

3M™ Wire Connectors

Reliable, high performing solutions
for every wire connecting application.



Our idea is simple:

You can never be too well-connected on the job

The best connectors do more than fit the application. They also fit your hand. They feel good to use. At 3M, we design connectors that are as comfortable and easy to use as they are dependable.

Our complete line provides a wide range of connector choices. Simply choose the connector that fits your personal preference as well as the application. We give you plenty of choices.

Start with the unique 3M™ O/B+, R/Y+ and B/G+ Wire Connectors. See just how easy it is to work with three sizes instead of seven and still cover the entire 600 volt copper

wire range. The Scotchlok™ connectors are our original color-coded line of wire connectors designed with features requested by electricians. 3M 212, 312, 512 and 512G Wire Connectors are suited for regular or low-voltage systems in construction, industrial, maintenance, OEM, or irrigation applications. Highland™ wire connectors offer an affordable alternative with no compromise to quality.

It's all here—right at your fingertips—with 3M's family of easy to use, versatile, and highly reliable wire connectors.



Installation of the 3M™ R/Y+ Wire Connector is smooth, fast and easy on the hands. 2



The 3M O/B+ Wire Connector's compact size is the best solution for fixture wiring applications where space is a problem. 3



Three 3M "plus" Wire Connectors replace seven of the other guy's connectors. 4

3M "Performance Plus" Connector: Three sizes do the job of seven



Because of their increased wire range, just three "Performance +" Wire Connectors handle the work of seven standard connectors. O/B+ replaces the orange, blue and gray wire nut style connectors, as well as 70% of the yellow wire nut and wing style connectors. R/Y+ replaces both red and yellow wing style connectors. B/G+ covers both the large blue and gray connectors. This simplifies selection of the right connector for a wide range of wiring jobs. There's also less inventory to manage, and a better chance you'll have the connectors you need to do every job.

In addition, they are exceptionally easy to handle. Their one-of-a-kind design incorporates a flexible skirt and a rigid top. The flexible skirt covers over-strips and protects conductors, yet conforms to whatever space is available in a box.

This exclusive feature allows O/B+, R/Y+ and B/G+ connectors to provide maximum protection and fit inside even the most crowded electrical boxes.

The rounded wings on the rigid top make 3M wire connectors exceptionally easy to handle. Twisting the connector—on or off—is easier than ever. That means fast installation and less wear and tear on your fingers.

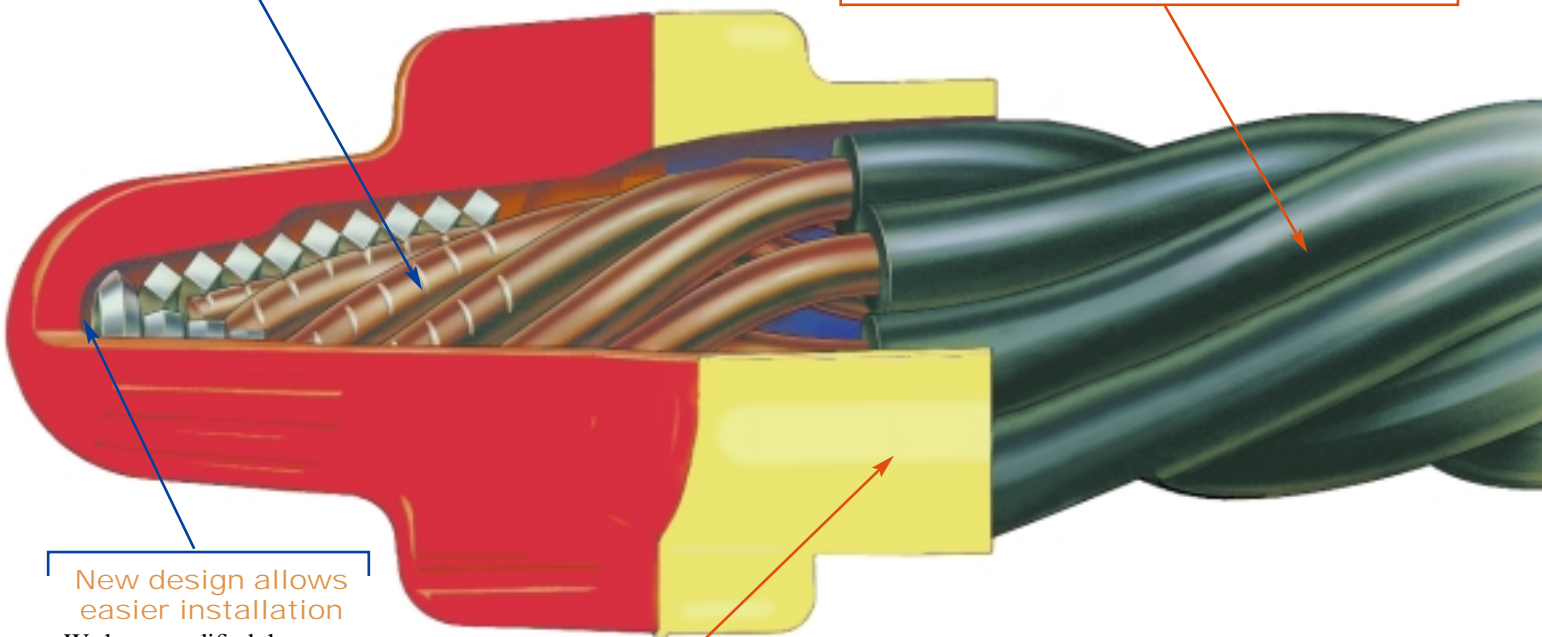
Inside, the unique spring grips quickly, turns on fast and expands to accept a wide range of wire sizes. It bites into conductors for solid, secure connections. The 3M "plus" connectors also feature a large, funnel-shaped throat design. The connectors meet UL max-fill requirements. All O/B+, R/Y+ and B/G+ wire combinations are UL listed for 600 volts on copper wire.

A better bite for a better connection

3M™ O/B+, R/Y+ and B/G+ Wire Connectors now have a better bite. Wires feed better into the connector improving the security of the connection and increasing the level of pull out.

A broad wire range reduces inventory

The versatility of 3M “plus” Wire Connectors saves time on the job and reduces inventory. Three 3M connectors replace seven of the other guy’s connectors: O/B+ replaces orange, blue, gray and 70% of yellow connectors; R/Y+ replaces red and yellow connectors; and the B/G+ replaces blue and gray connectors.



New design allows easier installation

We have modified the internal design of the 3M O/B+, R/Y+ and B/G+ Wire Connectors. Installation is smooth, fast and easy on the hands.

Flexible skirt provides safety

The flexible skirts on the 3M O/B+, R/Y+ and B/G+ Wire Connectors make your customer’s workplace a safer environment. The flexible skirt provides protection against potential shock situations.

3M™ O/B+, R/Y+ and B/G+ Connector Ordering Information

Product	Box	Bulk Container
O/B+	100 connectors/box 10 boxes/case 1,000 connectors/case	500 connectors/container 20 containers/case 10,000 connectors/case
R/Y+	100 connectors/box 10 boxes/case 1,000 connectors/case	500 connectors/container 8 containers/case 4,000 connectors/case
B/G+	50 connectors/box 10 boxes/case 500 connectors/case	250 connectors/container 8 containers/case 2,000 connectors/case

3M™ O/B+, R/Y+ and B/G+ Wire Range Capabilities*

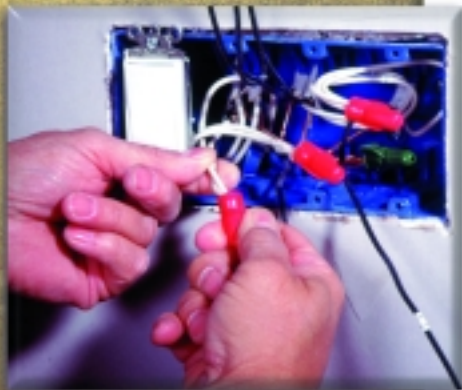
Combination	2#22	2#20	2#18	2#16	2#14	2#12	4#14	3#12	6#14	4#12	3#10	5#12	2#8	6#12	4#10	5#12
Cir. Mils	1,284	2,044	3,248	5,166	8,214	13,060	16,428	19,590	24,642	26,120	31,140	32,650	33,020	39,180	41,520	51,900
3M O/B+	[Bar chart showing capabilities for 3M O/B+ connector]															
3M R/Y+	[Bar chart showing capabilities for 3M R/Y+ connector]															
3M B/G+	[Bar chart showing capabilities for 3M B/G+ connector]															
Gray 71B	[Bar chart showing capabilities for Gray 71B connector]															
Blue 72B	[Bar chart showing capabilities for Blue 72B connector]															
Orange 73B	[Bar chart showing capabilities for Orange 73B connector]															
Yellow 74B	[Bar chart showing capabilities for Yellow 74B connector]															
Red 76B	[Bar chart showing capabilities for Red 76B connector]															
Tan 341	[Bar chart showing capabilities for Tan 341 connector]															
Yellow 451	[Bar chart showing capabilities for Yellow 451 connector]															
Red 452	[Bar chart showing capabilities for Red 452 connector]															
Gray 342	[Bar chart showing capabilities for Gray 342 connector]															
Blue 454	[Bar chart showing capabilities for Blue 454 connector]															

* For additional wire combinations, please call 512-984-5555.

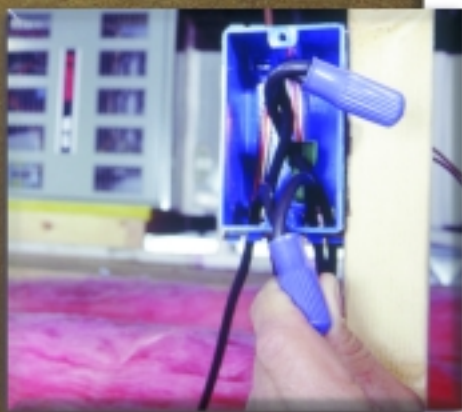
3M™ Scotchlok™ Y, R, G and B Connectors: the color-coded originals



5 The live-action spring of the 3M™ Scotchlok™ Electrical Spring Connectors delivers reliable, vibration-resistant connections over a wide range of wire combinations.



6 The Scotchlok connector's flared skirt makes wire insertion easier and protects against shorts and shiners.



7 The ribs on the Scotchlok B connector provide a comfortable and secure grip that make for a fast installation.

Flexible Scotchlok Y, R, G and B Electrical Spring Connectors

Scotchlok Y, R, G and B Electrical Spring Connectors are the original color-coded wire connectors designed with the features electricians request. They're flexible yet durable with an outer insulator that gives you a compact, fully insulated connection that won't cut or abrade wires. The Y, R, and G torque fins are engineered to provide a comfortable and secure grip that makes installation fast and back-off easy.

These four spring connectors have a corrosion-resistant steel inner shell to strengthen them while permitting spring expansion and contraction due to temperature changes. The live-action spring delivers reliable, vibration-resistant connections over a wide range of wire combinations from 2 #18 through 3 #8 copper AWG. A deep, flared skirt makes wire insertion easier and protects against shorts and shiners. Finally, the design and a flexible base let Scotchlok connectors bend with the wires you're slicing to fit easily into tight places.

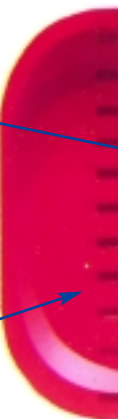
Scotchlok™ Wire Range Capabilities*

	2#18	3#16	2#14	2#12	3#12	5#12	4#10	2#6
Scotchlok Y	Yellow bar							
Scotchlok R		Red bar						
Scotchlok G			Grey bar					
Scotchlok B				Blue bar				

* For additional wire combinations, please call 512-984-5555.

Steel Inner Shell
Corrosion-resistant shell strengthens connector while allowing spring expansion/contraction due to temperature changes.

Flexible Outer Insulator
Gives you a compact, durable, fully-insulated connection that won't cut or abrade wires.



Sturdy 3M Scotchlok Electrical Crimp Sleeve and Closed End Connectors

UL Listed and CSA Certified, Scotchlok electrical crimp sleeve connectors make fast work of splicing 22 to 10 AWG copper conductors. The S-60 open-ended, non-insulated copper crimp sleeve connector is specially designed for fast pigtail grounding. Smooth flared entry makes wire insertion fast—simply twist conductors

together and crimp. The S-11 and S-31 (copper), and MN14CEC/ST (steel) and MN10CEC/ST (steel) are insulated, closed-end crimp sleeve connectors. With a rugged, yet resilient nylon insulator, use these connectors in light fixtures, appliances and other electrical OEM applications.



8

Easy to Use

Human engineered torque fins provide a comfortable and secure grip for fast installation and easy back-off.

Live Inner Spring

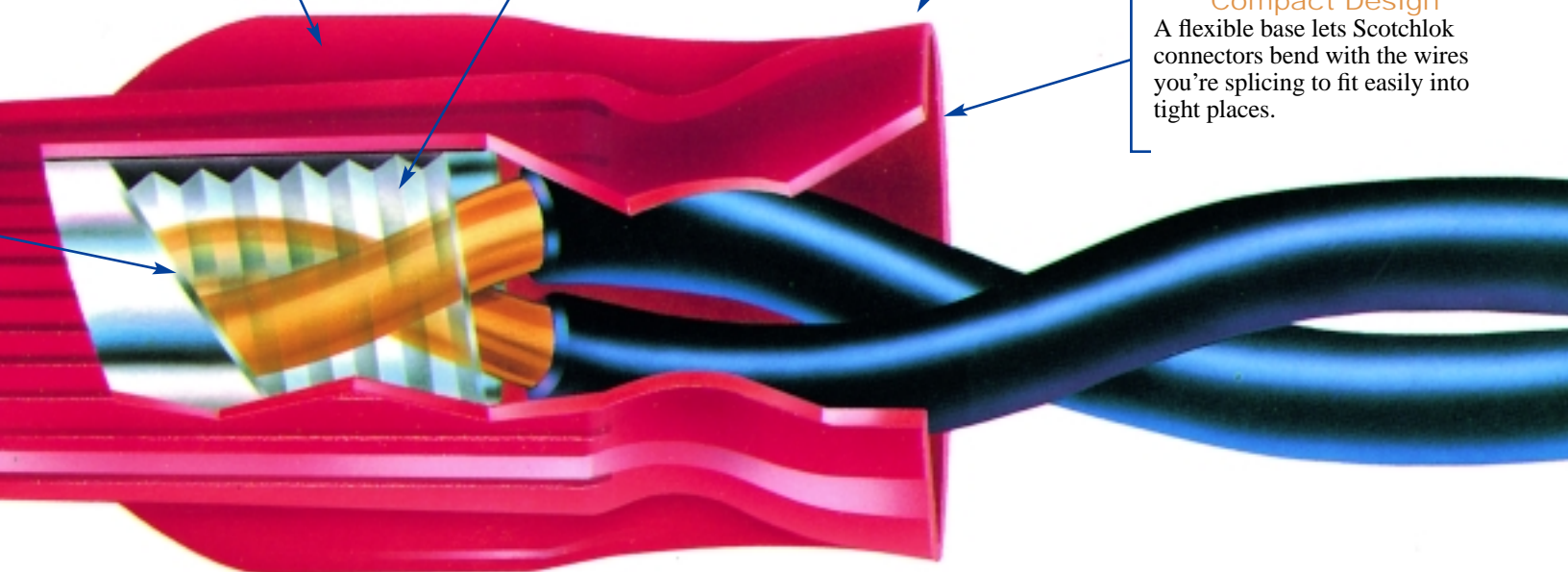
Tightly grips even small combinations and expands readily to accept a wide range of wire sizes.

Deep Flared Skirt

Makes wire insertion easier and protects against shorts and shiners.

Compact Design

A flexible base lets Scotchlok connectors bend with the wires you're splicing to fit easily into tight places.



3M™ 212, 312, 512 and 512G Connectors offer choices for reliability that feel just right



The quick-spin, wing-torque design of the 3M™ 212, 312, 512 and 512G Electrical Spring Connectors makes installation easy on your fingers. 9



Highland™ Color-Coded Wire Connectors make it quick and easy to match the right connector to the size of the wire. 10

For regular or low-voltage systems, in construction, industrial maintenance or OEM, 3M™ connectors are the answer—right at your fingertips.

Nylon-insulated 312 and 512 electrical spring connectors

The quick-spin, wing-torque design of 312 and 512 electrical spring connectors is easy on your fingers. The day's last connection will feel almost as good as the first. Generous expansion room accommodates a wide range of solid or stranded wire bundles. Use the 312 (yellow) connector for wire combinations from 3 #20 to 3 #12 copper AWG and the 512 (red) connector for 2 #18 to 5 #12 copper AWG. The 512G (Green) is used for grounding connections.

Economical 212 electrical spring connectors

The 212 connector combines 3M quality, plus economy, into one connector. Designed for speed and efficiency, 212 connectors spin on quickly and tighten down easily. They're engineered for easy back-off, too. The live inner spring action delivers uniform holding power on common #22 to #10 AWG copper wire combinations. The 212 connector is UL Listed and features a tough, impact-resistant thermo-plastic insulator.

Highland™ Connectors: Color-Coded Wire Connectors

Color-coded for general wiring use

Highland color-coded wire connectors make it quick and easy to match the right connector to the size of the wire.

The 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 copper wire. H-29 and H-30 connectors are rated to 300V. H-31, H-33 and H-35 connectors are rated to 600V maximum in building wire; 1000V maximum in signs or lighting fixtures (luminaires).

Highland™ Color-Coded Wire Connector Ordering Information

Product No.	Wire Range*	Size
H-29 (Gray)	22-16 AWG (Three to Five #22 AWG; Two to Four #20 AWG; Two or Three #18 AWG; Two #16 AWG)	71B
H-30 (Blue)	22-16 AWG (Five #22 AWG; Three to Five #20 AWG; Two to Four #18 AWG; Two or Three #16 AWG; One #14 AWG w/One #16 AWG)	72B
H-31 (Orange)	22-14 AWG (Five #22 AWG; Three to Five #20 AWG; Two to Five #18 AWG; Two or Three #16 AWG; Two #14 AWG)	73B
H-33 (Yellow)	22-12 AWG (Four or Five #22 AWG; Three to Five #20 AWG; Two to Seven #18 AWG; Two to Four #16 AWG; Two or Three #14 AWG; Two #12 AWG)	74B
H-35 (Red)	18-10 AWG (Three to Nine #18 AWG; Two to Six #14 AWG; Two to Four #12 AWG; Two or Three #10 AWG)	76B

3M Direct Bury Splice Kits

Our DBY, DBY-6, DBR and DBR-6 Kits are the fastest method of reliable underground splice protection. Specially designed plastic insulator tube comes pre-packaged containing gel. Just slide your connection (Scotchlok Y or R Connectors only) into the insulator

tube, close and bury. With 3M Direct Bury Splice Kits, there's no mixing, no mess. DBY & DBR are to be used on connections of 30 Volts maximum. DBY-6 & DBR-6 are UL Listed up to 600 volts. They are also UL Listed for submersion and rain tight situations.



13

3M WCD Wire Connector Drivers

These application tools for 3M O/B⁺, R/Y⁺, 212, 312 and 512, and Scotchlok™ Y, R, and G connectors quickly spin on the connector and position the wire bundle in the box. The WCD-H is a hand driver and the WCD-P is a power driver that fits a standard chuck.



⚠ WARNING

Turn power off before installing or removing terminal or connector. All work should be done according to appropriate electrical codes.

12

Connectors applications: the possibilities are endless

Here are just a few of the general categories and applications for the 3M family of wire connectors.

Recreational equipment	OEM	The 3M™ Family of Connectors
Motor homes	Appliances	3M “Plus” Connectors
Trailer hitches	Lighting fixtures	O/B+, R/Y+, B/G+
	Lamps	Scotchlok™ Connectors
Automotive	Vacuums	Y, R, G, B
After market equipment	Air conditioning	3M Connectors
Security systems	Underground splicing	212, 312, 512, 512G
Residential construction	Landscape lighting	Highland™ Color-Coded Connectors
Branch circuit wiring	Irrigation	H-29, H-30, H-31, H-33, H-35
Security systems	Golf course maintenance	Scotchlok Crimp Sleeve and Closed End Connectors
Ballast lighting	Manufacturing	S-11, S-31, S-60
Fans and fixtures	OEM equipment	3M Connector Tools
Commercial construction	Equipment maintenance	WCD-P, WCD-H
Branch circuit wiring		3M Direct Bury Splice Kits
Motors and relays		DBY, DBR, DBY-6, DBR-6
Fire alarm systems		
Industrial		
Branch circuit wiring		
Large motors and compressors		
Maintenance		
Replacement of motors and compressors		
Refurbishment		
Ballast lighting		

For more information, please call 800-245-3573.

Important Notice

Before using this product, you must evaluate it and determine if it is suitable for your intended application. You assume all risks and liability associated with such use.

Warranty; Limited Remedy; Limited Liability.

3M's product warranty is stated in its Product Literature available upon request. 3M MAKES NO OTHER WARRANTIES INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. If this product is defective within the warranty period stated

in the product literature, your exclusive remedy shall be, at 3M's option, to replace or repair the 3M product or refund the purchase price of the 3M product. **Except where prohibited by law, 3M will not be liable for any loss or damage arising from this 3M product, whether direct, indirect, special, incidental or consequential regardless of the legal theory asserted.**



Electrical Products Division

6801 River Place Blvd.
Austin, TX 78726-9000
800 245 3573
<http://www.3M.com/elpd>



40% Pre-consumer waste paper
10% Post-consumer waste paper

Litho in USA.

© 3M IPC 2000 80-6109-4369-0(060020.0)W-2