



QT II Cold Shrink Termination for medium voltage polymeric cables 6/10 kV up to 18/30 kV



1. Product Description

The QT II- kits are designed of non-skirted and skirted (4, 6 and 8 skirts) silicone rubber terminations for Indoor and Outdoor applications. The termination assemblies consist of a Silicone insulator and a built-in refractive stress control tube. The complete assembly is pre-stretched and loaded onto a removable step-core, which can be recycled. Each kit contains all the necessary components for three phases.

2. Applications

These termination kits are designed to be installed on single and three core wire screened, non-armoured polymeric insulated cables for voltages up to 18/30 kV ($U_m = 36$ kV).

3. Typical Properties

The one-piece design of the Cold Shrink Termination is made from high quality silicone material. This guarantees a long life span and excellent tracking resistance for cable ends.

The terminations are made for continuous operating temperatures of 90°C and an emergency overload rating of 130°C.

3.1 Performance Tests

Meets and exceeds International and European standards, like IEC, CENELEC, VDE, BS. Type Test reports are available on request.

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Issue date 11.02.2015

Reference: BM925660011#EN_01

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4. User Information

4.1 Selection Guide



QT II Cold Shrink kits for single core applications 6/10 kV (8,7/15 kV) Indoor Termination

For compression cable lugs according DIN 46329

| Kit Reference | Diameter over Primary Insulation (mm) | Diameter over Cable Jacket (mm) | Max Installation length ¹ (mm) | Application Range ² (mm ²) | |
|--|---------------------------------------|---------------------------------|---|---|------------------|
| | | | | Indoor 6/10 kV | Indoor 8,7/15 kV |
| 92-EB 60-1 | 11,2 - 16,5 | 23 | 190 + lug | 16 - 25 | - |
| 92-EB 61-1 | 14,2 - 22,1 | 28 | 220 + lug | 35 | 25 |
| 92-EB 62-1 | 15,9 - 30,0 | 18,0 - 37,0 | 265 + lug | 50-150 | 35-120 |
| 92-EB 63-1 | 22,6 - 41,4 | 25,0 - 50,0 | 255 + lug | 185-500 | 150-400 |
| 92-EB 64-1 | 27,3 - 49,3 | 29,0 - 60,5 | 265 + lug | 300-630 | 240-500 |
| 92-EB 65-1 | 31,5 - 61,5 | 18,0 - 37,0 | 245 + lug | 500-1000 | 400-800 |
| With Pfisterer mechanical cable lugs included (mounting hole up to 240 mm ² =13 mm, equal or greater than 300 mm ² =16,5 mm) | | | | | |
| 92-EB 62-1ML | 15,9 - 30,0 | 18,0 - 37,0 | 320 | 70-95 | 50-95 |
| 92-EB 62-1-1ML | 15,9 - 30,0 | 18,0 - 37,0 | 380 | 95-150 | 150 |
| 92-EB 63-1ML | 22,6 - 41,4 | 25,0 - 50,0 | 350 | 185-500 | 150-400 |
| 92-EB 64-1ML | 27,3 - 49,3 | 29,0 - 60,5 | 380 | 300-630 | 240-500 |
| 92-EB 65-1ML | 31,5 - 61,5 | 18,0 - 37,0 | 395 | 500-1000 | 400-800 |



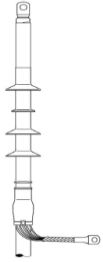
QT II Cold Shrink kits for three core applications 6/10 kV (8,7/15 kV) Indoor Termination

For compression cable lugs according DIN 46329

| Kit Reference | Diameter over Primary Insulation (mm) | Diameter over Cable Jacket max (mm) | Max Installation length ¹ (mm) | Application Range ² (mm ²) | |
|---------------|---------------------------------------|-------------------------------------|---|---|------------------|
| | | | | Indoor 6/10 kV | Indoor 8,7/15 kV |
| 92-EB 61-3 | 14,2 - 22,1 | 60 | 550 + lug (compact: 370 + lug) | 35-70 | 25-50 |
| 92-EB 62-3 | 16,5 - 22,1 | 78 | 560 + lug (compact: 380 + lug) | 70-95 | 50-70 |
| 92-EB 63-3 | 15,9 - 30,0 | 78 | 560 + lug (compact: 380 + lug) | 120-150 | 95-120 |
| 92-EB 64-3 | 22,6 - 41,4 | 107 | 600 + lug (compact: 420 + lug) | 185-300 | 150-240 |

¹ Installation length – from connection point up to the end of the termination

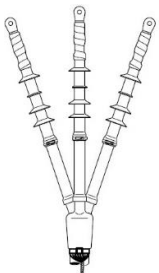
² Application ranges can be different depending on cable dimensions



QT II
Cold Shrink kits for single core applications
6/10 kV (8,7/15 kV) Outdoor Termination
12/20 kV (24 kV) Indoor Termination

For compression cable lugs according DIN 46329

| Kit Reference | Diameter over Primary Insulation (mm) | Diameter over Cable Jacket (mm) | Skirt Diameter (mm) | Max Installation length ¹ (mm) | Application Rang ² (mm ²) | | |
|--|---------------------------------------|---------------------------------|---------------------|---|--|-------------------|-----------------|
| | | | | | Outdoor 6/10 kV | Outdoor 8,7/15 kV | Indoor 12/20 kV |
| 93-EB 62-1 | 16,0 - 28,5 | 23,0 - 35,0 | 68 | 245 + lug | 50-150 | 35-120 | 25-95 |
| 93-EB 63-1 | 21,3 - 35,0 | 30,0 - 44,0 | 70 | 245 + lug | 150-300 | 120-240 | 70-240 |
| 93-EB 64-1 | 27,0 - 45,7 | 35,0 - 52,0 | 82 | 255 + lug | 300-630 | 240-500 | 185-500 |
| 93-EB 65-1 | 33,0 - 53,3 | 41,0 - 65,0 | 90 | 300 + lug | 500-1000 | 400-1000 | 400-1000 |
| With Pfisterer mechanical cable lugs included (mounting hole up to 240 mm ² =13 mm, equal or greater than 300 mm ² =16,5 mm) | | | | | | | |
| 93-EB 62-1ML | 16,2 - 28,4 | 23,0 - 35,0 | 68 | 300 | 70-95 | 35-95 | 25-95 |
| 93-EB 62-1-1ML | 16,2 - 28,4 | 23,0 - 35,0 | 68 | 370 | 70-150 | 50-120 | 25-95 |
| 93-EB 63-1ML | 21,3 - 35,0 | 30,0 - 44,0 | 70 | 340 | 185-240 | 95-240 | 95-240 |
| 93-EB 64-1ML | 27,4 - 45,7 | 35,0 - 52,0 | 82 | 370 | 300-400 | 240-400 | 240-400 |
| 93-EB 65-1ML | 33,3 - 53,3 | 41,0 - 65,0 | 90 | 455 | 500-630 | 500-630 | 400-630 |



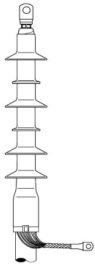
QT II
Cold Shrink kits for three core applications
6/10 kV (8,7/15 kV) Outdoor Termination
12/20 kV (24 kV) Indoor Termination

For compression cable lugs according DIN 46329

| Kit Reference | Diameter over Primary Insulation (mm) | Diameter over Cable Jacket max (mm) | Skirt Diameter (mm) | Max Installation length ¹ (mm) | Application Range ² (mm ²) | | |
|---------------|---------------------------------------|-------------------------------------|---------------------|---|---|-------------------|-----------------|
| | | | | | Outdoor 6/10 kV | Outdoor 8,7/15 kV | Indoor 12/20 kV |
| 93-EB 61-3 | 16,0 - 28,4 | 60 | 68 | 550 + lug | 50-70 | 35-50 | 25-35 |
| 93-EB 62-3 | 16,0 - 28,4 | 78 | 68 | 560 + lug | 95-150 | 70-120 | 50-120 |
| 93-EB 63-3 | 21,3 - 35,0 | 107 | 70 | 600 + lug | 185-300 | 150-240 | 120-240 |

¹ Installation length – from connection point up to the end of the termination

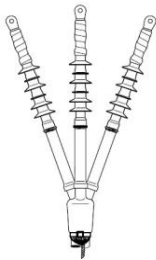
² Application ranges can be different depending on cable dimensions



QT II
Cold Shrink kits for single core applications
12/20 kV (24 kV) Outdoor Termination
18/30 kV (36 kV) Indoor Termination

For compression cable lugs according DIN 46329

| Kit Reference | Diameter over Primary Insulation (mm) | Diameter over Cable Jacket (mm) | Skirt Diameter (mm) | Max Installation length ¹ (mm) | Application Range ² (mm ²) | |
|--|---------------------------------------|---------------------------------|---------------------|---|---|-----------------|
| | | | | | Outdoor 12/20 kV | Indoor 18/30 kV |
| 94-EB 62-1 | 16,0 - 28,5 | 23,0 - 35,0 | 70 | 325 + lug | 25-95 | 25-50 |
| 94-EB 63-1 | 21,3 - 35,0 | 30,0 - 44,0 | 70 | 325 + lug | 70-240 | 50-150 |
| 94-EB 64-1 | 27,0 - 45,7 | 35,0 - 52,0 | 80 | 345 + lug | 185-500 | 120-300 |
| 94-EB 65-1 | 33,0 - 53,3 | 41,0 - 65,0 | 90 | 395 + lug | 400-1000 | 240-500 |
| With Pfisterer mechanical cable lugs included (mounting hole up to 240 mm ² =13 mm, equal or greater than 300 mm ² =16,5 mm) | | | | | | |
| 94-EB 62-1ML | 16,0 - 28,5 | 23,0 - 35,0 | 70 | 380 | 25-95 | 25-50 |
| 94-EB 63-1ML | 21,3 - 35,0 | 30,0 - 44,0 | 70 | 420 | 95-240 | 50-150 |
| 94-EB 64-1ML | 27,0 - 45,7 | 35,0 - 52,0 | 80 | 445 | 240-300 | 120-300 |
| 94-EB 65-1ML | 33,0 - 53,3 | 41,0 - 65,0 | 90 | 545 | 400-630 | 400-500 |



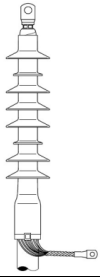
QT II
Cold Shrink kits for three core applications
12/20 kV (24 kV) Outdoor Termination
18/30 kV (36 kV) Wet Indoor Termination

For compression cable lugs according DIN 46329

| Kit Reference | Diameter over Primary Insulation (mm) | Diameter over Cable Jacket max max (mm) | Skirt Diameter (mm) | Max Installation length ¹ (mm) | Application Range ² (mm ²) | |
|---------------|---------------------------------------|---|---------------------|---|---|-----------------|
| | | | | | Outdoor 12/20 kV | Indoor 18/30 kV |
| 94-EB 61-3 | 16,2 - 24,4 | 60 | 70 | 570 + lug | 25-35 | - |
| 94-EB 62-3 | 16,2 - 28,4 | 78 | 70 | 580 + lug | 50-120 | 25-50 |
| 94-EB 63-3 | 21,3 - 35,0 | 107 | 70 | 620 + lug | 120-240 | 25-150 |
| 94-EB 64-3 | 27,0 - 45,7 | 107 | 80 | 620 + lug | - | 95-240 |

¹ Installation length – from connection point up to the end of the termination

² Application ranges can be different depending on cable dimensions

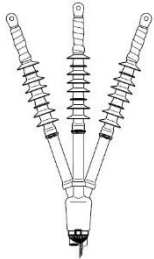


QT II

Cold Shrink kits for single core applications 18/30 kV (36 kV) Outdoor Termination

For compression cable lugs according DIN 46329

| Kit Reference | Diameter over Primary Insulation (mm) | Diameter over Cable Jacket (mm) | Skirt Diameter (mm) | Max Installation length ¹ (mm) | Application Range ² (mm ²) |
|--|---------------------------------------|---------------------------------|---------------------|---|---|
| | | | | | Outdoor 18/30 kV |
| 94-EB62-2 | 21,3 - 35,0 | 30,0 - 44,0 | 70 | 455 + lug | 50-150 |
| 94-EB63-2 | 27,0 - 45,7 | 35,0 - 52,0 | 82 | 485 + lug | 120-240 |
| 94-EB64-2 | 33,0 - 53,3 | 41,0 - 65,0 | 90 | 525 + lug | 240-630 |
| With Pfisterer mechanical cable lugs included (mounting hole up to 240 mm ² =13 mm, equal or greater than 300 mm ² =16,5 mm) | | | | | |
| 94-EB62-2ML | 21,3 - 35,0 | 30,0 - 44,0 | 70 | 530 | 50-150 |
| 94-EB63-2ML | 27,0 - 45,7 | 35,0 - 52,0 | 82 | 580 | 120-240 |
| 94-EB64-2ML | 33,3 - 53,3 | 41,0 - 65,0 | 90 | 640 | 240-400 |



QT II

Cold Shrink kits for three core applications 18/30 kV (36 kV) Outdoor Termination

For compression cable lugs according DIN 46329

| Kit Reference | Diameter over Primary Insulation (mm) | Diameter over Cable jacket max (mm) | Skirt Diameter (mm) | Max Installation length ¹ (mm) | Application Range ² (mm ²) |
|---------------|---------------------------------------|-------------------------------------|---------------------|---|---|
| | | | | | Outdoor 18/30 kV |
| 94-EB63-4 | 21,3 - 35,0 | 107 | 70 | 1000 + lug | 50-150 |
| 94-EB64-4 | 27,4 - 45,7 | 107 | 82 | 1000 + lug | 95-240 |

¹ Installation length – from connection point up to the end of the termination

² Application ranges can be different depending on cable dimensions

Values presented have been determined by standard test methods and are average values not meant to be used for specification purposes.

4.2 Regulatory

The QT II Termination kits are in compliance to EU regulation 1907/2007/EC (REACH).

4.3 Product Identification

3M QT II 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.

4.4 Storage

All components of the QT II Termination kits are recommended to storage and stock rotation under temperature condition of -40°C up to 50°C.

4.5 Shelf Life

The shelf life of the 3M QT II Series Terminations is specified to 36 month.

5. Additional Information

To request additional product information see address below.

Important Notice

All statements, technical information and recommendations contained in this document are based upon tests or experience that 3M believes are reliable. However, many factors beyond 3M's control can affect the use and performance of a 3M product in a particular application, including the conditions under which the product is used and the time and environmental conditions in which the product is expected to perform. Since these factors are uniquely within the user's knowledge and control, it is essential that the user evaluates the 3M product to determine whether it is fit for a particular purpose and suitable for the user's method or application.

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Issue date 11.02.2015

Reference: BM925660011#EN_01

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