



SSC 100x Series

Solder Splice Connector

Data Sheet

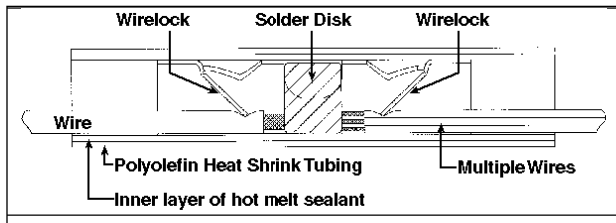
Ingenious, patented design

The 3M™ SSC 100x is a simple, one-piece design. The outer layer is a tube of tinted, translucent, polyolefin heat-shrinkable tubing lined with hot melt sealant, which provides both insulation and a moisture seal, and allows easy inspection of the solder connection. Inside the tubing is a wire-locking metal barrel that holds a fluxed solder disk.

After the wires are inserted and held in place by the barrel wire lock, heat is applied and three events occur:

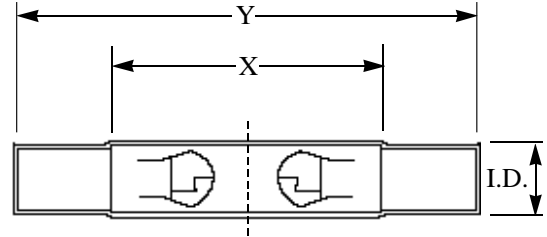
- The solder disk melts and connects the wires.
- Tubing inner wall melts and flows, forming a moisture seal.
- The tough polyolefin outer wall shrinks, forming the electrical insulation.

Construction detail



Product description

3M SSC 100x comes in four sizes, identified by tint color of tubing.



Model	Color	X (in.) nominal	Y (in.) nominal	I.D. (in.) nominal
SSC 1000	Clear	0.57	1.00	0.12
SSC 1001	Red	0.83	1.37	0.18
SSC 1002	Blue	1.00	1.68	0.26
SSC 1003	Yellow	1.25	2.00	0.33

Size selection

The SSC 100x will successfully solder any wire or combination of wires that can be easily inserted. However, successful sealing around the wire bundle is dependent on the size and number of wires. See Tables 1 and 2 for a general guide to sizing. Since these recommendations are based on typical insulation thickness, you may need to experiment with a specific set of wires to find the right SSC 100x for your needs. Remember, however, that 3M Solder Splice Connectors are not tied to specific wire gauges; each reliably splices a wide range of sizes.

Table 1: Single-wire to Single-wire Connections

Part Number	Color	Wire Size (AWG)
SSC 1001	Red	22-16
SSC 1002	Blue	20-14
SSC 1003	Yellow	14-8

(Also applicable for SSC 0501, SSC 0502, and SSC 0503)

Table 2: Multiple wires per Splice End (Also applicable for SSC 0501, SSC 0502, and SSC 0503)

Part No.	Wire Gauge (AWG)										
	28	26	24	22	20	18	16	14	12	10	8
SSC1000	1-3	1-2	1-2	1-2	1						
SSC1001			1-2	1-2	1	1	1	1			
SSC1002				1-3	1-3	1-2	1-2	1	1	1	
SSC1003					1-3	1-3	1-3	1-2	1-2	1	1

Table 3: Typical Properties

Shrinkable sleeve	Translucent cross-linked polyolefin with adhesive/sealant inner liner	Voltage Drop	0 - 1 mV
Solder Preform	43% lead, 43% tin, 14% bismuth with non-corrosive flux.	Dielectric Strength (outer sleeve)	10 kV min.
Barrel	Tin-Plated cartridge brass.	Resistance	0.5 milliohms max.
		Wire pull-out Strength	Wire failure or 125 lbs. min.
		Sealing Performance (immersed in saline)	0.250 micro amps current leakage at 50V DC and 50 milliamp input
		Service Temperature	-55°C to 125°C

Specifications: UL File E165969—UL Approved for selected wire combinations for 600V and 150°C. CSA File LR38227-37. ABS approved (American Bureau of Shipping) Meets requirements of American Boat & Yacht Council, Inc. (ABYC) for wire pull-out strength and moisture resistance. See ABYC Recommended Practices E-8 & E-9.

Limited Warranty – 3M expressly warrants that for a period of ninety days from the date of purchase, 3M static control products will be free of defects in materials (parts) and workmanship (labor). Defects occurring during the warranty period will be repaired or products will be replaced at 3M's option and expense, if 3M receives notice during the warranty period. Defective products must be returned to 3M with proof of purchase date.

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