



# Sav-Con<sup>®</sup> connector savers

## MIL-DTL-38999 Series III

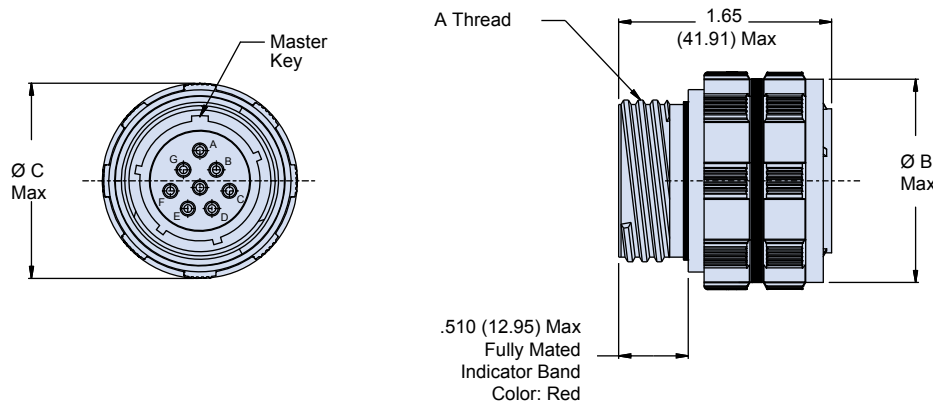
### 233-213 SuperNine<sup>®</sup> Threaded Coupling



#### 233-213 HIGH RELIABILITY WITH THREADED COUPLING

How To Order	
Sample Part Number	233-213 -NF 17-8 P N S N
Series / Basic Part No.	233-213
Finish	NF = Cadmium Olive Drab ME = Electroless Nickel MT = Nickel PTFE ZR = Black Zinc Nickel See Table I for Additional Finishes
Shell Size - Insert Arrangement	See Table II
Contact Style (Plug Side)	P = Pin, gold, 500 cycles S = Socket, gold, 500 cycles See Notes 3 and 4
Alternate Polarization (Plug Side)	A, B, C, D, E, N = Normal, U = Universal; See Note 6 See Table III
Contact Style (Receptacle Side)	P = Pin, gold, 500 cycles S = Socket, gold, 500 cycles See Notes 3 and 4
Alternate Polarization (Receptacle Side)	A, B, C, D, E, N = Normal, U = Universal; See Note 6 See Table III

B



#### NOTES

- Glenair's 233-213 connector savers are designed to meet or exceed the mechanical dimensional, electrical, and environmental requirements of MIL-DTL-38999, D38999/20, D38999/26, and MIL-STD-1560 except as shown and /or noted.
- Glenair connector savers mate with any QPL manufacturer's MIL-DTL-38999, series III plugs and receptacles that have the same shell size, insert arrangement, and polarization.
- For pin/pin and socket/socket, symmetrical insert layouts only.
- Power to a given contact on one end will result in power to a contact directly opposite, regardless of identification letter.
- Electrical safety limits must be established by user. Peak voltage, switching surge, transient, etc. should be used to determine the safety application.
- Alternate polarization 'U' (universal) is a non-standard/non-mill-spec option intended for test lab use only which allows for mating to any QPL manufacturer's MIL-DTL-38999, series III connector having the same shell size, insert arrangement, and mating contact size.

Dimensions						
Shell Size Code	Shell Size	A Thread	Ø B Max		Ø C Max	
			In	mm	In	mm
A	9	.6250 - 0.1P - 0.3L - TS-2A	0.811	20.60	0.858	21.79
B	11	.7500 - 0.1P - 0.3L - TS-2A	0.929	23.60	0.984	24.99
C	13	.8750 - 0.1P - 0.3L - TS-2A	1.110	28.19	1.157	29.39
D	15	1.0000 - 0.1P - 0.3L - TS-2A	1.232	31.29	1.280	32.51
E	17	1.1875 - 0.1P - 0.3L - TS-2A	1.358	34.49	1.406	35.71
F	19	1.2500 - 0.1P - 0.3L - TS-2A	1.469	37.31	1.516	38.51
G	21	1.3750 - 0.1P - 0.3L - TS-2A	1.594	40.49	1.642	41.71
H	23	1.5000 - 0.1P - 0.3L - TS-2A	1.720	43.69	1.768	44.91
J	25	1.6250 - 0.1P - 0.3L - TS-2A	1.843	46.81	1.890	48.01



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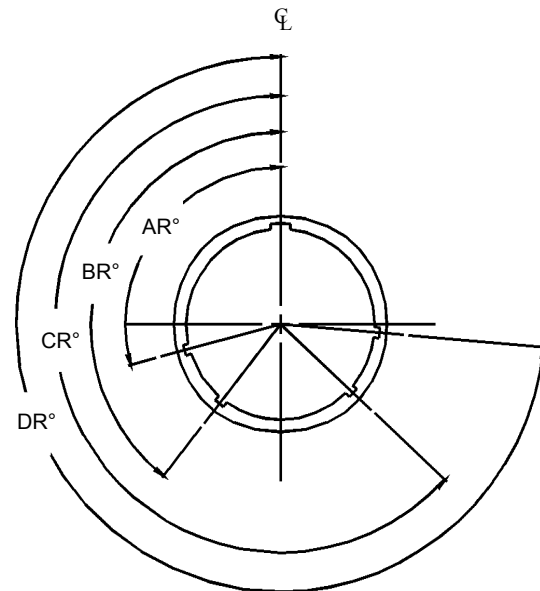
### Reference Information



Table I: Material and Finish		
Plating Code	Material	Finish
M	Aluminum	Electroless Nickel
B		Cad Plate, Olive Drab
NF		Cadmium Plate Olive Drab over Electroless Nickel
NC		Zinc-Cobalt
ZN		Olive Drab Zinc-Nickel
MT		Ni-PTFE 1000 Hour Grey™ (Nickel Fluorocarbon Polymer)
ZR		Zinc Nickel, Black
ME		Electroless Nickel (RoHS)
ZL	Stainless Steel	Electro-Deposited Nickel

Table III: Manin and Alternate Keyway Positions

Shell Size Code Ref	Shell Size	Alt. Keyway Code	AR°	BR°	CR°	DR°
A	9	N	105	140	215	265
		A	102	132	248	320
		B	80	118	230	312
		C	35	140	205	275
		D	64	155	234	304
B	11	N	95	141	208	236
		A	113	156	182	292
		B	90	145	195	252
		C	53	156	220	255
		D	119	146	176	298
C	13	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
		D	62	145	180	280
D	15	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
		D	62	145	180	280
E	17	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
		D	62	145	180	280
F	19	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
		D	62	145	180	280
G	21	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
		D	62	145	180	280
H	23	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
		D	62	145	180	280
J	25	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
		D	62	145	180	280



FACE VIEW  
RECEPTACLE INSERT



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### Reference Information



**Table II: Shell Size - Insert Arrangement**

Shell Size Code	Shell Size Ref.	Insert Arr. Dash No.	Contact Size			
			22	20	16	12
A	9	9-3		3		
		9-35	6			
		9-44	4			
		9-98		3		
B	11	11-2			2	
		11-4		4		
		11-5		5		
		11-6		6		
		11-35	13			
		11-98		6		
		11-99		7		
C	13	13-4			4	
		13-8		8		
		13-35	22			
		13-98		10		
D	15	15-5			5	
		15-15		14	1	
		15-18		18		
		15-19		19		
		15-35	37			
E	17	17-6				6
		17-8			8	
		17-26		26		
		17-35	55			
		17-99		21	2	
F	19	19-11			11	
		19-28		26	2	
		19-30		29	1	
		19-32		32		
		19-35	66			
19-45	67					

**Table II: Shell Size - Insert Arrangement**

Shell Size Code	Shell Size Ref.	Insert Arr. Dash No.	Contact Size			
			22	20	16	12
G	21	21-35	79			
		21-11				11
		21-16			16	
		21-24		24		
		21-25		25		
		21-27		27		
		21-39		37	2	
		21-41		41		
H	23	23-35	100			
		23-2	85			
		23-21			21	
		23-32		32		
		23-34		34		
		23-36		36		
		23-53		53		
		23-55		55		
		23-97			16	
		23-99			11	
J	25	25-2	100			
		25-4		48	8	
		25-19				19
		25-24			12	12
		25-29			29	
		25-35	128			
		25-43		23	20	
		25-61		61		

**Table IV: Capacitor Array Code Capacitance Range for Filtered Connectors**

Class	Pi - Circuit (pF)	C - Circuit (pF)
X*	160,000 - 240,000	80,000 - 120,000
Y*	80,000 - 120,000	40,000 - 60,000
Z*	60,000 - 90,000	30,000 - 45,000
A	38,000 - 56,000	19,000 - 28,000
B	32,000 - 45,000	16,000 - 22,500
C	18,000 - 33,000	9,000 - 16,500
D	8,000 - 12,000	4,000 - 6,000
E	3,300 - 5,000	1,650 - 2,500
F	800 - 1,300	400 - 650
G	400 - 600	200 - 300
J	70-120	35-60

\* Filter Classes X, Y and Z are 250 VDC.  
All others are 500 VDC