



## 3M Technical Information

### Medium Voltage Joint

# 3M™ QS 2000E

## Cold-Shrink Inline Joint with Cold-Shrink re-jacketing

94-AS 620-1

94-AS 630-1



### Product Application

The 3M QS 2000E Cold Shrink Series Kits are designed for inline splicing up to 36kV Umax voltage class, single core polymeric power cable systems with copper wire screen according to HD 620 (IEC 60502) .

Splicing medium voltage power cables of different voltage classes and cross sections is possible.

### Kit Content

The 94-AS 6x0-1 Inline Joint Series includes the Cold Shrink QS 2000E silicone splice body with integrated stress control device, silicone elastomer insulation and outer semi-conductive layer. Also included are Scotch® 13 tape to form the inner conductive electrode, copper screen sleeve, Constant Force springs and thick walled EPDM rubber Cold Shrink outer tubes to re-build the cable outer jacket.

## QS 2000E Selection Table

Application Range					
Kit Ref.	Cable Dimensions for Polymeric Cables			Connector Dimensions Crimp or Mechanical Connector	
	Diameter over Cable jacket max.(mm)	Diameter over Primary Insulation (mm)	Cross Section (mm <sup>2</sup> ) 18/30(36)kV 19/33(36)kV	Diameter max. (mm)	Length max. (mm)
94-AS 620-1	46	20,6 – 36.8	50 - 185	38	150
94-AS 630-1	74	33.4 – 67.6	240 - 1000	60	250

### Product Features

- The versatile design of the prefabricated one-piece cold shrink splice body allows installation on a wide range of cable sizes and types and a fast and easy installation at temperatures ranging from - 20°C to + 50°C.
- No heat or flame is needed during splice body installation.
- Accommodates crimp or mechanical connectors up to 60mm diameter and 250mm length.
- Wide application range covering several cable cross sectional areas from 50mm<sup>2</sup> – 1000mm<sup>2</sup>.
- Solderless earth connection by means of copper screen sleeve and constant force springs.
- Thick walled, EPDM rubber Cold Shrink outer re-jacketing tubes provide physical protection and moisture sealing of the completed Inline Splices. They can be stacked together providing a short parking position on the cable.
- No special tools needed during splice installation.

### Performance Tests

The 3M QS2000E Single Core Inline Joint Series meets and exceeds the requirements of the European standard CENELEC HD 629.1

Test Report: University of Karlsruhe, Report No.2007-104 dated September 24, 2007

### Installation

The 3M Cold Shrink technology ensures quick, easy and safe installation of the QS2000E Splice Body and outer protection tubes by pulling and unwinding the plastic support core in counter clockwise direction. The use of special tools is not necessary.

Detailed instructions for installing the 3M QS 2000E Series Inline Joints are included in each kit.

## **Product Identification**

The 3M QS 2000E Series Inline Joint kits are marked with supplier name, cable cross section ranges, voltage classes and cable type, storage conditions and manufacturing codes for product traceability.

## **Storage Conditions**

The shelf life of the 3M QS 2000E Series Inline Joints is specified as 3 years.

Temperature: -40°C to +50°C (short term peaks at 60°C max.)

## **Legal Requirements**

The 3M QS 2000E Series Inline Joints are not subject of the European WEEE and RoHS Directives but meet their requirements.

## **Source of Supply**

3M Italy