

600V PVC/NYLON SHIELDED TRIADS, CPE JACKET STOS Halo-Flex™, TYPE TC-ER-HL

Type TC-ER-HL Instrumentation Cable 600 Volt Copper Conductors PVC/Nylon Insulated Singles, Shielded Triads with Overall Shield STOS. CPE Jacket Heat, Moisture, Oil and Sunlight Resistant, RoHS Compliant, rated for -40°C to 90°C

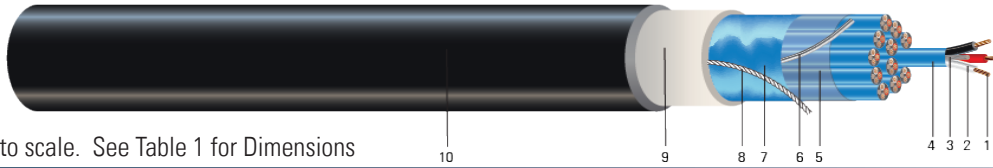


Image not to scale. See Table 1 for Dimensions

CONSTRUCTION:

1. **Conductors:** Class B stranded bare copper per ASTM B3 and B8
2. **Insulation:** Premium Grade Polyvinyl Chloride (PVC) plus nylon. Black, White, Red with alpha-numeric print alternate and inverted on each triad. 1-ONE, 2-TWO, 3-THREE
3. **Drain Wire:** Tinned Copper
4. **Twisted Shielded Triad:** 100% coverage aluminum/polyester foil shield with an individual drain wire shown in step 3
5. **Binder:** Mylar binder
6. **Overall Drain Wire:** Tinned Copper
7. **Overall Shielded:** 100% coverage aluminum/polyester foil shield with an individual drain wire as shown in step 6
8. **Rip Cord:** Rip cord under jacket for ease of removal
9. **Extruded Polymeric Layer:** 60 mils Extruded Polymeric Fill Layer
10. **Jacket:** -40°C Thermoplastic Chlorinated Polyethylene (CPE) Jacket

APPLICATIONS AND FEATURES:

Southwire's Halo-Flex™ 600 Volt Type TC-ER-HL instrumentation cables are suitable for installation as outlined in NEC Article 336 for process control and instrumentation, control circuits for operation and interconnection of protective and signaling devices and for general use in manufacturing, industrial and commercial distribution systems. Cables are constructed with 7-strand copper conductors insulated with nylon covered PVC. The triad conductors are colored black, white, red and alpha-numeric printed. Each pair has an aluminum polyester foil with 100% coverage and a tinned drain wire. The overall assembly is covered with an aluminum polyester foil with 100% coverage and a tinned drain wire. A gas/vapor-tight polymeric sheath is extruded over the assembly. The cable is suited for use in cable trays, raceways, conduit, aerial (when supported with a messenger). The cable is rated for -40°C to 90°C and rated for use in Class I, II, and III, Division 1 and 2 hazardous locations per NEC Article 501, 502, and 503. Listed for exposed runs (TC-ER-HL) per NEC 336.10. "Note: -HL rating is restricted to a maximum overall diameter of 1" per UL and the NEC.

SPECIFICATIONS:

- ASTM B8 - Concentric Lay-Standard Copper
- ASTM B33 - Tinned soft or Annealed Copper
- UL 83 Thermoplastic-Insulated Wires and Cables
- UL 1277 Electrical Power and Control Cable
- UL 66 - Fixture Wire unlisted PVC/Nylon inners are 90°C dry and 75°C wet rated
- UL 1685 - Vertical-Tray Fire Propagation and Smoke-Release Test.
- UL 2225 - Standard for Cables and Cable-Fittings For Use In Hazardous (Classified) Locations



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SPECIFICATIONS:

- IEEE 1202/FT4 - Flame Test 70,000 Btu/hr Vertical Tray
- ABS: Certified for Installation on ABS Units
- MSHA: Passes MSHA Flame Test
- RoHS: Meets the Material Requirements Identified in the RoHS-2 (2011/65/EU) Directive

SAMPLE PRINT LEGEND:

SOUTHWIRE{R} HALO-FLEX{TM} TC-ER-HL E75755 MASTER-DESIGN {UL} 16 AWG SHIELDED XX TRIADS 90°C DRY AND 75°C WET PVCN/CPE TYPE TC-ER HL 600V 90{D}C DRY OIL RES I SUN. RES. ABS. RoHS-2 2011/65/EU COMPLIANT {YYYY} {SEQUENTIAL FOOTAGE MARKS} SEQ FEET

Table 1 – Measurements and Electrical

Stock Code	Cond Size AWG	No. of Triads	Insulation Thickness	Nominal Core OD	Outer Jacket Thickness	Nominal OD	Min Bending Radius	Weight	DC Resistance @ 25°C
			mils	inches	mils	inches	inches	Lbs/MFT	Ω/MFT
679991 [◇]	16	1	20	0.214	45	0.424	1.69	140	4.18
679995 [◇]	16	4	20	0.527	60	0.782	3.13	395	4.18

All dimensions are nominal and subject to normal manufacturing tolerance

[◇] Standard stock item

Typical Electrical Specifications for Each Pair		
Size	Capacitance	Inductance
16 AWG	48.51 pF/ft.	0.0895 μ Henry/ft.

