

MIL-W-16878/4 (Type E) wire—medium-wall extruded PTFE insulation



Construction Details

Insulation: Extruded PTFE, wall thickness .010 (.25 mm).

Conductor: Silver-plated copper.

Colors: Color coded to MIL-STD-104 (See page 26).

Options: Nickel-plated copper conductor; silver or nickel-plated high-strength copper alloy conductor; sodium naphthalene etched insulation for bondability. Also available to NEMA HP-3-EX.

MIL-W-16878/4 (type E) wires have extruded PTFE insulation (medium wall thickness) for high-temperature applications. PTFE insulation offers high reliability with excellent thermal stability and chemical resistance.

For heavy-wall (type EE) versions of these wires, see M16878/5 (following page); for thin-wall (type ET) versions, see M16878/6 (page 29).

Performance:

Voltage rating: 600V.

Temperature rating: Silver-plated conductor: -55 to 200° C;
Nickel-plated conductor: -55 to 260° C.

Ordering Information: Specify Thermax part number, M16878 number, and color.

To order with optional conductor materials:

For silver-plated high-strength copper conductor, change **TE** in Thermax part number to **TETF**.

For nickel-plated copper conductor, change **TE** in Thermax part number to **TEN**.

For nickel-plated high-strength copper conductor, change **TE** in Thermax part number to **TETFN**.

Dimensions, Resistance, and Weights—M16878/4

M16878 P/N**	AWG Size	Stranding	Conductor Diameter	Insulation Diameter		Weight	Maximum Resistance	Thermax P/N
				Minimum	Maximum			
M16878/4 BMG-*	10	37/26	.108 (2.74)	.127 (3.23)	.141 (3.58)	34.9 (51.9)	1.19 (3.90)	10-TE-3726
M16878/4 BLE-*	12	19/25	.084 (2.13)	.107 (2.72)	.121 (3.07)	22.6 (33.6)	1.81 (5.94)	12-TE-1925
M16878/4 BKE-*	14	19/27	.067 (1.70)	.088 (2.24)	.102 (2.59)	14.7 (21.9)	2.88 (9.45)	14-TE-1927
M16878/4 BJE-*	16	19/29	.053 (1.35)	.073 (1.85)	.087 (2.21)	9.77 (14.5)	4.53 (14.8)	16-TE-1929
M16878/4 BHE-*	18	19/30	.047 (1.19)	.064 (1.63)	.074 (1.88)	7.60 (11.3)	5.79 (19.0)	18-TE-1930
M16878/4 BHB-*	18	7/26	.048 (1.22)	.064 (1.63)	.074 (1.88)	7.52 (11.2)	6.28 (20.6)	18-TE-726
M16878/4 BHA-*	18	SOLID	.040 (1.02)	.056 (1.42)	.066 (1.68)	6.50 (9.67)	4.20 (13.8)	18-TE-118
M16878/4 BGE-*	20	19/32	.038 (.97)	.054 (1.37)	.062 (1.57)	5.12 (7.62)	9.19 (30.1)	20-TE-1932
M16878/4 BGB-*	20	7/28	.038 (.97)	.054 (1.37)	.062 (1.57)	5.05 (7.52)	10.0 (32.8)	20-TE-728
M16878/4 BGA-*	20	SOLID	.032 (.81)	.048 (1.22)	.056 (1.42)	4.34 (6.46)	10.5 (34.4)	20-TE-120
M16878/4 BFE-*	22	19/34	.030 (.76)	.046 (1.17)	.054 (1.37)	3.47 (5.16)	15.1 (49.5)	22-TE-1934
M16878/4 BFB-*	22	7/30	.030 (.76)	.046 (1.17)	.054 (1.37)	3.44 (5.12)	15.9 (52.2)	22-TE-730
M16878/4 BFA-*	22	SOLID	.025 (.64)	.041 (1.04)	.049 (1.24)	2.95 (4.39)	17.0 (55.8)	22-TE-122
M16878/4 BEE-*	24	19/36	.024 (.61)	.040 (1.02)	.048 (1.22)	2.44 (3.63)	24.3 (79.7)	24-TE-1936
M16878/4 BEB-*	24	7/32	.024 (.61)	.040 (1.02)	.048 (1.22)	2.44 (3.63)	25.2 (82.7)	24-TE-732
M16878/4 BEA-*	24	SOLID	.020 (.51)	.036 (.91)	.044 (1.12)	2.09 (3.11)	26.8 (87.9)	24-TE-124
M16878/4 BDE-*	26	19/38	.019 (.48)	.035 (.89)	.043 (1.09)	1.83 (2.72)	38.4 (126)	26-TE-1938
M16878/4 BDB-*	26	7/34	.019 (.48)	.035 (.89)	.043 (1.09)	1.74 (2.59)	40.5 (133)	26-TE-734
M16878/4 BDA-*	26	SOLID	.016 (.41)	.032 (.81)	.040 (1.02)	1.51 (2.25)	42.7 (140)	26-TE-126
M16878/4 (REF)	28	19/40	.015 (.38)	.031 (.79)	.039 (.99)	1.33 (1.98)	63.1 (207)	28-TE-1940
M16878/4 BCB-*	28	7/36	.015 (.38)	.031 (.79)	.039 (.99)	1.28 (1.90)	63.8 (209)	28-TE-736
M16878/4 BCA-*	28	SOLID	.013 (.33)	.029 (.74)	.037 (.94)	1.14 (1.70)	68.0 (223)	28-TE-128
M16878/4 (REF)	30	19/42	.012 (.31)	.028 (.71)	.036 (.91)	1.01 (1.50)	96.1 (315)	30-TE-1942
M16878/4 BBB-*	30	7/38	.012 (.31)	.028 (.71)	.036 (.91)	.990 (1.47)	101 (330)	30-TE-738
M16878/4 BBA-*	30	SOLID	.010 (.25)	.026 (.66)	.034 (.86)	.880 (1.31)	108 (354)	30-TE-130
M16878/4 (REF)	32	19/44	.010 (.25)	.026 (.66)	.034 (.86)	.830 (1.24)	153 (502)	32-TE-3726
M16878/4 BAB-*	32	7/40	.009 (.23)	.026 (.66)	.034 (.86)	.790 (1.18)	173 (567)	32-TE-1944
M16878/4 BAA-*	32	SOLID	.008 (.20)	.025 (.64)	.033 (.84)	.610 (.908)	169 (554)	32-TE-132
M16878/4 (REF)	34	7/42	.008 (.20)	.024 (.61)	.032 (.81)	.660 (.982)	258 (846)	34-TE-742
M16878/4 (REF)	36	7/44	.006 (.15)	.022 (.56)	.030 (.76)	.540 (.804)	412 (1351)	36-TE-744

Dimensions in inches (mm). Weights in pounds/1000 feet (Kg/1000 m). Resistance in Ω/1,000 feet (Ω/Km), @20° C.

* Add color coding per MIL-STD-104 (see page 26). ** Complies with the latest issue of MIL-W-16878 having no surface marking, and NEMA HP-3.

(REF) indicates alternate constructions conforming to, but not specifically contained in, MIL-W-16878. All values are nominal unless otherwise indicated.

