

3M™ Scotchlok™ Copper/ Aluminum Compression Connectors 20000 Series



Data Sheet

June 2012

Description

3M™ Scotchlok™ Copper/Aluminum Compression Connectors, 20000 Series are made of high conductivity aluminum and are designed to cover a wide range of conductor sizes from 6 AWG through 1000 kcmil (MCM). They are designed to connect either aluminum and/or copper conductors. Each connector is electro-tin plated to resist electrolytic corrosion. They are installed using standard industry tooling. Chamfered ends, and an integral solid center barrier,* ensure simplicity and ease of conductor insertion.

*NOTE: 20001 and 20002 connectors have bore protrusions rather than a solid center barrier.

Agency Approvals and Self Certifications

UL Listed, UL Standard 486A-486-B, File No. E23438

Features

- Simple installation using readily available tools
- Unique integral solid barrier center stop
- Manufactured using high conductivity aluminum
- Color-coded end caps for easy connector identification
- Antioxidant material (compatible with solid insulations) inside connector barrel to facilitate clean conductor to connector contact

Applications

- To connect aluminum and/or copper conductors from 6 AWG through 1000 kcmil (MCM)
- For low and medium voltage up to 35 kV
- For indoor and outdoor use

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Connector Dimensions and Selection Guide

NOTE: All listed connectors are UL Listed.

3M™ Scotchlok™ Connector Number	Conductor Size AWG or kcmil (MCM)	Color Code	Length inches (mm)	I.D. inches (mm)	O.D. inches (mm)
20001	6 AWG	Gray	1.620 (41,14)	.200 (5,08)	.344 (8,73)
20002	4 AWG	Green	2.125 (53,97)	.272 (6,93)	.480 (12,19)
20003	2 AWG	Pink	2.000 (50,80)	.307 (7,79)	.531 (13,48)
20004	1 AWG	Gold	2.000 (50,80)	.350 (8,89)	.531 (13,48)
20005	1/0 AWG	Tan	2.125 (53,97)	.394 (10,00)	.635 (16,12)
20006	2/0 AWG	Olive	2.312 (58,72)	.445 (11,30)	.690 (17,52)
20007	3/0 AWG	Ruby	2.625 (66,67)	.484 (12,29)	.760 (19,30)
20008	4/0 AWG	White	2.750 (69,85)	.547 (13,89)	.875 (22,22)
20009	250 kcmil	Red	2.937 (74,59)	.594 (15,06)	.906 (23,01)
20010	300 kcmil	Dark Blue	3.125 (79,37)	.650 (16,51)	1.000 (25,40)
20011	350 kcmil	Brown	3.380 (85,85)	.720 (18,28)	1.125 (28,57)
20012	400 kcmil	Green	3.750 (95,25)	.762 (19,35)	1.187 (30,14)
20014	500 kcmil	Pink	3.875 (98,42)	.843 (21,41)	1.320 (33,52)
20016	600 kcmil	Black	4.125 (104,77)	.923 (23,44)	1.438 (36,52)
20019	750 kcmil	Yellow	4.680 (118,87)	1.031 (26,18)	1.600 (40,64)
20020	800 kcmil	Light Blue	4.750 (120,65)	1.062 (26,97)	1.652 (42,96)
20024	1000 kcmil	Brown	5.250 (133,35)	1.193 (30,30)	1.847 (46,91)

Typical Properties

Not for specifications. Values are typical, not to be considered minimum or maximum. Properties measured at room temperature 73°F (23°C) unless otherwise stated.

3M™ Scotchlok™ Copper/Aluminum Compression Connectors 20000 Series, when crimped with approved die sets, can be used on cables with an operating temperature of 221°F (105°C) and an emergency overload rating of 284°F (140°C). The connectors pass the requirements of UL486B (Underwriters Laboratories standard for safety). The current rating of these connectors meets or exceeds the current rating of the conductor size for which it is intended.

Tool/Installation Information

Connectors shall be crimped with one of the approved die sets according to the engineering information supplied with the connectors. (Also see Crimping Tool-Die Sets table below). If different crimping tools and die sets are used, consult the tool and die manufacturer.

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Crimping Tool Recommendations

Crimping Tool – Die Sets (Minimum # of Crimps / End)

3M™ Scotchlok™ Connector	Conductor Size AWG or kcmil (MCM)	Burdny Corporation						Thomas & Betts			Kearney
		Die Index	MD6	Y35	Y39	Y45	Y46	TBM5	TBM 8	TBM15	WH2,052
20001	6 AWG	161 346	W161 (1) -----	U161 (1) U6CABT (1)	----- U6CABT (1)	U161 (1) U6CABT (1)	U161 (1) U6CABT (1)	Grey (1)	Grey (1)	29 (1)	5/16 (1)
20002	4 AWG	162 375	W162 (2) -----	U162 (1) U4CABT (1)	----- U4CABT (1)	U162 (1) U4CABT (1)	U162 (1) U4CABT (1)	Green (2)	Green (2)	37 (1)	-----
20003	2 AWG	163 348	W163 (3) -----	U163 (1) U2CABT (1)	----- U2CABT (1)	U163 (1) U2CABT (1)	U163 (1) U2CABT (1)	Gold (2)	Gold (2)	45 (2)	1/2 (2)
20004	1 AWG	163 348	W163 (3) -----	U163 (1) U2CABT (1)	----- U2CABT (1)	U163 (1) U2CABT (1)	U163 (1) U2CABT (1)	Gold (2)	Gold (2)	45 (1)	1/2 (2)
20005	1/0 AWG	BG 243	W-BG (2) W243 (2)	U-BG (2) U243 (1)	----- -----	U-BG (2) U243 (1)	U-BG (2) U243 (1)	Tan (3)	Tan (3)	52 (1)	5/8 (3)
20006	2/0 AWG	297	-----	U26ART (2)	U26ART (2)	U26ART (2)	U26ART (2)	Olive (3)	Olive (3)	58 (2)	5/8-1 (3)
20007	3/0 AWG	167 467	----- -----	U167 (2) U27ART (3)	----- U27ART (3)	U167 (2) U27ART (3)	U167 (2) U27ART (3)	Ruby (3)	Ruby (3)	66 (1)	-----
20008	4/0 AWG	296	-----	U28ART (2)	U28ART (2)	U28ART (2)	U28ART (2)	-----	White (3)	71H (3)	640 (3)
20009	250 kcmil	249	W249 (2)	U249 (1)	-----	U249 (1)	U249 (1)	-----	Red (2)	76 (1)	640 (3)
20010	300 kcmil	251 470	----- -----	U251 (2) U30ART (2)	----- U30ART (2)	U251 (2) U30ART (2)	U251 (2) U30ART (2)	-----	Blue (3)	87H (2)	1 (3)
20011	350 kcmil	299 655	----- -----	U31ART (2) U655 (2)	U31ART (2) -----	U31ART (2) U655 (2)	U31ART (2) U655 (2)	-----	Brown (4)	96 (2)	1 1/8-1 (2)
20012	400 kcmil	472 655	----- -----	U32ART (3) U655 (2)	U32ART (3) -----	U32ART (3) U655 (2)	U32ART (3) U655 (2)	-----	-----	96 (2)	1 1/8-1 (2)
20014	500 kcmil	300 317	----- -----	U34ART (4) U317 (3)	U34ART (4) -----	U34ART (4) U317 (3)	U34ART (4) U317 (3)	-----	-----	106A (2)	1 5/16 (3)
20016	600 kcmil	473 786 936	----- ----- -----	U36ART (3) U786* -----	U36ART (3) ----- U39ART-2(2)	U36ART (3) S786* U39ART-2 (2)	U36ART (3) P786* U39ART-2 (2)	-----	-----	115H (3)	1 5/16 (3)
20019	750 kcmil	608 786 936	----- ----- -----	U608 (2) U786* -----	----- ----- U39ART-2(3)	U608 (2) S786* U39ART-2 (3)	U608 (2) P786* U39ART-2 (3)	-----	-----	125H (4)	1 1/2 (3)
20020	800 kcmil	342 474	----- -----	----- -----	----- -----	S342 (2) S40ART (2)	P342 (2) P40ART (2)	-----	-----	140H (2)	1 1/2 (3)
20024	1000 kcmil	292 302 319 352	----- ----- ----- -----	----- ----- ----- -----	----- ----- ----- -----	S292 (4) S44ART (4) S319 (3) S352 (3)	P292 (2) P44ART (2) P319 (2) P352 (2)	-----	-----	161 (2)	1 3/4 (3)

*Install as many crimps as possible without overlapping.
() Indicates minimum number of crimps for each cable insertion.

Storage

Components of the connectors are not impaired by freezing or overheating due to ambient temperatures found in typical storage or shipping. Normal stock rotation procedures are recommended.

Availability

Please contact your local distributor; available from 3M.com/electrical [Where to Buy] or call 1.800.245.3573.

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