

# Wire - Type MTW

## Applications

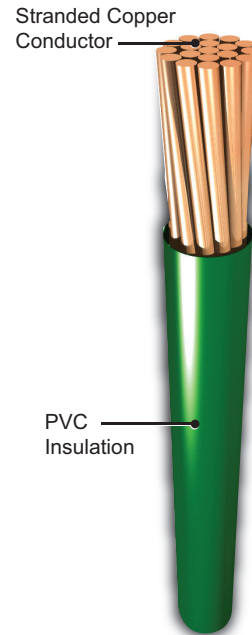
Type MTW conductors are primarily used in control cabinets, in machine tool applications, and in appliance wiring applications. For use in accordance with the National Electrical Code (NEC) and NFPA Standard 79. Voltage rating for all applications is 600 volts.

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

## Features

- Gauges from 22AWG to 10AWG
- 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



Type MTW Wire Specifications												
Size (AWG or kcmil)	Number of Strands	mm <sup>2</sup> Equivalent	Insulation Thickness (inches)	Overall Outside Diameter		Allowable Ampacities*			Agency Approvals	Temperature Rating per UL1015	Approximate Weight (lbs) 500ft	Standard Packaging (Spool/Reel)
				(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 UL 1032 UL 1230 UL 1011 UL 1013 UL 1335 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			
10**	105	6	0.030	0.182	4.62	30	35	40	CSA TEW or AWM I A/B UL 758 UL 1015 UL 1032 UL 1230 UL 1011 UL 1013 UL 1335 UL 1426 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 [86F]. 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 16AWG, 15 amps for 12AWG, and 30 amps for 10AWG. 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](http://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
<a href="#">MTW22BK</a>	Black	22AWG	Type MTW wire, bare copper, 7 strands, 600 Volts	500ft	[3.9 lb] [1.76 kg]	\$27.00
<a href="#">MTW22WH</a>	White					\$27.00
<a href="#">MTW22RD</a>	Red					\$27.00
<a href="#">MTW22BL</a>	Blue					\$27.00
<a href="#">MTW22GN</a>	Green					\$27.00
<a href="#">MTW22YL</a>	Yellow					\$27.00
<a href="#">MTW22OR</a>	Orange					\$27.00
<a href="#">MTW22BN</a>	Brown					\$27.00
<a href="#">MTW22PL</a>	Purple					\$27.00
<a href="#">MTW22GY</a>	Gray					\$27.00
<a href="#">MTW22BW</a>	Blue with White spiral stripe					\$31.00
<a href="#">MTW22WB</a>	White with Blue spiral stripe					\$31.00
<a href="#">MTW22WO</a>	White with Orange spiral stripe					\$31.00
<a href="#">MTW22GYL</a>	Green with Yellow spiral stripe					\$31.00
<a href="#">MTW20BK</a>	Black	20AWG	Type MTW wire, bare copper, 10 strands, 600 Volts	500ft	[4.0 lb] [1.81 kg]	\$32.00
<a href="#">MTW20WH</a>	White					\$32.00
<a href="#">MTW20RD</a>	Red					\$32.00
<a href="#">MTW20BL</a>	Blue					\$32.00
<a href="#">MTW20GN</a>	Green					\$32.00
<a href="#">MTW20YL</a>	Yellow					\$32.00
<a href="#">MTW20OR</a>	Orange					\$32.00
<a href="#">MTW20BN</a>	Brown					\$32.00
<a href="#">MTW20PL</a>	Purple					\$32.00
<a href="#">MTW20GY</a>	Gray					\$32.00
<a href="#">MTW20BW</a>	Blue with White spiral stripe					\$41.50
<a href="#">MTW20WB</a>	White with Blue spiral stripe					\$41.50
<a href="#">MTW20WO</a>	White with Orange spiral stripe					\$41.50
<a href="#">MTW20GYL</a>	Green with Yellow spiral stripe					\$41.50
<a href="#">MTW18BK</a>	Black	18AWG	Type MTW wire, bare copper, 16 strands, 600 Volts	500ft	[4.6 lb] [2.08 kg]	\$47.00
<a href="#">MTW18WH</a>	White					\$47.00
<a href="#">MTW18RD</a>	Red					\$47.00
<a href="#">MTW18BL</a>	Blue					\$47.00
<a href="#">MTW18GN</a>	Green					\$47.00
<a href="#">MTW18YL</a>	Yellow					\$47.00
<a href="#">MTW18OR</a>	Orange					\$47.00
<a href="#">MTW18BN</a>	Brown					\$47.00
<a href="#">MTW18PL</a>	Purple					\$47.00
<a href="#">MTW18GY</a>	Gray					\$47.00
<a href="#">MTW18BW</a>	Blue with White spiral stripe					\$53.00
<a href="#">MTW18WB</a>	White with Blue spiral stripe					\$53.00
<a href="#">MTW18WO</a>	White with Orange spiral stripe					\$53.00
<a href="#">MTW18GYL</a>	Green with Yellow spiral stripe					\$58.00
<a href="#">MTW16BK</a>	Black	16AWG	Type MTW wire, bare copper, 26 strands, 600 Volts	500ft	[6.5 lb] [2.94 kg]	\$67.00
<a href="#">MTW16WH</a>	White					\$67.00
<a href="#">MTW16RD</a>	Red					\$67.00
<a href="#">MTW16BL</a>	Blue					\$67.00
<a href="#">MTW16GN</a>	Green					\$67.00
<a href="#">MTW16YL</a>	Yellow					\$67.00
<a href="#">MTW16OR</a>	Orange					\$67.00
<a href="#">MTW16BN</a>	Brown					\$67.00
<a href="#">MTW16PL</a>	Purple					\$67.00
<a href="#">MTW16GY</a>	Gray					\$67.00
<a href="#">MTW16BW</a>	Blue with White spiral stripe					\$73.00
<a href="#">MTW16WB</a>	White with Blue spiral stripe					\$59.00
<a href="#">MTW16GYL</a>	Green with Yellow spiral stripe					\$73.00

# Wire - Type MTW

Type MTW Wire						
Part Number	Insulation Color	Gauge	Description	Spool/Reel Length	Approx. Weight	Price
<a href="#">MTW14BK</a>	Black	14 AWG	Type MTW wire, bare copper, 41 strands, 600 Volts	500ft	[9.5 lb] [4.31 kg]	\$96.00
<a href="#">MTW14WH</a>	White					\$96.00
<a href="#">MTW14RD</a>	Red					\$96.00
<a href="#">MTW14BL</a>	Blue					\$96.00
<a href="#">MTW14GN</a>	Green					\$96.00
<a href="#">MTW14YL</a>	Yellow					\$96.00
<a href="#">MTW14OR</a>	Orange					\$96.00
<a href="#">MTW14BN</a>	Brown					\$96.00
<a href="#">MTW14PL</a>	Purple					\$96.00
<a href="#">MTW14GY</a>	Gray					\$96.00
<a href="#">MTW14BW</a>	Blue with White spiral stripe					\$102.00
<a href="#">MTW14WB</a>	White with Blue spiral stripe					\$102.00
<a href="#">MTW14GYL</a>	Green with Yellow spiral stripe					\$102.00
<a href="#">MTW12BK</a>	Black					12AWG
<a href="#">MTW12WH</a>	White	\$142.00				
<a href="#">MTW12RD</a>	Red	\$142.00				
<a href="#">MTW12BL</a>	Blue	\$142.00				
<a href="#">MTW12GN</a>	Green	\$142.00				
<a href="#">MTW12YL</a>	Yellow	\$142.00				
<a href="#">MTW12OR</a>	Orange	\$142.00				
<a href="#">MTW12BN</a>	Brown	\$142.00				
<a href="#">MTW12GY</a>	Gray	\$142.00				
<a href="#">MTW10BK</a>	Black	10AWG	Type MTW wire, bare copper, 105 strands, 600 Volts	500ft	[20.5 lb] [9.30 kg]	
<a href="#">MTW10WH</a>	White					\$227.00
<a href="#">MTW10GN</a>	Green					\$227.00
<a href="#">MTW10YL</a>	Yellow					\$227.00
<a href="#">MTW10OR</a>	Orange					\$227.00
<a href="#">MTW10BN</a>	Brown					\$227.00
<a href="#">MTW22BK10</a>	Black	22AWG	Type MTW wire, bare copper, 7 strands, 600 Volts	1000ft	[6.8 lb] [3.08kg]	\$48.50
<a href="#">MTW22BL10</a>	Blue					\$48.50
<a href="#">MTW22BN10</a>	Brown					\$48.50
<a href="#">MTW22BW10</a>	Blue with White spiral stripe					\$59.00
<a href="#">MTW22GN10</a>	Green					\$48.50
<a href="#">MTW22GYL10</a>	Green with Yellow spiral stripe					\$59.00
<a href="#">MTW22OR10</a>	Orange					\$48.50
<a href="#">MTW22RD10</a>	Red					\$48.50
<a href="#">MTW22WB10</a>	White with Blue spiral stripe					\$59.00
<a href="#">MTW22WH10</a>	White					\$48.50
<a href="#">MTW22YL10</a>	Yellow					\$48.50

# Wire - Type MTW

Type MTW Wire						
Part Number	Insulation Color	Gauge	Description	Spool/Reel Length	Approx. Weight	Price
<a href="#">MTW20BK10</a>	Black	20AWG	Type MTW wire, bare copper, 10 strands, 600 Volts		[8.3lb] [3.76kg]	\$59.00
<a href="#">MTW20BL10</a>	Blue					\$59.00
<a href="#">MTW20BN10</a>	Brown					\$58.00
<a href="#">MTW20BW10</a>	Blue with White spiral stripe					\$65.00
<a href="#">MTW20GN10</a>	Green					\$59.00
<a href="#">MTW20GYL10</a>	Green with Yellow spiral stripe					\$65.00
<a href="#">MTW20OR10</a>	Orange					\$59.00
<a href="#">MTW20RD10</a>	Red					\$59.00
<a href="#">MTW20WB10</a>	White with Blue spiral stripe					\$65.00
<a href="#">MTW20WH10</a>	White					\$59.00
<a href="#">MTW20YL10</a>	Yellow					\$59.00
<a href="#">MTW18BK10</a>	Black					18AWG
<a href="#">MTW18BL10</a>	Blue	\$91.00				
<a href="#">MTW18BN10</a>	Brown	\$91.00				
<a href="#">MTW18BW10</a>	Blue with White spiral stripe	\$98.00				
<a href="#">MTW18GN10</a>	Green	\$91.00				
<a href="#">MTW18GYL10</a>	Green with Yellow spiral stripe	\$99.00				
<a href="#">MTW18GY10</a>	Gray	\$91.00				
<a href="#">MTW18OR10</a>	Orange	\$91.00				
<a href="#">MTW18PL10</a>	Purple	\$91.00				
<a href="#">MTW18RD10</a>	Red	\$91.00				
<a href="#">MTW18WB10</a>	White with Blue spiral stripe	\$99.00				
<a href="#">MTW18WH10</a>	White	\$91.00				
<a href="#">MTW18YL10</a>	Yellow	\$91.00				
<a href="#">MTW16BK10</a>	Black	16AWG	Type MTW wire, bare copper, 26 strands, 600 Volts		[14.6lb] [6.62kg]	
<a href="#">MTW16BL10</a>	Blue					\$127.00
<a href="#">MTW16BW10</a>	Blue with White spiral stripe					\$141.00
<a href="#">MTW16GN10</a>	Green					\$127.00
<a href="#">MTW16GYL10</a>	Green with Yellow spiral stripe					\$141.00
<a href="#">MTW16RD10</a>	Red					\$127.00
<a href="#">MTW16WB10</a>	White with Blue spiral stripe					\$141.00
<a href="#">MTW16WH10</a>	White					\$127.00
<a href="#">MTW16YL10</a>	Yellow					\$127.00
<a href="#">MTW14BK10</a>	Black	14AWG	Type MTW wire, bare copper, 41 strands, 600 Volts		[19.0lb] [8.62kg]	\$192.00
<a href="#">MTW14BL10</a>	Blue					\$192.00
<a href="#">MTW14GN10</a>	Green					\$192.00
<a href="#">MTW14GYL10</a>	Green with Yellow spiral stripe					\$196.00
<a href="#">MTW14RD10</a>	Red					\$192.00
<a href="#">MTW14WH10</a>	White					\$178.00
<a href="#">MTW18BK25</a>	Black					18AWG
<a href="#">MTW18RD25</a>	Red	\$217.00				
<a href="#">MTW18BL25</a>	Blue	\$217.00				
<a href="#">MTW18BW25</a>	Blue with White spiral stripe	\$249.00				

# Wire - Type MTW

Type MTW Wire						
Part Number	Insulation Color	Gauge	Description	Spool/Reel Length	Approx. Weight	Price
MTW16BK25	Black	16AWG	Type MTW wire, bare copper, 26 strands, 600 Volts	2500ft	[36.5lb] [16.5kg]	\$286.00
MTW16WH25	White					\$286.00
MTW16RD25	Red					\$286.00
MTW16BL25	Blue					\$286.00
MTW16BW25	Blue with White spiral stripe					\$286.00
MTW14BK25	Black	14AWG	Type MTW wire, bare copper, 41 strands, 600 Volts	2500ft	[47.5lb] [21.55kg]	\$461.00
MTW14BN25	Brown					Retired
MTW14BW25	Blue with White spiral stripe					Retired

## 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

\*Note: Allowable ampacity shown above is per 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]

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