

SuperNine® Environmental Series



MIL-DTL-38999 Series III Type

233-209 Sealed 1 x 10⁻⁴ PCB receptacle with washout standoffs

ENVIRONMENTAL CONNECTORS



Part Number Development										
Sample Part Number	233-209					-00	NF	17-8	P	N
Series / Basic Part No.	233-209 = SuperNine PCB receptacle with short standoff									
Connector Style*	00 = Wall mount receptacle with slotted holes HM = Wall mount receptacle with metric helicoils HS = Wall mount receptacle with standard helicoils CM = Wall mount receptacle with metric clinch nuts CS = Wall mount receptacle with standard clinch nuts									
Finish	NF = Al alloy/cadmium olive drab MT = Al alloy/nickel PTFE ME = Al alloy/electroless nickel ZR = Al alloy/black zinc nickel Consult factory for additional finish options									
Shell Size-Insert Arrangement*	Per MIL-STD-1560									
Contact Type	P = Pin, Gold, 1500 cycles					S = Socket, Gold, 1500 cycles				
	H = Pin, Pd/Ni, 1500 cycles					J = Socket, Pd/Ni, 1500 cycles				
Alternate Polarization*	A, B, C, D, E, N = Normal (IAW MIL-DTL-38999 Series III)									

*Refer to Section A for complete details

Dimensions														
Shell Size Code	Shell Size	A Thread -0.1P-0.3L-TS-2A	B Sq	B' Sq	C Bsc	D Bsc ⁵	E	F	G	G'	ØH Min	ØJ Max	L Thd	L' Thd
A	9	.6250	.948 (24.08) .925 (23.50)	1.094 (27.79) 1.054 (26.77)	.719 (18.26)	.594 (15.09)		.224 (5.69) .208 (5.28)			.340 (8.64)	.470 (11.94)		
B	11	.7500	1.043 (26.49) 1.019 (25.88)	1.187 (30.15) 1.147 (29.13)	.812 (20.62)	.719 (18.26)		.202 (5.13)	.122 (3.10)		.468 (11.89)	.590 (14.99)		
C	13	.8750	1.137 (28.88) 1.114 (28.30)	1.281 (32.54) 1.241 (31.52)	.906 (23.01)	.812 (20.62)	.136	.186 (4.72)	.083 (2.11)	.179 (4.55)	.572 (14.53)	.708 (17.98)		
D	15	1.0000	1.232 (31.29) 1.208 (30.68)	1.344 (34.14) 1.304 (33.12)	.969 (24.61)	.906 (23.01)	(3.45) .120	.181 (4.60) .165 (4.19)	(2.11)	(4.55) .140 (3.56)	.705 (17.91)	.865 (21.97)	.112-40 UNC	M3X0.5
E	17	1.1875	1.323 (33.60) 1.299 (32.99)	1.437 (36.50) 1.397 (35.48)	1.062 (26.97)	.969 (24.61)	(3.05)				.830 (21.08)	.985 (25.02)		
F	19	1.2500	1.449 (36.80) 1.425 (36.20)	1.531 (38.89) 1.491 (37.87)	1.156 (29.36)	1.062 (26.97)		.202 (5.13) .186 (4.72)			.934 (23.72)	1.105 (28.07)		
G	21	1.3750	1.575 (40.00) 1.551 (39.40)	1.625 (41.28) 1.585 (40.26)	1.250 (31.75)	1.156 (29.36)			.153 (3.89)		1.055 (26.80)	1.220 (30.99)		
H	23	1.5000	1.701 (43.21) 1.677 (42.60)	1.750 (44.45) 1.710 (43.43)	1.375 (34.92)	1.250 (31.75)	.162 (4.11)	.250 (6.35) .234 (5.94)	.114 (2.90)	.190 (4.83)	1.160 (29.46)	1.340 (34.04)	.138-32 UNC	M4X0.7
J	25	1.6250	1.823 (46.30) 1.799 (45.69)	1.875 (47.63) 1.835 (46.61)	1.500 (38.10)	1.375 (34.92)	.146 (3.71)			.170 (4.32)	1.307 (33.20)	1.455 (36.96)		

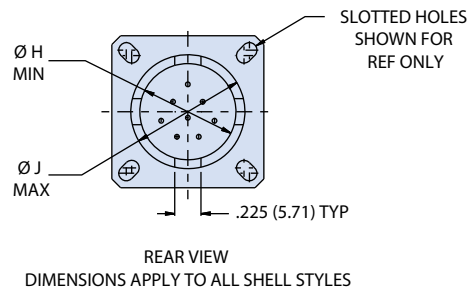
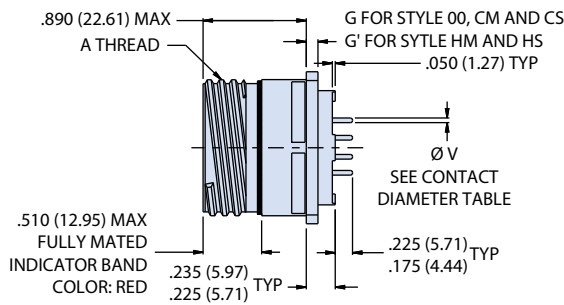
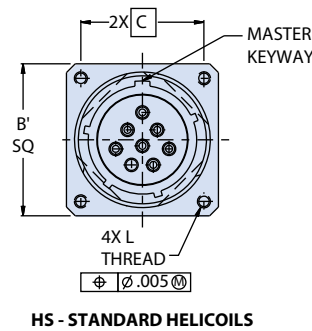
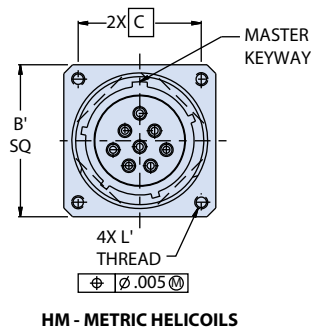
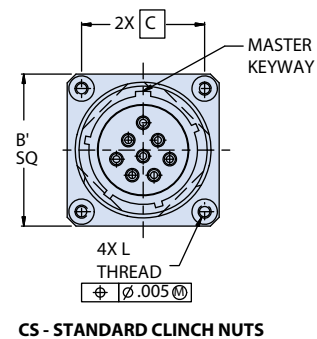
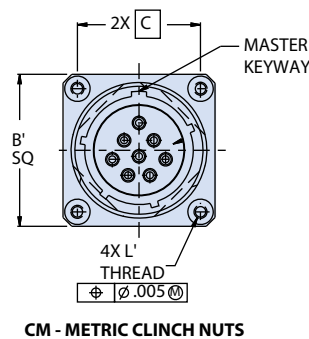
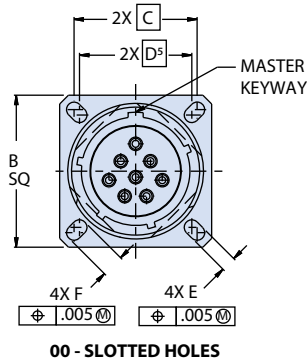
PC Tail Diameter	
Contact Size	ØV
23	.020 (.51)
	.018 (.46)
22	.020 (.51)
	.018 (.46)
20	.030 (.76)
	.028 (.71)
16	.040 (1.02)
	.038 (.97)
12	.072 (1.83)
	.070 (1.78)

MIL-DTL-38999 Series III Type

233-209 Sealed 1 x 10⁻⁴ PCB receptacle with washout standoffs

ENVIRONMENTAL CONNECTORS

00, CM, CS, HM AND HS - WALL MOUNT RECEPTACLES



NOTES

- 233-209 receptacle connector is designed to meet or exceed the mechanical, electrical, environmental and dimensional requirements of D38999/20 and MIL-STD-1560 except as shown and/or noted.
- 233-209 receptacle connector mates with any QPL manufacturer's D38999/26 series III plug having the same shell size, insert arrangement and polarization.
- Insert arrangements IAW MIL-STD-1560. Contact factory for additional arrangement options
- 233-209 receptacle connector is designed with fixed PC tail contacts. Potting meets or exceeds ingress protection rating IP67 and is environmentally sealed to a leak rate of 1×10^{-4} ccHe/Sec in an unmated condition.
- Front panel mount only
- Material/finish
 - Shell size: see part number development, finish
 - Contacts: copper alloy/see part number development, contact type
 - insulators: high grade rigid dielectric/N.A.
 - Seals: Fluorosilicone blend/N.A.
 - Potting: Epoxy/N.A.

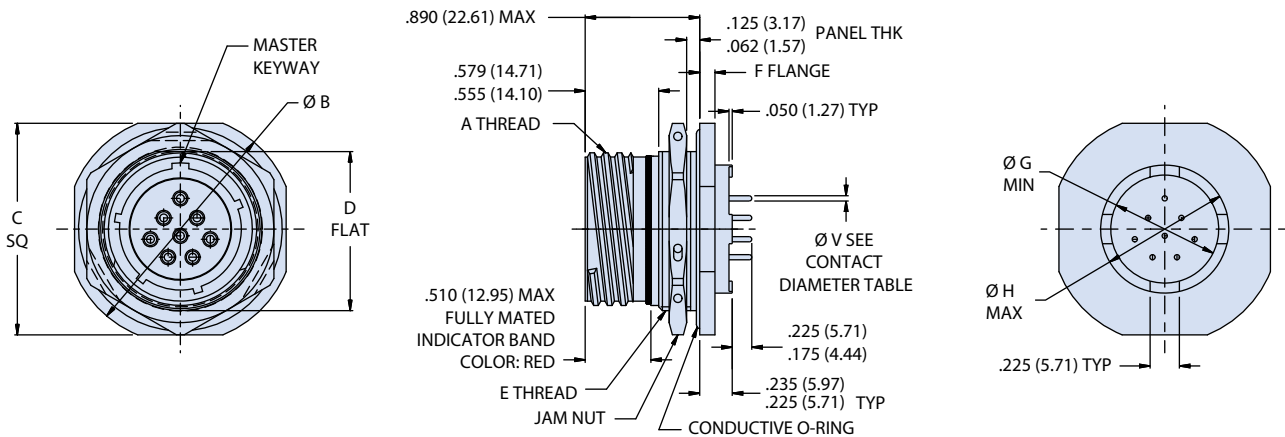
MIL-DTL-38999 Series III Type

233-209-07 PCB jam nut receptacles with short standoff

ENVIRONMENTAL CONNECTORS

Part Number Development						
Sample Part Number	233-209	-07	NF	17-8	P	N
Series / Basic Part No.	233-209 = SuperNine PCB receptacle with short standoff					
Connector Style*	07 = Jam Nut Mount Receptacle					
Finish	NF = Al alloy/cadmium Olive Drab		MT = Al alloy/nickel PTFE			
	ME = Al alloy/electroless Nickel		ZR = Al alloy/black zinc Nickel			
	Consult factory for additional finish options					
Shell Size-Insert Arrangement*	Per MIL-STD-1560					
Contact Type	P = Pin, Gold, 1500 cycles S = Socket, Gold, 1500 cycles H = Pin, Pd/Ni, 1500 cycles J = Socket, Pd/Ni, 1500 cycles					
Alternate Polarization*	A, B, C, D, E, N = Normal (IAW MIL-DTL-38999 Series III)					

*Refer to Section A for complete details



PC Tail Diameter	
Contact Size	$\varnothing V$
23	.020 (.51)
	.018 (.46)
22	.020 (.51)
	.018 (.46)
20	.030 (.76)
	.028 (.71)
16	.040 (1.02)
	.038 (.97)
12	.072 (1.83)
	.070 (1.78)

MIL-DTL-38999 Series III Type

233-209-07 PCB jam nut receptacles with short standoff

Dimensions									
Shell Size Code	Shell Size	A Thread	Ø B	C Sq	D Flat	E Thread ISO Metric	F	Ø G Min	Ø H Max
A	9	.6250 -0.1P-0.3L-TS-2A	1.200 (30.48) 1.178 (29.92)	1.078 (27.38) 1.048 (26.62)	.654 (16.61) .645 (16.38)	M17 X 1.0-6g	.122 (3.10) .083 (2.11)	.340 (8.64)	.470 (11.94)
B	11	.7500 -0.1P-0.3L-TS-2A	1.386 (35.20) 1.362 (34.59)	1.268 (32.21) 1.236 (31.39)	.755 (19.18) .745 (18.92)	M20 X 1.0-6g		.468 (11.89)	.590 (14.99)
C	13	.8750 -0.1P-0.3L-TS-2A	1.512 (38.40) 1.488 (37.80)	1.390 (35.31) 1.358 (34.49)	.942 (23.93) .932 (23.67)	M25 X 1.0-6g		.572 (14.53)	.708 (17.98)
D	15	1.0000-0.1P-0.3L-TS-2A	1.638 (41.61) 1.614 (41.00)	1.516 (38.51) 1.484 (37.69)	1.066 (27.08) 1.056 (26.82)	M28 X 1.0-6g		.705 (17.91)	.865 (21.97)
E	17	1.1875 -0.1P-0.3L-TS-2A	1.764 (44.81) 1.740 (44.20)	1.642 (41.71) 1.610 (40.89)	1.191 (30.25) 1.181 (30.00)	M32 X 1.0-6g*		.830 (21.08)	.985 (25.02)
F	19	1.2500 -0.1P-0.3L-TS-2A	1.949 (49.50) 1.925 (48.90)	1.827 (46.41) 1.795 (45.59)	1.316 (33.43) 1.306 (33.17)	M35 X 1.0-6g	.153 (3.89) .114 (2.90)	.934 (23.72)	1.105 (28.07)
G	21	1.3750 -0.1P-0.3L-TS-2A	2.075 (52.71) 2.051 (52.10)	1.953 (49.61) 1.921 (48.79)	1.441 (36.60) 1.431 (36.35)	M38 X 1.0-6g		1.055 (26.80)	1.220 (30.99)
H	23	1.5000 -0.1P-0.3L-TS-2A	2.201 (55.91) 2.177 (55.30)	2.079 (52.81) 2.047 (51.99)	1.566 (39.78) 1.556 (39.52)	M41 X 1.0-6g		1.160 (29.46)	1.340 (34.04)
J	25	1.6250 -0.1P-0.3L-TS-2A	2.323 (59.00) 2.299 (58.39)	2.205 (56.01) 2.173 (55.19)	1.691 (42.95) 1.681 (42.70)	M44 X 1.0-6g		1.307 (33.20)	1.455 (36.96)

* Modified major diameter 31.95 - 31.80 (1.257 - 1.252)

NOTES

- 233-209-07 receptacle connector is designed to withstand a minimum of 1500 mating durability cycles when mated to a SuperNine plug and appropriate contacts. Contact finish should be the same for both mating connectors to optimize performance.
- 233-209-07 receptacle connector is designed with fixed PC tail contacts. Connector potting process meets or exceeds ingress protection rating IP67 and is environmentally sealed with a leak rate of < 1 X 10⁻⁴ ccHe/sec in unmated condition.
- 233-209-07 receptacle connector is designed to meet or exceed the mechanical, electrical, environmental requirements of D38999/24 and MIL-STD-1560 except as shown and/or noted. Receptacle mates with any QPL manufacturer's D38999/26, Series III plug having same shell size, insert arrangement and polarization.
- Insert arrangements IAW MIL-STD-1560. Contact manufacturer for additional arrangement options.
- Material/finish
 - Shell, jam-nut: see part number development, finish
 - Contacts: copper alloy/see part number development, contact type
 - Insulators: high-grade rigid dielectric/N.A.
 - Seals: fluorosilicone blend/N.A.
 - Potting: epoxy/N.A.
 - O-ring: silver plated aluminum in fluorosilicone (cho-seal 1298 or equivalent)