

INCH-POUND

MIL-DTL-16878/37A
w/AMENDMENT 1
12 January 2016
SUPERSEDING
MIL-DTL-16878/37A
11 August 2000

DETAIL SPECIFICATION SHEET

WIRE, ELECTRICAL, ETHYLENE-PROPYLENE DIENE ELASTOMER
(EPDM) INSULATED, 125 DEGREE C, 600 VOLTS, EXTRUDED
INSULATION

Inactive for new design after 12 January 2016. For new design, use
National Electrical Manufacturers Association (NEMA) HP 9.

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-16878.

REQUIREMENTS.

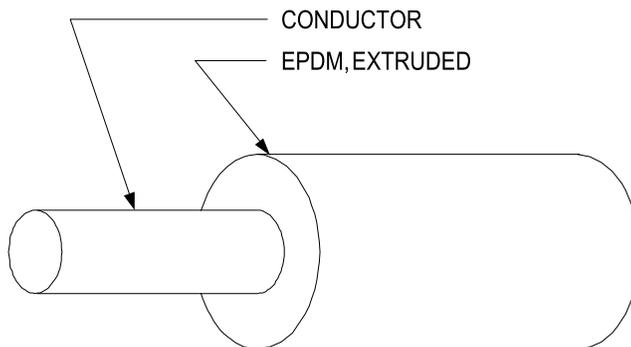


FIGURE 1. Wire configuration.



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TABLE I. Wire configuration and dimensions.

PIN ^{1/}	Wire size	Stranding	Conductor		Conductor Diameter (nominal) (inch)	Finished wire diameter (inch)	
			Material	Coating		Min	Max
M16878/37BHA*	18	1 X 18	Copper	Tin	.0403	.080	.095
M16878/37BHB*	18	7 X 26	Copper	Tin	.0480	.090	.100
M16878/37BHE*	18	19 X 30	Copper	Tin	.0500	.090	.100
M16878/37BJA*	16	1 X 16	Copper	Tin	.0508	.090	.100
M16878/37BJE*	16	19 X 29	Copper	Tin	.0570	.097	.112
M16878/37BKE*	14	13 X 27	Copper	Tin	.0720	.112	.127
M16878/37BLE*	12	19 X 25	Copper	Tin	.0910	.131	.146
M16878/37BLG*	12	37 X 28	Copper	Tin	.0890	.129	.143
M16878/37BMG*	10	37 X 26	Copper	Tin	.1110	.151	.165
M16878/37BNL*	8	133 X 29	Copper	Tin	.1690	.224	.235
M16878/37BPL*	6	133 X 27	Copper	Tin	.2130	.268	.280
M16878/37BRL*	4	133 X 25	Copper	Tin	.2690	.324	.334
M16878/37BSP*	2	665 X 30	Copper	Tin	.3150	.370	.380
M16878/37BTR*	1	817 X 30	Copper	Tin	.3850	.460	.475
M16878/37BUS*	0	1045 X 30	Copper	Tin	.4100	.485	.495
M16878/37BWT*	00	1330 X 30	Copper	Tin	.4550	.530	.550
M16878/37BYV*	000	1672 X 30	Copper	Tin	.5350	.610	.650
M16878/37BZW*	0000	2109 X 30	Copper	Tin	.5950	.670	.800

Notes:

^{1/} PIN stands for part or identifying number.

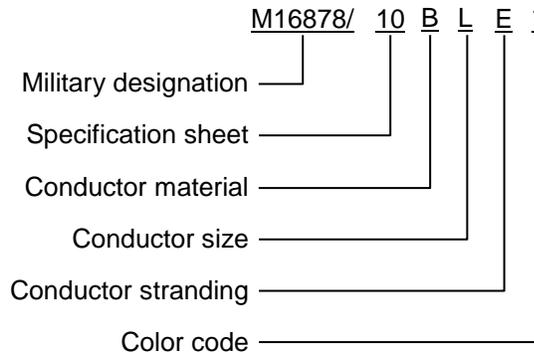


FIGURE 2. Example of PIN (see MIL-DTL-16878).

Configuration and dimensions:	See figure 1 and table I
Operating voltage:	Up to 600 volts
Operating temperature:	Up to 125 degrees C
Insulation:	Extruded ethylene-propylene diene elastomer (EPDM)
Spark test voltage:	6.0 kV

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Impulse dielectric test voltage: 6.7 kV to 7.8 kV, or 9.5 to 11.0 kV using the 3.0 kHz spark test
 Dielectric withstanding voltage: 5.0 kV
 Insulation resistance: $IR = K \log_{10} D/d$
 Where: IR = Minimum insulation resistance in megohms-1000 feet at 20 degrees C
 K = 20,000
 D = Maximum average diameter of finished wire
 d = Conductor diameter
 Cold bend: Condition 4 hours at -25 ± 1 degrees C (see table II)

TABLE II. Cold bend mandrel sizes.

Wire size	Cold bend mandrel diameter (inches, maximum)
18 through 10	.5
8 through 2	1.5
1 through 0000	4.0

Surface resistance: Not required
 Heat resistance: Condition at 150 degrees C
 Heat aging: Not required
 Insulation tensile strength: 1000 pounds force per square inch (minimum)
 Insulation elongation: 250 percent (minimum)
 Identification of product: Required

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations.

Referenced documents: This document references MIL-DTL-16878.

CONCLUDING MATERIAL

Custodians:
Navy - SH

Air Force - 85
DLA - CC

Review activity:
Navy – AS

Preparing activity:

DLA - CC

(Project 6145-2015-056)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.