

MIL-W-16878/5 (Type EE) wire—heavy-wall extruded PTFE insulation

MIL-W-16878/5 (type EE) wires have extruded PTFE insulation (heavy wall thickness) for high-temperature applications. PTFE insulation offers high reliability with excellent thermal stability and chemical resistance.

For medium-wall (type E) versions of these wires, see M16878/4 (previous page); for thin-wall (type ET) versions, see M16878/6 (next page).

Performance:

Voltage rating: 1,000V.

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



Construction Details

Insulation: Extruded PTFE, wall thickness .015 (.38 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-EEX.

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

To order with optional conductor materials:

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

For nickel-plated copper conductor, change **XT** in Thermax part number to **XTN**.

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

Dimensions, Resistance, and Weights—M16878/5

M16878 P/N**	AWG Size	Stranding	Conductor Diameter	Insulation Diameter		Weight	Maximum Resistance	Thermax P/N
				Minimum	Maximum			
M16878/5 BNL-*	8	133/29	.162 (4.11)	.199 (5.05)	.219 (5.56)	65.9 (98.1)	.658 (2.16)	8-XT-13329
M16878/5 BNG-*	10	37/26	.108 (2.74)	.137 (3.48)	.153 (3.89)	35.3 (52.5)	1.19 (3.90)	10-XT-3726
M16878/5 BLE-*	12	19/25	.084 (2.13)	.117 (2.97)	.133 (3.38)	24.8 (36.9)	1.81 (5.94)	12-XT-1925
M16878/5 BKE-*	14	19/27	.067 (1.70)	.098 (2.49)	.114 (2.90)	16.4 (24.4)	2.88 (9.45)	14-XT-1927
M16878/5 BJE-*	16	19/29	.053 (1.35)	.083 (2.11)	.095 (2.41)	11.1 (16.5)	4.52 (14.8)	16-XT-1929
M16878/5 BJA-*	16	SOLID	.051 (1.30)	.077 (1.96)	.089 (2.26)	10.8 (16.1)	6.60 (21.6)	16-XT-116
M16878/5 BHE-*	18	19/30	.047 (1.19)	.074 (1.88)	.084 (2.13)	8.67 (12.9)	5.79 (19.0)	18-XT-1930
M16878/5 BHB-*	18	7/26	.048 (1.22)	.074 (1.88)	.084 (2.13)	8.10 (12.1)	6.28 (20.6)	18-XT-726
M16878/5 BHA-*	18	SOLID	.040 (1.02)	.066 (1.68)	.076 (1.93)	7.46 (11.1)	4.20 (13.8)	18-XT-118
M16878/5 BGE-*	20	19/32	.038 (.97)	.064 (1.63)	.072 (1.83)	6.10 (9.08)	9.19 (30.1)	20-XT-1932
M16878/5 BGB-*	20	7/28	.038 (.97)	.064 (1.63)	.072 (1.83)	5.84 (8.69)	10.0 (32.8)	20-XT-728
M16878/5 BGA-*	20	SOLID	.032 (.81)	.058 (1.47)	.066 (1.68)	5.22 (7.77)	10.5 (34.4)	20-XT-120
M16878/5 BFE-*	22	19/34	.030 (.76)	.056 (1.42)	.064 (1.63)	4.32 (6.43)	15.1 (49.5)	22-XT-1934
M16878/5 BFB-*	22	7/30	.030 (.76)	.056 (1.42)	.064 (1.63)	4.18 (6.22)	15.9 (52.2)	22-XT-730
M16878/5 BFA-*	22	SOLID	.025 (.64)	.051 (1.30)	.060 (1.52)	3.74 (5.57)	17.0 (55.8)	22-XT-122
M16878/5 BEE-*	24	19/36	.024 (.61)	.050 (1.27)	.058 (1.47)	3.18 (4.73)	24.3 (79.7)	24-XT-1936
M16878/5 BEB-*	24	7/32	.024 (.61)	.050 (1.27)	.058 (1.47)	3.12 (4.64)	25.2 (82.7)	24-XT-732
M16878/5 BEA-*	24	SOLID	.020 (.51)	.046 (1.17)	.054 (1.37)	2.80 (4.17)	26.8 (87.9)	24-XT-124
M16878/5 BDE-*	26	19/38	.019 (.48)	.045 (1.14)	.053 (1.35)	2.48 (3.69)	38.4 (126)	26-XT-1938
M16878/5 BDB-*	26	7/34	.019 (.48)	.045 (1.14)	.053 (1.35)	2.40 (3.57)	40.5 (133)	26-XT-734
M16878/5 BDA-*	26	SOLID	.016 (.41)	.042 (1.07)	.050 (1.27)	2.16 (3.21)	42.7 (140)	26-XT-126
M16878/5 (REF)	28	19/40	.015 (.38)	.041 (1.04)	.049 (1.24)	1.95 (2.90)	63.1 (207)	28-XT-1940
M16878/5 BCB-*	28	7/36	.015 (.38)	.041 (1.04)	.049 (1.24)	1.89 (2.81)	63.8 (209)	28-XT-736
M16878/5 BCA-*	28	SOLID	.013 (.33)	.039 (.99)	.047 (1.19)	1.74 (2.59)	68.1 (223)	28-XT-128
M16878/5 (REF)	30	19/42	.012 (.31)	.038 (.97)	.046 (1.17)	1.60 (2.38)	96.1 (315)	30-XT-1942
M16878/5 BBB-*	30	7/38	.012 (.31)	.038 (.97)	.046 (1.17)	1.55 (2.31)	101 (330)	30-XT-738
M16878/5 BBA-*	30	SOLID	.010 (.25)	.036 (.91)	.044 (1.12)	1.43 (2.13)	108 (354)	30-XT-130
M16878/5 (REF)	32	19/44	.010 (.25)	.036 (.91)	.044 (1.12)	1.34 (1.99)	153 (502)	32-XT-1944
M16878/5 BAB-*	32	7/40	.009 (.23)	.036 (.91)	.044 (1.12)	1.29 (1.92)	173 (567)	32-XT-740
M16878/5 BAA-*	32	SOLID	.008 (.20)	.034 (.87)	.042 (1.07)	1.23 (1.83)	169 (554)	32-XT-132

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.

