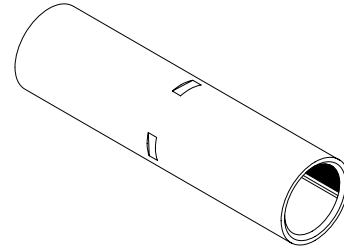




Scotchlok™ Copper Compression Connectors

10000 Series



Data Sheet

1. Product Description

Scotchlok™ Copper Compression Connectors consist of a series of inline connectors from 6 AWG through 1,000 kcmil (MCM) designed for connecting copper conductors. Each connector is tin plated to resist corrosion and can be installed with standard industry tooling. Chamfered ends and cable stops ensure simplicity and ease of installation.

The Scotchlok connectors consist of a series of compression sleeves from 6 AWG through 1,000 kcmil and a series of long-barreled sleeves from 2/0 through 1,000 kcmil.

The connector features are:

- One-piece, seamless tin-plated copper.
- Simple application using readily available tools.
- Cable stops in center of connector.
- Chamfered ends for ease of conductor insertion.
- U.L. Listed, CSA Certified.
- Both standard and long-barrel connectors are available in most sizes.
- U.L. Listed with Burndy, T&B and Anderson crimping tools.

2. Applications

- To splice copper conductors from 6 AWG through 1,000 kcmil.
- Low voltage and high voltage (up to 35 kV).
- For maximum current-carrying requirements, long-barreled connectors are available.

3. Data

Physical and Electrical

The Scotchlok 10000 and 11000 series copper connectors, crimped with approved die sets, can be used on cables with a rated operating temperature of 90°C and an emergency overload rating of 130°C.

The connectors pass the requirements of UL 486A, Underwriters Laboratories standards for safety. The current rating of these connectors meets or exceeds the current rating of the conductor size for which it is intended.

3A.

CONNECTOR DIMENSIONS AND SELECTION GUIDE						
Dimensions in Inches and (Millimeters)						
Scotchlok Connector Number	Conductor Size (AWG or kcmil)	Length	Inside Diameter	Outside Diameter	Chamfer	Color Code
10001	6	1.75 (44,4)	0.19 (5,0)	0.29 (7,3)	0.025 (0,64)	Blue
10002	4	1.75 (44,4)	0.24 (6,2)	0.34 (8,6)	0.025 (0,64)	Grey
10003	2	1.88 (47,7)	0.30 (7,8)	0.41 (10,6)	0.025 (0,64)	Brown
10004	1	1.88 (47,7)	0.35 (9,1)	0.46 (11,7)	0.025 (0,64)	Green
10005	1/0	1.88 (47,7)	0.39 (10,0)	0.51 (13,0)	0.030 (0,76)	Pink
10006	2/0	2.00 (50,8)	0.43 (11,2)	0.56 (14,2)	0.030 (0,76)	Black
11006	2/0	3.13 (79,4)	0.43 (11,2)	0.56 (14,2)	0.030 (0,76)	Black
10007	3/0	2.13 (54,0)	0.49 (12,4)	0.61 (15,7)	0.030 (0,76)	Orange
11007	3/0	3.13 (79,4)	0.49 (12,4)	0.61 (15,7)	0.030 (0,76)	Orange
10008	4/0	2.13 (54,0)	0.54 (13,9)	0.68 (17,4)	0.040 (1,00)	Purple
11008	4/0	3.38 (85,8)	0.54 (13,9)	0.68 (17,4)	0.040 (1,00)	Purple
10009	250	2.25 (57,2)	0.59 (15,1)	0.75 (19,0)	0.040 (1,00)	Yellow
11009	250	3.38 (85,8)	0.59 (15,1)	0.75 (19,0)	0.040 (1,00)	Yellow
10010	300	2.25 (57,2)	0.65 (16,5)	0.81 (20,7)	0.040 (1,00)	White
11010	300	4.13 (104,8)	0.65 (16,5)	0.81 (20,7)	0.040 (1,00)	White
10011	350	2.38 (60,4)	0.70 (17,8)	0.87 (22,2)	0.045 (1,14)	Red
11011	350	4.13 (104,8)	0.70 (17,8)	0.87 (22,2)	0.045 (1,14)	Red
10014	500	2.88 (73,1)	0.83 (21,2)	1.06 (27,0)	0.050 (1,40)	Brown
11014	500	4.63 (117,5)	0.83 (21,2)	1.06 (27,0)	0.050 (1,40)	Brown
10019	750	3.38 (85,8)	1.03 (26,2)	1.29 (33,0)	0.070 (1,80)	Black
11019	750	5.88 (149,3)	1.03 (26,2)	1.29 (33,0)	0.070 (1,80)	Black
10024	1000	3.88 (98,5)	1.17 (29,8)	1.50 (38,1)	0.080 (2,03)	—
11024	1000	6.13 (155,6)	1.17 (29,8)	1.50 (38,1)	0.080 (2,03)	—

Table 1

3B. Crimping/Tool Recommendations

Scotchlok Copper Connector Number	Conductor Size (AWG or kcmil)	CRIMPING TOOL-DIE SETS (NUMBER OF CRIMPS/END)							
		Burdny Corporation				Thomas & Betts Corporation			Square D Co. Anderson Div.
		MD6	MY29	Y34A	Y35, Y39, Y45*, Y46*	TBM5	TBM8	TBM15	VC6-3, VC6-FT**
10001	6	—	6 AWG (1)	—	U5CRT (1)	Blue (1)	Blue (1)	—	Universal (1)
10002	4	W161 (1)	4 AWG (1)	A4CR (1)	U4CRT (1)	Gray (1)	Gray (1)	—	Universal (1)
10003	2	W162 (2)	2 AWG (1)	A2CR (1)	U2CRT (2)	Brown (1)	Brown (1)	33 (1)	Universal (2)
10004	1	—	1 AWG (1)	A1CR (1)	U1CRT (2)	Green (1)	Green (1)	37 (1)	Universal (2)
10005	1/0	W163 (2)	1/0 (1)	A25R (1)	U25RT (1)	Pink (2)	Pink (2)	42 (2)	Universal (1)
10006	2/0	W241 (2)	2/0 (1)	A26R (1)	U26RT (2)	Black (2)	Black (2)	45 (1)	Universal (1)
11006	2/0	W241 (3)	2/0 (2)	A26R (2)	U26RT (3)	Black (3)	Black (3)	45 (2)	Universal (2)
10007	3/0	W243 (2)	3/0 (1)	A27R (1)	U27RT (2)	Orange (2)	Orange (2)	50 (1)	Universal (1)
11007	3/0	W243 (3)	3/0 (2)	A27R (2)	U27RT (3)	Orange (3)	Orange (3)	50 (2)	Universal (2)
10008	4/0	BG (3)	4/0 (1)	A28R (2)	U28RT (2)	Purple (2)	Purple (2)	54H (2)	Universal (2)
11008	4/0	BG (4)	4/0 (2)	A28R (3)	U28RT (3)	Purple (3)	Purple (3)	54H (3)	Universal (3)
10009	250	W166 (3)	250 (1)	A29R (2)	U29RT (2)	Yellow (2)	Yellow (2)	62 (2)	Universal (2)
11009	250	W166 (4)	250 (2)	A29R (3)	U29RT (3)	Yellow (3)	Yellow (3)	62 (3)	Universal (3)
10010	300	—	—	A30R (3)	U30RT (2)	—	White (2)	66 (2)	Universal (2)
11010	300	—	—	A30R (3)	U30RT (3)	—	White (3)	66 (3)	Universal (3)
10011	350	—	—	A31R (2)	U31RT (2)	—	Red (3)	71H (3)	—
11011	350	—	—	A31R (3)	U31RT (3)	—	Red (4)	71H (4)	—
10014	500	—	—	A34R (2)	U34RT (2)	—	Brown (3)	87H (3)	—
11014	500	—	—	A34R (4)	U34RT (3)	—	Brown (4)	87H (4)	—
10019	750	—	—	—	Y39, Y45, Y46: U39RT (3)	—	—	106H (3)	—
11019	750	—	—	—	Y39, Y45, Y46: U39RT (5)	—	—	106H (4)	—
10024	1000	—	—	—	Y45: S44RT (4) Y46: P44RT (4)	—	—	125H (3)	—
11024	1000	—	—	—	Y45: S44RT (6) Y46: P44RT (6)	—	—	125H (4)	—

* Y45 and Y46 accept all Y35 dies ("U" series). For Y45 use PT6515 adapter. For Y46 use PUADP adapter.

** Anderson VC6-3 and VC6-FT require no die set.

Table 2

4. Specifications

Product

Connectors must be constructed of seamless copper and tin plated according to ASTM B545-71, Class Cu/Sn5. They must be available in standard-barrel lengths from 6 AWG through 1,000 kcmil (MCM) and long-barrel lengths from 2/0 through 1,000 kcmil. The connectors when crimped with the approved die sets must have a current-carrying capacity equal to the conductors for which they are rated.

Engineering/Architectural

Connectors shall be crimped with one of the approved die sets according to the engineering information supplied with the connectors (*See Crimping Tool and Die Set Table*). All connections of copper stranded wires in sizes 6 AWG through 1,000 kcmil shall be made electrically and mechanically secure with Scotchlok Copper Compression Connectors. The connectors must have a current carrying capacity equal to or greater than the conductors they are

rated for and must also meet the requirements as listed in U.L. 486A test standards.

5. Performance Tests

A. Physical and Electrical Properties

Material – Connector; Copper, C.D.A.
No. 120

Plating – Tin plated, minimum
thickness 0.0001 inches

Voltage Rating – Low and high voltage
(up to 35 kV)

Current Rating – Same as conductor size
for which connector is
intended.

B. U.L. 486A

Scotchlok connectors crimped with approved die sets pass the tests as found in U.L. 486A, Underwriters Laboratories standard for safety.

6. Installation Techniques

Make connections for Scotchlok compression connectors with the approved crimping tool and die sets as listed in *Table 2*. When inserting conductors, make sure ends are pushed tight against cable stops. When crimping connectors, if more than one crimp per end is required, make initial crimps closest to the center of the connectors and subsequent crimps should progress outward. If any flash or sharp points exist on connectors after crimping, they should be removed or smoothed out.

If the connectors are to be used on insulated conductors (above 600 V), all indents should be filled and the connectors should be “rounded out” with Scotch™ 13 Semi-conducting Tape.

7. Availability

Scotchlok Copper Compression Connectors are available in the quantities shown in *Table 3* and can be ordered from your local authorized 3M™ electrical distributor.

Scotchlok Copper Connector Number	Conductor Size (AWG or kcmil)	Packaging Carton
10001	6	50
10002	4	50
10003	2	25
10004	1	10
10005	1/0	10
10006	2/0	10
11006	2/0	10
10007	3/0	10
11007	3/0	10
10008	4/0	10
11008	4/0	10
10009	250	3
11009	250	3
10010	300	3
11010	300	3
10011	350	3
11011	350	3
10014	500	3
11014	500	3
10019	750	3
11019	750	3
10024	1000	3
11024	1000	3

Table 3

'3M', 'Scotchlok' and 'Scotch' are trademarks of 3M.

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