

SIMpull® THHN THWN-2 MTW / c(UL) T90 Nylon TWN75

Copper Conductor, 600V, Thermoplastic-Insulated Cable, All Sizes Rated TWN75

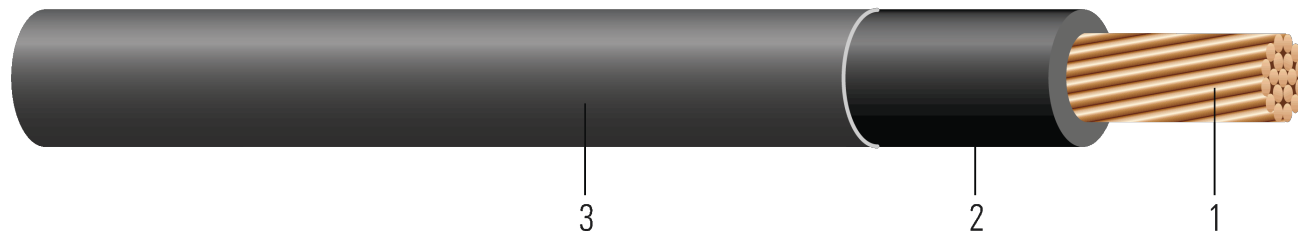


Image not to scale. See Table 1 for dimensions.

CONSTRUCTION:

- Conductor:** Solid per ASTM B3 or Combination unilay-stranded copper conductors per ASTM B787.
- Insulation:** All phases are insulated with Polyvinyl Chloride with Nylon Sheath
- Jacket:** Polyvinyl Chloride PVC jacket utilizing SIMpull® Technology.

APPLICATIONS AND FEATURES:

SIMpull® THHN, THWN-2, MTW-(UL)-suitable for dry locations not exceeding 90°C. For Gasoline and Oil Resistant II applications not to exceed 75°C. MTW (UL) - suitable for dry locations not exceeding 90°C. For wet locations, Gasoline and Oil Resistant II applications not to exceed 60°C. T90 Nylon c(UL) - cables are primarily intended for installation in conduit (raceways) as exposed wiring in dry locations not exceeding 90°C. TWN75 c(UL) - suitable for wet or dry locations at not more than 75°C. The maximum voltage rating for all intended applications is 600 volts. Minimum installation handling temperature is limited to -25°C. Minimum operating temperature limited to -40°C.

SPECIFICATIONS:

- ASTM B3 Soft or Annealed Copper Wire
- ASTM B8 Concentric-Lay-Stranded Copper Conductors
- ASTM B787 19 Wire Combination Unilay-Stranded Copper Conductors

SAMPLE PRINT LEGEND:

SOUTHWIRE SIMpull{TM} E51583 {UL} {XX AWG} XX.X{mm2} CU TYPE MTW OR THWN-2 OR THHN OR GASOLINE AND OIL RESISTANT II OR AWM 600 VOLTS VW-1 --- {CSA} T90 NYLON OR TWN75 600 VOLTS FT1 {NOM}-ANCE 90{D}C - (X AWG) ---RoHS PAT www.patentSW.com



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Table 1 – Weights and Measurements

Stock Number	Cond. Size	Cond. Number	Strand Count	Diameter Over Conductor	Insul. Thickness	Jacket Thickness	Approx. OD	Copper Weight	Approx. Weight
	AWG/ Kcmil		No. of Strands	inch	mil	mil	inch	lb/1000ft	lb/1000ft
507665◇	14	1	Solid	0.064	15	5	0.106	12	15
495770◇	12	1	Solid	0.080	15	5	0.122	19	23
484626◇	10	1	Solid	0.101	20	5	0.153	31	37
472001◇	14	1	19	0.070	15	5	0.113	12	16
472050◇	12	1	19	0.088	15	5	0.132	20	24
472100◇	10	1	19	0.113	20	5	0.165	32	38
472159◇	8	1	19	0.141	30	6	0.217	50	63
472209◇	6	1	19	0.177	30	6	0.253	81	95
472258◇	4	1	19	0.225	40	7	0.322	128	153
484667◇	3	1	19	0.252	40	7	0.350	162	190
672386◇	2	1	19	0.282	40	7	0.382	204	235
684084◇	1	1	19	0.322	50	8	0.439	258	301
471979◇	1/0	1	19	0.361	50	8	0.480	326	374
471987◇	3/0	1	19	0.456	50	8	0.574	518	579
677820◇	4/0	1	19	0.512	50	8	0.630	655	723

All dimensions are nominal and subject to normal manufacturing tolerances

◇ Cable marked with this symbol is a standard stock item

Table 2 – Electrical and Engineering Data

Stock Number	Cond. Size	Cond. Number	Min Bending Radius	Max Pull Tension	DC Resistance @ 25°C	AC Resistance @ 75°C	Inductive Reactance @ 60Hz	Allowable Ampacity At 60°C	Allowable Ampacity At 75°C	Allowable Ampacity At 90°C
	AWG/ Kcmil		inch	lb	Ω/1000ft	Ω/1000ft	Ω/1000ft	Amp	Amp	Amp
507665◇	14	1	0.4	32	2.631	3.170	0.058	15	20	25
495770◇	12	1	0.4	52	1.662	2.002	0.054	20	25	30
484626◇	10	1	0.6	83	1.040	1.253	0.050	30	35	40
472001◇	14	1	0.4	32	2.631	3.170	0.058	15	20	25
472050◇	12	1	0.5	52	1.662	2.002	0.054	20	25	30
472100◇	10	1	0.6	83	1.040	1.253	0.050	30	35	40
472159◇	8	1	0.8	132	0.653	0.786	0.052	40	50	55
472209◇	6	1	1.0	209	0.411	0.495	0.051	55	65	75
472258◇	4	1	1.2	333	0.258	0.310	0.048	70	85	95
484667◇	3	1	1.4	420	0.205	0.246	0.047	85	100	115
672386◇	2	1	1.5	530	0.162	0.195	0.045	95	115	130
684084◇	1	1	1.7	669	0.128	0.154	0.046	110	130	145
471979◇	1/0	1	1.9	844	0.102	0.122	0.044	125	150	170
471987◇	3/0	1	2.2	1342	0.064	0.078	0.042	165	200	225
677820◇	4/0	1	2.5	1692	0.051	0.062	0.041	195	230	260

† Ampacities based upon 2023 NEC Table 310.16 and do not take into account the overcurrent protection limitations in NEC 240.4(D) of 15 Amps for 14 AWG CU, 20 Amps for 12 AWG CU, and 30 Amps for 10 AWG CU (independent of the conductor temperature rating and stranding if size is present in table). Also, see NEC sections 310.15 and 110.14(C) for additional requirements.



† Ampacities have been adjusted for more than Three Current-Carrying Conductors.

* Inductive impedance is based on non-ferrous conduit with one diameter spacing.

