

QTEN Cold Shrink Termination 96-EP 7xx-2 66/69(72.5kV)

Application

3M™ Cold Shrink Terminations for application on copper wire screened or lead sheathed power cables up to 72.5kV. Indoor or outdoor installation. Application range from 120 – 1500mm².

Kit Content

3M™ QTEN Termination includes a Cold shrink body with integrated, silicone elastomeric insulation and outer silicone rain sheds, with a separate Cold shrink Stress Control PST. Also included are silicone Cold shrink tubes for sealing onto the cable sheath, and the cable lug. The inner refractive stress control layer and the silicone insulation layer are co-extruded during the manufacturing process. The Termination is designed to accommodate all available cable Lugs designs including, hexagonal or deep indent compression, as well as mechanical.

Product Features

- The versatile design of the silicone cold shrink Termination 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, flame, or special tools are needed during splice body installation.
- Accommodates crimp or mechanical Lugs up to 110mm in diameter.
- Wide application range covering several cable cross sectional areas from 120mm² –1500mm².
- Solderless earth connection to copper screen wires or lead sheath.
- Silicone rubber Cold Shrink outer rain sheds and sealing PST's provide physical protection and moisture sealing of the completed Termination.
- The Silicone outer rain sheds of the Termination makes it ideal for zones with maximum environmental contamination, industrial or coastal.
- Creepage path connection for additional protection in areas of high pollution.



Installation

3M™ Cold Shrink technology ensures quick, easy and safe installation of the QTEN Termination Body and outer rain sheds and sealing 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™ QTEN Termination are included in each kit.

Performance Tests

The 3M™ QTEN Single Core Termination meets and exceeds the requirements of IEC standard 60840 04/2004. Refer to Test Reports 003257 & 2009-124

Physical and Electrical Properties

The 3M™ QTEN Kit can be used on cables with a rated operating temperature up to 105°C, and an emergency overload rating of 140°C. A Termination constructed from this kit is rated for 72.5 kV U_{max} and meets or exceeds the requirements of IEC 60840. The current rating of the Termination meets or exceeds the current rating for the cables on which it is installed. BIL rating is 350 kV.

Typical Dimensions (Installed Termination)

Installed Termination is 850 to 900mm in length. (Dependant on Cable Cross Section)

Product Identification

3M™ QTEN Series Termination Kits are marked with supplier name, cable cross section ranges, voltage class and cable type, storage conditions and manufacturing codes for product traceability.

Product Selection

Kit Reference	Cable Dimensions for Polymeric Cable				Cable Lug Dimensions
	Type of Shielding	Diameter over Primary Insulation (mm)	Cross Section ¹ 66/69kV 72.5kV U _{max} (mm ²)	Maximum Diameter over Cable Sheath ² (mm)	Maximum Diameter (mm)
96-EP 720-2	Copper Wire Screen	33.0 – 60.0	120 - 1000	90	90
96-EP 730-2	Copper Wire Screen	51.1 – 87.0	500 - 1500	110	110
96-EP 722-2	Lead Sheath	33.0 – 60.0	120 - 1000	90	90
96-EP 732-2	Lead Sheath	51.1 – 87.0	500 - 1500	110	110
96-EP 723-2	Copper Tape Screen	33.0 – 60.0	120 – 1000	90	90
96-EP 725-2	Copper Wire Screen	33.0 – 60.0	120 – 1000	90	90

¹ The application range can change depending on the primary insulation diameter.

² Maximum cable jacket diameter can change depending on the screen cross section.

Kit Reference	Creepage Distance (mm)	SPS Class		SCD (mm/kV)	USCD (mm/kV)
96-EP 720-2	1820	d	Heavy	25	43.2
96-EP 730-2	1820	d	Heavy	25	43.2
96-EP 722-2	1820	d	Heavy	25	43.2
96-EP 732-2	1820	d	Heavy	25	43.2
96-EP 723-2	1820	d	Heavy	25	43.2
96-EP 725-2	2250	e	Very heavy	31	53.7

Shelf Life & Storage

3M™ QTEN Series Termination Kits have a shelf life of 36 months from date of manufacture. Expiry date is stated on the product label. All components of the kits are recommended for storage and stock rotation at -40°C up to 50°C.

Product Stewardship

3M has a fundamental concern for all who make, distribute and use its products, and for the environment in which we live. This concern is the basis of our philosophy and policies by which we assess the health and environmental information on our products and then take the appropriate steps to protect employee, the public health and the environment.

Customer Notice

3M encourages its customers and potential users of 3M products to review their applications for such products from the standpoint of human health and environmental quality. To help ensure that 3M products are not used in ways for which they were not intended or tested. 3M personnel are available to assist customers in dealing with ecological and product safety considerations. Your 3M sales representative can arrange for the proper contacts.

Product Identification

3M™ QTEN Series Termination Kits are marked with supplier name, cable cross section ranges, voltage class and cable type, storage conditions and manufacturing codes for product traceability.

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. All statements, technical information, and recommendations related to 3M's products are based on information believed to be reliable, but the accuracy or completeness is not guaranteed. 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. Any statements related to the product which are not contained in 3M's current publications, or any contrary statements contained on your purchase order shall have no force or effect unless expressly agreed upon, in writing, by an authorized officer of 3M.

Warranty; Limited Remedy; Limited Liability. This product will be free from defects in material and manufacture at the time of purchase. 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 above, 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.



Electrical Markets Division
3M UK PLC, 3M Centre, Cain Rd,
Bracknell RG12 8HT, United Kingdom
0870 609 4639
www.3M.co.uk/electrical

Electrical Markets Division
3M Ireland Ltd, The Iveagh Building, The
Park, Carrickmines, Dublin 18, Ireland
1 800 812 732
www.3M.co.uk/electrical

3M and is a trademarks of the 3M
company.
© 3M 2023. All rights reserved.

Issue 9

