

Wire – THHN Type and MTW Type



THHN10GYL



THHN4BK



MTW16WH



MTW10WH

Applications

Type **THHN** building wire is intended for general purpose applications as defined by the National Electrical Code (NEC). It is appropriate for new construction or rewiring for 600-volt applications. When used as type THHN, the conductor is suitable for use in wet or dry locations at temperatures not to exceed 90°C or not to exceed 75°C in oil or coolants. When used as type MTW, the conductor is suitable for use in dry locations at 90°C, or not to exceed 60°C in wet locations or where exposed to oils or coolants.

Type **MTW** conductors are primarily used in control cabinets, in machine tool applications and appliance wiring applications at temperatures -25°C to 90°C. They comply with the National Electrical Code (NEC) and NFPA Standard 79. Voltage rating for all applications is 600 volts.

THHN and MTW wire is sold in 500 foot spools; certain sizes are also available in 2500 foot reels.

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.

Features

Conductors

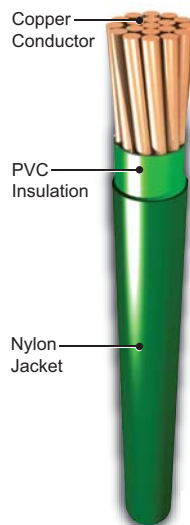
- THHN: stranded, uncoated copper conductors per ASTM-B3, ASTM-B787 and ASTM-B8
- MTW: bare, annealed copper per ASTM-B3, -B8 and -B787

Insulation

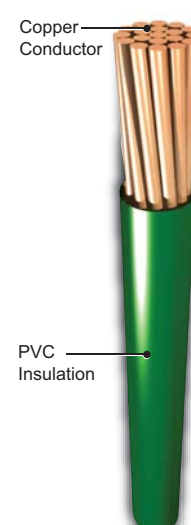
Color-coded, Polyvinyl Chloride (PVC) heat- and moisture-resistant, flame-retardant compound per UL 1063 and UL 83

Jacket

THHN wire has a tough, polyamide, Nylon outer covering per UL 1063 and UL 83. Slick Nylon outer jacket for easy pulling



THHN Type



MTW Type

Ratings

VW-1 rated 14 AWG - 1 AWG

1/0 AWG and larger is rated for CT (cable tray) use.

6 AWG and larger is rated for sunlight resistance in all colors. All sizes are rated "gasoline and oil resistant II."

Wire – THHN Type

Type THHN Wire Specifications											
Size (AWG or kcmil)	Number of Strands	Cross-sectional Area (mm ²)	Insulation Thickness (inches)		Overall Outside Diameter		Allowable Ampacities*			Approximate Weight (lbs) 500'/2500'	Standard Packaging spool/reel
			PVC	Nylon	(inches)	(mm)	60°C	75°C	90°C		
14	19	6.258	0.015	0.004	0.109	2.77	15	15	15	7.8/42.2	500' or 2500'. Some colors not offered in 2500' reel.
12	19	8.581	0.015	0.004	0.127	3.23	20	20	20	11.7/61.4	
10	19	13.61	0.020	0.004	0.160	4.07	30	30	30	18.7	500'
8	19	23.61	0.030	0.005	0.212	5.39	40	50	55	31.4	
6	19	32.71	0.030	0.005	0.248	6.30	55	65	75	48.5	
4	19	53.16	0.040	0.006	0.317	8.06	70	85	95	75.4	

**Note: Allowable ampacity shown above is per the 2005 National Electrical Code. The above data is approximate and subject to normal manufacturing tolerances.*

Type THHN Wire										
Part Number	Color	Gauge	Description	Spool/Reel Length	Approx. Weight	Price				
THHN14BK	Black	14 AWG	Type THHN copper wire, 19 strands, 600 Volts	500'	7.8 lbs.	<--->				
THHN14WH	White					<--->				
THHN14RD	Red					<--->				
THHN14BL	Blue					<--->				
THHN14GN	Green					<--->				
THHN14YL	Yellow					<--->				
THHN14OR	Orange					<--->				
THHN14BN	Brown					<--->				
THHN14PK	Pink					<--->				
THHN14PL	Purple					<--->				
THHN14GY	Gray					<--->				
THHN14TN	Tan					<--->				
THHN14GYL	Green/Yellow stripe					<--->				
THHN14BW	Blue/White stripe					<--->				
THHN12BK	Black	12 AWG	Type THHN copper wire, 19 strands, 600 Volts	500'	11.7 lbs	<--->				
THHN12WH	White					<--->				
THHN12RD	Red					<--->				
THHN12BL	Blue					<--->				
THHN12GN	Green					<--->				
THHN12YL	Yellow					<--->				
THHN12OR	Orange					<--->				
THHN12BN	Brown					<--->				
THHN12GY	Gray					<--->				
THHN12GYL	Green/Yellow stripe					<--->				
THHN12BW	Blue/White stripe					<--->				
THHN10BK	Black					10 AWG	Type THHN copper wire, 19 strands, 600 Volts	500'	18.7 lbs	<--->
THHN10WH	White									<--->
THHN10GN	Green									<--->
THHN10YL	Yellow	<--->								
THHN10OR	Orange	<--->								
THHN10BN	Brown	<--->								
THHN10GYL	Green/Yellow stripe	<--->								
THHN8BK	Black	8 AWG	Type THHN copper wire, 19 strands, 600 Volts	500'	31.4 lbs					<--->
THHN8GN	Green					<--->				
THHN8GYL	Green/Yellow stripe					<--->				
THHN6BK	Black	6 AWG	Type THHN copper wire, 19 strands, 600 Volts	500'	48.5 lbs	<--->				
THHN4BK	Black	4 AWG	Type THHN copper wire, 19 strands, 600 Volts	500'	75.4 lbs	<--->				

Wire – THHN Type

Company Information

Systems Overview

Programmable Controllers

Field I/O

Software

C-more & other HMI

Drives

Soft Starters

Motors & Gearbox

Steppers/ Servos

Motor Controls

Proximity Sensors

Photo Sensors

Limit Switches

Encoders

Current Sensors

Pressure Sensors

Temperature Sensors

Pushbuttons/ Lights

Process

Relays/ Timers

Comm.

Terminal Blocks & Wiring

Power

Circuit Protection

Enclosures

Tools

Pneumatics

Appendix

Product Index

Part # Index

Type THHN Wire						
Part Number	Color	Gauge	Description	Spool/Reel Length	Approx. Weight	Price
THHN14BK25	Black	14 AWG	Type THHN copper wire, 19 strands, 600 Volts	2500'	42.2 lbs.	<-->
THHN14WH25	White					<-->
THHN14RD25	Red					<-->
THHN14BL25	Blue					<-->
THHN14GN25	Green					<-->
THHN14YL25	Yellow					<-->
THHN14OR25	Orange					<-->
THHN14BN25	Brown					<-->
THHN14PK25	Pink					<-->
THHN14PL25	Purple					<-->
THHN14GY25	Gray					<-->
THHN14TN25	Tan					<-->
THHN14BW25	Blue/White stripe					<-->
THHN12BK25	Black					12 AWG
THHN12WH25	White	<-->				
THHN12RD25	Red	<-->				
THHN12BL25	Blue	<-->				
THHN12GN25	Green	<-->				
THHN12YL25	Yellow	<-->				
THHN12OR25	Orange	<-->				
THHN12BN25	Brown	<-->				
THHN12BW25	Blue/White stripe	<-->				

Wire – Gauge Conversion Tables

American Wire Gauge Conversion Chart*			
This cross reference shows equivalent nominal values. Actual cross sections may vary.			
AWG	mm ²	AWG	mm ²
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.**

You will find product MSDS information and a complete glossary of wire terminology on our Web site at <http://support.automationdirect.com/products/wire.html>