



## 3M Technical Information

Cold Shrink Single Core Indoor / Outdoor Terminations for Copper Wire Screen Armoured & Unarmoured Cables up to 36kV  $U_{max}$  Voltage Class

# 3M™ QT-II Terminations



### Product Features

- The versatile design of the prefabricated one-piece 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 or flame is needed during installation.
- No special tools needed during installation.

### Product Application

3M™ QT-II Cold Shrink Indoor / Outdoor Series Kits are designed up to 36kV  $U_{max}$  voltage class, single polymeric power cable systems according to HD 620 (IEC 60502).

### Kit Contents

3M™ Terminations include the Cold Shrink QT-II Silicone Termination body with integrated stress control device, and silicone elastomeric insulation. Skirts are integrated for easier & faster installation. Silicone tape is included for moisture sealing. Also included are all armour continuity components where applicable, please refer to selection table for details.

### Product Features

- The versatile design of the prefabricated one-piece 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 or flame is needed during installation.
- No special tools needed during installation.

### Installation

3M™ Cold Shrink technology ensures quick, easy and safe installation of the QT-II Termination Body by pulling and unwinding the plastic support core in counter clockwise direction. Use of special tools is not necessary.

Detailed instructions for installing the 3M™ QT-II Series Terminations are included in each kit.



## QT-II Selection Table

### Single Core Unarmoured Copper Wire Screen Cables

Kit Number	BIL kV	Jacket Diameter Range (mm)	Cable Insulation Range (mm)	Indoor 3.3kV mm <sup>2</sup>	Indoor 6.6kV mm <sup>2</sup>	Indoor 11kV mm <sup>2</sup>	Indoor 15kV mm <sup>2</sup>
92-EB 60-1-AU	95	Max. 23	11.2 - 16.5	25 - 70	25 - 50	16 - 25	-
92-EB 61-1-AU	95	Max. 28	14.2 - 22.1	70 - 185	70 - 150	35	25
92-EB 62-1-AU	95	18.0 - 37.0	15.9 - 30.0	95 - 300	95 - 300	50 - 150	35-120
92-EB 63-1-AU	95	25.0 - 50.0	22.6 - 41.4	240 - 630	240 - 500	185 - 500	150-400
92-EB 64-1-AU	95	29.0 - 60.5	27.3 - 49.3	400 - 800	400 - 800	300 - 630	240-500
92-EB 65-1-AU	95	31.5 - 74.0	31.5 - 61.5	500 - 1000	500 - 1000	500 - 1000	400-800

Final determining factor is cable insulation diameter

### Single Core Armoured Copper Wire Screen Cables

Kit Number	BIL kV	Jacket Diameter Range (mm)	Cable Insulation Range (mm)	Indoor 3.3kV mm <sup>2</sup>	Indoor 6.6kV mm <sup>2</sup>	Indoor 11kV mm <sup>2</sup>	Indoor 15kV mm <sup>2</sup>
92-EB 60-1-AR-AU	95	Max. 23	11.2 - 16.5	25 - 70	25 - 50	16 - 25	-
92-EB 61-1-AR-AU	95	Max. 28	14.2 - 22.1	70 - 185	70 - 150	35	25
92-EB 62-1-AR-AU	95	18.0 - 37.0	15.9 - 30.0	95 - 300	95 - 300	50 - 150	35-120
92-EB 63-1-AR-AU	95	25.0 - 50.0	22.6 - 41.4	240 - 630	240 - 500	185 - 500	150-400
92-EB 64-1-AR-AU	95	29.0 - 60.5	27.3 - 49.3	400 - 800	400 - 800	300 - 630	240-500
92-EB 65-1-AR-AU	95	31.5 - 74.0	31.5 - 61.5	500 - 1000	500 - 1000	500 - 1000	400-800

Final determining factor is cable insulation diameter

### Single Core Unarmoured Copper Wire Screen Cables

Kit Number	BIL kV	Jacket Diameter Range (mm)	Cable Insulation Range (mm)	Outdoor 3.3kV mm <sup>2</sup>	Outdoor 6.6kV mm <sup>2</sup>	Outdoor 11kV mm <sup>2</sup>	Outdoor 15kV mm <sup>2</sup>	Indoor 22kV mm <sup>2</sup>
93-EB 62-1-AU	125	23.0 - 35.0	16.0 - 28.5	95 - 300	95 - 240	50 - 150	35-120	25-95
93-EB 63-1-AU	125	30.0 - 44.0	21.3 - 35.0	240 - 500	240 - 400	150 - 300	120-240	70-240
93-EB 64-1-AU	125	35.0 - 52.0	27.0 - 45.7	400 - 800	400 - 630	300 - 630	240-500	185-500
93-EB 65-1-AU	125	41.0 - 65.0	33.0 - 53.3	500 - 1000	500 - 1000	500 - 1000	400-1000	400-1000

Final determining factor is cable insulation diameter

### Single Core Armoured Copper Wire Screen Cables

Kit Number	BIL kV	Jacket Diameter Range (mm)	Cable Insulation Range (mm)	Outdoor 3.3kV mm <sup>2</sup>	Outdoor 6.6kV mm <sup>2</sup>	Outdoor 11kV mm <sup>2</sup>	Outdoor 15kV mm <sup>2</sup>	Indoor 22kV mm <sup>2</sup>
93-EB 62-1-AR-AU	125	23.0 - 35.0	16.0 - 28.5	95 - 300	95 - 240	50 - 150	35-120	25-95
93-EB 63-1-AR-AU	125	30.0 - 44.0	21.3 - 35.0	240 - 500	240 - 400	150 - 300	120-240	70-240
93-EB 64-1-AR-AU	125	35.0 - 52.0	27.0 - 45.7	400 - 800	400 - 630	300 - 630	240-500	185-500
93-EB 65-1-AR-AU	125	41.0 - 65.0	33.0 - 53.3	500 - 1000	500 - 1000	500 - 1000	400-1000	400-1000

Final determining factor is cable insulation diameter



### Single Core Unarmoured Copper Wire Screen Cables

Kit Number	BIL kV	Jacket Diameter Range (mm)	Cable Insulation Range (mm)	Outdoor 22kV mm <sup>2</sup>	Indoor 33kV mm <sup>2</sup>
94-EB 62-1-AU	170	23.0 - 35.0	16.2 - 28.5	25-95	25-50
94-EB 63-1-AU	170	30.0 - 44.0	21.3 - 35.0	70-240	50-150
94-EB 64-1-AU	170	35.0 - 52.0	27.4 - 45.7	185-500	120-300
94-EB 65-1-AU	170	41.0 - 65.0	33.3 - 53.3	400-1000	240-500

Final determining factor is cable insulation diameter

### Single Core Armoured Copper Wire Screen Cables

Kit Number	BIL kV	Jacket Diameter Range (mm)	Cable Insulation Range (mm)	Outdoor 22kV mm <sup>2</sup>	Indoor 33kV mm <sup>2</sup>
94-EB 62-1-AR-AU	170	23.0 - 35.0	16.2 - 28.5	25-95	25-50
94-EB 63-1-AR-AU	170	30.0 - 44.0	21.3 - 35.0	70-240	50-150
94-EB 64-1-AR-AU	170	35.0 - 52.0	27.4 - 45.7	185-500	120-300
94-EB 65-1-AR-AU	170	41.0 - 65.0	33.3 - 53.3	400-1000	240-500

Final determining factor is cable insulation diameter

### Single Core Unarmoured Copper Wire Screen Cables

Kit Number	BIL kV	Jacket Diameter Range (mm)	Cable Insulation Range (mm)	Outdoor 33kV mm <sup>2</sup>
94-EB 62-2-AU	170	30.0 - 44.0	31.3 - 35.0	50-150
94-EB 63-2-AU	170	34.0 - 52.0	27.0 - 45.7	120-240
94-EB 64-2-AU	170	41.0 - 65.0	33.3 - 53.3	240-630

Final determining factor is cable insulation diameter

### Single Core Armoured Copper Wire Screen Cables

Kit Number	BIL kV	Jacket Diameter Range (mm)	Cable Insulation Range (mm)	Outdoor 33kV mm <sup>2</sup>
94-EB 62-2-AR-AU	170	30.0 - 44.0	31.3 - 35.0	50-150
94-EB 63-2-AR-AU	170	34.0 - 52.0	27.0 - 45.7	120-240
94-EB 64-2-AR-AU	170	41.0 - 65.0	33.3 - 53.3	240-630

Final determining factor is cable insulation diameter



## Performance Tests

3M™ Terminations meet and exceed the requirements of IEC 60502-4 and IEEE-48.

## Storage

The shelf life of 3M™ QT-II Series Terminations is specified as 3 years.  
Temperature: -40°C 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.

## Legal Requirements

3M QT-II Series Inline Joints are not subject to the European WEEE and RoHS Directives but meet their requirements.

## 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.

## Regulatory Status

3M™ QT-II Series Terminations are not subject to the European WEEE and RoHS Directives but meet their requirements.

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### Important Notice

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**3M Australia Pty Ltd**

