



IUSA WIRE

TYPE THHN / MTW / THWN-2 / T90 COPPER CONDUCTOR 600 V



APPLICATIONS

Type THHN/THWN conductors are primarily used in conduit for services, feeder, and branch circuits in commercial or industrial applications as specified in the National Electrical Code. When used as type THHN, conductor is suitable for use in dry locations at temperatures not to exceed 90 °C. When used as type THWN, conductor is suitable for use in wet or dry locations at temperatures not to exceed 90 °C dry locations or 75 °C wet locations or not to exceed 75 °C when exposed to oil or coolant. When used as type THWN-2, conductor is suitable for use in wet or dry locations at temperatures not to exceed 90 °C both dry and wet locations or not to exceed 75 °C when exposed to oil or coolant. When used as type MTW conductor is suitable for use in wet locations or when exposed to oil or coolant at temperatures not to exceed 60 °C or dry locations at temperatures not to exceed 90 °C (with ampacity limited to that for 75 °C conductors per NFPA79). Conductor temperatures not to exceed 105 °C in dry locations when rated AWM and used as appliance wiring material. Voltage rating for all applications is 600 volts.

CONSTRUCTION

Type THHN or THWN or MTW are copper conductors that are soft annealed copper, insulated with a tough, heat and moisture resistant, lead-free polyvinyl chloride (PVC) over which a nylon (polyamide) or UL listed equivalent jacket is applied. 6 AWG and larger are made with a friction reducing nylon. Available in black, white, red, blue, green, yellow, brown, orange, purple, pink, or gray.

SPECIFICATIONS

Type THHN or THWN or MTW (also AWM) meets or exceeds all applicable ASTM Specifications, UL Standard 83, UL Standard 1063 (MTW), UL Standard 758 (AWM), Federal Specification A-A-59544, NEMA WC 70/ICEA S-95-658 and the requirements of the National Electrical Code® (NFPA70).



Size (AWG or kcmil)	No. of Strands	PVC insulation thickness (conductor)		Nylon jacket thickness		Outside Diameter		Approximate net weight		Allowable Ampacity (Amps)		
		(mm)	(in)	(mm)	(in)	(mm)	(in)	(kg/km)	(lbs/1000ft)	60 °C	75 °C	90 °C
14*	19	0.38	0.015	0.10	0.004	2.77	0.109	25	16	15	20	25
12*	19	0.38	0.015	0.10	0.004	3.25	0.128	36	23	20	25	30
10*	19	0.51	0.020	0.10	0.004	4.09	0.161	57	38	30	35	40
8	19	0.76	0.030	0.13	0.005	5.41	0.213	94	62	40	50	55
6	19	0.76	0.030	0.13	0.005	6.32	0.249	141	94	55	65	75
4	19	1.02	0.040	0.15	0.006	8.08	0.318	228	153	70	85	95
3	19	1.02	0.040	0.15	0.006	8.79	0.346	281	189	85	100	115
2	19	1.02	0.040	0.15	0.006	9.60	0.378	348	233	95	115	130
1	19	1.27	0.050	0.18	0.007	11.05	0.435	445	298	110	130	145
1/0	19	1.27	0.050	0.18	0.007	12.04	0.474	554	372	125	150	170
2/0	19	1.27	0.050	0.18	0.007	13.16	0.518	687	462	145	175	195
3/0	19	1.27	0.050	0.18	0.007	14.43	0.568	851	572	165	200	225
4/0	19	1.27	0.050	0.18	0.007	15.85	0.624	1059	712	195	230	260
250	37	1.52	0.060	0.20	0.008	17.22	0.678	1266	849	215	255	290
300	37	1.52	0.060	0.20	0.008	18.54	0.730	1503	1010	240	285	320
350	37	1.52	0.060	0.20	0.008	19.74	0.777	1741	1170	260	310	350
400	37	1.52	0.060	0.20	0.008	20.85	0.821	1979	1330	280	335	380
500	37	1.52	0.060	0.20	0.008	22.91	0.902	2455	1650	320	380	430
600	61	1.78	0.070	0.23	0.009	26.70	1.051	3004	2019	350	420	475
750	61	1.78	0.070	0.23	0.009	29.36	1.156	3670	2466	400	475	535

*14 AWG - 10 AWG also available in solid conductors