

# PYROTENAX SPLICES – COMMERCIAL WIRING

## FACTORY AND FIELD INSTALLED SPLICES

For Pyrotенax copper sheathed mineral insulated (MI) wiring cable

### PRODUCT OVERVIEW

#### Splices for copper-sheathed cables

Factory and field installed fire-rated and non-fire-rated splices are used to join individual lengths of Pyrotенax MI cable in cases where the manufactured length is shorter than the run length. Field splices may also be used to repair damaged cables.

Factory installed fire-rated and non-fire-rated splices are rugged, all welded in-line splices for copper-sheathed wiring cables with up to seven conductors. In fire-rated applications, the splice is available for 0.402 in (10.2 mm) and larger diameter cables and is supplied with an integral UL Classified 2-hour fire rating that requires no additional fire protection.

Field installed fire-rated and non-fire-rated splice kits are available for copper-sheathed cables with up to seven conductors. These splice kits are also used to repair damaged cables.

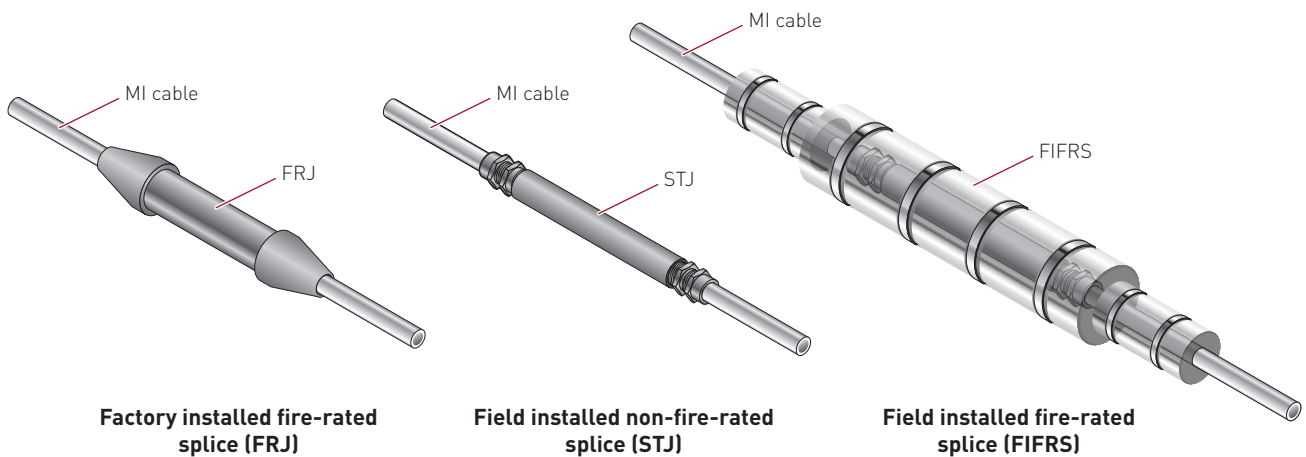
In non-fire-rated applications where the field installed splice is installed outdoors or indoors where moisture is present, it must be protected with a moisture protection kit.

The fire-rated splice is comprised of a high temperature splice protected by an endothermic mat assembly that provides fire protection at a peak temperature of 1010°C (1850°F) after 2 hours – based on the ASTM E119 time-temperature curve used in the UL 2196 fire test.

Pyrotенax commercial MI wiring cables are approved as a complete system only when used with the appropriate Pyrotенax termination and splice kits. The use of nonapproved components will compromise the reliability of the system and will invalidate approvals and warranties.

For more information on splice kits for MI cable, contact your Pentair Thermal Building Solutions representative or phone (800) 545-6258.

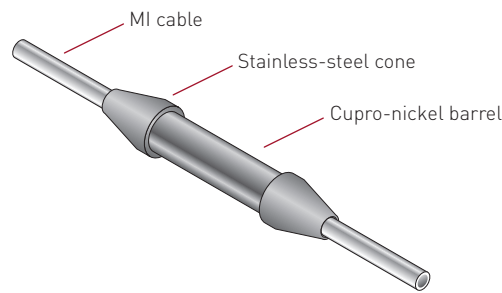
### SPLICES AND ACCESSORIES AVAILABLE FOR COPPER-SHEATHED CABLES



**Field installed moisture protection kit (STJMPRO) also available for use with field installed non-fire-rated splice (STJ)**

## FACTORY AND FIELD INSTALLED SPLICES

### FACTORY INSTALLED FIRE-RATED SPlice FOR COPPER-SHEATHED CABLES (FRJ)



Splice type	Factory installed (for cables 0.402 in (10.2 mm) and larger in diameter)	
Temperature rating	1010°C (1850°F) based on ASTM E119 two-hour time-temperature curve	
Cable configurations	1 to 7 conductors	
Material	Cupro-nickel barrel with stainless-steel end cones	
Dimensions (approximate)	Cables up to 0.768 in (19.5 mm) OD	10 in long x 1-3/4 in diameter (25.4 cm long x 4.4 cm diameter)
	Cables greater than 0.768 in (19.5 mm) OD	10 in long x 2 in diameter (25.4 cm long x 5.1 cm diameter)

### APPROVALS



**Nonhazardous Locations**

- A Classified Electrical Circuit integrity System (FHIT), System No. 1850, in the UL Fire Resistance Directory when used with System no. 1850 cable
- A Listed Electrical Circuit Integrity System (FHITC), System No. 1850, in the ULC Fire Resistance Directory when used with System no. 1850 cable



UL Classified, 2-hour fire-resistive cable, tested to UL 2196



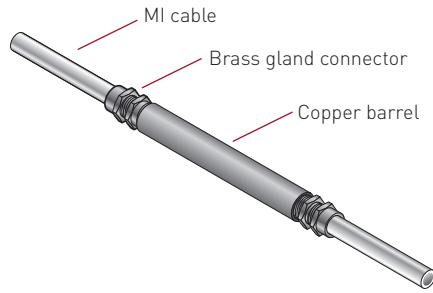
ULC Listed, 2-hour fire-resistant cable, tested to ULC-S139

Order reference	Description
FRJ+Cable reference number	Factory installed fire-rated splice (for System 1850 cables only)

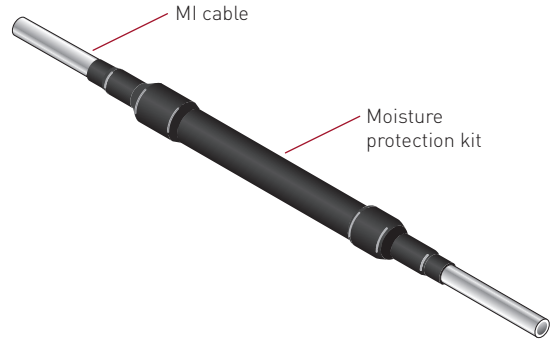
**Example:** Order reference number for fire-rated splice for 1/1-496 System 1850 cable is: FRJ1/1-496.

**FIELD INSTALLED NON-FIRE-RATED SPLICE AND MOISTURE PROTECTION KIT FOR COPPER-SHEATHED CABLES**

**Field-installed non-fire-rated splice kit (STJ)**



**Moisture protection kit (STJMPRO)**



Splice type	Field installed
Continuous exposure temperature	Single conductor: 90°C (194°F) Multi conductor: 105°C (221°F)
Cable configurations	All single and multiconductor cables
Material	Copper barrel with brass gland connectors (1/2 in, 3/4 in, 1 in and 1-1/4 in NPT)
Dimensions (approx.)	13 in long x 2 in diameter (33 cm long x 5 cm diameter)

Type	Field installed
Temperature rating	90°C (194°F)
Cable configurations	All single and multiconductor cables
Material	Heat-shrinkable tubing

**APPROVALS**



Nonhazardous Locations

**APPROVALS**



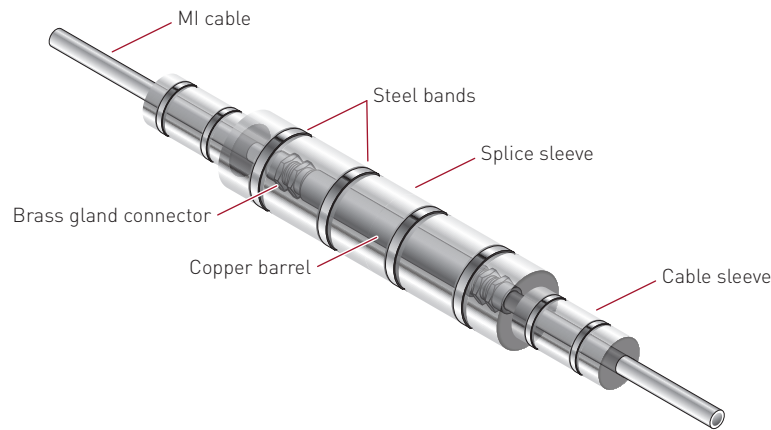
Nonhazardous Locations

Order Reference	Description
STJ+Cable reference number	Field installed splice (for System 1850 cables)
STJMPRO12A	Moisture protection kit for 1/2" Conn size, 0.188 - 0.219" cable OD
STJMPRO12B	Moisture protection kit for 1/2" Conn size, 0.220 - 0.370" cable OD
STJMPRO12C	Moisture protection kit for 1/2" Conn size, 0.371 - 0.418" cable OD
STJMPRO34A	Moisture protection kit for 3/4" Conn size, 0.324 - 0.621" cable OD
STJMPRO1A	Moisture protection kit for 1" Conn size, 0.621 - 0.699" cable OD
STJMPRO114A	Moisture protection kit for 1-1/4" Conn size, 0.699 - 1.000" cable OD

**Example:** Order reference number for field installed splice for 1/1-496 System 1850 cable is: STJ1/1-496.

# FACTORY AND FIELD INSTALLED SPLICES

## FIELD-INSTALLED FIRE-RATED SPLICE KIT FOR COPPER-SHEATHED CABLES (FIFRS)



Type	Field installed
Continuous exposure temperature	105°C (221°F)
Maximum exposure Temperature	1010°C (1850°F) based on ASTM E119 two-hour time-temperature curve
Cable configurations	All single and multi-conductor cables
Material	
Splice	Copper barrel with brass gland connectors (3/4 in, 1 in and 1-1/4 in)
Splice Sleeve	Endothermic mat
Cable Sleeves	Endothermic mat
Dimensions (approx.)	
Splice	13 in long x 2 in dia. (33 cm long x 5 cm dia.)
Splice Sleeve	24.5 in long x 7 in dia. (62 cm long x 18 cm dia.)
Cable Sleeves	Installed: 7 in long x 4 in dia. (18 cm long x 10 cm dia.)

## APPROVALS



- Splice is part of the Electrical Circuit Integrity System (FHIT) System No. 1850 in the UL Fire Resistance Directory when used with UL Classified System no. 1850 cable
- Splice is part of the Electrical Circuit Integrity System (FHITC) System No. 1850 in the ULC Fire Resistance Directory when used with ULC Listed System no. 1850 cable (tested with hose stream)



UL Classified, 2-hour fire-resistive cable, tested to UL 2196



ULC Listed, 2-hour fire-resistant cable, tested to ULC-S139

Order reference	Description
FIFRS + Cable reference number	Field Installed fire-rated splice (System 1850 cables)

**Example:** For 1/1-496 System 1850 cable: FIFRS1/1-496

**GLAND SIZES FOR NON-FIRE RATED (STJ) AND FIRE-RATED SPLICES (FIFRS)**

Cable Reference Number	NPT Gland Size STJ	NPT Gland Size FIFRS
<b>Single Conductor</b>		
1/10-277	1/2	N/A
1/8-298	1/2	N/A
1/6-340	1/2	3/4
1/4-402	1/2	3/4
1/3-449	3/4	3/4
1/2-449	3/4	3/4
1/1-496	3/4	3/4
1/1/0-512	3/4	3/4
1/2/0-580	3/4	3/4
1/3/0-621	1	1
1/4/0-684	1	1
1/250-746	1-1/4	1-1/4
1/350-834	1-1/4	1-1/4
1/500-1000	1-1/4	1-1/4

<b>Two Conductor</b>		
2/16-340	1/2	3/4
2/14-371	1/2	3/4
2/12-402	3/4	3/4
2/10-449	3/4	3/4
2/8-512	3/4	3/4
2/6-590	1	1
2/4-684	1	1
2/3-768	1-1/4	1-1/4
2/2-865	1-1/4	1-1/4
2/1-975	1-1/4	1-1/4

<b>Three Conductor</b>		
3/16-355	1/2	3/4
3/14-387	1/2	3/4
3/12-480	3/4	3/4
3/10-480	3/4	3/4
3/8-590	1	1
3/6-621	1	1
3/4-746	1-1/4	1-1/4
3/3-834	1-1/4	1-1/4

Cable Reference Number	NPT Gland Size STJ	NPT Gland Size FIFRS
<b>Four Conductor</b>		
4/16-387	3/4	3/4
4/14-465	3/4	3/4
4/12-465	3/4	3/4
4/10-590	3/4	3/4
4/8-590	1	1
4/6-730	1-1/4	1-1/4

<b>Seven Conductor</b>		
7/16-449	1	1
7/14-496	1	1
7/12-543	1	1
7/10-621	1-1/4	1-1/4
7/8-710	1-1/4	1-1/4

<b>Twisted Pair and Shielded Twisted Pair</b>		
2/18-215T	1/2	N/A
2/16-246T	1/2	N/A
2/18-324TS	3/4	3/4
2/16-364TS	3/4	3/4



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