

Wire - Type MTW

Applications

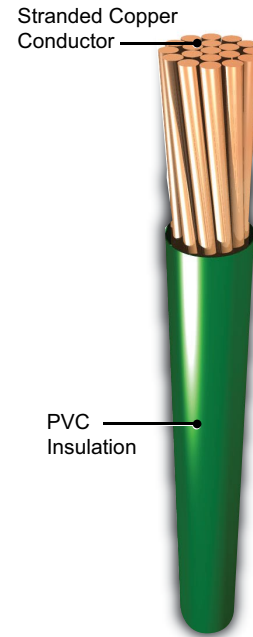
Type MTW conductors are primarily used in control cabinets, in machine tool applications, and in appliance wiring applications. For use in accordance with the National Electrical Code (NEC) and NFPA Standard 79. Voltage rating for all applications is 600 volts.

MTW wire is sold in a variety of colors and gauges on 500ft, 1000ft and 2500ft spools.

Features

- Gauges from 22 AWG to 10 AWG
- Bare copper conductor
- Color-coded Polyvinyl Chloride (PVC) outer jacket
- Striped version available for some colors and gauges
- Multiple ratings and approvals
- 500ft, 1000ft and 2500ft spools or reels available for most gauges & colors
- Made in the USA

Type MTW Wire



PVC Insulation

Type MTW Wire Specifications

Size (AWG or kcmil)	Number of Strands	mm2 Equivalent	Insulation Thickness	Overall Outside Diameter		Allowable Ampacities*			Agency Approvals	Temperature Rating per UL1015	Approximate Weight (lbs) 500ft	Standard Packaging (Spool/Reel)
			(inches)	(inches)	(mm)	60°C(140 °F)	75°C (167 °F)	90°C (194 °F)				
22	7	0.34	0.030	0.092	2.34	3	3	3	UL 758 UL 1015 UL1032 UL1230 UL 1011 UL1013 UL1335 CSA TEW or AWM I A/B UL File No E80256	105°C (221°F)	3.9	500ft or 1000ft
20	10	0.50	0.030	0.099	2.51	5	5	5			4.0	
18	16	0.75	0.030	0.110	2.79	7	7	14			4.6	1000ft or 2500ft. Some colors not offered in 1000ft and 2500ft reels.
16**	26	1.5	0.030	0.121	3.07	10	10	18	6.5			
14**	41	2.5	0.030	0.137	3.48	20	20	25	9.5			
12**	65	4	0.030	0.157	3.99	25	25	30	13.9		500ft	
10**	105	6	0.030	0.182	4.62	30	35	40	CSA TEW or AWM I A/B UL File No E215651		20.5	500ft

*Note: Allowable ampacity shown above is per the NFPA79 Electrical Standard for Industrial Machinery 2018 Table 12.5.1 Conductor Ampacity Based on Copper Conductors with 60 °C [140 °F], 75 °C [167 °F], and 90 °C [194 °F] Insulation in an Ambient Temperature of 30 °C [86°F]. The above data is approximate and subject to normal manufacturing tolerance.

Product Color Disclaimer: The product photos shown are representative of our wire colors. The actual wire colors may vary from the images shown. Although our suppliers maintain a high-quality standard, there can be color variation from production. As a result, we cannot guarantee color spools will match up perfectly.

**Note: Unless specifically permitted elsewhere in NFPA 70 overcurrent protection should not exceed 10 amps 16 AWG, 15 amps for 14 AWG, 20 amps for 12 AWG, and 30 amps for 10 AWG.

To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page at www.automationdirect.com

Please Note: Our prices on wire are closely tied to the market price for copper. This allows us to offer the best savings possible if conditions are favorable; however, it also means that our prices may increase if market conditions warrant.

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Part Number	Insulation Color	Gauge	Description	Spool/Reel Length	Approx. Weight	Price
MTW22BK	Black	22 AWG	Type MTW wire, bare copper, 7 strands, 600 Volts	500ft	[3.9 lb] [1.76 kg]	
MTW22WH	White					
MTW22RD	Red					
MTW22BL	Blue					
MTW22GN	Green					
MTW22YL	Yellow					
MTW22OR	Orange					
MTW22BN	Brown					
MTW22PL	Purple					
MTW22GY	Gray					
MTW22BW	Blue with White spiral stripe					
MTW22WB	White with Blue spiral stripe					
MTW22WO	White with Orange spiral stripe					
MTW22GYL	Green with Yellow spiral stripe					
MTW20BK	Black					20 AWG
MTW20WH	White					
MTW20RD	Red					
MTW20BL	Blue					
MTW20GN	Green					
MTW20YL	Yellow					
MTW20OR	Orange					
MTW20BN	Brown					
MTW20PL	Purple					
MTW20GY	Gray					
MTW20BW	Blue with White spiral stripe					
MTW20WB	White with Blue spiral stripe					
MTW20WO	White with Orange spiral stripe					
MTW20GYL	Green with Yellow spiral stripe					
MTW18BK	Black	18 AWG	Type MTW wire, bare copper, 16 strands, 600 Volts	[4.6 lb] [2.08 kg]		
MTW18WH	White					
MTW18RD	Red					
MTW18BL	Blue					
MTW18GN	Green					
MTW18YL	Yellow					
MTW18OR	Orange					
MTW18BN	Brown					
MTW18PL	Purple					
MTW18GY	Gray					
MTW18BW	Blue with White spiral stripe					
MTW18WB	White with Blue spiral stripe					
MTW18WO	White with Orange spiral stripe					
MTW18GYL	Green with Yellow spiral stripe					
MTW16BK	Black				16 AWG	Type MTW wire, bare copper, 26 strands, 600 Volts
MTW16WH	White					
MTW16RD	Red					
MTW16BL	Blue					
MTW16GN	Green					
MTW16YL	Yellow					
MTW16OR	Orange					
MTW16BN	Brown					
MTW16PL	Purple					
MTW16GY	Gray					
MTW16BW	Blue with White spiral stripe					
MTW16WB	White with Blue spiral stripe					
MTW16GYL	Green with Yellow spiral stripe					

Wire - Type MTW

Type MTW Wire						
Part Number	Insulation Color	Gauge	Description	Spool/Reel Length	Approx. Weight	Price
MTW14BK	Black	14 AWG	Type MTW wire, bare copper, 41 strands, 600 Volts	500ft	[9.5 lb] [4.31 kg]	
MTW14WH	White					
MTW14RD	Red					
MTW14BL	Blue					
MTW14GN	Green					
MTW14YL	Yellow					
MTW14OR	Orange					
MTW14BN	Brown					
MTW14PL	Purple					
MTW14GY	Gray					
MTW14BW	Blue with White spiral stripe					
MTW14WB	White with Blue spiral stripe					
MTW14GYL	Green with Yellow spiral stripe					
MTW12BK	Black	12 AWG	Type MTW wire, bare copper, 65 strands, 600 Volts	500ft	[13.9 lb] [6.3 kg]	
MTW12WH	White					
MTW12RD	Red					
MTW12BL	Blue					
MTW12GN	Green					
MTW12YL	Yellow					
MTW12OR	Orange					
MTW12BN	Brown					
MTW12GY	Gray					
MTW10BK	Black	10 AWG	Type MTW wire, bare copper, 105 strands, 600 Volts	500ft	[20.5 lb] [9.30 kg]	
MTW10WH	White					
MTW10GN	Green					
MTW10YL	Yellow					
MTW10OR	Orange					
MTW10BN	Brown					
MTW22BK10	Black	22 AWG	Type MTW wire, bare copper, 7 strands, 600 Volts	1000ft	[6.8 lb] [3.08kg]	
MTW22BL10	Blue					
MTW22BN10	Brown					
MTW22BW10	Blue with White spiral stripe					
MTW22GN10	Green					
MTW22GYL10	Green with Yellow spiral stripe					
MTW22OR10	Orange					
MTW22RD10	Red					
MTW22WB10	White with Blue spiral stripe					
MTW22WH10	White					
MTW22YL10	Yellow					

Wire - Type MTW

Type MTW Wire								
Part Number	Insulation Color	Gauge	Description	Spool/Reel Length	Approx. Weight	Price		
MTW20BK10	Black	20 AWG	Type MTW wire, bare copper, 10 strands, 600 Volts	1000ft	[8.3lb] [3.76kg]			
MTW20BL10	Blue							
MTW20BN10	Brown							
MTW20BW10	Blue with White spiral stripe							
MTW20GN10	Green							
MTW20GYL10	Green with Yellow spiral stripe							
MTW20OR10	Orange							
MTW20RD10	Red							
MTW20WB10	White with Blue spiral stripe							
MTW20WH10	White							
MTW20YL10	Yellow							
MTW18BK10	Black					18 AWG	Type MTW wire, bare copper, 16 strands, 600 Volts	1000ft
MTW18BL10	Blue							
MTW18BN10	Brown							
MTW18BW10	Blue with White spiral stripe							
MTW18GN10	Green							
MTW18GYL10	Green with Yellow spiral stripe							
MTW18GY10	Gray							
MTW18OR10	Orange							
MTW18PL10	Purple							
MTW18RD10	Red							
MTW18WB10	White with Blue spiral stripe							
MTW18WH10	White							
MTW18YL10	Yellow							
MTW16BK10	Black	16 AWG	Type MTW wire, bare copper, 26 strands, 600 Volts	1000ft	[14.6lb] [6.62kg]			
MTW16BL10	Blue							
MTW16BW10	Blue with White spiral stripe							
MTW16GN10	Green							
MTW16GYL10	Green with Yellow spiral stripe							
MTW16RD10	Red							
MTW16WB10	White with Blue spiral stripe							
MTW16WH10	White							
MTW16YL10	Yellow							
MTW14BK10	Black	14 AWG	Type MTW wire, bare copper, 41 strands, 600 Volts		1000ft	[19.0lb] [8.62kg]		
MTW14BL10	Blue							
MTW14GN10	Green							
MTW14GYL10	Green with Yellow spiral stripe							
MTW14RD10	Red							
MTW14WH10	White							
MTW18BK25	Black	18 AWG	Type MTW wire, bare copper, 16 strands, 600 Volts			2500ft	[26.5lb] [12.02kg]	
MTW18RD25	Red							
MTW18BL25	Blue							
MTW18BW25	Blue with White spiral stripe							

Wire - Type MTW

Type MTW Wire							
Part Number	Insulation Color	Gauge	Description	Spool/Reel Length	Approx. Weight	Price	
MTW16BK25	Black	16 AWG	Type MTW wire, bare copper, 26 strands, 600 Volts	2500ft	[36.5lb] [16.5kg]		
MTW16WH25	White						
MTW16RD25	Red						
MTW16BL25	Blue						
MTW16BW25	Blue with White spiral stripe						
MTW14BK25	Black	14 AWG	Type MTW wire, bare copper, 41 strands, 600 Volts		[47.5lb] [21.55kg]		
MTW14BN25	Brown						
MTW14BW25	Blue with White spiral stripe						

Gauge Conversion Table

American Wire Gauge Conversion Chart*			
This cross reference shows equivalent nominal values. Actual cross sections may vary.			
AWG	mm2	AWG	mm2
30	0.05	6	16
28	0.08	4	25
26	0.14	2	35
24	0.25	1	50
22	0.34	1/0	55
21	0.38	2/0	70
20	0.50	3/0	95
18	0.75	4/0	120
17	1.00	300MCM	150
16	1.50	350MCM	185
14	2.50	500MCM	240
12	4	600MCM	300
10	6	750MCM	400
8	10	1000MCM	500

*Note: Table shows commercially used equivalent values.

Conductor Ampacity Table

Allowable Ampacity			
AWG	60°C [140°F]	75°C [167°F]	90°C [194°F]
30	—	0.5	0.5
28	—	0.8	0.8
26	—	1	1
24	2	2	2
22	3	3	3
20	5	5	5
18	7	7	14
16**	10	10	18
14**	20	20	25
12**	25	25	30
10**	30	35	40
8	40	50	55
6	55	65	75
4	70	85	95
3	85	100	110
2	95	115	130
1	110	130	150
1/0	125	150	170
2/0	145	175	195
3/0	165	200	225
4/0	195	230	260
250MCM	215	255	290
300MCM	240	285	320
350MCM	260	310	350
400MCM	280	335	380
500MCM	320	380	430
600MCM	355	420	475
700MCM	385	460	520
750MCM	400	475	535
800MCM	410	490	555
900MCM	435	520	585
1000MCM	455	545	615

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