

3M

Copper Splicing

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3M™ Scotchlok™ Connectors and Tools

Over 40 years ago, 3M introduced the industry's original U element connector, the Scotchlok UR Connector. The latest series of connectors, the Scotchlok UR2, UY2, and UB2A Connectors, feature that same originality in technology advantages, building on the successful Scotchlok Connector's design, shape, color-coded cap concepts, and element technology.

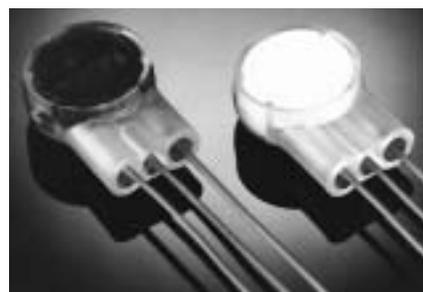
The Series 2 Connectors additionally offer full wire range capability, increased port size to accommodate up to 2.08 mm (0.082") insulation sizes, double elements in all products, and a solvent resistant plastic construction.

Use chart on pages 4-5 for reference.



3M™ Butt Connectors

UR2/UR2-D Butt Connectors

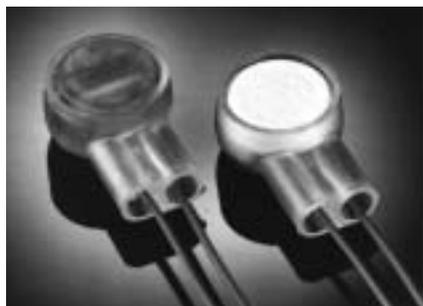


2

The UR2 Connector accepts two or three solid copper conductors that can be of different wire gauges for butt splicing. The connector is filled with a moisture resistant sealant and the UR2-D Connector is a dry version.

RUS Listed

UY2/UY2-D Butt Connectors

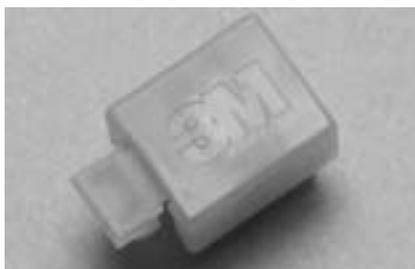


3

The size of the UY2 Connector reduces the splicing bundle O.D. to a minimum. The wires joined can be of different wire gauges. Factory inserted sealant seals out moisture. In addition, the UY2 Connector is available in a dry version, UY2-D Connector.

RUS Listed

211 Trim-Out Connector



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The Scotchlok™ Trim-Out Connector 211 is a polypropylene, moisture-resistant, self-stripping insulation displacement contact device with a built-in cut-off blade and a test port. Wires are positioned in the connector from the sides, allowing the 211 Connector to be used as a maintenance connector for replacing problem connectors without interrupting service. The 211 Connector may also be used for standard two-wire butt type splicing operations. A pre-crimp feature permits easy, positive connector positioning by gripping the conductors until the crimp is completed. Excess wire is cut off when the connector is crimped.

RUS Listed

UP2 Butt Connector



5

A dry flame retardant two-wire UL Listed connector for use on paper, pulp or PIC cable where moisture resistance is not needed.

UP3 Butt Connector



6

The UP3 Butt connector is a dry, flame-retardant two- or three-wire connector for paper, pulp or PIC cable where moisture resistance is not needed.



Product Referral Generator

Buried Closures	pg. 133
SLiC™ Aerial Closures	pg. 118
GATM Closures	pg. 123
Foam-Sealed Closures	pg. 131

3M™ Tap Connectors

UB2A/UB2A-D Tap Connector

The UB2A Connector has a pre-crimp feature that gives the craftsman a time-saving edge. By positioning the connector on the conductor and pre-crimping, the conductor is prevented from slipping out of the connector before the crimp is completed. Like the UR2 Connector, a factory sealant insulates against moisture and seals out corrosion. The UB2A-D Connector is a dry version of the UB2A Connector.

The UB2A Connector permits tapping directly onto an existing conductor without interrupting service. In ready access closures, the UB2A Connector eliminates cutting cable pairs, opening circuits, and piecing out wires.

RUS Listed



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UPB Tap Connector

A dry, flame-retardant two-wire UL Listed connector with pre-crimp feature for use on pulp, paper or PIC cable where moisture resistance is not needed.



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ST Connector

The ST Connectors are used on main and intermediate distributing frames within switching facilities having solder post terminal blocks. The connector is simply pushed onto a solder terminal to complete the connection. ST Connectors also are ideal when preparing pre-terminated jumpers or resistor straps.

• Connectors accept one or two wires, allowing for half-tapping.
• Test ports permit access without removing the connector or interrupting service.
• Flame retardant, molded polycarbonate with oxygen index of at least 28.



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3M™ Inline Connectors

UDW2 Inline Connector

A sealed moisture-resistant, four-wire (1 full pair) inline aerial connector for copper or copper-coated steel conductors. Not for midspan splices unless strain-relief is provided. Tape over-wrap is not required.



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3M™ Clearing Caps

UCC Clearing Cap

Each moisture-resistant Scotchlok UCC Clearing Cap isolates a full cable pair. The conductors are held rigidly in place with a plastic blade. The UCC accepts any two-wire combination.

RUS Listed



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UPC Clearing Cap

A UL Listed dry flame-retardant version of the UCC Clearing Cap, manufactured from polycarbonate, making it suitable for use in buildings.



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3M™ Wire Gauge

ESG Connector and Wire Gauge

Used to check Scotchlok Connectors for complete crimps. Wire slots for checking 0.9-0.4 mm (19-26 AWG) conductors are also on the gauge. The AWG for each slot is shown on one side, the metric equivalents of the AWG are shown on the other side.



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3M™ Scotchlok™ Crimping Tools

E-9BM Crimping Tool

The E-9BM has parallel closing action with adjustable jaws, and features high mechanical advantage. For use with all Scotchlok Connectors.



14

E-9C Cartridge Tool with Case and Gauge

The E-9C tool holds the connectors (in cartridges) firmly in place, allowing the craftsman the use of the other hand for guiding wires. This time-saving tool holds cartridges of UR2, UR2-D, UR, UY2, UY2-D, UY, UAL, ULG, UCC, UPC, UP2 and UP3 Connectors. Its automatic feed, ratchet, and parallel jaw action assure perfect crimps every time.



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E-9E Crimping Tool

Parallel closing action tool for use with Scotchlok Butt and Tap Connectors.



16

E-9R Crimping Tool

The E-9R tool enables users to effortlessly cut copper wire and crimp all Scotchlok Connectors without changing tools. The single-stroke, ratchet release design ensures positive crimps with all Scotchlok Connectors.



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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. Not recommended for any 19 gauge, 3 wire application due to fatigue factor.

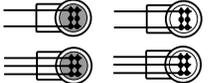
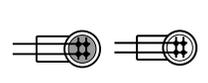
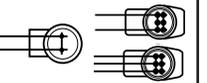


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3M™ Scotchlok™ Connectors and Tools Specification Chart

Butt Splicing

Connector	UR2	UR2-D	UR	UY2	UY2-D	UY	UP2	UP3
								
	Polypropelene		Polycarbonate	Polypropelene		Polycarbonate	Polycarbonate	
Type Connector								
Special Features	RUS Listed Gel-Filled	Dry	Gel-Filled	RUS Listed Gel-Filled	Dry	Gel-Filled	Dry Flame Retardant	

Maximum Insulation O.D.

Metric (mm)	2.08	2.08	1.52	2.08	2.08	1.52	1.52	1.52
Inches	0.082	0.082	0.060	0.082	0.082	0.060	0.060	0.060

Cable Type

PIC-unfilled and PIC-filled

AWG	19-26	19-26	19-26	19-26	19-26	22-26	22-26	19-26
Metric (mm)	0.9-0.4	0.9-0.4	0.9-0.4	0.9-0.4	0.9-0.4	0.7-0.4	0.7-0.4	0.9-0.4

Pulp or Paper

AWG	N/A	19-26	19-26	N/A	19-26	22-26	22-26	19-26
Metric (mm)	N/A	0.9-0.4	0.9-0.4	N/A	0.9-0.4	0.7-0.4	0.7-0.4	0.9-0.4

Ordering Information - 3M™ Scotchlok Connectors

Box — Packaging: 100/box, 1000/cs.; Min. Order: 1000 connectors

Weight kg (lbs.)	1.36 (3)	—	1.4 (3.1)	0.9 (1.9)	—	(0.9 (1.4)	—	—
UPC	054007-68538	—	054007-56390	054007-68537	—	054007-14911	—	—

Bulk — Packaging: 1000/box, 5000/cs. (500/box, 5000/cs.)

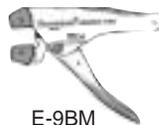
Weight kg (lbs.)	5.8 (12.8)	4.6 (10.3)	6.6 (14.6)	3.5 (7.7)	2.8 (6.1)	2.7 (6.0)	2.4 (5.4)	7.1 (13.3)
Min. Order - connectors	5000	5000	5000	5000	5000	5000	5000	5000
UPC	054007-68539	054007-71474	054007-33277	054007-68535	054007-71477	054007-33278	054007-33420	054007-33419

Cartridge —

Packaging	10/cart., 100/pk., 1000/cs.	10/cart., 100/pk., 1000/cs.	10/cart., 100/pk., 1000/cs.	12/cart., 120/pk., 1200/cs.	12/cart., 120/pk., 1200/cs.	16/cart., 160/pk., 1600/cs.	16/cart., 160/pk., 1600/cs.	10/cart., 100/pk., 1000/cs.
Weight kg (lbs.)	1.9 (4.3)	1.7 (3.9)	2.1 (4.7)	1.6 (3.6)	1.4 (3.2)	1.5 (3.4)	1.4 (3.2)	2.0 (4.4)
Min. Order - Connectors	10 pkg.	10 pkg.	10 pkg.	12 pkg.	12 pkg.	16 pkg.	16 pkg.	10 pkg.
UPC	054007-68541	054007-71475	054007-27816	054007-68534	054007-71478	054007-27817	054007-32698	054007-32700

Approved Tools

To reduce fatigue, use tool within each group with highest mechanical advantage indicated in ().



E-9BM
(10:1)



E-9C
(7:1)



E-9E
(4:1)



E-9Y*
(3:1)



E-9R
(10:1)

Ordering Information - 3M™ Scotchlok Connector Tools

Tool	E-9BM Crimp Tool	E-9C Cartridge Tool w/ Case & Gauge	E-9R Crimping Tool
Packaging kg (lbs.)/cs.	2.6 (5.8)	1/cs., 0.91 (2)	1/bag, 10/cs., 2.59 (5.7)
Minimum Order	6 each	1 each	10 each
UPC	054007-33482	054007-34211	051138-87649

* Not recommended for 19 AWG and larger.

3M™ Scotchlok™ Connectors and Tools Specification Chart



Butt Splicing		Tap Splicing			Clear / Cap Only		In Line Splicing
UAL  Polycarbonate	211  Polypropelene	UB2A  Polypropelene	UB2A-D  Polypropelene	UPB  Polycarbonate	UCC  Polycarbonate	UPC  Polycarbonate	UDW2  Polycarbonate
							
Gel-Filled For Aluminum	RUS Listed Gel-Filled	RUS Listed Gel-Filled	Dry	Dry Flame Retardant	RUS Listed Gel-Filled	Dry Flame Retardant	Gel-Filled For Drop Pair
2.08	2.08	2.08	2.08	1.27	1.52	1.52	4.4
0.082	0.082	0.082	0.082	0.050	0.060	0.060	0.175
17-20AL 19-24 CU	19-26	19-26	19-26	22-26	22-26	22-26	16-19
1.2-0.8AL 0.9-0.5 CU	0.9-0.4	0.9-0.4	0.9-0.4	0.7-0.4	0.7-0.4	0.7-0.4	1.3-0.9
N/A	19-26	N/A	19-26	22-26	N/A	22-26	N/A
N/A	0.9-0.4	N/A	0.9-0.4	0.7-0.4	N/A	0.7-0.4	N/A

Ordering Information - 3M Scotchlok Connectors

Box — Packaging: 100/box, 1000/cs.; Min. order: 1000 connectors

1.4 (3.1)	1.2 (2.6)	0.9 (2.0)	0.8 (1.8)	0.6 (1.4)	—	—	1.0 (2.4)
054007-27827	054007-34079	054007-92693	054007-92694	054007-34173	—	—	051138-11505

Bulk — Packaging: 1000/box, 5000/cs. (500/box, 5000/cs.)

—	—	4.2 (9.2)	3.3 (7.3)	3.0 (6.6)	2.6 (5.2)	2.1 (4.7)	—
—	—	1000	1000	5000	5000	5000	—
—	—	054007-92696	054007-92697	054007-33416	054007-33417	054007-33557	—

Cartridge —

10/cart., 100/pk., 1000/cs.	—	—	—	—	16/cart., 160/pk., 1600/cs.	16/cart., 160/pk., 1600/cs.	—
2.1 (4.7)	—	—	—	—	1.6 (3.5)	1.5 (3.0)	—
10 pkg.	—	—	—	—	16 pkg.	16 pkg.	—
054007-27828	—	—	—	—	054007-31734	054007-33721	—

Approved Tools

All tools approved for butt splicing may be used.

E-9BM (10:1)
E-9E (4:1)
E-9Y (3:1)



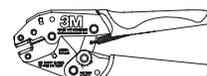
E-9BM (10:1)



E-9Y* (3:1)



E-9E (4:1)



E-9R (10:1)



E-9BM (10:1)

Ordering Information - 3M Scotchlok Connector Tools

Tool	E-9E Crimp Tool	E-9Y Crimping Tool	ESG Connector and Wire Gauge
Packaging kg (lbs.)/cs.	1/bag, 10/cs., 2.7 (6)	1/bag, 10/cs., 1.5 (3.3)	100/bag, 1/cs., 1 (2.2)
Minimum Order	10 each	10 each	100 each
UPC	054007-10577	054007-15625	054007-31735

* Not recommended for 19 AWG and larger.

3M™ MS²™ Splicing System

The 3M MS² Super-Mini 25-pair and MS² Super Mate 25-pair Splicing Modules provide the reliability of soldered connections, the efficiency of multi-pair splicing, plus the proven performance of MS² splicing system.

The MS² 4000 and 4008 Series Super-Mini Modules and 4005 Series Super Mate Modules are the basic components of MS² Modular Splicing System from 3M. The modules are building blocks of a systematized splicing technology that can reduce installation time of outside or inside plant and in addition can reduce reworking demands, and save both time and effort in your construction and maintenance programs. To make your job easier, all MS² modules' covers and bases are now transparent.

U-shaped contacts enable solder-equivalent connections

The MS² 4000 and 4008 Series Super-Mini Modules and MS² 4005 Super Mate Modules feature an array of U-shaped, phosphor-bronze contacts and stainless steel cut-off blades.

As a module is crimped, each contact strips the insulation from the positioned wire and securely grips the conductor. During this crimping operation, the cut-off blades inside each module trim the excess wire.

A single crimp completes a gas-tight connection on all 25-pairs in the module.

It's simple and fast, because there's no need to strip or trim any of the individual pairs.

Pair testing is easy

Test entry ports on the front side of all modules provide access for testing individual pairs. All tests can be accomplished without opening the module, stripping insulation, or otherwise interrupting service by using MS² module test accessories.



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The rugged design and construction of the modules can withstand crimping and reopening to facilitate transfers or cable rearrangements.

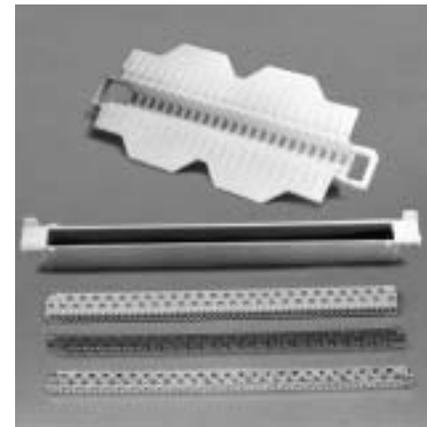
4000-G/TR Super-Mini Splicing Module



20

The new 4000-G/TR Super-Mini Splicing Module not only meets CAT-5 requirements of the TIA/CIA 568A and the ISO/IEC 11801:1995 for high-speed connectors, but it also delivers in place performance withstanding extended exposure to various conditions of extremely high humidity, including water immersion, while maintaining insulation resistance and circuit integrity.

4000-DWP/TR Module with Sealant Box



21

The 4000-DWP/TR 25-pair module combines a 4000-D/TR Super-Mini Module with a 4075-S Sealant Box. This combination offers waterproof splicing of copper in buried, aerial, and underground applications. The module also makes reentry into splices encapsulated with reenterable gel much easier. Because the sealant box prevents encapsulants from filling the wire channels and test entry ports, modules may be tested at any time once the sealant box is removed.



Product Referral Generator

Buried Closures	pg. 133
SLiC™ Aerial Closures	pg. 118
K&B™ Vault & Riser Closures	pg. 173
Foam-Sealed Closures	pg. 131

The term “waterproof” applies to this system as determined according to 3M Test Method No. TP0200-05. User should write for this method to determine suitability for application.

4005-DPM/TR Super Mate Pluggable Module



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3M™ Super Mate Pluggable Modules 4005-DPM/TR 25-pair Series increase productivity and reduce expenses by avoiding the time-and cost-intensive job of cutting and resplicing conductors for rearrangement, addition, and removal of apparatus and stubs.

The 4005-DPM/TR Series Super Mate Modules plug into other Super Mate Modules and onto the top of the 4000-D/TR or 4008-D/TR Super-Mini Series Modules for bridging applications.

The 4005-CBM/TR Series Modules is for bridging to encapsulated 4000-G/TR or 4008-G/TR Series Modules, as a bridge only.

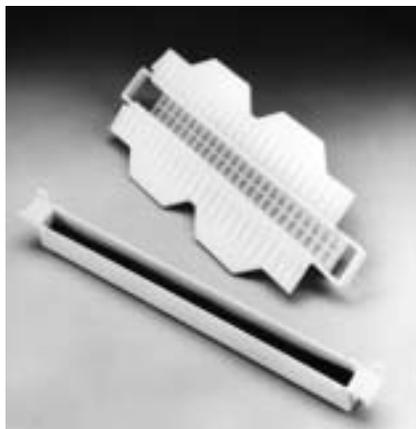
The UL Listed 4005-DPM/FR is for applications requiring a flame-retardant module.

4008-D/TR Module

The MS²™ Super-Mini Modules 4008D/TR 25-pair Series , available dry or encapsulated, are similar to the 4000TR Series, except that the cut-off blades have been eliminated from the bottom of the modules. This allows the run of through wires to be half-tapped without cutting the conductors. The wires in the base are electrically connected, but are not cut off.

RUS Listed

4075-S Sealant Box



23

The 4075-S Sealant Box is a molded PBT polyester box designed to be used with the MS² 4000 Series Super-Mini Modules that provides waterproof protection in PIC splicing applications. One applicator tool is included with every twelve sealant boxes.

The term “waterproof” applies to this system as determined according to 3M Test Method No. TP0200-05. User should write for this method to determine suitability for application.

RUS Listed

4077 Series Sealant Boxes



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Designed for use with MS² 4005-DPM/TR Super Mate Modules and/or in combination with 4000-D/TR Modules. The Sealant Boxes provide waterproof protection in PIC splicing applications where one or more modules are plugged together. One applicator tool is included with each box of 12 sealant boxes.

The term “waterproof” applies to this system as determined according to 3M Test Method No. TP0200-05. User should write for this method to determine suitability for application.

RUS Listed

4077-A One 4005-DPM/TR Module
4077-B One 4000-D/TR and one
4005-DPM Module

4077-C Two 4005-DPM/TR Modules
4077-D Three 4005-DPM/TR Modules

Ordering Information for 3M™ MS²™ Splicing System Sealant Boxes

Product Number	Sealant Box Requirements	Packaging kg (lbs.)/cs.	Minimum Order	UPC
4000-DWP/TR	Includes one 4000-D/TR Module and 4075-S Sealant Box	7.5 (16.6) 12/box, 120/cs	120 each	051138-57574
4075-S	Use with one 4000-D/TR Series Module or one 4008-D/TR Series Module	4.1 (9.1) 12/box, 120/cs	120 each	051138-57567
4077-A	Use with one 4005-DPM/TR Module	4.9 (10.8) 12/box, 120/cs	120 each	051138-57569
4077-B	Use with one 4000-D/TR Module and one 4005-DPM Module	5.4 (12) 12/box, 120/cs	120 each	051138-57570
4077-C	Use with two 4005-DPM/TR Modules	6.0 (13.3) 12/box, 120/cs	120 each	051138-57572
4077-D	Use with three 4005-DPM/TR Modules	7.5 (16.6) 12/box, 120/cs	120 each	051138-57573

Specifications for all 3M™ MS²™ Splicing Modules 4000/4005/4008 Series (Super-Mini and Super Mate)

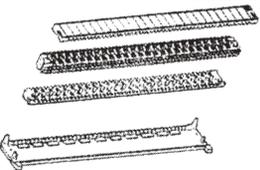
Maximum Insulation O.D.

Metric (mm)	1.65 [4000G/TR has maximum insulation O.D. of 1.35 mm (0.053")]
Inches	0.065 [4000G/TR has maximum insulation O.D. of 1.35 mm (0.053")]

Cable Type

PIC, Pulp or Paper	
AWG	22-28
Metric (mm)	0.7-0.3

3M MS² Straight Splicing Modules 4000 Series

Splicing Module	4000-DWP/TR	4000-D/TR/24	4000-G/TR	4000D-CO	4000-DT/TR
					

Modular Type

	Dry Transparent	RUS Listed Dry Transparent	Gelled Transparent	Dry Flame Retardant	RUS Listed Dry/Test Transparent
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Colors

	4000-DWP/TR	4000-D/TR/24	4000-G/TR	4000D-CO	4000-DT/TR
Cover	Transparent	Transparent	Transparent	Gray	Transparent
Body top	Yellow	Yellow	Yellow	Gray	Yellow
Body bottom	Dark gold	Dark gold	Dark gold	Gray	Dark gold
Base	Transparent smoked	Transparent smoked	Transparent smoked	Gray smoked	Transparent

Sealant Boxes for 4000 Modules



4075-S (included)	4075-S	N/A	N/A	4075-S
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Ordering Information

Packaging kg (lbs.)/cs.	12/bag, 120/cs. 7.5 (16.6)	24/bag, 120/cs. 3.0 (6.5)	12/bag, 120/cs. 3.9 (8.7)	12/bag, 120/cs. 2.9 (6.4)	12/bag, 120/cs. 2.8 (6.3)
Minimum order	120 each	120 each	120 each	120 each	120 each
UPC	051138-57574	051138-57525	051138-70906	054007-30944	054007-71368

Specifications for 3M™ MS²™ Pluggable/Bridge Splicing Modules 4005 Series



Splicing Module	4005-DPM/TR	4005-CBM/TR	4005-DPM/FR	4005-DPM/TR/NB	4005-DPM/FR/NB
					
Module Type	RUS Listed Dry Bridge Transparent	Filled Bridge Transparent	Dry Bridge Flame Retardant	Dry Bridge Transparent No Blade	Dry Bridge Flame Retardant No Blade
Colors					
Cover	Transparent	Transparent	Gray	Transparent	Gray
Body top	Yellow	Yellow	Gray	Yellow	Gray
Body bottom	Blue	Blue	Dark blue	Blue	Dark Blue
Insulator	Red	Red	Maroon	Red	Maroon
Ordering Information					
Packaging kg (lbs.)/cs.	12/bag, 120/cs. 3.5 (7.8)	12/bag, 120/cs. 5.1 (11.3)	12/bag, 120/cs. 3.5 (7.8)	12/bag, 120/cs. 3.5 (7.8)	12/bag, 120/cs. 3.5 (7.8)
Minimum order	120 each	120 each	120 each	120 each	120 each
UPC 054007-	71370	71369	17352	92318	051115-15166

Note: 4077-A protects one 4005-DPM Module, 4077-B protects one 4000-D and one 4005-DPM Module, 4077-C protects two 4005-DPM Modules, 4077-D protects three 4005-DPM Modules.

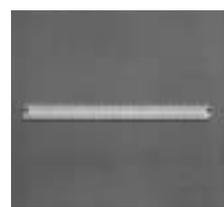
Specifications for 3M™ MS²™ Half-tap Splicing Modules 4008 Series



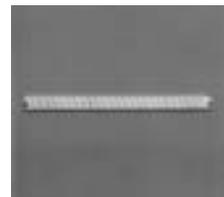
Splicing Module	4008-D/TR	4008-G/TR	4008-D/CO
Module Type			
	RUS Listed Dry Transparent	Gelled Transparent	Dry Flame Retardant
Colors			
Cover	Transparent	Transparent	Gray
Body top	Yellow	Yellow	Gray
Body bottom	Green	Green	Gray
Base	Transparent smoked	Transparent smoked	Gray
Sealant Boxes for 4008 Modules	4075-S after cut out	N/A	N/A
Ordering Information			
Packaging kg (lbs.)/cs.	12/bag, 120/cs. 2.9 (6.4)	12/bag, 120/cs. 4.03 (8.9)	12/bag, 120/cs. 2.9 (6.4)
Minimum order	120 each	120 each	120 each
UPC	054007-71372	051138-89336	054007-30945



Ordering Information for 3M™ MS²™ Components and Accessories



1. 25



2. 26



3. 27



4. 28



5. 29



6. 30



7. 31

#	Product Description	Pkg. kg (lbs.)/cs.	Min. Order	UPC
1.	4003-D/TR Super-Mini Module Cover (transparent)	12/bag 120/cs. 0.6 (1.4)	120 each	054007-71596
2.	4004-D/TR Super-Mini Module Base (smoked)	12/bag 120/cs. 0.6 (1.4)	120 each	054007-71597
3.	4004-DT/TR Super-Mini Test Base (transparent)	12/bag 120/cs. 0.6 (1.4)	120 each	054007-71654
4.	4005-DPM/36PTJ Preterminated Jumper Assemblies (transparent cover)	The assemblies consist of 24 AWG, PIC, unsheathed 25-pair binder group terminated on each end with a 4005-DPM Module. It enables quick restoration of cut cable and is available in 91.4 cm (36") and 182.9 cm (72") lengths with transparent covers.	12/cs. 2.63 (5.8)	12 each 054007-68254
4.	4005-DPM/72PTJ Preterminated Jumper Assemblies (transparent cover)	The assemblies consist of 24 AWG, PIC, unsheathed 25-pair binder group terminated on each end with a 4005-DPM Module. It enables quick restoration of cut cable and is available in 91.4 cm (36") and 182.9 cm (72") lengths with transparent covers.	12/cs. 3.8 (8.5)	12 each 054007-68255
5.	4005-DPM/BTP Bottom Test Plug Jumper Assembly	The 4005-DPM/BTP is a test plug assembly consisting of a 4005-DPM module attached by a 60.9 cm (24") jumper to a module designed to plug into the bottom of a Super-Mini module. This assembly enables reentry into any Super-Mini/Super Mate combination splice without interruption of service.	12/cs.	12 each 054007-17718
6.	4039 Marking Pen	Use the 4039 Marking Pen for permanent marking of MS ² modules for easy identification at a later date.	12/box 144/cs. 0.5 (1.1)	144 each 054007-57516
7.	4078-C Half-Tap Cover	Used to protect wire ends after the half-tap has been cut out of the MS ² Super-Mini 4008 Half-Tap Module in pulp/paper and pressurized PIC cable and vault splices.	12/bag 120/cs. 1.4 (3.1)	120 each 054007-34167



3M™ MS²™ Modular Splicing Rigs and Equipment

3M MS² Series Modular System Splicing tools and equipment are easy to use in any kind of splicing operation, regardless of the environment or working conditions.

By designing system components and techniques that are basically interchangeable, we are able to simplify the splicing task and eliminate potential inventory headaches.

Included in the system are detailed step-by-step instructions for every kind of splicing application, user-friendly parts and components, and testing equipment which assures splice accuracy.



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Systemized splicing technology

MS² Modular System Splicing simplifies wire joining and terminating operations by allowing many jobs to be performed with the same basic components, tools, and techniques. That's why any one of five standard splicing rigs with MS² Splicing Modules could meet all your multi-pair splicing requirements in inside or outside plant — new construction, cable rearrangements or maintenance.

Easily-learned procedures, designed to assure both splicing accuracy and good housekeeping, make all of the system's components simple to master.



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Product Referral Generator

Buried Closures	pg. 133
Tapes & Sealing	pg. 189

4021-M Splicing Rig

The 4021-M Splicing Rig is a complete splicing rig designed for one-person fold-back or inline splicing. Contains 4031 Crimper.

4021-M/36 Splicing Rig

The 4021-M/36 Splicing Rig is a complete splicing rig designed for one-person fold-back or inline splicing. This rig contains the 4036-25 Hand Crimper.

4021-M2/36 Splicing Rig

The 4021-M2/36 Splicing Rig is a complete splicing rig designed for one-person fold-back or inline splicing. This rig contains the 4036-25 Hand Crimper and additional 4041-SPL Splicing Head for easier two-bank inline splicing.

4022-M Splicing Rig

The 4022-M Splicing Rig is a complete splicing rig designed for one-man fold-back or inline splicing. The 4022-M Rig contains two 4040 Splicing Head assemblies and one short traverse bar. Crimper not included.

4026-A Module Maintenance Kit



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The 4026-A Module Maintenance Kit contains the tools necessary for re-entry of Super-Mini and Super Mate Modules. The 4026-A Module Maintenance Kit may be used to maintain the working pair continuity and integrity of the MS² Super-Mate Pluggable Modules (DPM) and MS² Super-Mini Module Splices. The kit may be used for splice module combinations of two, three, four or five way stackable splices.

4045-K/36 Universal Splicing Rig

The 4045-K/36 Universal Splicing Rig is versatile and designed for one-person splicing in difficult to reach areas. This rig contains the 4036-25 Hand Crimper.

4049-R Lite Rig



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The MS² 4049-R Lite Rig is a complete lightweight and portable splicing rig.



Complete 3M™ MS²™ Splicing Rigs and Maintenance Kits

Product Number For Kits	4049-R	4021-M	4021-M/36	4021-M2/36
Application	A lightweight portable splicing rig in a pail. Contains 4036-25 Hand/Hydraulic Tool.	A complete splicing rig designed for one person fold-back or inline splicing. Contains 4031 Crimper.	A complete splicing rig designed for one-person fold-back or inline splicing. Contains 4036 Crimper.	A complete splicing rig with two splice heads designed for one person fold-back or inline splicing. Contains 4036 Crimper.

Kit Components (can be ordered separately; see accessories pg. 18)

4049-0 Rig Container/Pail	1			
4036-H Tool Holder	1			
4028A Rubbermaid Rig Case		1	1	1
4031 Hand/Hydraulic Crimping Unit		1		
4036-25 Hand Crimper	1		1	1
4041-SH Splice Head Holder	1			
4040 Splicing Head Assembly Includes:				
4041-SPL Splicing Head		1	1	2
Spare-Rigs/PED Pedestal		1	1	1
Spare-Rigs/TC Traverse Clamp Assembly With Long Bar		1	1	1
4045-HCA Head Clamp Assembly		1	1	1
4041-P Splicing Head and "T" Bar Pedestal Support	1			
4045-ST Support Tube Assembly		1	1	1
4047 Pair Test Plug		1	1	1
4051 Wire Insertion Tool	1	1	1	1
4052-T Check Comb	1	2	2	2
4053 Cover Removal Tool		1	1	1
Spare-Rigs/STB Short Traverse Bar		1	1	1
4049-VTB Variable Traverse Brace Assembly	1			

Ordering Information

Product number	4049-R	4021-M	4021-M/36	4021-M2/36
Packaging 1/cs. kg (lbs.)	11.3 (25)	24.5 (55)	25.0 (55)	25.4 (56)
Minimum order	1 each	1 each	1 each	1 each
UPC (054007-)	92719	30252	91750	91748

Complete 3M™ MS²™ Splicing Rigs and Maintenance Kits



Product Number For Kits	4022-M	4026-A	4045-K/36
Application	A complete rig designed for two-person fold-back or inline splicing. Crimper not included.	A complete module maintenance kit for super-mini super mate modules.	A versatile rig designed for one-person splicing applications. Contains 4036 Crimper.

Kit Components (can be ordered separately; see accessories pg. 18)

4005-DPM/BTP Bottom Test Plug		1	
4005-DPM/36PTJ		2	
4028A Rubbermaid Rig Case	1		1
4036-25 Hand Crimper			1
4040 Splicing Head Assembly Includes:			
4041 Hand Held Splicing Head	2		
Spare-Rigs/PED Pedestal	2		
Spare-Rigs/TC Traverse Clamp Assembly With Long Bar	2		
4045-HCA Head Clamp Assembly	2		
4041-P Splicing Head and "T" Bar Pedestal Support		1	1
4045-ST Support Tube Assembly	1		
4045-SHSA Universal Splicing Head Support Assembly		1	1
4047 Pair Test Plug	1	1	1
4051 Wire Insertion Tool	1	1	
4052-T Check Comb	2	1	1
4053 Cover Removal Tool	1	1	
4270-A Handpresser		1	
Spare-Rigs/STB Short Traverse Bar	1		

Ordering Information

Product number	4022-M	4026-A	4045-K/36
Packaging 1/cs. kg (lbs.)	22.6 (49.9)	5.0 (11.1)	21.5 (47.5)
Minimum order	1 each	1 each	1 each
UPC (054007-)	30253	92307	91749

3M™ MS²™ Rig Kit Components

#	Product Description	Pkg. kg (lbs.)/cs.	Min. Order	UPC
1.	4028A Rubbermaid™ Tool Box with Modified Tray			
	66 x 29.2 x 28.2 cm (26 x 11.5 x 11.1") Cube: 9.8 kg. (21.7 lbs.) Ctn. size: 67.1 x 30 x 58.4 cm (26.4 x 11.8 x 23")	1/cs. 9.8 (16.5)	1 each	051138-70971
2.	4030 Air/Hydraulic Crimping Unit			
	The 4030 Air/Hydraulic Crimping Unit is designed for use with an air or nitrogen supply. An air cylinder or compressor with output pressure of 5.37kg/cm 21 (90-100 PSI) must be used. The unit is either hand or foot operated.	1/cs. 8.3 (18.2)	1 each	054007-30183
3.	4031 Hand/Hydraulic Crimping Unit			
	The 4031 Hand Crimping Unit is lightweight and hand-operated. When proper crimping pressure is reached, a bypass valve opens.	1/cs. 6.3 (13.8)	1 each	054007-30184
4.	4035A Strand Clamp			
	A 4035A Strand Clamp is designed to hold a 4041-P Splicing Head in aerial splicing applications. Anchored to the suspension strand, the strand clamps behind and below the splice bundle and can be used with strands from 5 mm (3/16") diameter to 10 mm (3/8").	1/cs. 1.7 (3.7)	1 each	054007-31917
5.	4036-25 Hand Crimper			
	The 4036 Hand/Hydraulic Crimper is a self-contained, pistol-gripped crimper designed to crimp MS ² Modules in the 4041 Splicing Head.	1/cs. 6.3 (13.8)	1 each	054007-92843
6.	4040 Splicing Head Assembly			
	This assembly contains a splicing head, a pedestal, a traverse clamp assembly with a long bar, and a head clamp for use with two man fold-back splicing.	1/cs. 3.2 (7.1)	1 each	054007-27822
7.	4041-SPL Splicing Head			
	The 4041-SPL Splicing Head is the standard MS ² Splicing Head without any support components.	1/cs. 1.3 (2.9)	1 each	054007-27823
8.	4041-P Splicing Head and "T" Bar			
	Additional Splicing Head and "T" Bar support for use with the MS ² System.	1/cs. 1.7 (3.7)	1 each	054007-30266



1. 36



2. 37



3. 38



4. 39



5. 40



6. 41



7. 42



8. 43

3M™ MS²™ Rig Kit Components

#	Product Description	Pkg. kg (lbs.)/cs.	Min. Order	UPC
9. 4045-SHSA Universal Splicing Head Support Assembly				
	The 4045-SHSA Universal Splicing Head Support Assembly is designed to hold an MS ² Splicing Head so it can be used in all applications.	1/cs. 3.2 (7)	1 each	054007-30219
10. 4046-CST Collapsible Support Tube				
	Collapsible for easy transport and set up.	1/cs. 3.2 (7)	1 each	054007-17626
11. 4047 Pair Test Plug				
	This plug is a module probe which permits one pair checking without damaging wire insulation. The prongs fit the test entry port of all MS ² modules. The cord permits easy connection to a talk block or test set.	1/box 10/cs. 1.0 (2.3)	10 each	054007-30220
12. 4051 Super Mini Module Wire Insert and Cutoff Tool				
	The 4051 tool is used on MS ² modules to replace conductors back into the module.	1/bag 10/cs. 0.7 (1.5)	10 each	054007-31137
13. 4052-T Check Comb				
	The check comb eliminates wiring errors by double-checking tip and ring placement prior to crimping and to insulate pairs when using the in-head tester without a cover.	1/box 10/cs. 0.6 (1.3)	10 each	054007-33796
14. 4053 Cover Removal Tool				
	The 4053 Cover Remote Tool is recommended for removing either bases or covers from 25-pair Super-Mini and Super Mate Modules.	1/box 10/cs. 0.4 (0.8)	10 each	054007-30185
15. 4053-PM Separation Tool				
	The only recommended tool to separate MS ² Super Mate 4005-DPM/TR Modules from any other module. Note: The 4053 Cover Removal Tool cannot be used with DPM Modules.	1/cs. 0.6 (1.3)	1 each	054007-34404
16. 4270-A Hand Presser				
	The 4270-A presser is used to plug up to seven Super Mate Modules together.	1/cs. 1.5 (3.4)	1 each	054007-71280



9. 44



10. 45



11. 46



12. 47



13. 48



14. 49



15. 50



16. 51





3M™ MS²™ Module Test Accessories

MS² Module Testing Accessories provide connection accuracy during the splicing operation, saving untold money in rework and repair.

4047 Pair Test Plug



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This plug is a module probe which permits one pair checking without damaging wire insulation. The prongs fit the test entry port of all MS² modules. The cord permits easy connection to a talk block or test set.

4048-DPM/CJ Super Mate Module Probe

This probe is used to provide test connections between MS² Modules and various types of test equipment. The probe consists of a male/female 25-pair Super Mate body and a 25-pair female Cinch-Jones connector



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terminated on opposite ends of a 1.8 m (6') sheathed cable.

4048-S Super-Mini 25-pair Pocket Probe



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Specially designed for use with the MS² Super-Mini and Super Mate Splicing Modules, the 4048-S Pocket Probe provides access for identification of cable pairs. The probe has a removable protective pin cover, spring loaded contact pins and spring clips for holding the pins securely in the module. Pins are replaceable.

4048-CJ Cinch-Jones Test Cord

The 4048-CJ Test Cord allows for connection of the 4041-T Test Head and test equipment with a Cinch-Jones Connector on one end and an Amphenol-type plug on the other end of a 177.8 cm (70") cord.

4048-PP 25-pair Pocket Probe

Designed to interface with the MS² Cross-Connect line of modules, the 4048 Pocket Probe contains an exposure strip that allows contact for a test probe. The contact pins are spring loaded to ensure positive contact and the probe has special spring clips for holding pins securely in module. Pins are replaceable. There is a removable protective pin cover.

4048-SA/1 Super-Mini Test Probe Kit

A reliable interface with testers and rotary switches with Cinch-Jones male plugs, the Probe Assembly is specially designed for quick, accurate continuity testing and tagging of all MS² Splicing Modules and Cross-Connect Modules.

The assembly consists of a 4048-S Probe attached to a 2.4 m (8') 25-pair cord with 25-pair female Cinch-Jones Connector at the end. Also included is an MS² 4047 Pair Test Plug, an MS² splicing head attachment (probe clamp bracket), and an interchangeable 4048 Probe. Probe and accessories are supplied in a compact case.

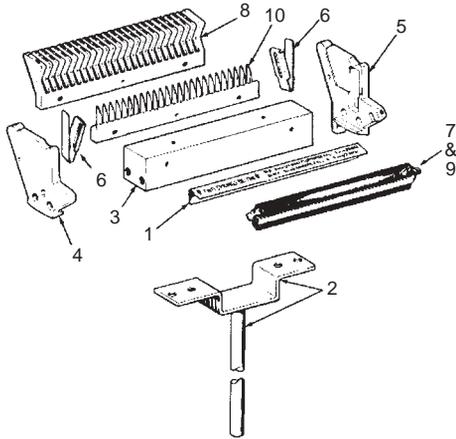
Ordering Information for 3M MS² Module Test Accessories

Product	Packaging	Min. Order	UPC
4047	1/box, 10/cs., 1.0 (2.3)	10 each	054007-30220
4048-DPM/CJ	1/cs., 0.80 (1.7)	1 each	054007-17069
4048-S	1/box, 10/cs., 1.4 (3.0)	10 each	054007-30577
4048-CJ	1/box, 1/cs., 0.5 (1.2)	1 each	054007-33982
4048-PP	1/box, 10/cs., 1.4 (3.0)	10 each	054007-30908
4048-SA/1	1/box, 1/cs., 3.0 (6.6)	1 each	054007-33500
4048-SA/ADP	1/box, 1/cs.	1 each	054007-92266
4048-SA/TDR	1/box, 1/cs., 0.7 (1.5)	1 each	054007-31313

3M™ MS²™ Splicing Rig Spare Parts

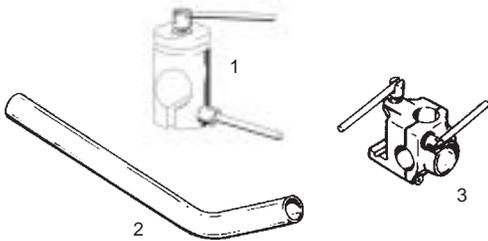


3M MS² 4041P Splicing Head

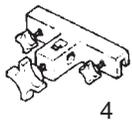
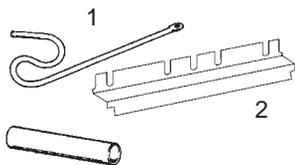


#	Product Number	Description	Pkg.	Stock Number	UPC
1	Spare-Rigs/HTP	Head tape plate	1/cs.	78-8011-2558-0	054007-26479
2	Spare-Rigs/PED	Pedestal	1/cs.	78-8011-2557-2	054007-26478
3	Spare-Rigs/SHB	Splice head body	1/cs.	78-8004-0869-8	054007-26289
4	Spare-Rigs/SHLP	Splice head side plate - left hand	1/cs.	78-8026-7713-4	054007-26860
5	Spare-Rigs/SHRP	Splice head side plate - right hand	1/cs.	78-8026-7714-2	054007-26861
6	Spare-Rigs/SHLS	Splicing head leaf spring universal	1/cs.	78-8095-6379-0	051138-75718
7	Spare-Rigs/SWR	Spring wire retainer 20-24, 26-28 gauge (Blue/Brown)	1/cs.	78-8011-2508-5	054007-26476
8	Spare-Rigs/WGK	Wire guide kit	1/cs.	78-8054-9695-3	054007-17636
9	Spare-Rigs/WRA 2226	Spring wire retainer assy. 22-26 gauge (Red/Black)	1/cs.	78-8011-2559-8	054007-26480
10	Spare-Rigs/WSK	Wire separator kit	1/cs.	78-8011-2560-6	054007-26481

3M MS² 4045 Universal Splicing Head Support Assembly



#	Product Number	Description	Pkg.	Stock Number	UPC
1	4045-HCA	Universal Head Clamp Assembly	1/cs.	78-8006-2482-3	054007-26332
2	4045-ST	Universal Support Tube	1/cs.	78-8006-2485-6	054007-26333
3	4045-VA	Vise Final Assembly	1/cs.	78-8006-2472-4	054007-26331
4	4045-VHPA	Universal Vise Handle and Pad Assembly	1/cs.	78-8020-7958-8	054007-26727
5	4045-PS	Pad Sub Assembly	1/cs.	78-8020-7777-2	054007-26710



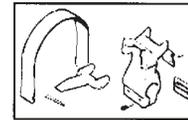
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3M™ MS²™ Splicing System Accessories

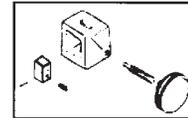
#	Product Number	Description	Pkg.	Stock Number	UPC
1	4041-2	.05 m (2") Unilength Hook	1/cs.	80-6103-2688-8	054007-63857
1	4041-4	.1 m (4") Unilength Hook	1/cs.	80-6103-2689-6	054007-63858
2	4041-RS	Rear Spring Holder	1/cs.	78-8061-8795-7	054007-68203
3	4000/4300-MRT	Module Replacement Tool	1/cs., 1 each	78-8011-2573-9	054007-26483
4	4025	Support Vise	1/cs.	78-8011-2043-3	054007-26468

3M™ MS2™ Splicing System Spare Parts

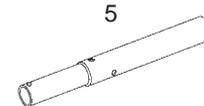
#	Product Number	Description	Pkg.	Stock Number	UPC
1	Spare-Rigs/24CS	60.9 cm (24") cable strap	1/cs.	78-8004-0855-7	054007-26287
2	Spare-Rigs/CA	Clamp assembly	1/cs.	78-8004-0844-1	054007-26286
3	Spare-Rigs/HKCA	Hand knob clamp assembly	1/cs.	78-8004-0837-5	054007-26284
4	Spare-Rigs/STB	Short traverse bar	1/cs.	78-8004-0862-3	054007-26288
5	Spare-Rigs/TSXA	Tube support extension assembly	1/cs.	78-8006-2467-4	054007-26330
6	4046	Double knob head and bar clamp	1/cs.	78-8044-9384-5	054007-17620
7	4046-STNC	Collapsible support tube without clamps	1/cs.	78-8091-2212-6	054007-92825
8	Spare-Rigs/TC	Traverse clamp assembly	1/each	78-8004-0836-7	054007-26283
9	Spare-Rigs/LTB	Long traverse bar	1/each	78-8004-0841-7	054007-26285
10	4049-0	Organizer with Bucket and Lid (no tools)	1/each	80-6108-4416-1	054007-92718
11	4049-NC	Lite Rig w/o Crimper	1/each	80-6108-4761-0	054007-92956
12	4041-SH	Splicing Head Holder	1/each	80-6108-4762-8	054007-92955



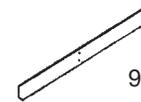
(Assembly) 2



(Assembly) 3



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3M™ 710 Splicing System for Dry or Filled Applications

Modules are available for straight, half-tap and bridge splicing

Several splice module configurations make for multiple options when designing a communications system. Straight connectors permit the joining of conductors when making a straight splice. Half-tap modules permit the joining of two cables but can also be used for rearranging and transferring cables without interruption of service while bridge modules are used in conjunction with either straight or half-tap connectors.

Modules may be used to splice 22 to 26 AWG conductors

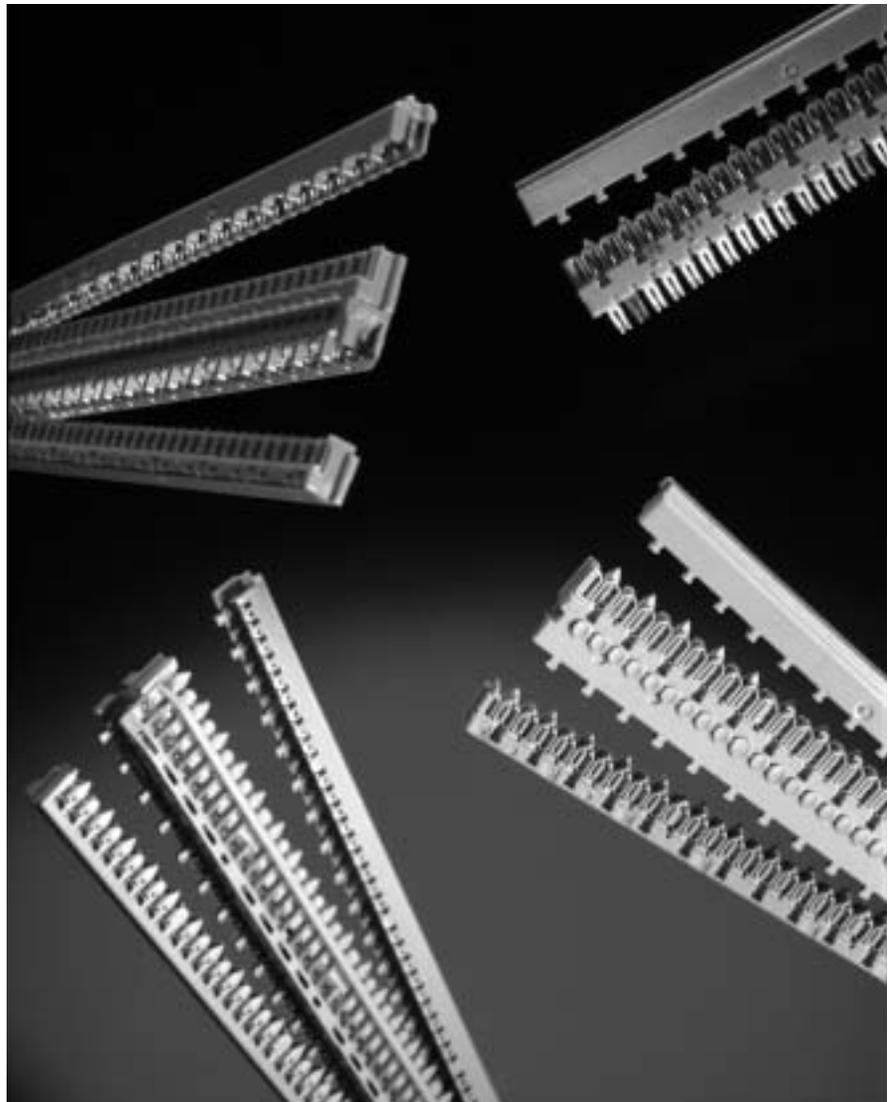
Multiple pairs (5 or 25) of PIC, PVC, pulp or paper-insulated, copper conductors are quickly and easily spliced at one time. 3M 710 Connectors may be used to splice conductors ranging in size between 0.65 mm to 0.40 mm (22 to 26 AWG).

All 3M 710 Modules are manufactured from fire retardant plastic.

All 3M 710 Modules are available either dry or filled.

Applications:

- Aerial closures
- Underground/vault closures
- Direct buried closures
- Encapsulated closures
- Building distribution systems
- Central office/main frame distribution



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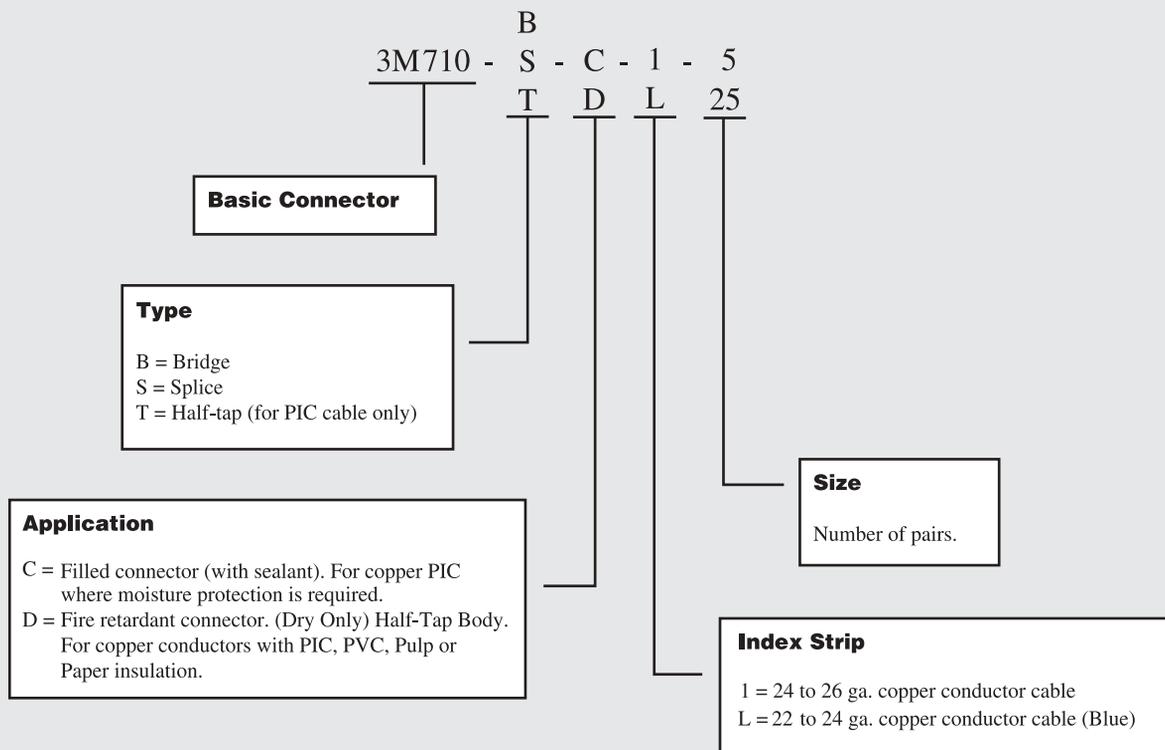


Product Referral Generator

Buried Closures	pg. 133
SLiC™ Aerial Closures	pg. 118
K&B Vault & Riser Closures	pg. 173
Foam-Sealed Closures	pg. 131



3M™ 710 Splicing System Ordering Chart



22/26 gauge (0.65 - 0.40 mm) connectors are standard.

*3M™ Scotchlok™ UY2 connectors recommended for 19 AWG (0.9 mm) solid polypropylene insulated conductors.

Ordering Information for 3M™ 710 Splice Connection System

Product Number	Descriptions	Gauge mm (in.)	Packaging	Minimum Order kg (lbs.)/each	UPC 051138-
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3M 710 25-pair Straight-only Modular Splice Connectors

Straight-only splice connectors permit the joining of conductors, 25 pairs at a time, in a communication distribution system.

3M710-SC1-25S	Splice module - full skirt body, standard index strip, standard cap - encap.	24-26 gauge, 0.51/0.40 mm (0.020/0.016 in.)	24 ctn. 16 ctn./cs.	384 each 16.4 kg (36 lbs.)	78470
3M710-SCL-25S	Splice module - full skirt body, 22 ga. index strip, standard cap - encap.	22-24 gauge 0.65*/0.51 mm (0.026/0.020 in.)	24 ctn. 16 ctn./cs.	384 each 16.4 kg (36 lbs.)	78472

3M 710 25-pair Straight/Half-Tap Modular Splice Connectors

Straight/Half-Tap splice connectors permit the joining of two cables, 25 pairs at a time. They may also be used for rearranging and transferring cable without interrupting service.

3M710-SD1-25SD	Splice module - half-tap body, standard index strip, solid cap - dry	24-26 gauge, 0.51/0.40 mm (0.020/0.016 in.)	24 ctn. 16 ctn./cs.	384 each 16.4 kg (36 lbs.)	78475
3M710-SDL-25SD	Splice module - half-tap body, 22 ga. index strip, solid cap - dry	22-24 gauge, 0.65*/0.51 mm (0.026/0.020 in.)	24 ctn. 16 ctn./cs.	384 each 16.4 kg (36 lbs.)	77092
3M710-TC1-25S	Splice module - half-tap body, standard index strip, solid cap - encap.	24-26 gauge, 0.51/0.40 mm (0.020/0.016 in.)	24 ctn. 16 ctn./cs.	384 each 16.4 kg (36 lbs.)	78478
3M710-TCL-25S	Splice module - half-tap body, 22 ga. index strip, solid cap - encap.	22-24 gauge, 0.65*/0.51 mm (0.026/0.020 in.)	24 ctn. 16 ctn./cs.	384 each 16.4 kg (36 lbs.)	78480

3M 710 25-pair Bridge Splice Connectors

Bridge connectors are used in conjunction with either straight-only connectors or straight/half-tap connectors to permit pluggable 3-way splices, 25 pairs at a time.

3M710-BC1-25S	Bridge module - bridge body, solid cap - encap.	22-26 gauge, 0.65*/0.40 mm (0.026/0.016 in.)	24 ctn. 16 ctn./cs.	384 each 12.7 kg (28 lbs.)	78452
3M710-BD1-25SD	Bridge module - bridge body, solid cap - dry	22-26 gauge, 0.65*/0.40 mm (0.026/0.016 in.)	24 ctn. 16 ctn./cs.	384 each 12.7 kg (28 lbs.)	78456

3M 710 25-pair Caps

Caps are used as a replacement item for the 3M710 25-pair modular splicing system.

3M710-CC1-25	Solid cap - encap., Gray	22-26 gauge, 0.65*/0.40 mm (0.026/0.016 in.)	100 caps	100 each 0.82 kg (1.8 lbs.)	78461
3M710-CD1-25	Solid cap - dry, Gray	22-26 gauge, 0.65*/0.40 mm (0.026/0.016 in.)	100 caps	100 each 0.82 kg (1.8 lbs.)	77602

3M 710 25-pair Index Strips

Index strips are used as a replacement item for the 25-pair modular splicing system.

3M710-ID1-25	Gray index strip, color-coded	24-26 gauge, 0.51/0.40 mm (0.020/0.016 in.)	100 index strips	100 each 0.73 kg (1.6 lbs.)	78467
3M710-IDL-25	Blue index strip, color-coded	22-24 gauge, 0.65/0.51 mm (0.026/0.020 in.)	100 index strips	100 each 0.68 kg (1.5 lbs.)	77073

* Recommend use of 3M Scotchlok™ Connectors on 19-gauge (0.9 mm) conductors.

Ordering Information for 3M™ 710 Splice Connection System



Product Number	Descriptions	Gauge mm (in.)	Packaging	Minimum Order kg (lbs.)/each	UPC 051138-
3M 710 5-pair Straight-only Modular Splice Connectors					
Straight-only splice connectors permit the joining of conductors, 5 pairs at a time, in a communication distribution system.					
3M710-SC1-5S	Splice module - full skirt body, standard index strip, standard cap - encap.	22-26 gauge, 0.65/0.40 mm (0.026/0.016 in.)	25/ctn. 4 ctn./cs.	100 each 10.9 kg (24 lbs.)	78471
3M 710 5-pair Straight/Half-Tap Modular Splice Connectors					
Straight/Half-Tap splice connectors permit the joining of two cables, 5 pairs at a time. They may also be used for rearranging and transferring cable without interrupting service.					
3M710-SD1-5SD	Splice module - half-tap body, standard index strip, solid cap - dry	22-26 gauge, 0.65/0.40 mm (0.026/0.016 in.)	25/ctn. 4 ctn./cs.	100 each 10 kg (22 lbs.)	78476
3M710-TC1-5S	Splice module - half-tap body, standard index strip, solid cap - encap.	22-26 gauge, 0.65/0.40 mm (0.026/0.016 in.)	25/ctn. 4 ctn./cs.	100 each 10.9 kg (24 lbs.)	78479
3M 710 5-pair Bridge Splice Connectors					
Bridge connectors are used in conjunction with either straight-only connectors or straight/half-tap connectors to permit pluggable 3-way splices, 5 pairs at a time.					
3M710-BC1-5S	Bridge module - bridge body, solid cap - encap.	22-26 gauge, 0.65*/0.40 mm (0.026/0.016 in.)	25/ctn. 4 ctn./cs.	100 each 11.8 kg (26 lbs.)	78453
3M710-BD1-5SD	Bridge module - bridge body, solid cap - dry	22-26 gauge, 0.65*/0.40 mm (0.026/0.016 in.)	25/ctn. 4 ctn./cs.	100 each 10.9 kg (24 lbs.)	78457