

INCH-POUND

MIL-DTL-16878/15B
11 August 2000
SUPERSEDING
MIL-W-16878/15A(NAVY)
11 September 1992

DETAIL SPECIFICATION SHEET

WIRE, ELECTRICAL,
CROSSLINKED, MODIFIED POLYETHYLENE (XLPE) INSULATED,
125 °C, 1000 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.

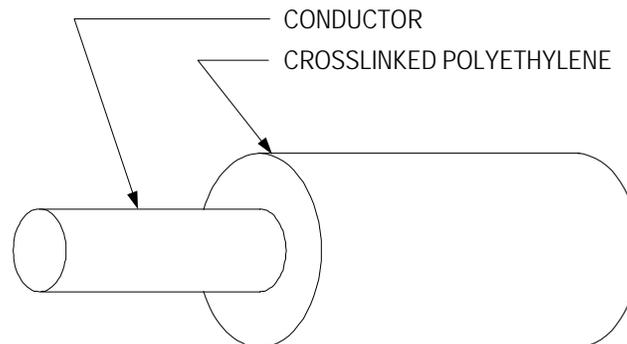


FIGURE 1. Wire configuration.

TABLE I. Wire configuration and dimensions.

PIN ^{1/}	Wire Size	Stranding	Conductor		Conductor diameter (nominal) (inch)	Finished wire diameter (inch)	
			Material	Coating		Min	Max
M16878/15BDA*	26	1 X 26	Copper	Tin	.0159	.046	.054
M16878/15BDB*	26	7 X 34	Copper	Tin	.0190	.049	.057
M16878/15BDE*	26	19 X 38	Copper	Tin	.0200	.049	.057
M16878/15BEA*	24	1 X 24	Copper	Tin	.0201	.050	.058
M16878/15BEB*	24	7 X 32	Copper	Tin	.0240	.054	.062
M16878/15BEE*	24	19 X 36	Copper	Tin	.0250	.054	.062
M16878/15BFA*	22	1 X 22	Copper	Tin	.0540	.055	.064
M16878/15BFB*	22	7 X 30	Copper	Tin	.0300	.060	.068
M16878/15BFE*	22	19 X 34	Copper	Tin	.0320	.060	.068
M16878/15BGA*	20	1 X 20	Copper	Tin	.0320	.062	.070
M16878/15BGB*	20	7 X 28	Copper	Tin	.0380	.068	.076
M16878/15BGE*	20	19 X 32	Copper	Tin	.0400	.068	.076
M16878/15BHA*	18	1 X 18	Copper	Tin	.0403	.070	.079
M16878/15BHB*	18	7 X 28	Copper	Tin	.0480	.076	.086
M16878/15BHE*	18	19 X 30	Copper	Tin	.0470	.076	.086
M16878/15BJA*	16	1 X 16	Copper	Tin	.0508	.080	.089
M16878/15BJE*	16	19 X 29	Copper	Tin	.0570	.087	.095
M16878/15BJF*	16	26 X 30	Copper	Tin	.0600	.090	.098
M16878/15BKA*	14	1 X 14	Copper	Tin	.0641	.094	.103
M16878/15BKE*	14	19 X 27	Copper	Tin	.0720	.102	.110
M16878/15BKH*	14	41 X 30	Copper	Tin	.0760	.106	.114
M16878/15BLE*	12	19 X 25	Copper	Tin	.0910	.121	.129
M16878/15BLG*	12	37 X 28	Copper	Tin	.0890	.119	.127
M16878/15BLJ*	12	65 X 30	Copper	Tin	.0930	.123	.131

Notes:

^{1/} PIN stands for part or identifying number (see figure 2).

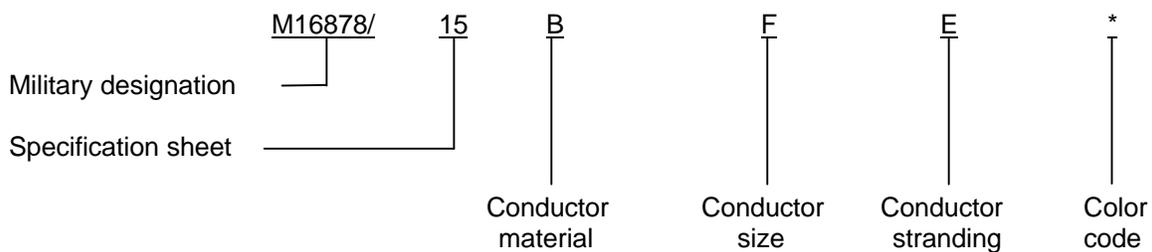


FIGURE 2. Example of PIN (see MIL-DTL-16878G).

MIL-DTL-16878/15B

Configuration and dimensions: See figure 1 and table I
 Operating voltage: Up to 1000 volts
 Operating temperature: Up to 125 °C
 Insulation: Crosslinked polyethylene
 Spark test voltage: 5.0 kV
 Impulse dielectric test voltage: 10.0 kV, or 7.1 kV using the 3.0 kHz spark test
 Dielectric withstanding voltage: 3.0 kV
 Insulation resistance: $IR = K \log_{10} D/d$
 Where: IR = Minimum insulation resistance in megohms per 1000 feet at 20 °C
 K = 10,000
 D = Maximum average diameter of finished wire
 d = Conductor diameter
 Cold bend: Condition 4 hours at -55±1 °C (see table II)

TABLE II. Cold bend mandrel sizes.

Wire size	Cold bend mandrel diameter (inches, maximum)
26 through 16	2
14, 12	3

Surface resistance: Not required
 Heat resistance: Condition at 150 °C
 Heat aging: 25 percent change (maximum) in 96 hours at 135 °C
 Insulation tensile strength: 1800 pounds force per square inch (minimum)
 Insulation elongation: 100 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 issues due to the extensiveness of the changes.

CONCLUDING MATERIAL

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

Preparing activity:
 DLA - CC
 (Project 6145-2193-008)

Review activity:
 Navy - AS