

THHN / THWN-2 / MTW

Application and Description

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 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 and dry locations at temperatures not to exceed 90° C 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 NFPA 79).

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.

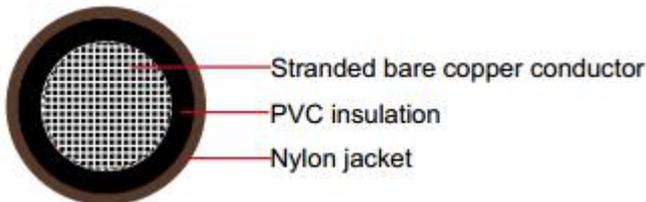
Standard and Approval

- ▶ UL 83 - Thermoplastic-Insulated Wires and Cables
- ▶ CSA C22.2 No. 75-03
- ▶ UL 1063 (MTW) - Machine-Tool Wires and Cables (stranded cables only)
- ▶ UL 758 (AWM)
- ▶ ICEA S-95-658/NEMA WC 70

Cable Construction

Conductor: Soft annealed bare copper, Class B stranding per ASTM B8

Insulation: Tough, heat and moisture resistant Polyvinyl chloride (PVC) insulation over which a nylon (polyamide) jacket is applied.



Cable Parameter

AWG or kcmil	Strand	Nominal Insulation thickness Inch/mm		Nominal Jacket thickness Inch/mm		Nominal Overall Diameter Inch/mm		Cable weight Lbs/kft kg/km	
14	1	0.015	0.38	0.004	0.10	0.11	2.79	15	22
12	1	0.015	0.38	0.004	0.10	0.12	3.05	23	34
10	1	0.020	0.51	0.004	0.10	0.15	3.81	37	54
14	19	0.015	0.38	0.004	0.10	0.11	2.79	16	24
12	19	0.015	0.38	0.004	0.10	0.13	3.30	24	36
10	19	0.020	0.51	0.004	0.10	0.17	4.32	39	58
8	19	0.030	0.76	0.005	0.13	0.22	5.59	63	94
6	19	0.030	0.76	0.005	0.13	0.26	6.60	98	145
4	19	0.040	1.01	0.006	0.15	0.33	8.38	157	234
3	19	0.040	1.01	0.006	0.15	0.36	9.14	193	287
2	19	0.040	1.01	0.006	0.15	0.39	9.91	240	357
1	19	0.050	1.27	0.007	0.18	0.43	10.92	300	446
1/0	19	0.050	1.27	0.007	0.18	0.47	11.94	376	560
2/0	19	0.050	1.27	0.007	0.18	0.52	13.21	467	695
3/0	19	0.050	1.27	0.007	0.18	0.57	14.48	581	864
4/0	19	0.050	1.27	0.007	0.18	0.64	16.26	724	1077
250	37	0.060	1.52	0.008	0.20	0.69	17.53	855	1272
300	37	0.060	1.52	0.008	0.20	0.76	19.30	1022	1521
350	37	0.060	1.52	0.008	0.20	0.79	20.07	1191	1772
400	37	0.060	1.52	0.008	0.20	0.85	21.59	1345	2001
500	37	0.060	1.52	0.008	0.20	0.94	23.88	1668	2482
600	61	0.070	1.78	0.009	0.23	1.10	27.94	1994	2967
750	61	0.070	1.78	0.009	0.23	1.16	29.46	2465	3668