

TYPE VNTC TC-ER - POWER CABLE

PVC/Nylon 600 Volt 90°C Overall PVC Jacket

CABLE DATA					
PART NUMBER	SIZE (AWG OR KCMIL)	NUMBER OF CONDS.	OVERALL JACKET THICKNESS (MILS)	APPROX. OUTSIDE DIAMETER (INCHES)	APPROX. WEIGHT (LBS./M FT.)
03-0100	8 AWG	2 FL	60	0.343 x 0.560	180
03-0101	w/10 AWG	3	60	0.595	283
03-0102	Ground	4	60	0.650	352
03-0103	6 AWG	2	60	0.626	299
03-0104	w/8 AWG	3	60	0.665	400
03-0105	Ground	4	60	0.730	506
03-0106	4 AWG	2	60	0.770	434
03-0107	w/8 AWG	3	80	0.820	653
03-0108	Ground	4	80	0.945	828
03-0109	2 AWG	2	80	0.925	676
03-0110	w/6 AWG	3	80	0.985	948
03-0111	Ground	4	80	1.085	1206
03-0112	1 AWG	2	80	1.040	833
03-0113	w/6 AWG	3	80	1.110	1122
03-0114	Ground	4	80	1.220	1562
03-0115	1/0 AWG	2	80	1.125	1099
03-0116	w/6 AWG	3	80	1.195	1436
03-0117	Ground	4	80	1.320	1850
03-0118	2/0 AWG	2	80	1.210	1328
03-0119	w/6 AWG	3	80	1.290	1750
03-0120	Ground	4	80	1.420	2345
03-1120	3/0 AWG	2	80	1.300	1619
03-1121	w/4 AWG	3	80	1.385	2120
03-1122	Ground	4	80	1.535	2750
03-0121	4/0 AWG	2	80	1.420	1962
03-0122	w/4 AWG	3	80	1.515	2610
03-0123	Ground	4	110	1.735	3480
03-0124	250 MCM	2	80	1.525	2896
03-0125	w/4 AWG	3	110	1.630	3190
03-0126	Ground	4	110	1.865	4119
03-0127	350 MCM	2	110	1.865	3200
03-0128	w/3 AWG	3	110	1.985	4150
03-0129	Ground	4	110	2.200	5530
03-0130	500 AWG	2	110	2.035	4029
03-0131	w/2 AWG	3	110	2.170	5980
03-0132	Ground	4	110	2.410	7668

CONDUCTOR DATA				
SIZE (AWG)	STRANDS NO.	PVC INSULATION THICK. (INCHES)	NYLON ARMOR (INCHES)	APPROX. O.D. (INCHES)
8	7	.030	.005	.218
6	7	.030	.005	.251
4	7	.040	.006	.323
2	7	.040	.006	.380
1	19	.050	.007	.437
1/0	19	.050	.007	.478
2/0	19	.050	.007	.521
3/0	19	.050	.007	.568
4/0	19	.050	.007	.626
250	37	.060	.008	.679
300	37	.060	.008	.732
350	37	.060	.008	.777
400	37	.060	.008	.823
500	37	.060	.008	.903
750	61	.070	.009	1.111

SCOPE:

This specification covers the construction requirements for two, three or four conductor cables VW-1 THHN/THWN (PVC/Nylon) insulation with an overall gas/vapor tight and oil resistant Polyvinyl Chloride (PVC) jacket; Underwriters' Laboratories, Inc. listed as TC-ER per UL Standard 1277. These cables also conform to Article 392 "Cable Trays", and Article 336 "Power and Control Cable Type TC" of the 2008 National Electric Code. They meet the requirements of the ICEA T-30-520 flame test as well as the 70,000 BTU "Cable Propagation Test" per IEEE-383 and show reserve capabilities by also passing the ICEA T-29-520 210,000 BTU flame test. Rated 600 Volts, 90°C dry and 75°C wet. They also meet the CSA FT4 and the IEEE 1202 70,000 BTU flame tests.

APPLICATIONS:

UL listed and OSHA acceptable. Recognized for use in Class 1 or 2, Division 2 hazardous locations and for installation in trays, wireways, troughs, channels, ducts and conduit. Specifically approved for direct burial, wet or dry locations and outdoors in cable trays where a sunlight resistant rating is required. Designed to supply power motors, or for connection to other power devices.

CONSTRUCTION:

CONDUCTORS

Bare, soft annealed copper per ASTM B-3.

Sizes 8 thru 2 AWG

Concentric, compressed or compact stranded, class B (7 strands) per ASTM B-8 and UL Table 13.1, or 19 wire combination stranding per ASTM B-787.

Sizes 1 thru 4/0 AWG

Concentric, compressed or compact stranded, class B (19 strands) per ASTM B-8 and UL Table 13.1, or 19 wire combination stranding per ASTM B-787.

Sizes 250 thru 500 KCMIL

Concentric, compressed or compact stranded, class B (37 strands) per ASTM B-8 and UL Table 13.1.

Size 750 KCMIL

Concentric, compressed or compact stranded, class B (61 strands) per ASTM B-8 and UL Table 13.1.

INSULATION:

High dielectric strength polyvinyl chloride:

UL-1581 Table 50.145 (THWN 75°C)

UL-1581 Table 50.155 (THHN 90°C)

Thickness - UL-83 Table 15.5

INSULATION ARMOR:

Nylon - UL-83 paragraph 14.1

Thickness - UL-83 Table 15.8

CABLE ASSEMBLY:

The applicable number of conductors are cabled together with fillers and optional binder tape.

OVERALL JACKET:

A black, gas/vapor tight, flame resistant, VW-1 rated Polyvinyl Chloride (PVC) jacket is applied over the assembly. The surface profile of the jacket shall approximate that of the underlying assembly. A high strength nylon rip cord shall be placed under the jacket to facilitate stripping of the jacket.

CABLE IDENTIFICATION (INK PRINT ON JACKET):

(Size) AWG (or KCMIL)/no. of CDRs. Type TC-ER THHN or THWN CDRs sun resistant and oil resistant, 600 Volts, AIW Corp (or E60749) (UL) Direct Burial FT4/IEEE 1202 (Sequential footage).

COLOR CODING:

Black insulation with ICEA Method 4 printed numbers. See Color Code Charts on page Z16.

CONSTRUCTION OPTIONS:

See pages 8 and 9 for specifications on cables with ground wire. Cables made in accordance with Dupont Spec. SE-33.4 B are also available.

»The data listed above is approximate and subject to change without notice.



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