

DE Group Series 16

The 16 Series assemblies are offered in 14 different insert arrangements and 10 shell sizes. Voltage capability is up to 50 KVDC when properly mated and Caton terminated. Shell design is the proven MIL-C-5015 die cast aluminum with bright cad finish. Inserts are manufactured at Caton and are of resilient silicone tapered conical towers to evacuate air during mating providing an interface connection that is impervious to the surrounding environment.



Termination of the connectors to the cable is a unique Caton technique utilizing vacuum degassed two part condensation cure RTV silicone encapsulation. This process together with the Caton designed inserts, provide a termination that is impervious to the surrounding environment and is the same as used on custom requirements demanding performance beyond MIL-C-5015 class E.

Assemblies are DC hi-pot tested to at least 1.5 times the DC working voltage.

General Design Specifications

1.0) ELECTRICAL (when properly mated)

- 1.1) Operating Voltage: 5 thru 50 KVDC
- 1.2) Current: 4 - 26 AMPS

2.0) ENVIRONMENTAL

- 2.1) Altitude: Sea Level to 70,000 Feet
- 2.2) Operating Temperature Range: -55° C to +125° C

3.0) MECHANICAL

- 3.1) Connector Coupling: Threaded Screw-On
- 3.2) Connector Termination: Vacuum degassed two part condensation cure RTV silicone encapsulation
- 3.3) Interfacial Seal: Tapered conical towers
- 3.4) Shield Termination: 360° compression wedge

4.0) MATERIALS*

- 4.1) Shell Body & Plating: Die Cast Aluminum IAW MIL-C-5015; Bright Cadmium
- 4.2) Inserts: Resilient Silicone; Color Red
- 4.3) Contacts & Sockets: Gold Plated Brass & Beryllium Copper
- 4.4) Cable Shielding: Tinned Copper Braid
- 4.5) Cable Filler: Silicone
- 4.6) Jacket: Silicone; Color Black

*Note: Caton may at no cost to customer, upgrade component material to ensure prompt delivery

STANDARD MATING ASSEMBLY CONFIGURATION

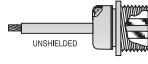
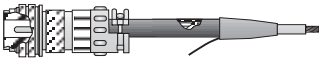









INSERT ARRANGEMENT PIN to SHELL OPERATING VOLTAGE CURRENT CAPABILITY NUMBER OF CONDUCTORS	SHELL SIZE IAW MIL-C-5015 see chart	BULKHEAD MOUNTING	CABLE ASSEMBLY	STANDARD WIRE
		Unshielded Flying Lead(s)	Overall Shield with Silicone Jacket	
5 KVDC - 4 AMPS 5 CONDUCTOR	SHELL SIZE 12S	16008-L4 24 inches [609.6 mm]	16002-L7 96 inches [2438.4 mm]	20 AWG
5 KVDC - 4 AMPS 13 CONDUCTOR	SHELL SIZE 18	16018-L4 24 inches [609.6 mm]	16012-L7 96 inches [2438.4 mm]	20 AWG
10 KVDC - 6.5 AMPS 1 CONDUCTOR	SHELL SIZE 12S	16028-L4 24 inches [609.6 mm]	16022-L7 96 inches [2438.4 mm]	18 AWG
15 KVDC - 6.5 AMPS 3 CONDUCTOR	SHELL SIZE 16S	16038-L4 24 inches [609.6 mm]	16032-L7 96 inches [2438.4 mm]	18 AWG
15 KVDC - 6.5 AMPS 7 CONDUCTOR	SHELL SIZE 16	16058-L4 24 inches [609.6 mm]	16052-L7 96 inches [2438.4 mm]	18 AWG

For Additional Configurations, Please Contact Caton.



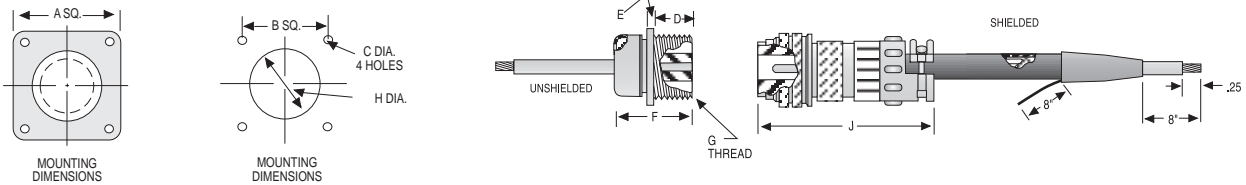
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Founding Member: High Voltage Association
<http://www.high-voltage-assoc.com>

INSERT ARRANGEMENT PIN to PIN OPERATING VOLTAGE CURRENT CAPABILITY NUMBER OF CONDUCTORS		SHELL SIZE IAW MIL-C-5015 see chart	STANDARD MATING ASSEMBLY CONFIGURATION		STANDARD WIRE
			BULKHEAD  Unshielded Flying Lead(s)	CABLE ASSEMBLY  Overall Shield with Silicone Jacket	
	25 KVDC - 10 AMPS 7 CONDUCTOR	SHELL SIZE 24	16168-L4 24 inches [609.6 mm]	16162-L7 96 inches [2438.4 mm]	16 AWG
	20 KVDC - 16.5 AMPS 1 CONDUCTOR	SHELL SIZE 16	16078-L4 24 inches [609.6 mm]	16072-L7 96 inches [2438.4 mm]	14 AWG
	20 KVDC - 6.5 AMPS 2 CONDUCTOR	SHELL SIZE 16S	16088-L4 24 inches [609.6 mm]	16082-L7 96 inches [2438.4 mm]	16 AWG
	25 KVDC - 16.5 AMPS 5 CONDUCTOR	SHELL SIZE 28	16098-L4 24 inches [609.6 mm]	16092-L7 96 inches [2438.4 mm]	14 AWG
	30 KVDC - 10 AMPS 1 CONDUCTOR	SHELL SIZE 18	16108-L4 24 inches [609.6 mm]	16102-L7 96 inches [2438.4 mm]	16 AWG
	30 KVDC - 16.5 AMPS 2 CONDUCTOR	SHELL SIZE 24	16118-L4 24 inches [609.6 mm]	16112-L7 96 inches [2438.4 mm]	14 AWG
	50 KVDC - 10 AMPS 1 CONDUCTOR	SHELL SIZE 22	16128-L4 24 inches [609.6 mm]	16122-L7 96 inches [2438.4 mm]	16 AWG
	30 KVDC - 26 AMPS 5 CONDUCTOR	SHELL SIZE 36	16158-L4 24 inches [609.6 mm]	16152-L7 96 inches [2438.4 mm]	12 AWG
	30 KVDC - 26 AMPS 2 CONDUCTOR	SHELL SIZE 32	16148-L4 24 inches [609.6 mm]	16142-L7 96 inches [2438.4 mm]	12 AWG

SHELL SIZE	TYPICAL DIMENSIONS FOR CONNECTORS USED IN THE 16 SERIES ASSEMBLIES								
	A	B	C	D	E	F	G-THREAD	H	J
12S	1.09 [27.7]	0.81 [20.57]	0.12 [3.0]	0.56 [14.2]	0.07 [1.8]	1.48 [37.6]	3/4-20 UNEF-2	0.81 [20.6]	2.50 [63.5]
16S	1.28 [32.5]	0.96 [24.38]	0.12 [3.0]	0.56 [14.2]	0.09 [2.3]	1.65 [41.9]	1-20 UNEF-2	1.06 [26.9]	2.69 [68.3]
16	1.28 [32.5]	0.96 [24.83]	0.12 [3.0]	0.75 [19.1]	0.12 [3.0]	1.96 [49.8]	1-20 UNEF-2	1.06 [26.9]	3.06 [77.7]
18M	1.37 [34.8]	1.06 [26.92]	0.12 [3.0]	0.56 [14.2]	0.12 [3.0]	1.77 [45.0]	1 1/8-18 UNEF-2	1.18 [30.0]	3.06 [77.7]
18	1.37 [34.8]	1.06 [26.92]	0.12 [3.0]	0.75 [19.1]	0.12 [3.0]	1.96 [49.8]	1 1/8-18 UNEF-2	1.18 [30.0]	3.32 [84.3]
22	1.62 [41.1]	1.25 [31.75]	0.12 [3.0]	0.75 [19.1]	0.12 [3.0]	2.00 [50.8]	1 3/8-18 UNEF-2	1.44 [36.6]	3.37 [85.6]
24	1.75 [44.5]	1.37 [34.80]	0.15 [3.7]	0.81 [20.0]	0.14 [3.6]	2.00 [50.8]	1 1/2-18 UNEF-2	1.56 [39.6]	3.37 [85.6]
28	2.00 [50.8]	1.56 [39.62]	0.15 [3.7]	0.81 [20.6]	0.14 [3.6]	2.09 [53.1]	1 3/4-18 UNS-2	1.81 [46.0]	3.56 [90.4]
32	2.25 [57.2]	1.75 [44.45]	0.17 [4.4]	0.87 [22.1]	0.14 [3.6]	2.09 [53.1]	2 -18 UNS-2	2.06 [52.3]	3.59 [91.2]
36	2.50 [63.5]	1.94 [49.28]	0.17 [4.4]	0.87 [22.1]	0.14 [3.6]	2.09 [53.1]	2 1/4-18 UNS-2	2.31 [58.7]	3.65 [92.7]

Dimensions are in inches/millimeters



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