

Electronics

Performance Specifications

Voltage Rating —

Sizes 22, 20, 16, 12

Altitude	DWV*	Working Voltage
Sea level	1,500 V	600 V
70,000 Feet**	600 V	300 V

Size 21 (22HD)

Altitude	DWV*	Working Voltage
Sea Level	1,000 V	600 V
70,000 Feet**	325 V	300 V

* DWV = Dielectric Withstanding Voltage

** [21,336m]

Contact Voltage Drop (Max.) —

Contact Size	Test Current	Initial	After Conditioning
21 (22HD)	5.0 A	55 V	65 V
22	5.0 A	45 V	50 V
20	7.5 A	45 V	50 V
16	13.0 A	50 V	55 V
12	23.0 A	40 V	45 V

The MV drop is measured across an adjacent bussed pair of wire contacts.

Operating Temperature Range —

Class	Minimum	Maximum
D	-65°C (-85°F)	+200°C (+392°F)

Altitude Immersion —

Insulation resistance shall not fall below 5,000 megohms after being subjected to three, 70,000-foot [21,336m] altitude immersion cycles in salt water.

Fluid Immersion —

Class D—Extended fluid type

Fluid	
MIL-H-5606	Hydraulic fluid
MIL-L-23699	Lubricating oil
MIL-T-5624	Aviation fuel
MIL-L-7808	Lubrication oil
MIL-A-8243	Anti-ice fluid
MIL-C-25769	Cleaning fluid
Skydrol	500A & 500B
Aerosafe	2300 & 2300W
Flyjet	III
Esso Oil	Turbo 25

Moisture Resistance —

High Humidity (95% RH) 100 megohms min.
After Drying—24 hours 1,000 megohms min.

Durability —

No performance degradation after 10 cycles of contact insertion/removal.

Vibration —

Class D

Sine, MIL-STD-202, method 204 condition G
Random, MIL-STD-1344, method 2005.

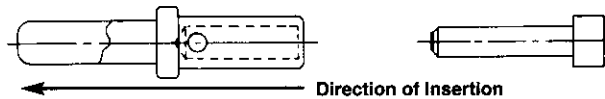
Shock —

Class D

MIL-STD-1344, Method 2004
(300 G, 3 milliseconds duration, half-sine).

Contacts, Sealing Plugs and Assembly Tools

Contacts and Sealing Plugs



Size	Part Numbers			
	Pin Contacts		Sealing Plugs	
	Commercial	Military	Commercial	Military
21(22HD)	592413-1	M39029/1-507	592104-4	MS27488-22
22	3-592404-1	M39029/1-100	592104-1	MS27488-20
20	2-592404-1	M39029/1-101	592104-1	MS27488-20
16	1-592404-1	M39029/1-102	592104-2	MS27488-16
12	592404-1	M39029/1-103	592104-3	MS27488-12

Insertion/Removal Tools

Size	Part Numbers		Color*	Wire Gage	Contact Wire Dia. Min./Max.	Finished Crimp Tool	Turret or Positioner
	Commercial	Military					
21(22HD)	—	M81969/14-01	Grn/Wh	28-22	.030-.054 [.76-1.37]	M22520/2-01	M22520/2-32
22	592105-1	M81969/14-11	Rd/Wh	26-22	.034-.066 [.86-1.68]	M22520/2-01	M22520/2-11
20	592105-1	M81969/14-11	Rd/Wh	24-20	.038-.083 [.97-2.11]	M22520/1-01 or /2-01	M22520/1-02 or /2-02
16	—	M81969/14-03	Blue/Wh	20-16	.060-.101 [1.52-2.57]	M22520/1-01	M22520/1-02
12	—	M81969/14-04	Yel/Wh	14-12	.087-.147 [2.21-3.73]	M22520/1-01	M22520/1-02

* Colored end for contact insertion; white end for release/removal.

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Dimensions are in inches and millimeters unless otherwise specified. Values in brackets are metric equivalents.

Dimensions are shown for reference purposes only. Specifications subject to change.

USA: 1-800-522-6752
Canada: 1-905-470-4425
Mexico: 01-800-733-8926
C. America: 52-55-5-729-0425

South America: 55-11-3611-1514
Hong Kong: 852-2735-1628
Japan: 81-44-844-8013
UK: 44-141-810-8967