

# TYPE TC - POWER CABLE - WITH GROUND - 600V

## THHN/THWN-2 CONDUCTORS (6 AWG - 4/0 AWG)

### ENGINEERING SPECIFICATIONS

#### Standards

Underwriters Laboratories® Standard UL-83, UL-1277, UL-1581, UL-1685, UL-2556; Compact Stranded Aluminum Alloy 8000 Series per ASTM B800, ASTM B801, ASTM B836; NFPA 70 (NEC®) Article 336; UL 1685-FT4/IEEE 1202 (70,000 Btu/hr) Flame Test; NEMA WC70/ICEA S-95-658; ICEA T-29-520 (210,000 Btu/hr) Flame Test; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E - 179429



Listing E-179429

### CONSTRUCTION

#### Conductors

Compact Stranded Conductors, Aluminum Alloy 8000 Series per ASTM B800, ASTM B801 and ASTM B836

#### Insulation

High-dielectric strength, heat, and moisture-resistant, colored Polyvinyl Chloride (PVC) rated for continuous use at 90°C dry or wet to meet UL-83 requirements for Type THHN or THWN-2 wire

#### Ground Conductor

Compact Stranded Conductors, Aluminum Alloy 8000 Series per ASTM B800, ASTM B801 and ASTM B836. *Insulated green ground.*

#### Overall Jacket

A flame-retardant, sunlight-resistant black PVC jacket is applied over core.

#### Assembly

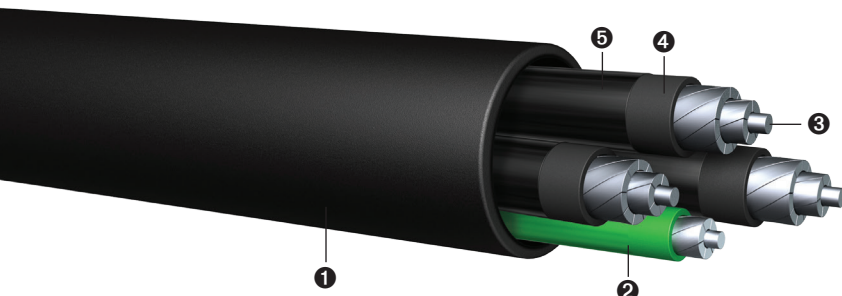
The insulated conductors are cabled together, with an insulated or bare ground and fillers as required, to form a round compact core. Nylon rip-cord is supplied for easy stripping; overall black PVC jacket.

#### Color Coding

Black insulation with ICEA Method 4 printed number

### APPLICATIONS

Primarily used for connect power devices in an commercial and industrial environment. Suitable for installation in electrical channels, ducts, wireways, cable trays, and raceways. Approved for direct burial in wet or dry locations and outdoors in cable trays where sunlight-resistant rating is required. Cable constructed and listed for applications requiring type TC-ER rating. Approved for Class I Division II Hazardous Locations.



- 1 PVC Jacket
- 2 Green Insulated Compact Stranded Ground Conductor, AA-8000 Series (as required)
- 3 Compact Stranded Conductor, AA-8000 Series (Fillers as required)
- 4 PVC Insulation
- 5 Nylon Jacket

Size (AWG)	No. of Conductors	No. of Strands	Size of Green Ground Wire (AWG)	No. of Strands for Ground	Outer Jacket Thickness PVC (in)		Outside Diameter (in)		Approximate Net Weight (lbs/1000 ft)		Allowable Ampacity (Amps) <sup>1</sup>		Standard Packaging (ft)
					3	4	3	4	3	4	75°C	90°C	
6	3	4	7	7	0.060	0.060	0.710	0.778	257	316	50	55	1000' 4000' Reels
4	3	4	7	7	0.080	0.080	0.872	0.965	361	450	65	75	1000' 3000' Reels
3	3	4	7	7	0.080	0.080	0.920	1.020	430	536	75	85	1000' 2000' Reels
2	3	4	7	7	0.080	0.080	0.977	1.086	496	618	90	100	1000' 2000' Reels
1	3	4	8	7	0.080	0.080	1.113	1.238	630	787	100	115	1000' 2000' Reels
1/0	3	4	10	7	0.080	0.080	1.184	1.320	733	908	120	135	1000' 2000' Reels
2/0	3	4	12	7	0.080	0.080	1.260	1.408	865	1070	135	150	500' 1000' 2000' Reels
3/0	3	4	15	7	0.080	0.080	1.350	1.512	1025	1275	155	175	1000' 2000' Reels
4/0	3	4	19	7	0.080	0.080	1.476	1.654	1236	1551	180	205	1000' 1500' Reels

<sup>1</sup> For ampacities see NEC Table 310.15(B)(16) for insulated conductors; not more than three current-carrying conductors in a raceway, cable, or earth (directly buried), based on ambient temperature of 30°C (86°F). NEC Article 310.15(B)(2)(a) for ambient temperature correction factors for temperatures other than 30°C (86°F). NEC Table 310.15(B)(3)(a) for ampacity adjustment factors, as applicable, for more than three current-carrying conductors. NEC Article 110.14(C) for conductor temperature limitations for equipment rated 100 amps or less, or for equipment rated for more than 100 amps. The above data is approximate and subject to manufacturing tolerances.

**PRINT LEGEND:** ENCORE WIRE CORP (SIZE) TYPE TC-ER CABLE THHN OR THWN-2 AA-8000 AL CDRS SUN-RES 600 VOLT DIR-BUR (UL) DATE/TIME/OPER/OC

# TYPE TC - POWER CABLE - WITH GROUND - 600V

## THHN/THWN-2 CONDUCTORS (250 KCMIL - 900 KCMIL)

### ENGINEERING SPECIFICATIONS

#### Standards

Underwriters Laboratories® Standard UL-83, UL-1277, UL-1581, UL-1685, UL-2556; Compact Stranded Aluminum Alloy 8000 Series per ASTM B800, ASTM B801, ASTM B836; NFPA 70 (NEC®) Article 336; UL 1685-FT4/IEEE 1202 (70,000 Btu/hr) Flame Test; NEMA WC70/ICEA S-95-658; ICEA T-29-520 (210,000 Btu/hr) Flame Test; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E - 179429



Listing E-179429

### CONSTRUCTION

#### Conductors

Compact Stranded Conductors, Aluminum Alloy 8000 Series per ASTM B800, ASTM B801 and ASTM B836

#### Insulation

High-dielectric strength, heat, and moisture-resistant, colored Polyvinyl Chloride (PVC) rated for continuous use at 90°C dry or wet to meet UL-83 requirements for Type THHN or THWN-2 wire

#### Ground Conductor

Compact Stranded Conductors, Aluminum Alloy 8000 Series per ASTM B800, ASTM B801 and ASTM B836. *Insulated green ground.*

#### Overall Jacket

A flame-retardant, sunlight-resistant black PVC jacket is applied over core.

#### Assembly

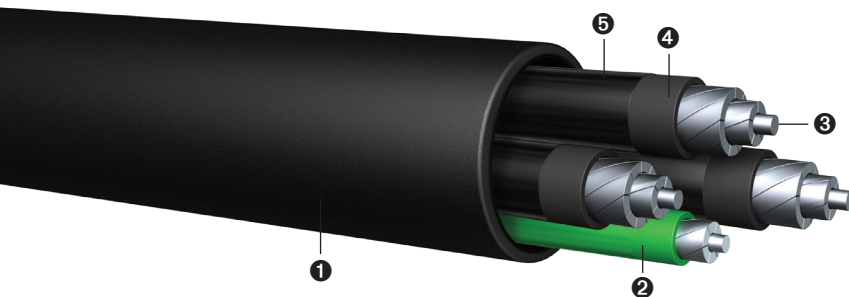
The insulated conductors are cabled together, with a bare ground and fillers as required, to form a round compact core. Nylon rip-cord is supplied for easy stripping; overall black PVC jacket.

#### Color Coding

Black insulation with ICEA Method 4 printed number

### APPLICATIONS

Primarily used for connect power devices in an commercial and industrial environment. Suitable for installation in electrical channels, ducts, wireways, cable trays, and raceways. Approved for direct burial in wet or dry locations and outdoors in cable trays where sunlight-resistant rating is required. Cable constructed and listed for applications requiring type TC-ER rating. Approved for Class I Division II Hazardous Locations.



- 1 PVC Thinwall Jacket
- 2 Green Insulated Compact Stranded Ground Conductor, AA-8000 Series (as required)
- 3 Compact Stranded Conductor, AA-8000 Series (Fillers as required)
- 4 PVC Insulation
- 5 Nylon Jacket

Size (AWG)	No. of Conductors		No. of Strands	Size of Green Ground Wire (AWG)	No. of Strands for Ground	Outer Jacket Thickness PVC (in)		Outside Diameter (in)		Approximate Net Weight (lbs/1000 ft)		Allowable Ampacity (Amps) <sup>1</sup>		Standard Packaging (ft)
						3	4	3	4	3	4	75°C	90°C	
250	3	4	22	2 AWG Insulated Green	7	0.080	0.110	1.608	1.863	1476	1942	205	230	1000' 1500' Reels
300	3	4	21	2 AWG Insulated Green	7	0.110	0.110	1.765	1.974	1794	2230	230	260	1000' 1500' Reels
350	3	4	24	2 AWG Insulated Green	7	0.110	0.110	1.855	2.077	2021	2518	250	280	1000' 1500' Reels
400	3	4	27	1 AWG Insulated Green	8	0.110	0.110	1.961	2.198	2253	2817	270	305	1000' 1500' Reels
500	3	4	34	1 AWG Insulated Green	8	0.110	0.110	2.112	2.369	2689	3366	310	350	1000' 1500' Reels
600	3	4	41	1 AWG Insulated Green	8	0.110	0.110	2.325	2.588	3222	4038	340	355	1000' 1500' Reels
700	3	4	45	1/0 AWG Insulated Green	10	0.110	0.140	2.463	2.815	3654	4696	375	425	1000' 1500' Reels
750	3	4	47	1/0 AWG Insulated Green	10	0.110	0.140	2.530	2.880	3870	4997	385	435	1000' 1500' Reels
900	3	4	58	1/0 AWG Insulated Green	10	0.140	0.140	2.786	3.094	4635	5816	425	480	1000' 1500' Reels

<sup>1</sup> For ampacities see NEC Table 310.15(B)(16) for insulated conductors; not more than three current-carrying conductors in a raceway, cable, or earth (directly buried), based on ambient temperature of 30°C (86°F). NEC Article 310.15(B)(2)(a) for ambient temperature correction factors for temperatures other than 30°C (86°F). NEC Table 310.15(B)(3)(a) for ampacity adjustment factors, as applicable, for more than three current-carrying conductors. NEC Article 110.14(C) for conductor temperature limitations for equipment rated 100 amps or less, or for equipment rated for more than 100 amps. The above data is approximate and subject to manufacturing tolerances.

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