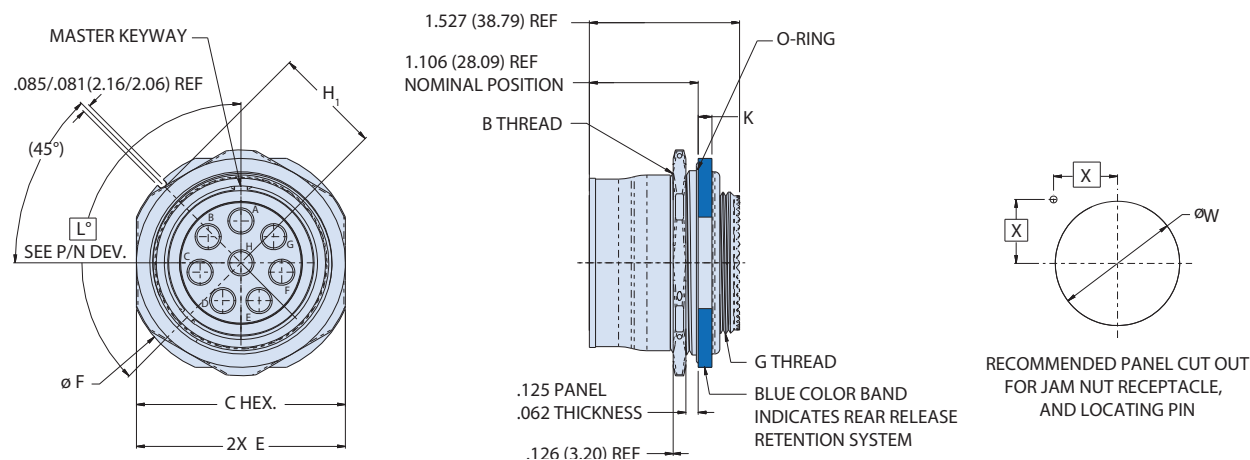
EL OCHITO CONTACT CONFIGURATION								
SYM	CAVITY A	CAVITY B	CAVITY C	CAVITY D	CAVITY E	CAVITY F	CAVITY G	CAVITY H
E	W	W	W	W	W	W	W	W
E2	B	W	W	W	W	W	W	W
E3	R	W	W	W	W	W	W	W
E4	B	B	W	W	W	W	W	W
E5	R	B	W	W	W	W	W	W
E6	R	R	W	W	W	W	W	W
E7	B	B	B	W	W	W	W	W
E8	R	B	B	W	W	W	W	W
E9	R	R	B	W	W	W	W	W
E10	R	R	R	W	W	W	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

SPACE-GRADE MIL-DTL-38999 TYPE SuperNine® Blind-Mate / ASF Connectors



253-045 High-Speed Receptacle, Float-Mount Series, Environmental High-Speed data and RF insert arrangements

253-045-L7 JAM-NUT MOUNT WITH ROLL-ON/ROLL-OFF NOSE, ACCESSORY THREADS AND SIZE 8 HIGH-SPEED CONTACTS



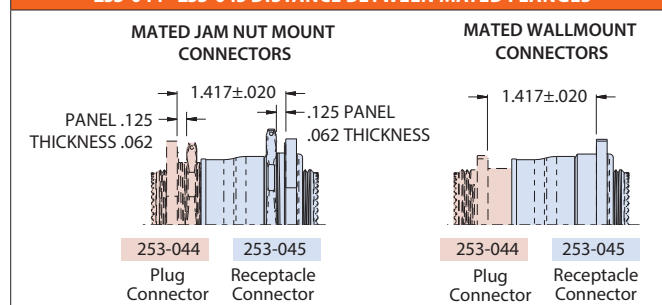
DIMENSIONS

Shell Size	B Thread Class 2A	C $\pm .015$	E $\pm .015$	$\varnothing F$	H ₁ $+.000/-0.008$	G Thread Unef Class 2A	K Flange Thickness
11	1.0000-20 UNEF	1.175 (29.85)	1.266 (32.16)	1.500 (38.10)	0.666 (16.92)	.5625-24	0.109 (2.77)
13	1.1250-18 UNEF	1.294 (32.87)	1.391 (35.33)	1.641 (41.68)	0.729 (18.52)	.6875-24	0.109 (2.77)
15	1.2500-18 UNEF	1.451 (36.86)	1.516 (38.51)	1.750 (44.45)	0.791 (20.09)	.8125-20	0.109 (2.77)
17	1.3750-18 UNEF	1.569 (39.85)	1.641 (41.68)	1.938 (49.23)	0.893 (22.68)	.9375-20	0.109 (2.77)
19	1.5000-18 UNEF	1.687 (42.85)	1.828 (46.43)	2.062 (52.37)	0.955 (24.26)	1.0625-18	0.140 (3.56)
21	1.6250-18 UNEF	1.875 (47.63)	1.954 (49.63)	2.188 (55.58)	1.017 (25.83)	1.1875-18	0.140 (3.56)
23	1.7500-18 UNS	2.010 (51.05)	2.078 (52.78)	2.312 (58.72)	1.080 (27.43)	1.3125-18	0.140 (3.56)
25	1.8750-16 UN	2.125 (53.97)	2.128 (54.05)	2.327 (59.11)	1.086 (27.58)	1.4375-18	0.140 (3.56)

PANEL-MOUNT DIMENSIONS

Shell Size	$\varnothing W$ $+.010/0.000$	X
11	1.010 (25.65)	0.504 (12.80)
13	1.135 (28.83)	0.549 (13.94)
15	1.260 (32.00)	0.593 (15.06)
17	1.385 (35.18)	0.665 (16.89)
19	1.510 (38.35)	0.709 (18.01)
21	1.635 (41.53)	0.753 (19.13)
23	1.760 (44.70)	0.797 (20.24)
25	1.885 (47.88)	0.799 (20.29)

253-044 - 253-045 DISTANCE BETWEEN MATED FLANGES



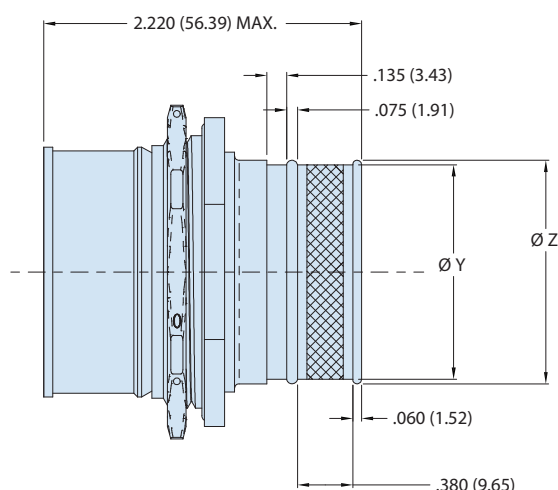
SPACE-GRADE MIL-DTL-38999 TYPE SuperNine[®] Blind-Mate / ASF Connectors



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RECEPTACLE, INTEGRAL BACKSHELL

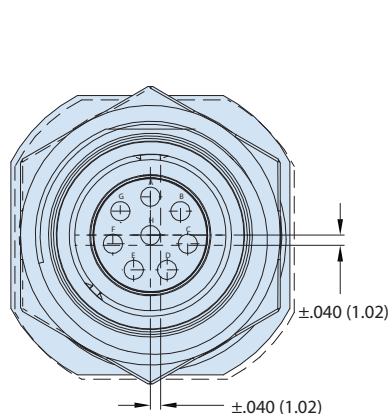
B - INTEGRAL BACKSHELL
AVAILABLE FOR ALL CONNECTOR STYLES



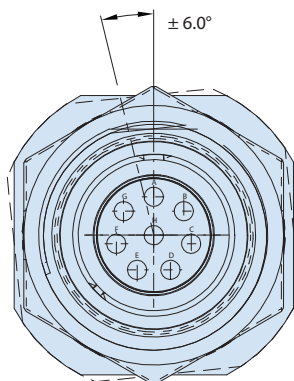
DIMENSIONS		
Shell Size	Ø Y	Ø Z
11	0.600 (15.24)	0.662 (16.81)
13	0.700 (17.78)	0.762 (19.35)
15	0.835 (21.21)	0.898 (22.81)
17	0.960 (24.38)	1.022 (25.96)
19	1.062 (26.97)	1.125 (28.58)
21	1.188 (30.18)	1.250 (31.75)
23	1.313 (33.35)	1.375 (34.93)
25	1.475 (37.47)	1.538 (39.07)

MISALIGNMENT CAPABILITIES

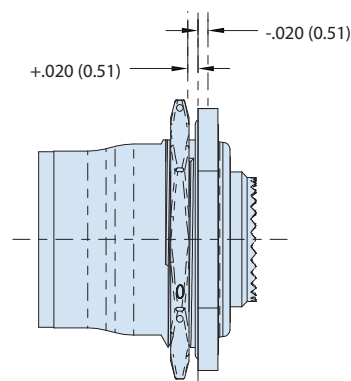
AXIAL MISALIGNMENT



ANGULAR MISALIGNMENT



LONGITUDINAL MISALIGNMENT



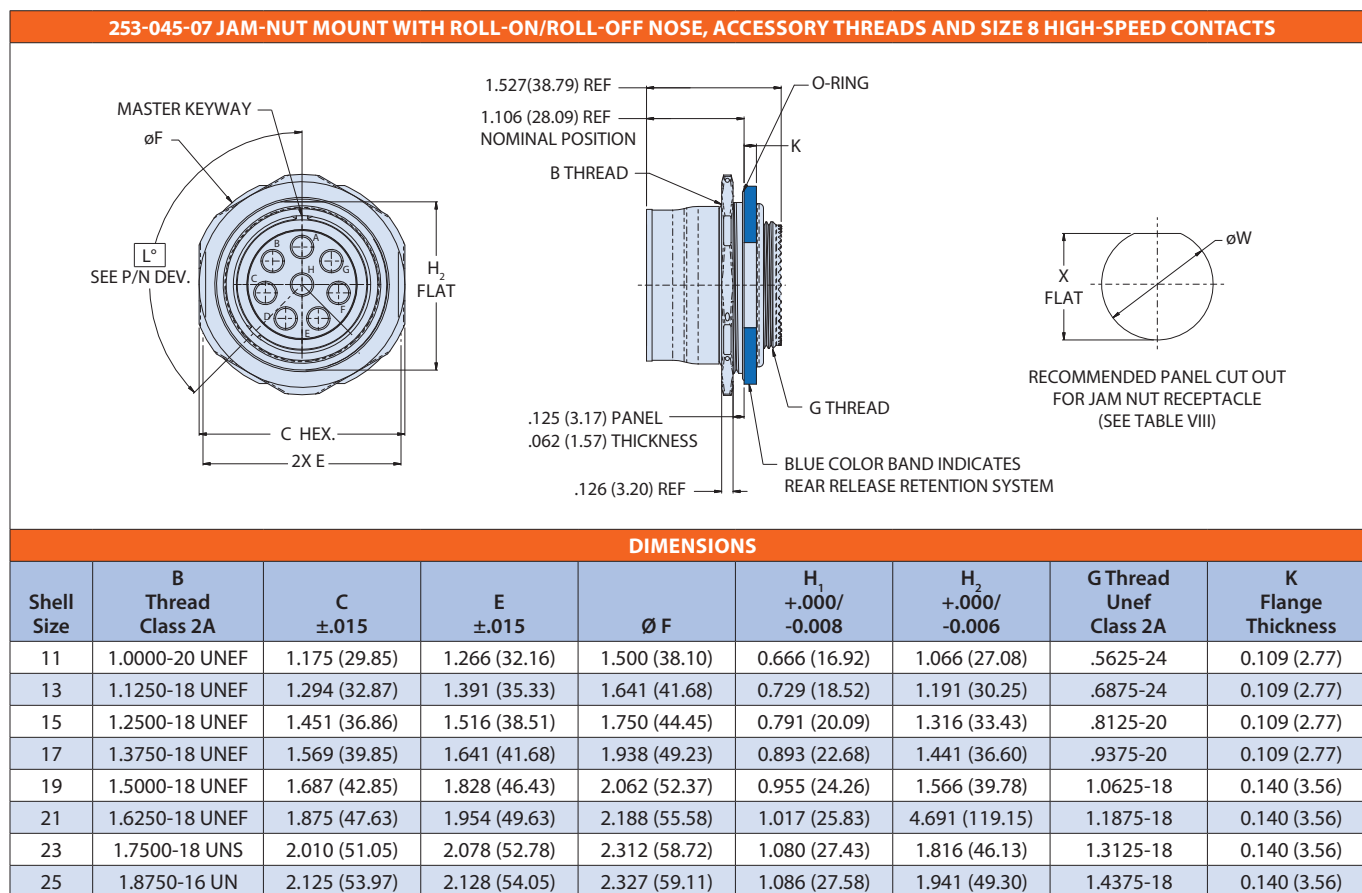
NOTES:

- Glenair 253-044 is designed to mate with 253-045 with same insert arrangement and polarization
- Stainless steel locating pin to be shipped with L7 jam-nut connector
- Misalignment capabilities are possible with 253-045, when mated to 253-044.
- See page 80 for outgassing options
- 253-045 connectors are rear panel-mount only. Panel to panel dimensions the same for all configurations. Tolerance as shown
- Contact Manufacturer for outgassing options
- Material/finish
 - Shell, jam-nut: see P/N development, finish
 - Insulator: high-grade rigid dielectric/N.A.
 - Seals: fluorosilicone blend/N.A.
 - Contacts: copper alloy/gold plated

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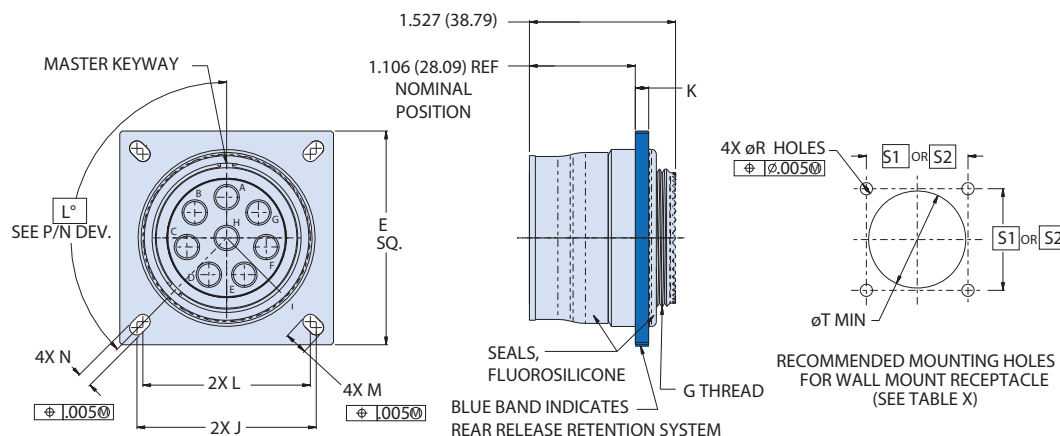
PANEL-MOUNT DIMENSIONS		
Shell Size	Ø W +.010/ 0.000	X Flat +.000/ -0.010
11	1.135 (28.83)	1.085 (27.56)
13	1.260 (32.00)	1.210 (30.73)
15	1.385 (35.18)	1.335 (33.91)
17	1.510 (38.35)	1.460 (37.08)
19	1.635 (41.53)	1.585 (40.26)
21	1.760 (44.70)	1.710 (43.43)
23	1.885 (47.88)	1.835 (46.61)
25	2.010 (51.05)	1.960 (49.78)

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253-045 High-Speed Receptacle, Float-Mount Series, Environmental High-Speed data and RF insert arrangements

253-045-00 PANEL-MOUNT RECEPTACLE WITH SLOTTED HOLES, ACCESSORY THREADS AND SIZE 8 HIGH-SPEED CONTACTS



DIMENSIONS WITH SEALING

Shell Size	E	L	J	M	N	G Thread Unef Class 2A	K Flange Thickness	S1	S2
11	1.311 (33.30)	0.969 (24.61)	1.062 (26.97)	0.194 (4.93)	0.128 (3.25)	.5625-24	0.109 (2.77)	0.969 (24.61)	1.062 (26.97)
13	1.437 (36.50)	1.062 (26.97)	1.156 (29.36)	0.194 (4.93)	0.128 (3.25)	.6875-24	0.109 (2.77)	1.062 (26.97)	1.156 (29.36)
15	1.563 (39.70)	1.156 (29.36)	1.250 (31.75)	0.194 (4.93)	0.128 (3.25)	.8125-20	0.109 (2.77)	1.156 (29.36)	1.250 (31.75)
17	1.689 (42.90)	1.250 (31.75)	1.375 (34.92)	0.216 (5.49)	0.128 (3.25)	.9375-20	0.109 (2.77)	1.250 (31.75)	1.375 (34.92)
19	1.811 (46.00)	1.375 (34.92)	1.500 (38.10)	0.242 (6.15)	0.154 (3.91)	1.0625-18	0.140 (3.56)	1.375 (34.92)	1.500 (38.10)
21	1.952 (49.58)	1.500 (38.10)	1.625 (41.28)	0.242 (6.15)	0.154 (3.91)	1.1875-18	0.140 (3.56)	1.500 (38.10)	1.625 (41.28)
23	2.093 (53.16)	1.625 (41.28)	1.750 (44.45)	0.242 (6.15)	0.154 (3.91)	1.3125-18	0.140 (3.56)	1.625 (41.28)	1.750 (44.45)
25	2.234 (56.74)	1.750 (44.45)	1.875 (47.63)	0.242 (6.15)	0.154 (3.91)	1.4375-18	0.140 (3.56)	1.750 (44.45)	1.875 (47.63)

DIMENSIONS WITHOUT SEALING

Shell Size	EE	LL	JJ	MM	NN	GG Thread Unef Class 2A	KK Flange Thickness	SS1	SS2
11	1.126 (28.60)	0.812 (20.62)	0.906 (23.01)	0.194 (4.93)	0.128 (3.25)	.5625-24	0.109 (2.77)	0.812 (20.62)	0.906 (23.01)
13	1.220 (30.99)	0.906 (23.01)	0.969 (24.61)	0.173 (4.39)	0.128 (3.25)	.6875-24	0.109 (2.77)	0.906 (23.01)	0.969 (24.61)
15	1.311 (33.30)	0.969 (24.61)	1.062 (26.97)	0.194 (4.93)	0.128 (3.25)	.8125-20	0.109 (2.77)	0.969 (24.61)	1.062 (26.97)
17	1.437 (36.50)	1.062 (26.97)	1.156 (29.36)	0.194 (4.93)	0.128 (3.25)	.9375-20	0.109 (2.77)	1.062 (26.97)	1.156 (29.36)
19	1.563 (39.70)	1.156 (29.36)	1.250 (31.75)	0.220 (5.59)	0.154 (3.91)	1.0625-18	0.140 (3.56)	1.156 (29.36)	1.250 (31.75)
21	1.689 (42.90)	1.250 (31.75)	1.375 (34.92)	0.242 (6.15)	0.154 (3.91)	1.1875-18	0.140 (3.56)	1.250 (31.75)	1.375 (34.92)
23	1.811 (46.00)	1.375 (34.92)	1.500 (38.10)	0.242 (6.15)	0.154 (3.91)	1.3125-18	0.140 (3.56)	1.375 (34.92)	1.500 (38.10)
25	1.952 (49.58)	1.500 (38.10)	1.625 (41.28)	0.242 (6.15)	0.154 (3.91)	1.4375-18	0.140 (3.56)	1.500 (38.10)	1.625 (41.28)

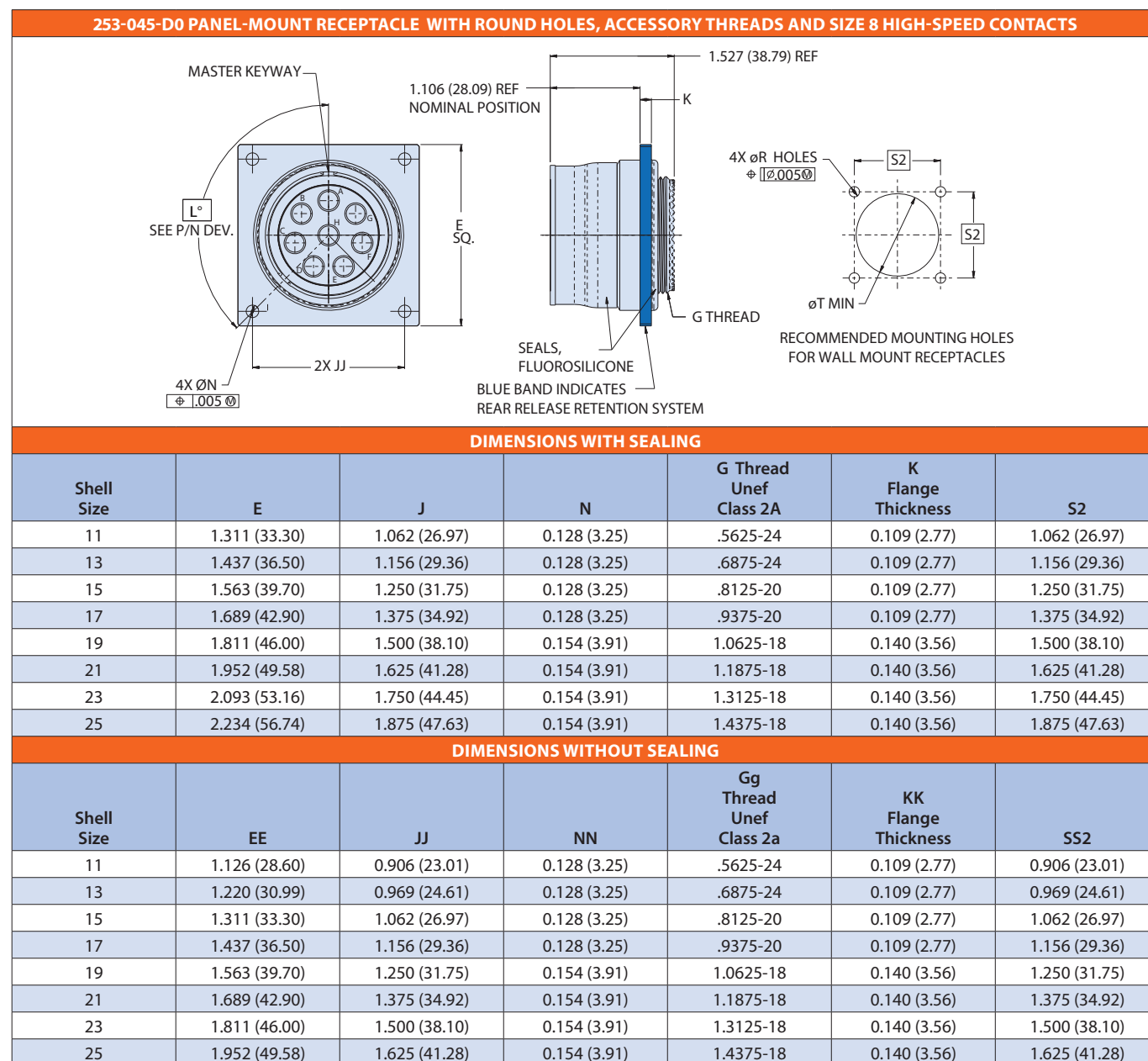
PANEL-MOUNT DIMENSIONS

Shell Size	T Dia. +.010 0.000	R Dia.	Shell Size	T Dia. +.010 0.000	R Dia.
11	0.970 (24.64)	0.133 (3.38) 0.123 (3.12)	19	1.450 (36.83)	0.155 (3.94) 0.145 (3.68)
13	1.095 (27.81)		21	1.575 (40.00)	
15	1.200 (30.48)		23	1.720 (43.69)	
17	1.335 (33.91)		25	1.845 (46.86)	

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PANEL-MOUNT DIMENSIONS					
SHELL SIZE	T DIA. +.010 0.000	R DIA.	SHELL SIZE	T DIA. +.010 0.000	R DIA.
11	0.970 (24.64)	0.133 (3.38) 0.123 (3.12)	19	1.450 (36.83)	0.155 (3.94) 0.145 (3.68)
13	1.095 (27.81)		21	1.575 (40.00)	
15	1.200 (30.48)		23	1.720 (43.69)	
17	1.335 (33.91)		25	1.845 (46.86)	