

3M

Cold Shrink “Slim Splice” 11kV Splicing Kit



3M's vast experience and research in this field has produced this new and innovative series: the "Slim Splice" Splicing Kit. This splicing system allows installation on a wide range of cable sizes and types and is designed to fit all standard cable connectors.

The kit consists of a cold shrink rubber body in an expanded state, solderless earth connection material and cable jacket replacements. The splice is designed for quick, easy, reliable installation even in confined areas. Saving you time and money!

3M

Cold Shrink “Slim Splice” 11kV XLPE & PILC cable Splicing Kit

Product Description

3M ‘Slim Splice’ Series kits consists of a cold shrink ferrule insulation tube for each phase, high-K mastic and 2228 tape. The splice is designed using the above components, for all 11kV cable types. The kit also features solderless earth components and a cold shrink outer jacket system. For mechanical protection the kit utilises a unique disposable resin pressure system.

Three basic kits will cover the entire cable range from 16mm² to 300mm².

The ferrule insulation tube accommodates most common crimp types, such as crimp and mechanical connectors. Because of the high-K mastic used over the ferrule, there is no need for pencilling.

The ‘Slim’ design of the splice ensures that the splice is not much larger than the cable itself. This feature makes the Slim Slice even more ideal for rack installations and splicing in confined areas, such as mining.

Kit Contents

Each kits contains sufficient of the following material to complete one three core splice:

- Ferrule tubes
- High-K mastic and 2228 tape
- Earthing materials
- Rejacketing materials
- Disposable resin dispensing materials
- Scotchcast 44 polyurethane resin

Applications

3M cold shrink ‘Slim Splice’ series is designed to splice 3 core 6,6 and 11kV PILC Belted and Screened as well as XLPE cable types.

The TRS series can be used to splice XLPE to PILC cables.

Three kit sizes cover cable sizes ranging from 16mm² to 300mm².

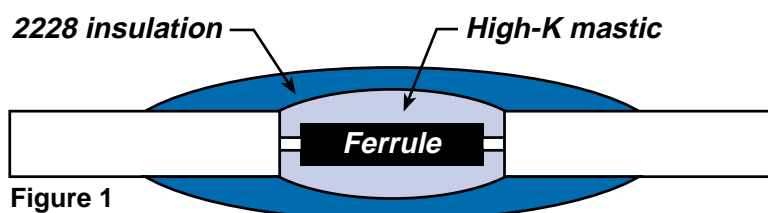
Installation Techniques

Each kit is supplied with an application procedure, giving step by step instructions on how to complete the splice. The instructions all have colour photographs to aid the written instructions.

Following is a short summary:

- Standard cable preparation
- Slide on all the cold shrink tubes
- Slide on earth components
- Crimp and smooth the ferrule
- Apply the high-K mastic
- Apply 2228 mastic
- Shrink down ferrule tubes
- Apply No.13 semiconducting tape (only for XLPE cable)
- Install earth components
- Fit re-jacketing tubes
- Inject splice with resin

The last step is to give the splice mechanical protection and in the case of PILC cable the resin will provide an oil barrier.



Maintenance

The components of the Slim Splice series are stable under normal storage condition. The resin has a two year shelf life and therefore stock rotation is recommended.



Data: Physical & Electrical Properties

The Slim Splice series can be used on XLPE and PILC cables with operating temperatures up to 90°C.

The current rating of the kit meets that of the cable on which it is to be installed.

The Slim Splice meets the requirements of the NRS 053 specification.

SABS type test report is available on request.

No.13 Semiconductive Layer

Thickness	0,76mm
Elongation	800%
Temperature rating	90°C
	130°C Emergency
Volume Resistivity	10 ohm-cm

High-K Mastic

Colour	Brown
Dielectric Constant K	16

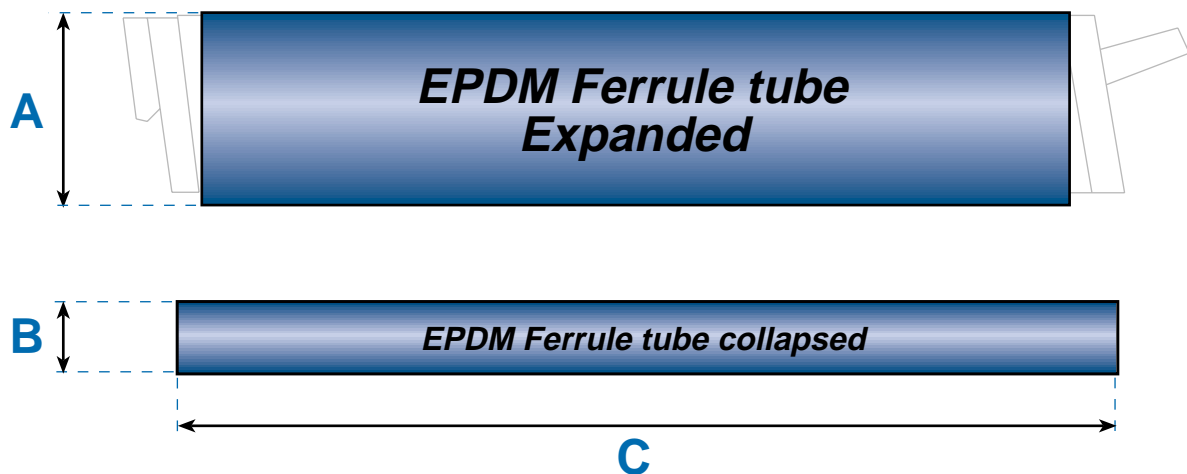
2228 Insulation

Colour	Black
Dielectric Strength:	
Wet	30,5kV/mm
Dry	25,9kV/mm
Dielectric Constant K	3,84
Elongation	1035%

EPDM Ferrule Tube

Colour	Black
Elongation	750%
Dielectric strength	25kV/mm
Dielectric Constant K	2,8

Kit Selection Guide



Ferrule Tube	A	B	C	Recovered Wall Thickness
Size 1 (16 - 35 mm ²)	24,2 mm	14,1 mm	280 mm	4,3 mm
Size 2 (50 - 120 mm ²)	41,4 mm	18,0 mm	300 mm	4,6 mm
Size 3 (150 - 300 mm ²)	49,3 mm	22,6 mm	280 mm	4,6 mm

NOTE: Total insulation applied during the installation of the splice should not exceed Dimension A for each kit size on Table 1. This will ensure that the plastic core of the cold shrink tube can be easily removed.



Cold Shrink “Slim Splice” 11kV Splicing Kit

Features:	Benefits:
<ul style="list-style-type: none"> Cold Shrink installation EPDM Rubber 	<ul style="list-style-type: none"> Good dielectric strength Suitable for all cable and connector types Continuous radial pressure to ensure a tight, natural seal around
<ul style="list-style-type: none"> Cold Shrink delivery system 	<ul style="list-style-type: none"> Easy, safe and quick installation No special tooling or heating required
<ul style="list-style-type: none"> Kit accommodates wide cable range 	<ul style="list-style-type: none"> 3 sizes cover range from 35 to 300 mm² Reduced inventory costs
<ul style="list-style-type: none"> “Slim” design 	<ul style="list-style-type: none"> Can be installed in confined areas, i.e. racks and shafts
<ul style="list-style-type: none"> Resin filled 	<ul style="list-style-type: none"> Excellent mechanical strength keeps mistakes out

Complies to NRS053 requirement

Selection Chart

Kit No.	Cable Size	Insulation OD
XLPE 11kV 3-core 16 - 300 mm		
MVX1	16 - 35 mm ²	14,1 - 18,2 mm
MVX2	50 - 120 mm ²	18,0 - 33,4 mm
MVX3	150 - 300 mm ²	22,6 - 41,3 mm
PILC Belted 11kV 3-core 16 - 300 mm		
MVPB1	16 - 50 mm ²	14,1 - 18,2 mm
MVPB2	70 - 120 mm ²	18,0 - 33,4 mm
MVPB3	150 - 300 mm ²	22,6 - 41,3 mm
PICL Screened 11kV 3-core 16 - 300 mm		
MVP1	16 - 35 mm ²	14,1 - 18,2 mm
MVP2	50 - 120 mm ²	18,0 - 33,4 mm
MVP3	150 - 300 mm ²	22,6 - 41,3 mm
Transition 11kV PILC Screened to XLPE		
MVT1	16 - 35 mm ²	4 - 16 mm
MVT2	50 - 120 mm ²	16 - 50 mm
MVT3	150 - 300 mm ²	22,6 - 41,3 mm

Also available in flame-retardant resins

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