

# Insulation Displacement Connectors (IDCs)



**3M** *Innovation*

*You're in a demanding industry. To be successful, you need a wide range of reliable products designed to effectively manage your daily processes. You need a supplier with a solid understanding of your industry and the technology that drives it. Quite simply, you need 3M. Our Electrical Products Division designs and manufactures a comprehensive line of products that can address your diverse applications. Widely recognized for our innovation, reliability and global corporate strength, 3M has the products and services you need and the name you trust. For over 30 years, 3M has been designing connectors with the reliability and ease of installation that electricians demand. From the very first Scotchlok™ Insulation Displacement Connector (IDC) to today's improved models, 3M has always provided connection technology that saves time and money.*



## Proven splicing technology designed for your specific applications.

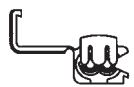
The latest series of IDCs has kept all that was good about the original connector — the design, the shape, the element technology and the color coding. Models also incorporate a full wire range capability, an increased port size that accommodates up to 0.190" (4.82mm) insulation sizes, double "U" elements and a solvent-resistant plastic construction. Choose from 38 different 3M IDCs to meet a variety of uses, including fluorescent ballast installation and replacement, fixture and appliance wiring, automotive and marine wiring and control circuit wiring. Whatever the application, 3M has the connector to make your job easier.



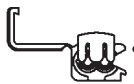
1

## Quick, reliable splices are a snap. And a squeeze.

3M Scotchlok insulation displacement connectors (IDCs) are easy to use and save time—to install one, just squeeze—no stripping or twisting. Our unique "U" contact provides a dependable electrical connection.



- A "live-spring" joint is made by driving the "U" contact down into connector.



- As the "U" contact is pressed into connector, it grasps conductors as it displaces insulation.



- Contact grips conductor and holds with a firm, resilient pressure.



2

### 314 & 314U IDCs\*

**Application:** Used to electrically connect two or three wire ends and insulate the connection.

- 314 version provides a moisture-resistant seal.
- Both models are flame retardant.
- Used for pigtail 2- and 3- wire splicing.

*\* Also tested in accordance with UL Standard for Portable Electric Lamps, UL 153 paragraph 15, when housed within the body of the lamp.*


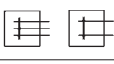

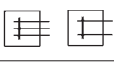

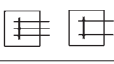





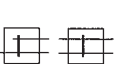





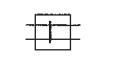























### 316 IR IDC

**Application:** Electrically connects two or three wire ends, insulates the connection, and provides a moisture resistant seal.

































- Recommended for use with low energy underground circuit wires.
- Suitable for sprinkler systems, landscape lighting, and other moisture resistant applications of less than 30 volts.
- Sealant is a mineral oil-based grease.

# IDCs for Electrical Applications

Connector	Type Connector	Special Features	Maximum Insulation	AWG (mm <sup>2</sup> ) Wire Range	Operating Temperature	UL, CSA or CE Certified	
314*			Moisture Resistant Seal	0.155" (3,94 mm)	22-14 (0,5-1,5)	105°C (221°F)	UL SP
314U*			Dry Environment Applications	0.155" (3,94 mm)	22-14 (0,5-1,5)	105°C (221°F)	UL SP
316IR			Moisture Resistant Applications	0.155" (3,94 mm)	22-16 (0,5-1,5)	105°C (221°F)	—
557*			Dual Element Connection	0.120" (3,05 mm)	22-16 (0,5-1,5)	105°C (221°F)	UL SP CE
558*			Flame Retardant	0.120" (3,05 mm)	22-16 (0,5-1,5)	105°C (221°F)	UL SP CE
560			Flame Retardant	0.145" (3,68 mm)	18-16 (0,75-1,5) Solid/Stranded 14 Stranded	105°C (221°F)	UL SP CE
560B			Run & Tap Splicing	0.145" (3,68 mm)	18-16 (0,75-1,5) Solid/Stranded 14 Stranded	90°C (194°F)	UL
560N			Flame Retardant	0.145" (3,68 mm)	18-16 (0,75-1,5) Solid/Stranded 14 Stranded	105°C (221°F)	UL SP
562			Run & Tap Splicing	0.190" (4,82 mm)	12-10 (3,0-4,0) Solid/Stranded 10 Stranded	90°C (194°F)	UL CE
564			Dry Environment Applications	0.145" (3,68 mm)	18-14 (0,75-1,5)	90°C (194°F)	CE
567			Dual Element Connection	0.145" (3,68 mm) Tap 0.190" (4,82 mm) Run	18-14 (0,75-1,5) Tap 12-10 (3,0-4,0) Run	105°C (221°F)	UL SP CE
804			Moisture Resistant Applications	0.145" (3,68 mm)	18-16 (0,75-1,5) Solid/Stranded 14 Stranded	75°C (167°F)	UL
804U			Dry Environment Applications	0.145" (3,68 mm)	18-16 (0,75-1,5) Solid/Stranded 14 Stranded	75°C (167°F)	UL
901			Disconnect	0.145" (3,68 mm)	18-14 (0,75-1,5)	90°C (194°F)	—
905			Low Voltage (Automotive) Applications	0.110" (2,79 mm) Tap 0.145" (3,68 mm) Run	22-18 (0,5-1,0) Tap 18-14 (0,75-1,5) Run	90°C (194°F)	CE
905N			Low Voltage (Automotive) Applications	0.110" (2,79 mm) Tap 0.145" (3,68 mm) Run	22-18 (0,5-1,0) Tap 18-14 (0,75-1,5) Run	90°C (194°F)	—
951			T-Tap Disconnect	0.150" (3,81 mm)	22-18 (0,5-1,0)	105°C (221°F)	UL SP
952			T-Tap Disconnect	0.150" (3,81 mm)	18-14 (0,75-1,5)	105°C (221°)	UL SP
953			T-Tap Disconnect	0.150" (3,81 mm)	12 (3,0)	105°C (221°)	UL SP
972			Fuse Holder	0.150" (3,81 mm)	18-14 (0,75-1,5)	90°C (194°F)	—

\* Also tested in accordance with UL Standard for Portable Electric Lamps, UL 153 paragraph 15, when housed within the body of the lamp.

# IDCs for Communication Applications

Connector	Type Connector	Special Features	Maximum Insulation	AWG (mm <sup>2</sup> ) Wire Range	Operating Temperature	UL, CSA or CE Certified	
U1B**			Full Pair	0.125" (3,18 mm)	16-19 (1,3-0,9) Solid Wire	-40 to 285°F (-40 to 140°C)	—
U1R**			Full Pair	0.125" (3,18 mm)	19-24 (0,9-0,5) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UAL**			For Aluminum Copper	0.082" (2,08 mm) Outside port 0.076" (1,93 mm) Center port	17-20 (1,15-0,5) Solid Wire 19-24 (0,9-0,5) Copper	-40 to 285°F (-40 to 140°C)	—
UB**			Moisture Resistant Seal	0.050" (1,27 mm)	19-26 (0,7-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UB2A**			RUS Listed Full Featured	0.082" (2,08 mm)	19-26 (0,9-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UB2A-D**			RUS Listed Full Featured	0.082" (2,08 mm)	19-26 (0,9-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UG**			Moisture Resistant Seal	0.066" (1,67 mm)	19-26 (0,9-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
ULG**			For large insulations	0.082" (2,08 mm) Outside Port 0.076" (1,93 mm) Center Port	19-26 (0,9-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UP2**			Dry Flame Retardant	0.060" (1,52 mm)	22-26 (0,7-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UP3**			Dry Flame Retardant	0.066" (1,67 mm)	19-26 (0,9-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UR**			Moisture Resistant Seal	0.066" (1,67 mm)	19-26 (0,9-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UR2**			RUS Listed Full Featured	0.082" (2,08 mm)	19-26 (0,9-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UR2-D**			Dry Full Featured	0.082" (2,08 mm)	19-26 (0,9-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UY**			Moisture Resistant Seal	0.060" (1,52 mm)	22-26 (0,7-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UY2**			RUS Listed Full Featured	0.082" (2,08 mm)	19-26 (0,9-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—
UY2-D**			Dry Full Featured	0.082" (2,08 mm)	19-26 (0,9-0,4) Solid Wire	-40 to 285°F (-40 to 140°C)	—

\*\* Solid wire only.

## Insulation Displacement Connectors

Features	Benefits
Squeeze shut connector	No stripping or twisting
Crimp with slip-joint pliers	No special tools required
Unique "U" contact, fully insulated	Provides dependable connections
No need to cut run wire	Faster installation, minimum clean up
No need to twist on	Easy on hands

- Many 3M IDCs are either UL-Listed (file No. E23458) or CSA-Certified (file No. LR 15503).
- UL Listed and CSA Certified products have a voltage rating of 600V maximum for building wire, 1000V maximum for signs or lighting fixtures (luminaries).
- The 3M™ E-9BM Crimping Tool is recommended for installing 3M IDCs.



3



### 557 IDC\*

**Application:** Electrically connects two wire ends and insulates the connection.

- Designed for control circuit wiring, fixture wiring, appliance wiring, signal and PA systems, automotive/boat/RV wiring.
- Flame retardant.
- Used for pigtail splicing.
- Rated up to 600 volts.



### 558 IDC\*

**Application:** Electrically connects a (tap) wire end to a through (run) wire and insulates the connection.

- Designed for control circuit wiring, fixture wiring, appliance wiring, signal and PA systems, automotive/boat/RV wiring.
- Flame retardant.
- Used for tap splicing.
- Rated up to 600 volts.

### 562 IDC

**Application:** Electrically connects a (tap) wire end through a (run) wire and insulates the connection.

- Self-stripping.
- Used for tap splicing.

**Color:** Yellow

### 560 & 560N IDCs

**Application:** Electrically connects a (tap) wire end to a through (run) wire and insulates the connection.

- Flame retardant.
- Used for tap and parallel splicing.



### 564 IDC

**Application:** Electrically connects two through (run) wires and insulates the connection.

- Used for parallel splicing.

### 567 IDC

**Application:** Electrically connects a (tap) wire end to a through (run) wire and insulates the connection.

- Flame retardant.
- Self-stripping.
- Used for tap splicing.

**Color:** Brown

*\*Also tested in accordance with UL Standard for Portable Electric Lamps, UL 153 section 15, when housed within the body of the lamp.*

### 560B IDC

**Application:** Electrically connects a (tap) wire end to a through (run) wire and insulates the connection.

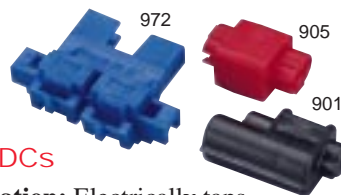
- For general-purpose electrical connections on auto, boat, van or trailer.
- Used for tap and parallel splicing.



### 804 & 804U IDCs

**Application:** Electrically connects a (tap) wire end to a through (run) wire; insulates and provides a moisture-resistant seal for the connection. The 804 connector is greased while the 804U connector is ungreased.

- Sealant-filled connector is suitable for RV trailers, boats, fleet vehicles and other environmentally sensitive applications where corrosive elements such as road chemicals, salt spray and exhaust fumes might be encountered.
- Used for tap splicing.



### 901 IDCs

**Application:** Electrically taps into a wire in mid-span without cutting or stripping the wire. Connector then mates with a 0.156" (4,0 mm) male snap plug, making a disconnectable connection.

- Designed for quick connect/disconnect of electrical systems on pull-behind vehicles such as rental trailers, boats and campers.
- Used for tap splicing.

### 905 & 905N IDCs

**Application:** Electrically connects a (tap) wire end to a through (run) wire and insulates the connection.

- Suitable for low-voltage accessories such as radios, stereo speakers, tape decks and CB radios.
- Used for tap, in-line parallel and pigtail splicing.

### 972 IDC

**Application:** Used to install a blade type automotive fuse between power source and device.

- Self-stripping.
- In-line fuse holder.

### 951, 952, & 953 IDCs

**Application:** Used to electrically tap into a wire in mid-span without cutting or stripping the wire. Connector then mates with 3M 0.250" (6,35 mm) male tabs, making a quick-connect wiring connection.

- Flame retardant.
- Used for tap splicing.



### UB2A & UB2A-D IDCs

**Application:** UB2A makes a moisture-resistant butt splice connection between two solid-copper conductors of air-core or filled cable. UB2A-D connector makes a dry connection.

- Sealant is a mineral oil-based grease.



### UG IDC

**Application:** Makes a moisture-resistant tap splice connection between two solid-copper conductors of air-core or filled cable.

- Sealant is a mineral oil-based grease.

### UR2 & UR2-D IDCs

**Application:** UR2 connector makes a moisture-resistant butt splice connection between three solid-copper conductors of air-core or filled cable. UR2-D connector makes a dry connection.

### UY2 & UY2-D IDCs

**Application:** UY2 connector makes a moisture-resistant butt splice connection between two solid-copper conductors of air-core or filled cable. UY2-D connector makes a dry connection.

- Sealant is a mineral oil-based grease.



*In your business, innovative solutions, technology and reliability are essential. 3M delivers that and more. We have the power of a diversified, global manufacturer with more than 60,000 products in our line, a reputation for technical excellence and innovation, and employees committed to delivering quality products and service to you, our valued customer. Our capability doesn't stop with electrical products, it starts there. To explore the many ways we can serve you, contact your 3M representative today.*

### E-9BM Crimping Tool

- For use with most Scotchlok connectors.
- Parallel closing action with adjustable jaws.
- High mechanical advantage.

### E-9C Cartridge Tool with Case

- Holds connectors (in cartridges) firmly in place, allowing the craftsman use of the other hand for guiding wires.
- Time saving tool holds cartridges of UR2, UR2-D, UR, UY2, UY2-D, UY, UAL, ULG, UP2 and UP3 connectors.
- Automatic feed, ratchet and parallel jaw action assure perfect crimps.

### E-9CW Cartridge Tool with Case and Window

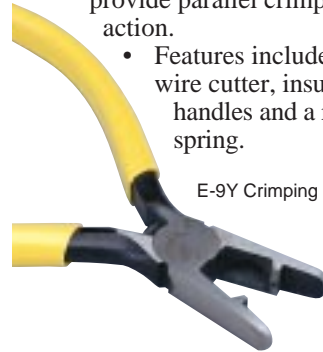
Same as E-9C with the addition of a window for viewing the connection.

### E-9E Crimping Tool

- Parallel closing action tool for use with Scotchlok butt and tap connectors.

### E-9Y Crimping Tool

- Stepped jaws and long nose provide parallel crimping action.
- Features include a side wire cutter, insulated handles and a return spring.



E-9Y Crimping Tool

**⚠ WARNING**

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

## Quick Connector References

Electrical IDC Connectors		Communication IDC Connectors	
314	567	U1B	UP2
314U	804	U1R	UP3
316 IR	804U	UAL	UR
557	901	UB	UR2
558	905	UB2A	UR2-D
560	905N	UB2-D	UY
560B	951	UG	UY2
560N	952	ULG	UY2-D
562	953		
564	972		

For more information, call 800-245-3573 or contact your local 3M Sales Representative.

### 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.



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