

SCT
Splice Cover (Dual Wall)
Heat - Shrinkable Tubing

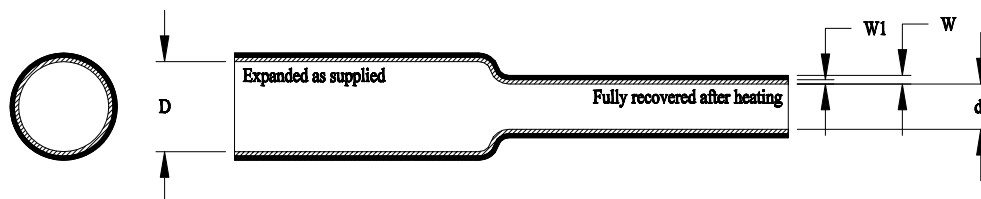


Table 1: Dimensions (mm/inches)

Size	As Supplied	As Recovered		
	Minimum Expanded I.D. (D)	Maximum Recovered I.D. (d)	(remove minimum) Recovered Total Wall (W)	Minimum Recovered Adhesive Wall (W1)
No.1	7.62 (0.300)	1.65 (0.065)	1.52 (0.060) ± .30 (0.012)	.76 (0.030)
No.2	9.02 (0.355)	2.29 (0.090)	1.52 (0.060) ± .30 (0.012)	.76 (0.030)
No.3	11.56 (0.455)	2.54 (0.100)	2.29 (0.090) ± .30 (0.012)	1.40 (0.055)
No.4	17.78 (0.700)	4.45 (0.175)	2.54 (0.100) ± .30 (0.012)	1.52 (0.060)

Color: Jacket shall be black; adhesive liner shall be amber. Marking is SCT-1, SCT-2, SCT-3, SCT-4

Table 2: Properties

Property	Unit	Requirements	Test Method
Dimensions	Inches	Table 1	ASTM D 2671
Tensile Strength	PSI	1500 minimum	ASTM D 2671
Ultimate Elongation	Percent	300 minimum	ASTM D 2671 Speed 2 in./min. Note 1
Secant Modulus (Expanded Form)	PSI	35000 minimum	ASTM D 2671 Speed 2 in./min.
Longitudinal Change	Percent	+0 to -10	ASTM D 2671 Note 1
Concentricity (Expanded Form)	Percent	60 minimum	ASTM D 2671
Dielectric Strength* (Jacket Only)	Volts/mil	500 minimum	ASTM D 149
Volume Resistivity	ohm-cm	10 ¹³ minimum	ASTM D 257

Specification Control Drawing

tyco <i>Electronics</i>	Tyco Electronics Corporation 300 Constitutional Drive Menlo Park, CA 94025 USA	Raychem	Title: SCT Splice Cover (Dual Wall) Heat - Shrinkable Tubing		
	Tyco Electronics reserves the right to amend this drawing at any time. Users should evaluate the suitability of the product for their application		Document No :	SCT	
Cage Code: 06090	Scale: None	Size: A	Rev. Date: 14-Apr-00	Rev.: G	Sheet: 1 of 3

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Properties, (continued)

Property	Unit	Requirements	Test Method
Immersion Leak Resistance	micro-amps	0.25 maximum	Note 2
Thermal Cycling 25 cycles -40°C to 135°C Followed by: Immersion Leak Resistance, Note 2.	micro-amps	0.25 maximum	Note 3
Heat Shock 4 hrs @ 250°C	--	No dripping, flowing, or cracking of jacket	ASTM D 2671
Thermal Aging 1000 hrs @ 150°C Followed by: Immersion Leak Resistance, Note 2.	micro-amps	0.25 maximum	Note 4
Fluid Resistance 24 hrs. @ 25° ± 3°C ASTM Reference Fuel C VV-F-800 Diesel Fuel 24 hrs @ 100°C ± 3°C ASTM #3 Oil	micro-amps	0.25 maximum	Note 5

Qualification Sizes: SCT-2 qualifies SCT-1, -2, and -3.
SCT-4 qualifies SCT-4.

Note 1: Tensile Strength & Secant Modulus
Calculate Tensile Strength and Secant Modulus based on wall thickness of jacket only.

Note 2: Immersion Leak Resistance
a) Size SCT-2
Prepare 3 test assemblies insulated with SCT-2 as follows:
Construct a 2-wire to 2-wire inline splice in any suitable manner (crimped, soldered, twisted, welded). Splice an AWG 18 and an AWG 14 to an AWG 20 and AWG 14. Each wire shall be approximately 12 inches long. The wire insulation shall be crosslinked polyolefin and the conductor shall be bare copper. Shrink a 2-inch length of SCT-2 over the splice area with a Thermogun TG-500A* or equivalent. Apply heat until the SCT-2 is completely recovered on the splice and the adhesive liner flows at both ends. Allow the test assemblies to cool to room temperature and immerse them, except for the ends, in a 5% salt solution for 24 hours at room temperature. Apply 50 volts d-c to the immersed specimens and measure the leakage current.

*available from Raychem

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b) Size SCT-4

Prepare 3 test assemblies with SCT-4 as follows:

Construct a 3-wire to 3-wire to 3-wire inline splice in any suitable manner (crimped, soldered, twisted, welded). Splice three AWG 12 wires to three AWG 12 wires. Each wire shall be approximately 12 inches long. The wire insulation shall be crosslinked polyolefin and the conductor shall be bare copper. Shrink a 3-inch length of SCT-4 over the splice area with a Thermogun TG-500A* or equivalent. Apply heat until the SCT-4 is completely recovered on the splice and the adhesive liner flows at both ends. While the assembly is still hot from the recovery process, press the ends of the SCT-4 together where the wires emerge. Using parallel jaw pliers, align the wires and assure that they are completely coated with adhesive. Allow the test assemblies to cool to room temperature and immerse them, except for the ends in a 5% salt solution for 24 hours at room temperature. Apply 50 volts d-c to the immersed specimens and measure the leakage current.

Note 3: Thermal Cycling

Prepare 3 splice assemblies in accordance with Note 2 and subject them to 25 thermal cycles. One cycle consists of 30 minutes at -40°C and 30 minutes at 135°C with a maximum of 5 minutes between temperatures. Specimens shall be allowed to cool to room temperature for one hour minimum and shall be measured for leakage current in accordance with Note 2.

Note 4: Thermal Aging

Prepare 3 splice assemblies in accordance with Note 2 and hold for 1000hrs at 150C. Specimens shall be allowed to cool to room temperature for one hour minimum and shall be measured for leakage current in accordance with Note 2.

Note 5: Fluid Resistance

Prepare 9 splice assemblies in accordance with Note 2 and immerse 3 assemblies in each of the fluids specified for 24 hours at the specified temperature. Measure leakage current in accordance with Note 2.

Acceptance tests shall consist of:

- Dimensions
- Tensile Strength
- Ultimate Elongation
- Heat Shock

Qualification tests shall consist of all the tests in this Specification Control Drawing.

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