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### Scotchlok™ Y, R, G and B Electrical Spring Connectors

- Color-coded wire connectors with a unique soft shell
- Flexible, yet durable, and provide a compact, fully insulated connection that won't cut or abrade wires
- Torque fins are engineered to provide a comfortable and secure grip
- Installation fast and back-off easy



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### 3M™ 212, 312, 512 and 512G Electrical Spring Connectors

- Quick-spin, wing-torque design of 312 and 512 Electrical Spring Connectors is easy on your fingers. Generous expansion room accommodates a wide range of solid or stranded wire
- Use 512G (green) for grounding connections
- The 212 connector combines 3M quality and economy into one connector
- Features a tough, impact-resistant, thermoplastic insulator



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### Highland™ Wire Connectors

- Economical and reliable
- Quick and easy to match the right connector to the size of the wire
- Shells are designed to withstand temperatures up to 221°F (105°C)
- Highland color-coded wire connectors are UL Listed, CSA Certified, and work equally well with either solid or stranded wire



















**DON'T FORGET!**

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Identifying	
Wire Identification	pg. 110
Splicing	
Heat Shrink	pg. 132



# Specification Information for 3M™ Spring Connectors

Connector	Features/ Description	Maximum Voltage Rating	Wire Range* AWG (mm <sup>2</sup> )	Temperature Rating	UL, CSA or CE Certified	Suggested Tools
3M O/B+	 Flexible skirt w/square wire	600V (1000V in signs, lighting fixtures and luminaries)	2#22-2#12 3#14 (1,0 mm <sup>2</sup> -5,0 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	WCD-P WCD-H
3M R/Y+	 Flexible skirt w/square wire	600V (1000V in signs, lighting fixtures and luminaries)	2#18-2#8 5#12 (2,0 mm <sup>2</sup> -16,0 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	WCD-P WCD-H
3M B/G+	 Flexible skirt w/square wire	600V (1000V in signs, lighting fixtures and luminaries)	4#14-2#6-3#8 (10,0 mm <sup>2</sup> -31,6 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	—
Scotchlok™ R	 Insulated w/vinyl skirt and live spring	600V (1000V for signs, lighting fixtures and luminaries)	9#18, 4-6#16, 2-5#14, 2-5#12, 1-3#10 (5,0-16,0 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	WCD-P WCD-H
Scotchlok Y	 Insulated w/vinyl skirt and live spring	600V (1000V for signs, lighting fixtures and luminaries)	5-8#22, 4-6#20, 2-5#18, 2-3#16, 1-3#14, 1-2#12, 1#10 (2,0-17,5 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	WCD-P WCD-H
Scotchlok B	 Insulated w/vinyl skirt and live spring	600V (1000V for signs, lighting fixtures and luminaries)	3-6#12, 2-6#10, 2-3#8, 1-2#6 stranded (12,0-36,0 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	—
Scotchlok G	 Insulated w/vinyl skirt and live spring	600V (1000V for signs, lighting fixtures and luminaries)	3-7#14, 2-6#12, 2-4#10, 2#8 (8,0-24,0 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	WCD-P WCD-H
3M 212	 Insulated electrical connector w/live spring	600V (1000V for signs, lighting fixtures and luminaries)	1#16 to 1#22, 3#12, 4#14 (5,0-16,0 mm <sup>2</sup> )	221°F (105°C)	UL CE †	WCD-P WCD-H
3M 312	 Nylon Insulated w/live spring	600V (1000V for signs, lighting fixtures and luminaries)	5-7#22, 3-6#20, 2-6#18 2-6#16, 1-4#14, 1-3#12 (1-5-10,0 mm <sup>2</sup> )	221°F (105°C)	UL SP †	WCD-P WCD-H
3M 512	 Nylon insulated w/live spring	600V (1000V for signs, lighting fixtures and luminaries)	2-10#18, 2-7#16, 1-6#14, 1-5#12, 1-3#10, 1-2#8, 1#6 (2,0-16,0 mm <sup>2</sup> )	221°F (105°C)	UL SP †	WCD-P WCD-H
3M 512G	 Nylon insulated grounding connector	600V (1000V for signs, lighting fixtures and luminaries)	2-5#14, 2-5#12, 2-3#10, 1#14 w/ 1-4#12, 2#14 w/1-3#12, 3#14 w/2 or 3 #12, 4#14 w/1#12, 1#14 w/1-3#10, 2#14 w/1 or 2#10, 3#14 w/1#10, 1#12 w/1 or 2#10, 2#12 w/1#10 (4,0-15,0 mm <sup>2</sup> )	221°F (105°C)	UL SP †	—
Highland™ H-29	 Easy-grip shell/ general use	300V	22-16 AWG [One 22 AWG/One 20 AWG Min.] [Two 16 AWG Max.] (1-5-2,5 mm <sup>2</sup> )	221°F (105°C)	UL SP	—
Highland H-30	 Easy-grip shell/ general use	300V	22-16 AWG [Three 20 AWG Min.] [Three 16 AWG Max.] (1,5-3,0 mm <sup>2</sup> )	221°F (105°C)	UL SP	—
Highland H-31	 Easy-grip shell/ general use	600V (1000V in signs, lighting fixtures and luminaries)	18-14 AWG [Two 18 AWG Min.] [Two 14 AWG Max.] (2,0-4,0 mm <sup>2</sup> )	221°F (105°C)	UL SP	—
Highland H-33	 Easy-grip shell/ general use	600V (1000V in signs, lighting fixtures and luminaries)	18-12 AWG [Two 18 AWG Min.] [Three 14 AWG Max] (2,0-0,5 mm <sup>2</sup> )	221°F (105°C)	UL SP	—
Highland H-35	 Easy-grip shell/ general use	600V (1000V in signs, lighting fixtures and luminaries)	18-10 AWG [Three 18 AWG Min.] [Three 10 AWG Max.] (2,5-16,0 mm <sup>2</sup> )	221°F (105°C)	UL SP	—

\*For information on additional Cu wire connections, refer to package or consult 3M technical service.

† UL Listed E23438 and CSA Certified LR15503



## Ordering Information for 3M™ Spring Connectors

Product Number	UPC (054007-)	Inner Unit Pack	Case Qty. (connectors) Distributor Order Qty.
3M™ O/B+	43152	100/box	1,000 box
	43153	500/jug	10,000 bulk
3M R/Y+	43154	100/box	1,000 box
	43155	500/jug	4,000 bulk
3M B/G+	43150	50/box	500 box
	43151	250/jug	2,000 bulk
Scotchlok™ R	20058	100/box	1,000 box
	70489	500/bag	5,000 bulk
Scotchlok Y	20041	100/box	1,000 box
	15769	500/bag	10,000 bulk
Scotchlok B	42033	50/box	500 box
Scotchlok G	21346	100/box	1,000 box
	70488	500/bag	2,500 bulk
3M 212 (Tan)	11792	100/box	1,000 box
	13202	500/bag	10,000 bulk
3M 312 (Yellow)	08159	100/box	1,000 box
	08160	500/bag	10,000 bulk
3M 512 (Red)	08161	100/box	1,000 box
	08162	500/bag	10,000 bulk
3M 512G (Green)	49950	50/box	500 box
	50232	500/bag	10,000 bulk
Highland™ H-29 (Gray)	43133	100/box	1,000 box
	43134	—	1,000 bin
	43135	—	25,000 keg (loose)
Highland H-30 (Blue)	43122	100/box	1,000 box
	43123	—	1,000 bin
	43124	—	10,000 keg (loose)
Highland H-31 (Orange)	43117	100/box	1,000 box
	43118	500/bag	10,000 bulk
	43119	—	1,000 bin
	43120	—	10,000 keg
Highland H-33 (Yellow)	43136	100/box	1,000 box
	43138	500/bag	5,000 bulk
	43137	—	1,000 bin
	43139	—	5,000 keg
Highland H-35 (Red)	49764	100/box	1,000 box
	49765	250/bag	2,500 bulk
	49766	—	1,000 bin



### 3M WCD Wire Connector Drivers

- For multiple connecting jobs, these drivers quickly spin on the connector and position the wire bundle
- Fits 3M Performance Plus connectors, 3M 212, 312 and 512 connectors, and Scotchlok Y, R and G connectors
- WCD-H is a hand driver. WCD-P is a power driver that fits a standard chuck

## Specification and Ordering Information for 3M Application Tools

Product Number	Description	Application	UPC (054007-)	Inner Unit Pack	Case Qty.
WCD-P	Power driver using a standard chuck, drill or screw driver	Tools for 3M O/B+, R/Y+, Scotchlok Y, R, G and 3M 212, 312, and 512.	49919	—	10
WCD-H	Hand driver	Tools for 3M O/B+, R/Y+, Scotchlok Y, R, G and 3M 212, 312, and 512.	49948	—	10



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















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3M R/Y+	 Flexible skirt w/square wire	600V (1000V in signs, lighting fixtures and luminaries)	2#18-2#8 5#12 (2,0 mm <sup>2</sup> -16,0 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	WCD-P WCD-H
3M B/G+	 Flexible skirt w/square wire	600V (1000V in signs, lighting fixtures and luminaries)	4#14-2#6-3#8 (10,0 mm <sup>2</sup> -31,6 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	—
Scotchlok™ R	 Insulated w/vinyl skirt and live spring	600V (1000V for signs, lighting fixtures and luminaries)	9#18, 4-6#16, 2-5#14, 2-5#12, 1-3#10 (5,0-16,0 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	WCD-P WCD-H
Scotchlok Y	 Insulated w/vinyl skirt and live spring	600V (1000V for signs, lighting fixtures and luminaries)	5-8#22, 4-6#20, 2-5#18, 2-3#16, 1-3#14, 1-2#12, 1#10 (2,0-17,5 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	WCD-P WCD-H
Scotchlok B	 Insulated w/vinyl skirt and live spring	600V (1000V for signs, lighting fixtures and luminaries)	3-6#12, 2-6#10, 2-3#8, 1-2#6 stranded (12,0-36,0 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	—
Scotchlok G	 Insulated w/vinyl skirt and live spring	600V (1000V for signs, lighting fixtures and luminaries)	3-7#14, 2-6#12, 2-4#10, 2#8 (8,0-24,0 mm <sup>2</sup> )	221°F (105°C)	UL SP CE †	WCD-P WCD-H
3M 212	 Insulated electrical connector w/live spring	600V (1000V for signs, lighting fixtures and luminaries)	1#16 to 1#22, 3#12, 4#14 (5,0-16,0 mm <sup>2</sup> )	221°F (105°C)	UL CE †	WCD-P WCD-H
3M 312	 Nylon Insulated w/live spring	600V (1000V for signs, lighting fixtures and luminaries)	5-7#22, 3-6#20, 2-6#18 2-6#16, 1-4#14, 1-3#12 (1-5-10,0 mm <sup>2</sup> )	221°F (105°C)	UL SP †	WCD-P WCD-H
3M 512	 Nylon insulated w/live spring	600V (1000V for signs, lighting fixtures and luminaries)	2-10#18, 2-7#16, 1-6#14, 1-5#12, 1-3#10, 1-2#8, 1#6 (2,0-16,0 mm <sup>2</sup> )	221°F (105°C)	UL SP †	WCD-P WCD-H
3M 512G	 Nylon insulated grounding connector	600V (1000V for signs, lighting fixtures and luminaries)	2-5#14, 2-5#12, 2-3#10, 1#14 w/ 1-4#12, 2#14 w/1-3#12, 3#14 w/2 or 3 #12, 4#14 w/1#12, 1#14 w/1-3#10, 2#14 w/1 or 2#10, 3#14 w/1#10, 1#12 w/1 or 2#10, 2#12 w/1#10 (4,0-15,0 mm <sup>2</sup> )	221°F (105°C)	UL SP †	—
Highland™ H-29	 Easy-grip shell/ general use	300V	22-16 AWG [One 22 AWG/One 20 AWG Min.] [Two 16 AWG Max.] (1-5-2,5 mm <sup>2</sup> )	221°F (105°C)	UL SP	—
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WCD-H	Hand driver	Tools for 3M O/B+, R/Y+, Scotchlok Y, R, G and 3M 212, 312, and 512.	49948	—	10