

MIL-DTL-38999 Series III Type

233-215 1K PSI crimp-contact piston-sealed connectors

ENVIRONMENTAL CONNECTORS

Part Number Development						
Sample Part Number	233-215					
Series / Basic Part No.	233-215 = Series 23 SuperNine, Standard MIL-DTL-38999 panel mount configuration					
Rear Accessory Option	See Rear Accessory Option table					
Connector Style*	See Connector Style table					
Finish	NF = Al alloy/cadmium olive drab MT = Al alloy/nickel PTFE		ME = Al alloy/electroless nickel ZR = Al alloy/black zinc nickel		AB = marine bronze/NA Z1 = SST, passivate	
Shell Size-Insert Arrangement*	Per MIL-STD-1560					
Contact Type	P = Pin, gold 1500 cycles S = Socket, gold 1500 cycles		A = Less pin contacts B = Less socket onctacts		H = Pin, Pd/Ni 1500 cycles J = Socket, Pd/Ni 1500 cycles	
Alternate Polarization	V, W, X, Y, Z, T = Normal (IAW MIL-DTL-38999 Series III); see key or keyway position tables					

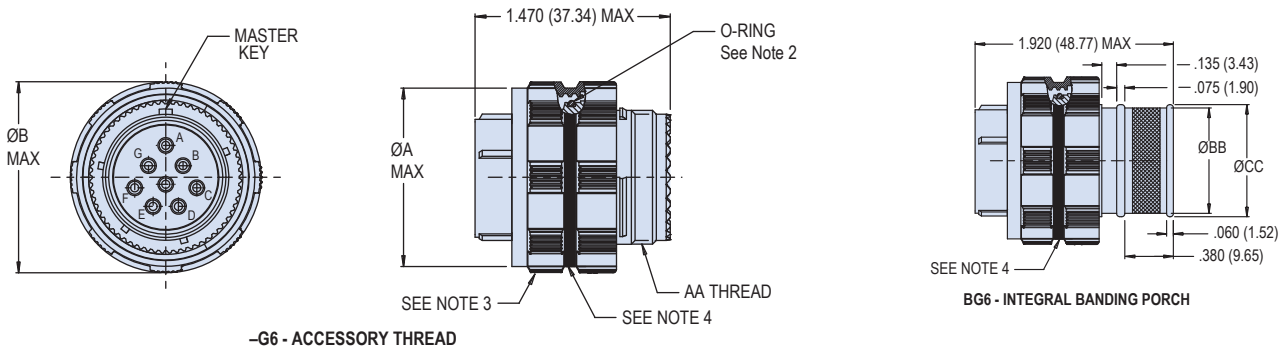
*Refer to Section A for complete details

Rear Accessory Option	
Sym	Description
-	Accessory thread and teeth
B	Integral backshell, boot adaptor

Panel Mount Options	
Sym	Description
-	Standard MIL-DTL-38999 panel mount configuration

Connector Style	
Sym	Description
G6	Plug with EMI spring (D38999/26 type)
05	Inline receptacle
07	Jam nut receptacle (D38999/24 type)
HM	Wall mount receptacle with metric helicoils
HS	Wall mount receptacle with standard helicoils

G6 AND BG6 PISTON SEAL PLUG, ACCESSORY THREAD OR INTEGRAL BACKSHELL



-G6 - ACCESSORY THREAD

BG6 - INTEGRAL BANDING PORCH

Plug requires a special protective cover to accommodate O-Ring seal. See Part Number 239-200 in accessories, section H of this catalog.

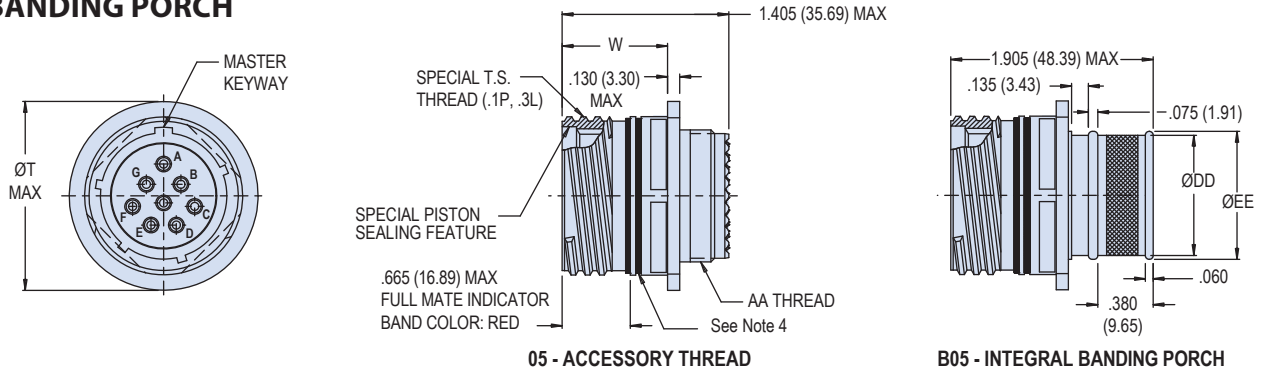
Plug Dimensions			
Shell Size	ØA	ØB	AA Thread
9	.815 (20.70)	.875 (22.23)	M12 X 1.0-6g 0.100R
11	.928 (23.57)	.988 (25.10)	M15 X 1.0-6g 0.100R
13	1.089 (27.66)	1.149 (29.18)	M18 X 1.0-6g 0.100R
15	1.214 (30.84)	1.274 (32.36)	M22 X 1.0-6g 0.100R
17	1.367 (34.72)	1.427 (36.25)	M25 X 1.0-6g 0.100R
19	1.464 (37.19)	1.524 (38.71)	M28 X 1.0-6g 0.100R
21	1.589 (40.36)	1.649 (41.88)	M31 X 1.0-6g 0.100R
23	1.714 (43.54)	1.774 (45.06)	M34 X 1.0-6g 0.100R
25	1.839 (46.71)	1.899 (48.23)	M37 X 1.0-6g 0.100R

Integral Backshell Dimensions		
Shell Size	ØBB	ØCC
9	.420 (10.67)	.465 (11.81)
11	.550 (13.97)	.595 (15.11)
13	.670 (17.02)	.715 (18.16)
15	.815 (20.70)	.860 (21.84)
17	.945 (24.00)	.990 (25.15)
19	1.050 (26.67)	1.100 (27.94)
21	1.170 (29.72)	1.220 (30.99)
23	1.290 (32.77)	1.340 (34.04)
25	1.400 (35.56)	1.450 (36.83)

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05 AND B05 PISTON SEAL BANDING PORCH RECEPTACLE, ACCESSORY THREAD OR INTEGRAL BANDING PORCH



05 - ACCESSORY THREAD

B05 - INTEGRAL BANDING PORCH

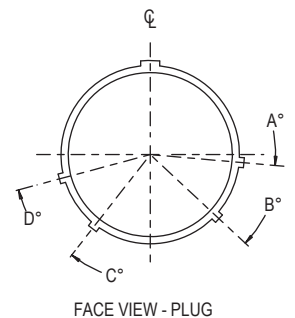
In-line with Integral Backshell Dimensions			
Shell Size	ØT MAX	W	AA THREAD
9	.858 (21.79)	.965 (24.51) .916 (23.27)	M12 X 1.0-6g 0.100R
11	.984 (24.99)		M15 X 1.0-6g 0.100R
13	1.157 (29.39)		M18 X 1.0-6g 0.100R
15	1.280 (32.51)		M22 X 1.0-6g 0.100R
17	1.406 (35.71)		M25 X 1.0-6g 0.100R
19	1.516 (38.51)		M28 X 1.0-6g 0.100R
21	1.642 (41.71)	.935 (23.75) .886 (22.50)	M31 X 1.0-6g 0.100R
23	1.768 (44.91)		M34 X 1.0-6g 0.100R
25	1.890 (48.01)		M37 X 1.0-6g 0.100R

In-line with Integral Backshell Dimensions		
Shell Size	ØDD	ØEE
	In	In
9	.475 (12.07)	.538 (13.67)
11	.600 (15.24)	.662 (16.81)
13	.700 (17.78)	.762 (19.35)
15	.835 (21.21)	.898 (22.81)
17	.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	1.275 (32.39)	1.338 (33.99)
25	1.475 (37.47)	1.538 (39.07)

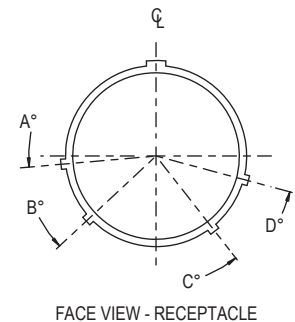
NOTES

- 233-215 is designed to meet the general requirements of D38999/20, /24 & /26 and MIL-STD-1560
 - Receptacles can be installed into standard panel cutouts.
 - Ingress protection IP68 or better expected
 - Connector accessory threads accept standard backshells
 - Connector accepts standard AS39029 type contacts
 - Connectors cannot be mated to standard MIL-DTL-38999 connectors or protective covers
- 233-215 piston seal interface is rated to 1000 PSI water submersion (2300 FT/700m) when fully mated or protected with 239-200 cover. Cable sealing and panel sealing capability dependent on customer installation
- Use with 233PS215 wall mount receptacle with dual O-ring sealing and tapped hole mounting for improved sealing
- Blue band indicates rear release retention system
- Supplied with contacts (including spares) and insertion/removal tool.
- Material/finish
 - Shell, barrel, coupling nut, jam-nut: see P/N development
 - Ratchet Ring, Detent spring: Stainless steel/passivated
 - insulator: high grade rigid dielectric/N.A.
 - Seals, grommet: fluorosilicone blend/N.A.
 - Contacts: copper alloy / see part P/N development

Key Positions (Plug)				
Alternate Key Code	A°	B°	C°	D°
T	95	135	220	275
V	92	127	253	325
W	70	113	235	322
X	35	135	210	285
Y	54	150	239	314
Z	81	126	202	250



Keyway Positions (Receptacle)				
Alternate Key Code	A°	B°	C°	D°
T	95	135	220	275
V	92	127	253	325
W	70	113	235	322
X	35	135	210	285
Y	54	150	239	314
Z	81	126	202	250

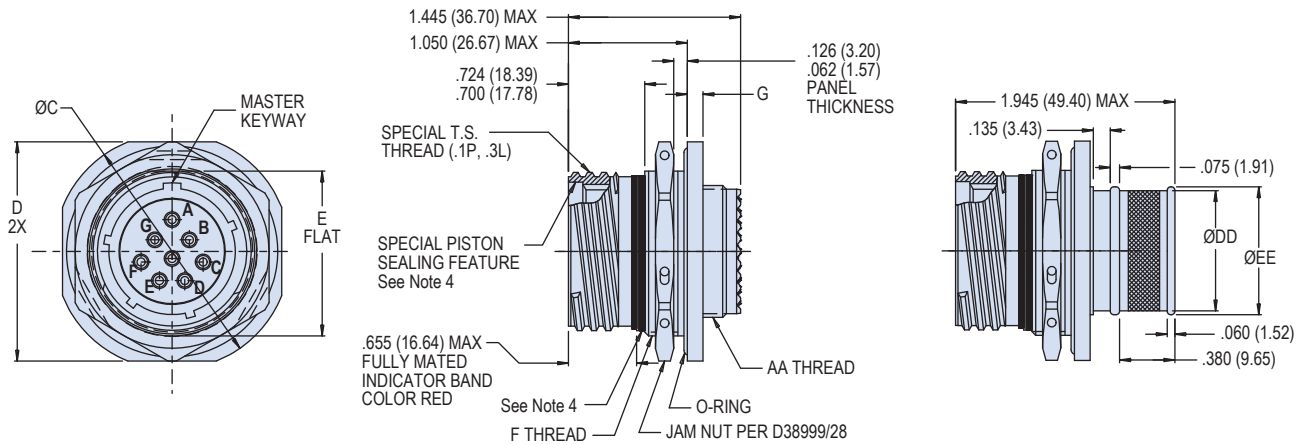


MIL-DTL-38999 Series III Type

233-215 1K PSI crimp-contact piston-sealed connectors

ENVIRONMENTAL CONNECTORS

-07 AND B07 PISTON SEAL JAM NUT RECEPTACLE, WITH ACCESSORY THREADS OR INTEGRAL BANDING PORCH

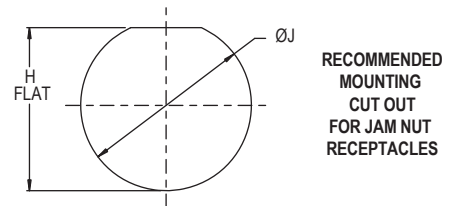


07 - ACCESSORY THREAD

B07 - INTEGRAL BANDING PORCH

Jam Nut Dimensions						
Shell Size	ØC	D	E Flat	F Thread	AA Thread	G
9	1.200 (30.48)	1.078 (27.38)	.655 (16.64)	M17 X 1.0	M12 X 1.0	.122 (3.10) .083 (2.11)
	1.178 (29.92)	1.048 (26.62)	.645 (16.38)	-6g 0.100R	-6g 0.100R	
11	1.386 (35.20)	1.268 (32.21)	.755 (19.18)	M20 X 1.0	M15 X 1.0	
	1.362 (34.59)	1.236 (31.39)	.745 (18.92)	-6g 0.100R	-6g 0.100R	
13	1.512 (38.40)	1.390 (35.31)	.942 (23.93)	M25 X 1.0	M18 X 1.0	
	1.488 (37.80)	1.358 (34.49)	.932 (23.67)	-6g 0.100R	-6g 0.100R	
15	1.638 (41.61)	1.516 (38.51)	1.066 (27.08)	M28 X 1.0	M22 X 1.0	
	1.614 (41.00)	1.484 (37.69)	1.056 (26.82)	-6g 0.100R	-6g 0.100R	
17	1.764 (44.81)	1.642 (41.71)	1.191 (30.25)	M32 X 1.0	M25 X 1.0	
	1.740 (44.20)	1.610 (40.89)	1.181 (30.00)	-6g 0.100R	-6g 0.100R	
19	1.949 (49.50)	1.827 (46.41)	1.316 (33.43)	M35 X 1.0	M28 X 1.0	
	1.925 (48.90)	1.795 (45.59)	1.306 (33.17)	-6g 0.100R	-6g 0.100R	
21	2.075 (52.71)	1.953 (49.61)	1.441 (36.60)	M38 X 1.0	M31 X 1.0	.153 (3.89) .114 (2.90)
	2.051 (52.10)	1.921 (48.79)	1.431 (36.35)	-6g 0.100R	-6g 0.100R	
23	2.201 (55.91)	2.079 (52.81)	1.566 (39.78)	M41 X 1.0	M34 X 1.0	
	2.177 (55.30)	2.047 (51.99)	1.556 (39.52)	-6g 0.100R	-6g 0.100R	
25	2.323 (59.00)	2.205 (56.01)	1.691 (42.95)	M44 X 1.0	M37 X 1.0	
	2.299 (58.39)	2.173 (55.19)	1.681 (42.70)	-6g 0.100R	-6g 0.100R	

Integral Banding Porch Dimensions		
Shell Size	ØC	D
9	.475 (12.07)	.538 (13.67)
11	.600 (15.24)	.662 (16.81)
13	.700 (17.78)	.762 (19.35)
15	.835 (21.21)	.898 (22.81)
17	.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	1.275 (32.39)	1.338 (33.99)
25	1.475 (37.47)	1.538 (39.07)



Panel Cut Out Dims.		
Shell Size	H Flat	ØJ
9	.703 (17.86)	.657 (16.69)
	.693 (17.60)	.648 (16.46)
11	.835 (21.21)	.771 (19.58)
	.825 (20.96)	.761 (19.33)
13	1.020 (25.91)	.955 (24.26)
	1.010 (25.65)	.945 (24.00)

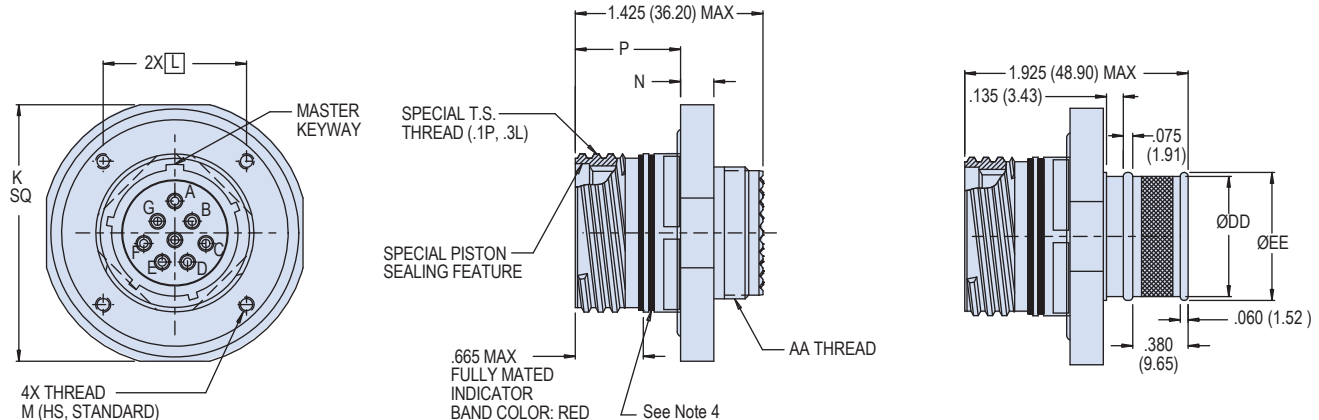
Panel Cut Out Dims.		
Shell Size	H Flat	ØJ
15	1.145 (29.08)	1.085 (27.56)
	1.135 (28.83)	1.075 (27.30)
17	1.270 (32.26)	1.210 (30.73)
	1.260 (32.00)	1.200 (30.48)
19	1.395 (35.43)	1.335 (33.91)
	1.385 (35.18)	1.325 (33.65)

Panel Cut Out Dims.		
Shell Size	H Flat	ØJ
21	1.520 (38.61)	1.460 (37.08)
	1.510 (38.35)	1.450 (36.83)
23	1.645 (41.78)	1.585 (40.26)
	1.635 (41.53)	1.575 (40.00)
25	1.770 (44.96)	1.710 (43.43)
	1.760 (44.70)	1.700 (43.18)

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233-215 1K PSI crimp-contact piston-sealed connectors

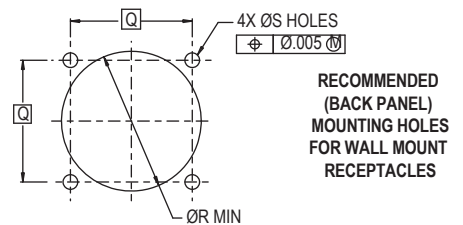
-HS, -HM, BHS AND BHM PISTON SEAL WALL MOUNT RECEPTACLE, WITH ACCESSORY THREAD OR INTEGRAL BANDING PORCH



ACCESSORY THREAD
HS - STANDARD HELICOILS
HM - METRIC HELICOILS

INTEGRAL BANDING PORCH
BHS - STANDARD HELICOIL
BHM - METRIC HELICOIL

Wall Mount Dimensions															
Shell Size	K SQ	L BSC	M THD	M' THD	N	P	AA Thread								
9	1.516 (38.51)	.719 (18.26)	#4-40 UNC-2B ↓.220 (5.59)	M3-0.5 ↓.225 (5.72) ↓.220 (5.59)	.285 (7.24) .250 (6.35)	.968 (24.59) .913 (23.19)	M12 X 1.0 -6g 0.100R								
	1.484 (37.69)	.812 (20.62)					M15 X 1.0 -6g 0.100R								
11	1.642 (41.71)	.812 (20.62)					.275 (6.99) ↓.270 (6.86)	.350 (8.89) .315 (8.00)	.936 (23.77) .881 (22.38)	M18 X 1.0 -6g 0.100R					
	1.610 (40.89)	.906 (23.01)								M22 X 1.0 -6g 0.100R					
13	1.827 (46.41)	.906 (23.01)					#6-32 UNC-2B ↓.275 (6.99) ↓.270 (6.86)	M4X0.7 ↓.275 (6.99) ↓.270 (6.86)	.350 (8.89) .315 (8.00)	.936 (23.77) .881 (22.38)	M25 X 1.0 -6g 0.100R				
	1.795 (45.59)	.969 (24.61)									M28 X 1.0 -6g 0.100R				
15	1.953 (49.61)	.969 (24.61)									.275 (6.99) ↓.270 (6.86)	.350 (8.89) .315 (8.00)	.936 (23.77) .881 (22.38)	.936 (23.77) .881 (22.38)	M31 X 1.0 -6g 0.100R
	1.921 (48.79)	1.062 (26.97)													M34 X 1.0 -6g 0.100R
17	2.079 (52.81)	1.062 (26.97)									#6-32 UNC-2B ↓.275 (6.99) ↓.270 (6.86)	M4X0.7 ↓.275 (6.99) ↓.270 (6.86)	.350 (8.89) .315 (8.00)	.936 (23.77) .881 (22.38)	M37 X 1.0 -6g 0.100R
	2.047 (51.99)	1.156 (29.36)													M37 X 1.0 -6g 0.100R
19	2.205 (56.01)	1.156 (29.36)	.275 (6.99) ↓.270 (6.86)	.350 (8.89) .315 (8.00)	.936 (23.77) .881 (22.38)	.936 (23.77) .881 (22.38)									M37 X 1.0 -6g 0.100R
	2.173 (55.19)	1.250 (31.75)													M37 X 1.0 -6g 0.100R
21	2.334 (59.28)	1.250 (31.75)	.275 (6.99) ↓.270 (6.86)	.350 (8.89) .315 (8.00)	.936 (23.77) .881 (22.38)	.936 (23.77) .881 (22.38)									M37 X 1.0 -6g 0.100R
	2.302 (58.47)	1.375 (34.92)													M37 X 1.0 -6g 0.100R
23	2.522 (64.06)	1.375 (34.92)	.275 (6.99) ↓.270 (6.86)	.350 (8.89) .315 (8.00)	.936 (23.77) .881 (22.38)	.936 (23.77) .881 (22.38)	M37 X 1.0 -6g 0.100R								
	2.490 (63.25)	1.500 (38.10)					M37 X 1.0 -6g 0.100R								
25	2.709 (68.81)	1.500 (38.10)	.275 (6.99) ↓.270 (6.86)	.350 (8.89) .315 (8.00)	.936 (23.77) .881 (22.38)	.936 (23.77) .881 (22.38)	M37 X 1.0 -6g 0.100R								
	2.677 (68.00)	1.500 (38.10)					M37 X 1.0 -6g 0.100R								



Panel Cut Out Dims.			
Shell Size	Q BSC	ØR MIN	ØS HOLES
9	.719 (18.26)	.656 (16.66)	
11	.812 (20.62)	.796 (20.22)	.133 (3.38)
13	.906 (23.01)	.922 (23.42)	.123 (3.12)
15	.969 (24.61)	1.047 (26.59)	

Panel Cut Out Dims.			
Shell Size	Q BSC	ØR MIN	ØS HOLES
17	1.062 (26.97)	1.219 (30.96)	
19	1.156 (29.36)	1.297 (32.94)	.133 (3.38)
21	1.250 (31.75)	1.422 (36.12)	.123 (3.12)

Panel Cut Out Dims.			
Shell Size	Q BSC	ØR MIN	ØS HOLES
23	1.375 (34.92)	1.547 (39.29)	.159 (4.04) .149 (3.78)
25	1.500 (38.10)	1.672 (42.47)	.155 (3.94) .145 (3.68)

ENVIRONMENTAL CONNECTORS

MIL-DTL-38999 Series III Type

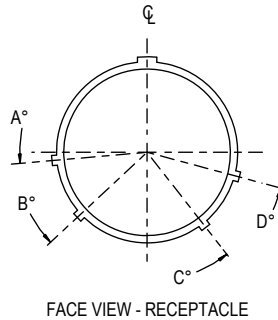
233PS215 1K PSI wall-mount receptacle with panel seal

ENVIRONMENTAL CONNECTORS

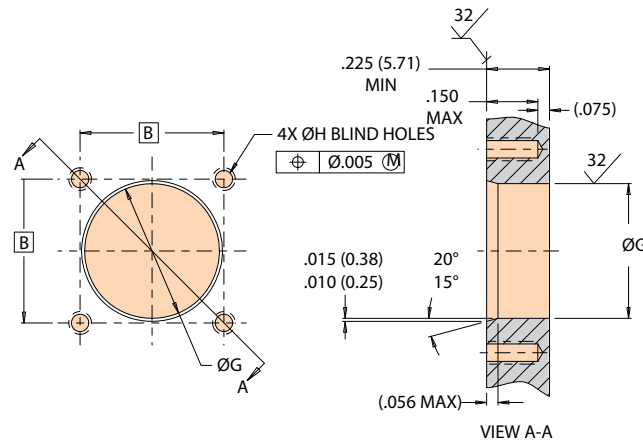
Part Number Development									
Sample Part Number	233PS215				G6	NF	17-8	P	T
Series / Basic Part No.	233PS215 = Improved panel sealing, Series 23 SuperNine with piston seal								
Connector Style*	D0 = Wall mount receptacle with round holes								
Finish	NF = Al alloy/Cadmium Olive Drab MT = Al alloy/Nickel PTFE	ME = Al alloy/electroless Nickel ZR = Al alloy/Black Zinc Nickel	AB = Marine Bronze/NA Z1 = SST, passivate						
Shell Size-Insert Arrangement*	Per MIL-STD-1560								
Contact Type	P = Pin, gold 1500 cycles S = Socket, gold 1500 cycles	A = Less pin contacts B = Less socket ontacts	H = Pin, Pd/Ni 1500 cycles J = Socket, Pd/Ni 1500 cycles						
Alternate Polarization	V, W, X, Y, Z, T = Normal (IAW MIL-DTL-38999 Series III); see key or keyway position tables								

*Refer to Section A for complete details

Keyway Positions (Receptacle)				
Alternate Keyway Code	A°	B°	C°	D°
T	95	135	220	275
V	92	127	253	325
W	70	113	235	322
X	35	135	210	285
Y	54	150	239	314
Z	81	126	202	250



Mounting Holes			
Shell Size	B BSC	ØG	ØH Holes
09	.719 (18.26)	.564 (14.33) .562 (14.27)	#4-40 0.150 MAX
11	.812 (20.62)	.689 (17.50) .687 (17.45)	
13	.906 (23.01)	.814 (20.68) .812 (20.62)	
15	.969 (24.61)	.939 (23.85) .937 (23.80)	
17	1.062 (26.97)	1.064 (27.03) 1.062 (26.97)	
19	1.156 (29.36)	1.189 (30.20) 1.187 (30.15)	
21	1.250 (31.75)	1.252 (31.80) 1.250 (31.75)	
23	1.375 (34.92)	1.377 (34.98) 1.375 (34.92)	#6-32 0.150 MAX
25	1.500 (38.10)	1.502 (38.15) 1.500 (38.10)	

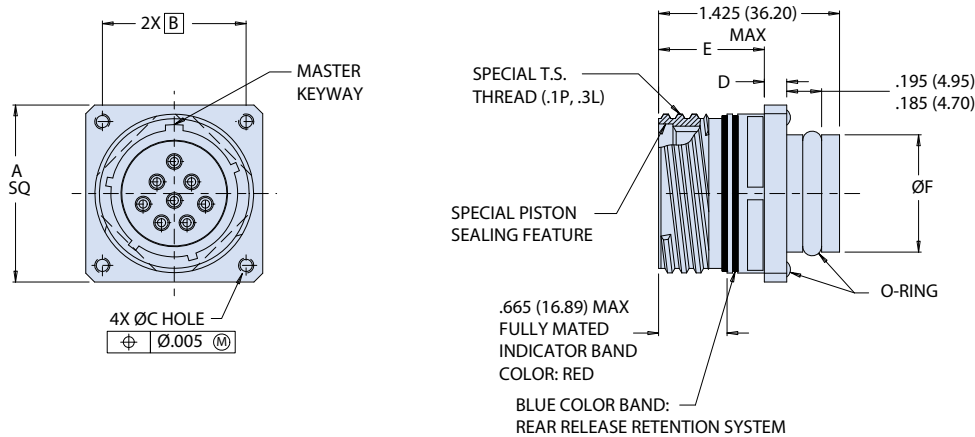


RECOMMENDED (FRONT PANEL) MOUNTING HOLES FOR WALL MOUNT RECEPTACLES (.225 MIN PANEL THICKNESS)

MIL-DTL-38999 Series III Type

233PS215 1K PSI piston sealed wall-mount receptacle, panel sealed

PISTON SEALED WALL MOUNT RECEPTACLE WITH IMPROVED PANEL SEALING, AND CRIMP CONTACTS



FD0 - WALL MOUNT RECEPTACLE, WITH ROUND HOLES, FLAT BACK

NOTES

- 233PS215 receptacle is designed to meet the general requirements of D38999/20 and MIL-STD-1560
 - Panel sealed wall mount receptacle requires special panel cutout.
 - Connector accessory threads accept standard backshells
 - Connector accepts standard AS39029 type contacts
 - Connectors cannot be mated to standard MIL-DTL-38999 plugs or protective covers
- 233PS215 piston seal interface is rated to 1000 PSI water submersion (2300 FT/700m) when fully mated or protected with 239-200 cover. Cable sealing and panel sealing capability dependent on customer installation
- Supplied with contacts (including spares) and insertion/removal tool.
- Material/finish
 - Shell: see part number development
 - Insulator: high grade rigid dielectric/ N.A.
 - seals grommet: fluorosilicone blend/N.A.
 - Contacts: copper alloy/see part number development

Dimensions							
Shell Size	A SQ	B BSC	ØC	D	E	ØF	
09	.949 (24.10)	.719 (18.26)	.136 (3.45) .120 (3.05)	.122 (3.10) .083 (2.11)	.968 (24.59)	.560 (14.22)	
	.925 (23.50)					.559 (14.20)	
11	1.043 (26.49)	.812 (20.62)				.935 (23.75)	.685 (17.40)
	1.020 (25.91)						.684 (17.37)
13	1.138 (28.91)	.906 (23.01)				.934 (23.72)	.810 (20.57)
	1.114 (28.30)						.809 (20.55)
15	1.232 (31.29)	.969 (24.61)				1.060 (26.92)	.934 (23.72)
	1.209 (30.71)						1.059 (26.90)
17	1.323 (33.60)	1.062 (26.97)				1.185 (30.10)	1.060 (26.92)
	1.299 (32.99)						1.059 (26.90)
19	1.449 (36.80)	1.156 (29.36)	1.184 (30.07)	1.185 (30.10)			
	1.425 (36.20)			1.184 (30.07)			
21	1.575 (40.00)	1.250 (31.75)	1.248 (31.70)	1.248 (31.70)			
	1.551 (39.40)			1.247 (31.67)			
23	1.701 (43.21)	1.375 (34.92)	1.373 (34.87)	.153 (3.89)			
	1.677 (42.60)			.114 (2.90)	.881 (22.38)	1.372 (34.85)	
25	1.823 (46.30)	1.500 (38.10)	1.498 (38.05)				
	1.799 (45.69)		.162 (4.11) .146 (3.71)	.881 (22.38)	1.497 (38.02)		