INCH-POUND

MIL-DTL-16878/37A
11 August 2000
SUPERSEDING
MIL-W-16878/37(NAVY)
11 September 1992

DETAIL SPECIFICATION SHEET

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

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.

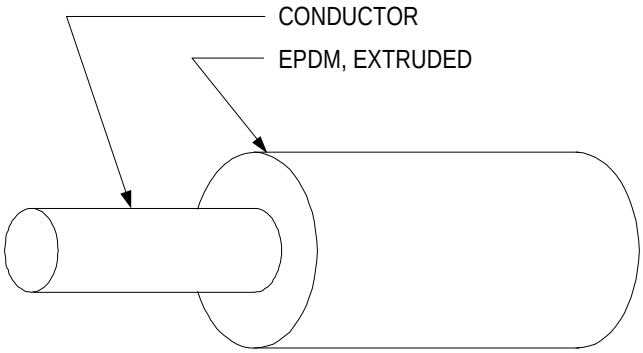

FIGURE 1. Wire configuration.

TABLE I. Wire configuration and dimensions.

PIN 1/	Wire size	Stranding	Conductor		Conductor Diameter (nominal) (inch)	Finished wire diameter (inch)	
			Material	Coating		Min	Max
M16878/37BHA*	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.

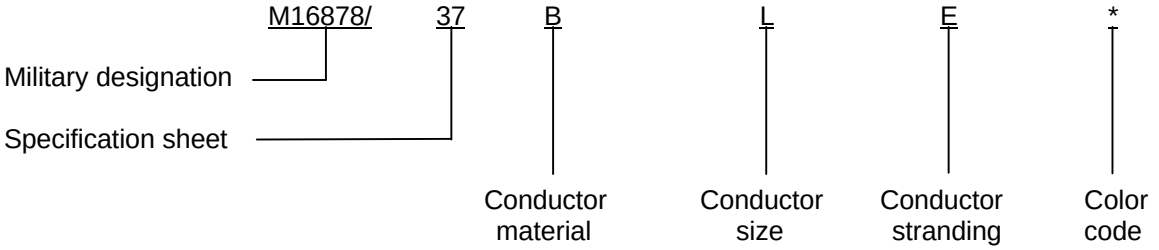

FIGURE 2. Example of PIN (see MIL-DTL-16878G).

Configuration and dimensions:	See figure 1 and table I
Operating voltage:	Up to 600 volts
Operating temperature:	Up to 125 °C
Insulation:	Extruded ethylene-propylene diene elastomer (EPDM)
Spark test voltage:	6.0 kV
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 per 1000 feet at 20 °C
K = 20,000
D = Maximum average diameter of finished wire
d = Conductor diameter

Cold bend: Condition 4 hours at -25±1 °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 °C
Heat aging: Not required
Insulation tensile strength: 1000 pounds force per square inch (minimum)
Insulation elongation: 250 percent (minimum)
Identification of product: 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 6145-2193-020)

Review activity:
Navy - AS