

TYPE MTW / AWM / TEW MACHINE TOOL & APPLIANCE WIRE - 600V

ENGINEERING SPECIFICATIONS

Standards

Underwriters Laboratories Standards UL-66, UL-83, UL-758, UL-1063, UL-1581, UL-2556; ASTM Stranding Class B3; B8; B787; Flame Test VW-1; APWA Uniform Color Code; AWM Style, 1335, 1015, 1032; NFPA 70 (NEC®); NFPA 79 AWM 600V 105°C (75°C in oil); Canadian Standard Association C22.2 No. 127; NEMA WC70/ICEA S-95-658; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-156878 (16 AWG; 18 AWG); UL Listing #E-156879



CONSTRUCTION

Conductors

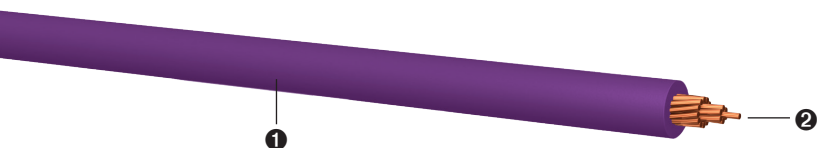
Bare, annealed copper per ASTM-B3, ASTM-B174 and ASTM-B787

Insulation

Color-coded Polyvinyl Chloride (PVC), heat and moisture-resistant, flame retardant compound per UL-1063

APPLICATIONS

Type MTW or TEW conductors are primarily used in control cabinets, in machine tool applications, and in appliance wiring applications at temperatures -25°C to 105°C. For use in accordance with the National Electrical Code (NEC) and NFPA Standard 79. Voltage rating for all applications is 600 volts.



- 1 PVC Insulation
- 2 Stranded Copper Conductor

Size (AWG)	No. of Strands	PVC Insulation Thickness (Conductor)		Outside Diameter		Approximate Net Weight		Allowable Ampacity (Amps) ¹			Standard Packaging (ft)
		(mm)	(in)	(mm)	(in)	(kg/km)	(lbs/1000 ft)	60°C	75°C	90°C	
18 ²	16	0.76	0.030	2.72	0.107	12	8	7	7	14	2000' Carton (4x500), 2500' Reels
16 ²	26	0.76	0.030	3.02	0.119	16	11	10	10	18	2000' Carton (4x500), 2500' Reels
14	19	0.76	0.030	3.33	0.131	27	18	15	20	25	2000' Carton (4x500), 2500' Reels
12	19	0.76	0.030	3.81	0.150	37	25	20	25	30	1000' Carton (2x500), 2500' Reels
10	19	0.76	0.030	4.39	0.173	60	40	30	35	40	500' Spools, 2500' Reels
8	19	1.14	0.045	5.92	0.233	100	67	40	50	55	500' 1000' 2500' 5000' Reels
6	19	1.52	0.060	7.59	0.299	149	100	55	65	75	500' 1000' 2500' 5000' Reels
4	19	1.52	0.060	8.79	0.346	223	150	70	85	95	500' 1000' 2500' 5000' Reels
3	19	1.52	0.060	9.50	0.374	315	212	85	100	115	500' 1000' 2500' 5000' Reels
2	19	1.52	0.060	10.31	0.406	342	230	95	115	130	500' 1000' 2500' 5000' Reels

¹ Ampacity of conductors are based on NFPA 70 (NEC) Table 310.15(B)(16). See 110.14(C), 240.4(D) and 310.15(B) for other limitations where applicable.

² Sizes 18 AWG - 16 AWG: Ampacity based on NFPA 79 Table 12.5.1 for use with Industrial Machinery applications.
The above data is approximate and subject to normal manufacturing tolerances.

PRINT LEGEND:

CONDUCTOR SIZES 18 AWG THROUGH 16 AWG: ENCORE WIRE CORP (SIZE) AWG TYPE MTW GR1 600V (UL) OR AWM OR C(RU) TYPE TEW FT1
CONDUCTOR SIZES 14 AWG THROUGH 2 AWG: ENCORE WIRE CORP (SIZE) AWG TYPE MTW GR1 600V VW-1 (UL) OR AWM OR C(RU) TYPE TEW FT1

Striping Combinations

White/Blue
Blue/White
Green/Yellow

Last Edit: 1/14/2025