

# TYPE TC-ER SE-R HYBRID CABLE

## THHN/THWN-2 INNERS

### ENGINEERING SPECIFICATIONS

#### Standards

Underwriters Laboratories Standards UL-83, UL-854, UL-1277, UL-1581, UL-2556; ASTM Stranding Class B3, B8, B787; NFPA 70 (NEC®) Article 215, 225, 230, 336 338, 392, 725; NEMA WC70/ICEA S-95-658; UL 1685 Method 2/FT4/IEEE 1202 (70,000 Btu/hr) Flame Test; ICEA T-29-520 (210,000 Btu/hr) Flame Test; Federal Specifications AA59544; NEMA RV 4-2012; ARRA 2009 Section 1605 "Buy American" Compliant; RoHS Compliant; MasterSpec Division 26 Sections 260519, 260523; UL Listing #E-174428; UL Listing #E-179429



### CONSTRUCTION

#### Conductors

7-Strand Class B concentrically stranded per ASTM-B8; 19-Strand combination unilay stranded conductors per ASTM-B787; 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.

#### Insulation

High dielectric strength, heat- and moisture-resistant, black or colored Polyvinyl Chloride (PVC) rated 90°C wet or dry, meeting the requirements of UL-83 for THHN or THWN-2 wire.

#### Ground/Neutral Conductor

Bare, soft-drawn grounding conductor per ASTM-B3, ASTM-B8, or ASTM-B787

#### Assembly

The insulated conductors are cabled together with a bare or insulated ground in one interstice. A glass-reinforced tape is applied over the cabled core.

#### Overall Jacket

Flame retardant, sunlight- and fungus-resistant, black PVC jacket. Sunlight-resistant overall jacket available in all colors by request.

### APPLICATIONS

#### TC-ER SE-R Hybrid

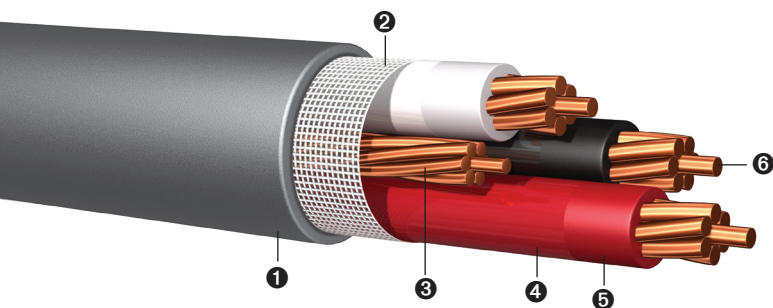
Combined hybrid can be used as TC-ER-JP or SE-R for indoor and outdoor, above ground and underground applications.

#### TC-ER-JP

Primarily used for connecting power devices in commercial and industrial environments. Suitable for installation in 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. Cables constructed and listed for applications requiring TC-ER-JP rating. Approved for Class I Division II Hazardous Locations.

#### SE-STYLE R

For above ground electrical service use from service disconnecting means to remote distribution equipment. Under special conditions as permitted, the National Electrical Code (NEC). Type SE Style R can be used for interior wiring as branch circuit to ranges, ovens, cooking units, or clothes dryers. This cable is manufactured in accordance with the requirements of Underwriters Laboratories Standard 854. Type SE Style R is approved for installation in accordance with Articles 215, 225, 230, and 338 of the NEC and has a 600-volt rating.



- ① PVC Jacket
- ② Glass-Reinforced Tape
- ③ Bare or Insulated Ground Conductors
- ④ Nylon Conductor Jacket
- ⑤ PVC Insulation
- ⑥ Stranded Copper Conductor

Insulated Conductor (AWG)	Insulated Conductor Stranding (No. of Wires)	Ground Wire Size & Stranding (AWG)	Outer PVC Jacket Thickness (in)	Outside Dimensions (in)	Allowable Ampacity (Amps) <sup>1</sup>		Approximate Net Weight (lbs/1000 ft)
					75°C	90°C	
6-6-6	7	6-7	0.060	0.694	65	75	421.53
4-4-4	7	6-7	0.080	0.868	85	95	632.23
3-3-3	7	5-7	0.080	0.945	100	115	787.78
2-2-2	7	4-7	0.080	1.007	115	130	926.53
1-1-1	19	3-7	0.080	1.130	130	145	1,165.43
1/0-1/0-1/0	19	2-7	0.080	1.220	150	170	1,421.65
2/0-2/0-2/0	19	1-19	0.080	1.321	175	195	1,748.26
3/0-3/0-3/0	19	1/0-19	0.080	1.436	200	225	2,147.47
4/0-4/0-4/0	19	2/0-19	0.080	1.565	230	260	2,638.02

<sup>1</sup> Ampacity of conductors are based on the National Electrical Code (NFPA 70) Table 310.16. See 110.14(C), 240.4(D) and 310.15(B) and (C) for other limitations where applicable.

60°C when terminated to equipment for circuits rated 100 amperes or less or marked for size 14 AWG through 1 AWG conductor.

75°C when terminated to equipment for circuits rated over 100 amperes or marked for conductors larger than 1 AWG.

90°C for ampacity derating purposes.

When the neutral is considered current-carrying conductor, the ampacity of 4/C cables shall be reduced by a factor of 0.80 per NEC 310.15(B)(3)(a).

The above data is approximate and subject to normal manufacturing tolerances.

1 AWG THROUGH 4/0 AWG ARE 19 STRANDS PER ASTM B787

PRINT LEGEND: ENCORE\*WIRE\*CORP\*TYPE\*TC-ER-JP\*FOR\*CT\*USE\*DIR-BUR\*SE\*STYLE\*R\*THHN\*OR\*THWN\*CDRS\*600V\*3\*CDRS\*(SIZE)\*CU\*1\*CDR\*(SIZE)\*CU\*(UL)\*(CDR SIZE1)\*-(CDR SIZE2)\*-(CDR SIZE3)\*-(GRD SIZE)\*DATE\*TIME\*OPERATOR\*QC