

INCH-POUND

MIL-DTL-16878/29B  
11 August 2000  
SUPERSEDING  
MIL-W-16878/29A(NAVY)  
11 September 1992

DETAIL SPECIFICATION SHEET

WIRE, ELECTRICAL,  
SILICONE RUBBER INSULATED, 150 °C, 600 VOLTS

This specification is approved for use by all Departments  
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and MIL-DTL-16878G.

REQUIREMENTS.

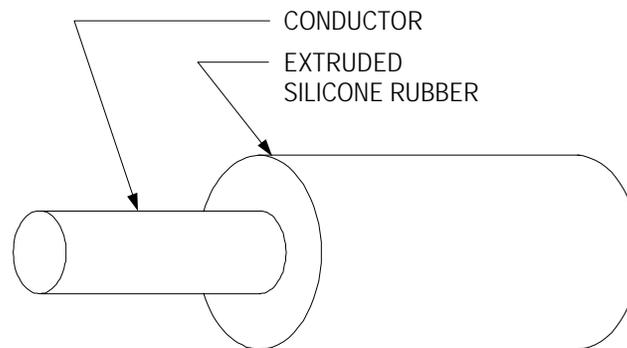


FIGURE 1. Wire configuration.

TABLE I. Wire configuration and dimensions.

PIN <sup>1/</sup>	Wire size	Stranding	Conductor		Conductor diameter (nominal) (inch)	Finished wire diameter (inch)	
			Material	Coating		Min	Max
M16878/29BEB*	24	7 X 32	Copper	Tin	.024	.052	.058
M16878/29BFB*	22	7 X 30	Copper	Tin	.030	.058	.064
M16878/29BGB*	20	7 X 28	Copper	Tin	.038	.066	.072
M16878/29BGC*	20	10 X 30	Copper	Tin	.038	.066	.072
M16878/29BHB*	18	7 X 26	Copper	Tin	.048	.076	.082
M16878/29BHD*	18	16 X 30	Copper	Tin	.048	.076	.082
M16878/29BJE*	16	19 X 29	Copper	Tin	.057	.085	.091
M16878/29BJF*	16	26 X 30	Copper	Tin	.057	.085	.091
M16878/29BKE*	14	19 X 27	Copper	Tin	.072	.116	.122
M16878/29BKH*	14	41 X 30	Copper	Tin	.072	.116	.122
M16878/29BLE*	12	19 X 25	Copper	Tin	.091	.135	.141
M16878/29BLJ*	12	65 X 30	Copper	Tin	.091	.135	.141
M16878/29BMK*	10	105 X 30	Copper	Tin	.120	.156	.166

Notes:

<sup>1/</sup> PIN stands for part or identifying number (see figure 2).

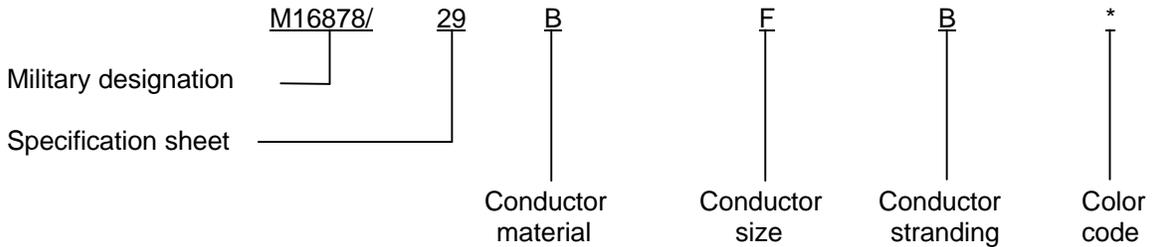


FIGURE 2. Example of PIN (see MIL-DTL-16878G).

Configuration and dimensions: See figure 1 and table I  
 Operating voltage: Up to 600 volts  
 Operating temperature: Up to 150 °C  
 Insulation: Extruded silicone rubber  
 Spark test voltage: 3.0 kV  
 Impulse dielectric test voltage: 6.5 kV, or 4.6 kV using the 3.0 kHz spark test  
 Dielectric withstanding voltage: 2.2 kV  
 Insulation resistance:  $IR = K \log_{10} D/d$   
 Where: IR = Minimum insulation resistance in megohms per 1000 feet at 20 °C  
 K = 1,000  
 D = Maximum average diameter of finished wire  
 d = Conductor diameter

Cold bend: Condition 4 hours at  $-55 \pm 1$  °C (see table II)

TABLE II. Cold bend mandrel sizes.

Wire size	Cold bend mandrel diameter (inches, maximum)
24 through 18	1
16 through 10	2

Surface resistance:	Not required
Heat resistance:	Condition at 195 °C
Heat aging:	Not required
Insulation tensile strength:	700 pounds force per square inch (minimum)
Insulation elongation:	125 percent (minimum)
Marking and stripe durability:	Not required

CHANGES FROM PREVIOUS ISSUE. Marginal notations are not used in this revision to identify changes with respect to the previous issue because of the extensiveness of the changes.

CONCLUDING MATERIAL

Custodians:  
 Navy - SH  
 Air Force - 11  
 DLA - CC

Preparing activity:  
 DLA - CC  
 (Project 6145-2193-013)

Review activity:  
 Navy - AS