

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-1685, UL-2556; Compact Stranded Aluminum Alloy 8000 Series per ASTM B800, ASTM B801, ASTM B836; Federal Specifications AA-59544; NFPA 70 (NEC®) Article 230, 336, 338; UL 1685 Method 2/FT4/IEEE 1202 (70,000 Btu/hr) Flame Test; NEMA RV-4; 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-174428; UL 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, 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

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

Overall Jacket

Flame retardant, sunlight- and fungus-resistant, black PVC jacket.

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.

APPLICATIONS

TC-ER SE-R Hybrid

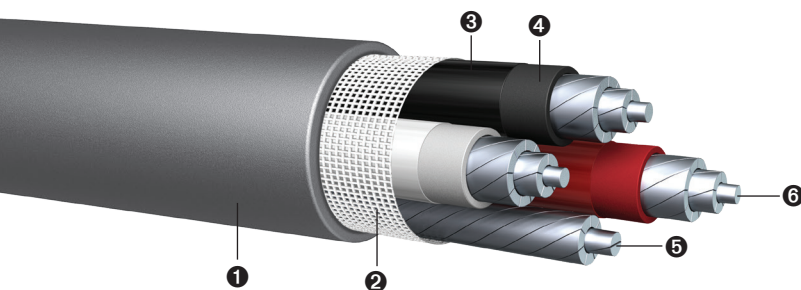
Combined hybrid can be used as TC-ER-JP or SE-R for indoor and outdoor, above ground and underground applications.

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. Approved for Class I Division II Hazardous Locations.

SE-STYLE R

For above ground electrical installations from the service disconnection means, to a remote distribution panel in single-family dwellings, two-family and multi-family dwelling units. Type SE Style R can be used for interior wiring as branch circuits to ranges, ovens, cooking units, or clothes dryers. Type SE Style R is approved for installation in accordance with Articles 215, 225 and 230 of the NEC and has a 600-volt rating.



- 1 PVC Jacket
- 2 Glass-Reinforced Tape Shield
- 3 Nylon Jacket
- 4 PVC Insulation
- 5 Bare or Insulated Ground Conductors
- 6 Compact Stranded Conductor, AA-8000 Series

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Conductor Sizes (Includes Ground) (AWG or KCMIL)	Insulated Conductors		Equipment Grounding Conductors		Outer PVC Jacket Thickness (in)	Outside Diameter (in)	Approximate Net Weight (lbs/1000 ft)	Allowable Ampacity (Amps) ¹			Standard Packaging (ft)
	Sizes (AWG or KCMIL)	No. of Strands	Sizes (KCMIL or AWG)	No. of Strands				60°C	75°C	90°C	
8-8-8	8-8	7	8	7	0.060	0.563	124.95	35	40	45	1000'
6-6-6	6-6	7	6	7	0.060	0.574	157.83	40	50	55	1000'
4-4-6	4-4	7	6	7	0.060	0.676	215.38	55	65	75	1000'
4-4-4	4-4	7	4	7	0.060	0.697	232.29	55	65	75	1000'
2-2-4	2-2	7	4	7	0.060	0.782	297.18	75	90	100	1000'
2-2-2	2-2	7	2	7	0.060	0.811	323.60	75	90	100	1000'
2/0-2/0-1	2/0-2/0	12	1	8	0.080	1.066	566.21	115	135	150	1000'
2/0-2/0-2/0	2/0-2/0	12	2/0	12	0.080	1.106	618.92	115	135	150	1000'
4/0-4/0-2/0	4/0-4/0	19	2/0	12	0.080	1.257	807.96	150	180	205	1000'
4/0-4/0-4/0	4/0-4/0	19	4/0	19	0.080	1.311	889.22	150	180	205	1000'
8-8-8-8	8-8-8	7	8	7	0.060	0.585	153.36	35	40	45	1000'
6-6-6-6	6-6-6	7	6	7	0.060	0.669	205.87	40	50	55	1000'
4-4-4-6	4-4-4	7	6	7	0.060	0.792	288.76	55	65	75	1000'
2-2-2-4	2-2-2	7	4	7	0.080	0.964	437.18	75	90	100	1000'
1-1-1-3	1-1-1	8	3	7	0.080	1.080	544.71	85	100	115	1000'
1/0-1/0-1/0-2	1/0-1/0-1/0	10	2	7	0.080	1.165	643.29	100	120	135	1000'
2/0-2/0-2/0-1	2/0-2/0-2/0	12	1	8	0.080	1.256	763.79	115	135	150	1000'
3/0-3/0-3/0-1/0	3/0-3/0-3/0	15	1/0	10	0.080	1.365	911.17	130	155	175	1000'
4/0-4/0-4/0-2/0	4/0-4/0-4/0	19	2/0	12	0.080	1.482	1,093.88	150	180	205	1000'
250-250-250-3/0	250-250-250	22	3/0	15	0.080	1.633	1,308.23	170	205	230	1000'
300-300-300-4/0	300-300-300	21	4/0	19	0.110	1.814	1,629.06	195	230	260	1000'
6-6-6-6-6	6-6-6-6	7	6	7	0.060	0.741	251.28	40	50	55	1000'
4-4-4-4-6	4-4-4-4	7	6	7	0.080	0.929	394.70	55	65	75	1000'
2-2-2-2-4	2-2-2-2	7	4	7	0.080	1.072	541.34	75	90	100	1000'
1-1-1-1-3	1-1-1-1	8	3	7	0.080	1.203	677.69	85	100	115	1000'
1/0-1/0-1/0-1/0-2	1/0-1/0-1/0-1/0	10	2	7	0.080	1.301	802.49	100	120	135	1000'
2/0-2/0-2/0-2/0-1	2/0-2/0-2/0-2/0	12	1	8	0.080	1.404	954.96	115	135	150	1000'
3/0-3/0-3/0-3/0-1/0	3/0-3/0-3/0-3/0	15	1/0	10	0.080	1.556	1,145.65	130	155	175	1000'
4/0-4/0-4/0-4/0-2/0	4/0-4/0-4/0-4/0	19	2/0	12	0.110	1.721	1,469.70	150	180	205	1000'
250-250-250-250-3/0	250-250-250-250	22	3/0	15	0.110	1.891	1,749.79	170	205	230	1000'
300-300-300-300-4/0	300-300-300-300	21	4/0	19	0.110	2.027	2,031.46	195	230	260	1000'

¹ 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.

8 AWG THROUGH 4/0 AWG ARE 19 STRANDS PER CONDUCTOR

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