

# HEAT SHRINK TERMINATIONS

CATALOGUE

2022



# HEAT SHRINK TERMINATIONS

CATALOGUE

2022

## INDEX

|                      |       |
|----------------------|-------|
| ABOUT THE GROUP      | P. 2  |
| COMPANY PRESENTATION | P. 4  |
| CERTIFICATIONS       | P. 6  |
| LOW VOLTAGE          | P. 11 |
| MEDIUM VOLTAGE       | P. 15 |



# About the group

**FOR OVER A CENTURY, NEXANS HAS PLAYED A CRUCIAL ROLE IN THE ELECTRIFICATION OF THE PLANET AND IS COMMITTED TO ELECTRIFY THE FUTURE.**

The Group is leading the charge to the new world of electrification: safe, sustainable, renewable, decarbonized and accessible to everyone. The Group is a leader in the design and manufacturing of cable systems and services across four main business areas: Building & Territories, High Voltage & Projects, Industry & Solutions and Telecom & Data.

Nexans is the first company of its industry to create a Foundation supporting sustainable initiatives bringing access to energy to disadvantaged communities worldwide. The Group pledge to contribute to carbon neutrality by 2030.

## HISTORY THE LIVING HISTORY OF NEXANS

Nexans is proud of its long lasting history of over 120 years. 120 years of innovation, flagship projects and international growth. 120 years of destiny that we owe to two remarkable personalities: François Borel, genius inventor, and Edouard Berthoud, brilliant industrialist. With over a century of experience, Nexans has never stopped building the future of electricity and will continue for the years to come. More than 120 years, 3 industrial revolutions... and starting a new chapter



**INNOVATION  
BY NEXANS,  
INNOVATIVE BY  
NATURE**

In 2019, Nexans completed the first chapter of an epic industrial story that started in the 19th century. After more than 120 years of conquests, major achievements and pioneering inventions, the Group is now starting the second chapter in its history.

## LET'S GET CONNECTED

**A full range of standardized or customized accessories for your low, medium and high voltage power networks.**

### Our solutions

Nexans is a leading specialized innovator, manufacturer and distributor of low, medium and high voltage accessories: cable joints and terminations, connectors and bushings, junction cabinets, ferrules and lugs, etc.



**LEANER. SMARTER. SIMPLER.**  
FOR NEXANS, INNOVATION IS THE ART OF DOING THINGS BETTER FOR THE BENEFIT OF OUR CUSTOMERS AND THE COMMUNITY.



# Company presentation

## INTRODUCTION

The origins of the Nexans Offida began with a company called ITALCO founded in 1969. Three entrepreneurs from Milan set up the company in order to manufacture high quality metal-connectors for the Italian energy networks. The company's focus soon shifted towards the design and manufacturing of accessories for cable installers.

In 1990 the company was bought by the Alcatel group which for the first time delivered the global marketplace onto ITALCO's doorstep. In 2000, Alcatel decided to separate its "cable" activities within the group on a global scale and as a result of this move Nexans was created.

Nexans, from the Latin word "nexus" (link), active in the energy cable production, soon decided to create a highly specialized group of companies known as the Power Cable Accessories Business Unit (PCABU) in order to focus efforts on the sales and development of MV cable and cable accessories.

With expertise in various technologies Nexans manufactures a wide variety of cable Accessories like cold shrink (Nexans Power Accessories France), heat shrink (Nexans Italia, Offida), slip on, screened connectors and bushings (Nexans Network Solutions, Euromold in Belgium), as well as ferrules and lugs with shear bolt technology (Nexans Power Accessories Germany, GPH in Hof).

With a long experience in the production of accessories for electrical cables, Nexans has the competence to work with customers on a global scale and create personalized solutions that are specifically adapted to our clients requirements and environment.



## PRODUCTION

The production unit of Nexans Italia in Offida has been certified according to ISO 9001, ISO 14001 as well as ISO/TS 22163 - IRIS (International Railway Industry Standard), ISO 45001 and ISO 37001.

In order to guarantee the highest level of quality to our end customers, the Offida plant is specialized in the production of all the core-components of its products such as: heat-shrink tubes, mastics and resins for electrical applications.



**Heatshrink tubes** Heatshrink technology dates back to 1960s. In Nexans, thanks to R&D activity, HS technology has been improved and tailored according to the market needs. Today we produce a complete range of tubes to cover Low and Medium voltage applications till 52kV in our Extruders/ Expanders lines with diameters starting from 20mm till 300mm and up to 4 different layers.

**Mastics** for electrical use: the complete range of our mastics have been developed and are manufactured totally in company, they are produced by means of a 630 liter mixer in a dedicated part of the plant.

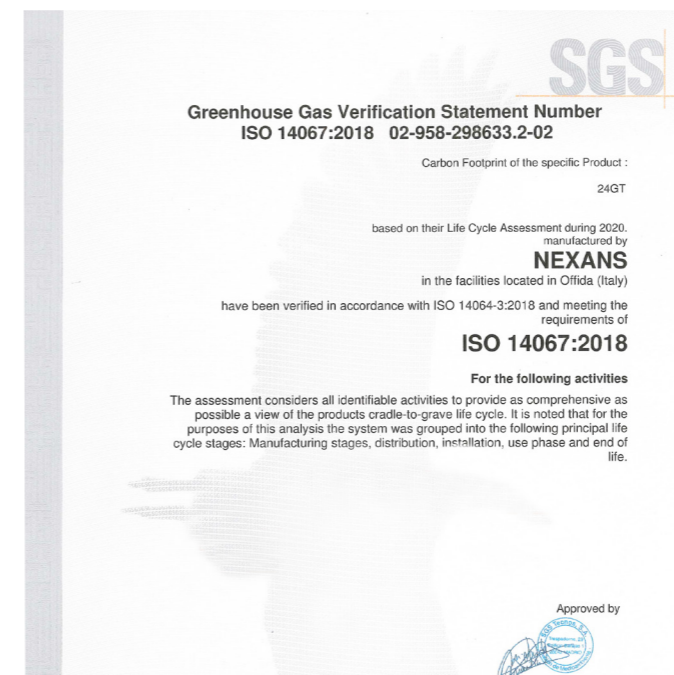
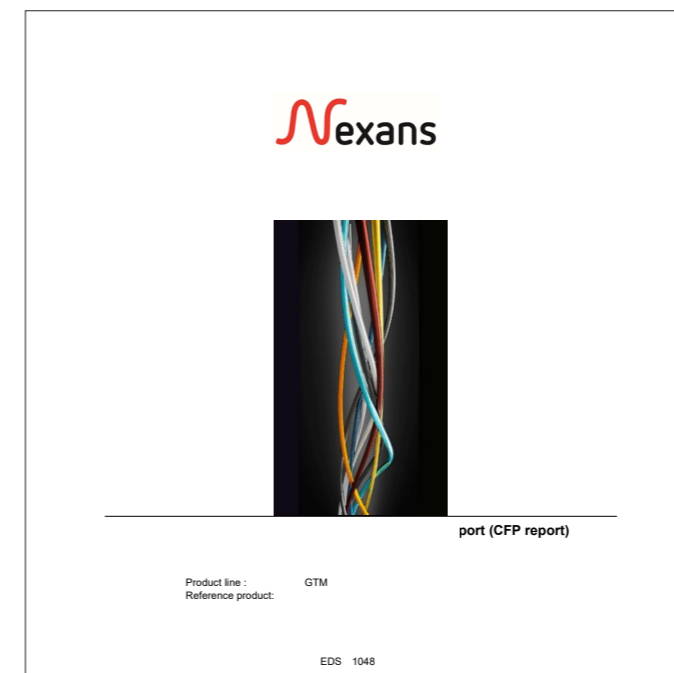
**Resins** for electrical use, casting and insulating, have been designed by Nexans Italia for more than 35 years.



## R&D AND LABORATORY

Our group of engineers and technicians use the most advanced tools and equipment to create, verify and test all our products among the different laboratories and material research centers of the Nexans group. Offida has extensive know how in the field of heat shrink materials as well as mastics.

We are well equipped to perform physical and chemical analysis of insulating, anti-tracking, and stress control materials, both for tubing and mastics. We supply training and failure analysis for all our customers. In the electrical laboratory we can perform type test and routine test (PD measurement at hot and ambient temperature, heating cycles in air and water, humidity and salt fog).



## HEAT-SHRINK MEDIUM VOLTAGE INDOOR AND OUTDOOR TERMINATIONS MONO<sub>i</sub>/MONO<sub>e</sub> FOR SINGLE/THREE CORE POLYMERIC INSULATED CABLES UP TO U<sub>max</sub> 42 kV

### DESIGN: ONE SINGLE TUBE "MONO" OF NEXANS

The tubing, which itself makes up the complete termination is the "GT12-T". This tube is a co-extruded, outer layer anti tracking, inner layer stress control.

The tube utilizes a combination of already proven compounds made with different grades of polymers and additives, designed for Heat shrinkable terminations usage. Co-extrusion manufacturing method brings benefits of reduced installation time and errors at the end user side.

### TECHNICAL ASPECTS:

The terminations were primarily designed to offer a short tail length product and would be matching simple design and superior performances. The indoor termination, while kept as short as possible, was required to pass 150 kV BIL for 24 kV voltage class and 200kV BIL for 42 kV voltage class, without adding any creepage extenders (rain sheds).

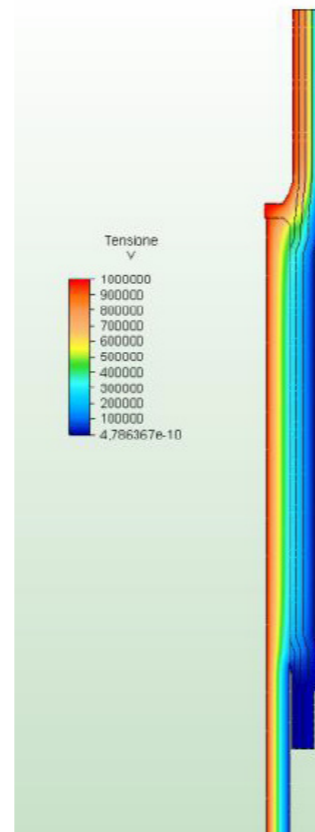
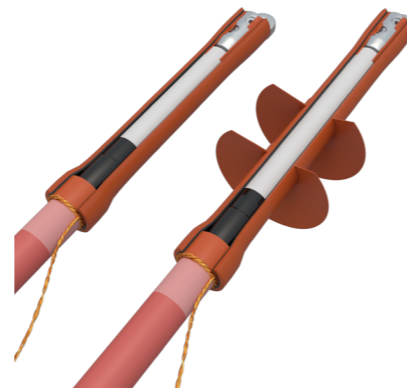
### STRESS CONTROL

During the product qualification it was obvious that the short length of screen removed, and exposed insulation surface causes disruption of the electrical field and creates severe electrical stress at the screen cut. In order to tackle and compensate the negative effects of these very short lengths, a combination of two different stress control material had to be used.

The built in stress control is the inner layer that is co-extruded and covers the full inner length of the tube. The reason this stress control material can be applied on the terminations complete length is that the compound exhibits a linear impedance characteristic therefore can extend and be in contact with conductor area down to the screen. The second stress control material is the MACD mastic that has a non-linear impedance characteristic which supports good impulse voltage withstand behavior.

### SEALING

Sealing is provided by antitracking mastics applied over the lug barrel and onto the outer sheath of the cable.



### INSULATION

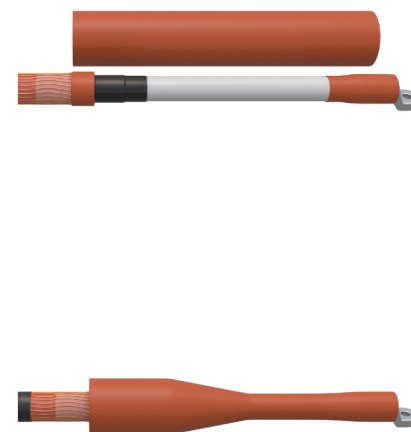
The outer layer is an antitracking material designed for Heat shrinkable terminations usage in harshest environments.

### CONTENT OF THE KIT

Each kit consists of the co extruded stress control-antitracking layers, a stress relief pad and sealing antitracking tapes. For 3-core cables, the kit also includes an antitracking break-out and tubing for customized tail lengths.

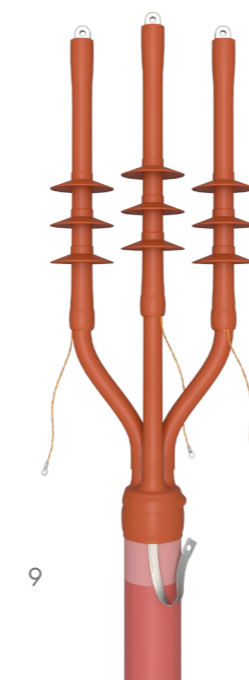
### PRODUCT RANGE

The product line is designed for polymeric cables from 16 to 1200 mm<sup>2</sup> and up to U<sub>max</sub> 42 kV with different screen type (CWS-CTS, Al Foil). The MONOs are fully type tested in accordance with IEC 60502-4 and the Cenelec Hd 629.1 standards.



### INSTALLATION

Each kit contains easy guided installation instructions with installation steps made by 3D pictures.





## LOW VOLTAGE

### Index of products

#### **1TTE** **1SES**

Heat-shrink low voltage termination for armored or unarmored cable  
Heat-shrink live end seal kits for low voltage cables

### Page

P. 12  
P. 13

# 1TTE



## HEAT-SHRINK LOW VOLTAGE TERMINATION FOR ARMORED OR UNARMORED CABLE

Up to 0,6/1 (1,2) kV

### APPLICATION

The 1TTE heat-shrink low voltage outdoor termination kits are designed for cables up to 4 cores with or without armor. The adhesive coating on the lug sealing tubes, the breakout body and fingers provides a good environmental seal, while the cores are protected with thin or medium wall tubing. All components are UV resistant.

### KIT CONTENTS

- Breakout
- Core protection tube (thin or medium wall sleeves)
- Lug sealing tubes w. adhesive
- For armored cable: Armor continuity kit consist of corrosion protection sleeve and earth braid



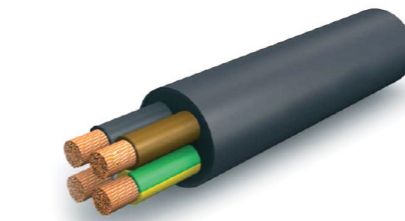
Type tested acc. to:  
EN 50393

| Type                 | Application range (mm <sup>2</sup> ) |
|----------------------|--------------------------------------|
| 1TTE3 & 1TTE 4.16 W  | 4+16                                 |
| 1TTE3 & 1TTE 4.50 W  | 16+50                                |
| 1TTE3 & 1TTE 4.150 W | 70+150                               |
| 1TTE3 & 1TTE 4.300 W | 185+300                              |

Kits for unarmored cables

| Type                 | Application range (mm <sup>2</sup> ) |
|----------------------|--------------------------------------|
| 1TTE3 & 1TTE 4.16 i  | 4+16                                 |
| 1TTE3 & 1TTE 4.50 i  | 16+50                                |
| 1TTE3 & 1TTE 4.150 i | 70+150                               |
| 1TTE3 & 1TTE 4.300 i | 185+300                              |

Kits for armored cables



# 1SES



## HEAT-SHRINK LIVE END SEAL KITS FOR LOW VOLTAGE CABLES

Up to 0,6/1 (1,2) kV

### APPLICATION

The SES kits provides insulation for energized LV cables. The end caps are spiral coated with adhesive, therefore the cables can be left outdoors. The caps are weathering resistant are supplied with the required "energized" symbol warning mark.

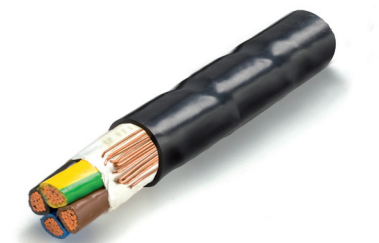
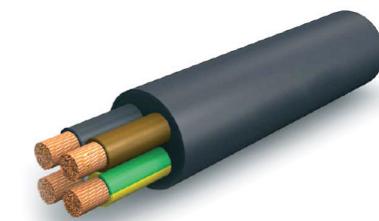
### KIT CONTENTS

- 3, or 4 core protective caps, 1 outer sealing cap
- Tinned copper mesh supplied neutral for concentric neutral cable



Meets specifications:  
EN 50393

| Type      | Application range           |                        |                         |
|-----------|-----------------------------|------------------------|-------------------------|
|           | Max size (mm <sup>2</sup> ) | Max. core Ø cable (mm) | Max. outer Ø cable (mm) |
| 1 SES 6   | 4x16                        | 4-8                    | 8-17                    |
| 1 SES 16  | 10x16                       | 5-8                    | 15-27                   |
| 1 SES 35  | 25x35                       | 7-15                   | 15-30                   |
| 1 SES 150 | 50x150                      | 11-17                  | 26-43                   |
| 1 SES 300 | 150x300                     | 15-27                  | 37-69                   |







## MEDIUM VOLTAGE

### Index of products

|                   | Page   |
|-------------------|--|
| <b>MONOi I</b>    | Heat-shrink MV indoor termination for single core polymeric cables with Cu wire screen P. 16                           |
| <b>MONOe I</b>    | Heat-shrink MV outdoor termination for single core polymeric cables with Cu wire screen P. 17                          |
| <b>MONOi AI</b>   | Heat-shrink MV indoor termination for single core polymeric cables with Cu tape screen P. 18                           |
| <b>MONOe AI</b>   | Heat-shrink MV outdoor termination for single core polymeric cables with Cu tape screen P. 19                          |
| <b>MONOi FCi</b>  | Heat-shrink MV indoor termination for single core polymeric cables with Al tape screen P. 20                           |
| <b>MONOe FCi</b>  | Heat-shrink MV outdoor termination for single core polymeric cables with Al tape screen P. 21                          |
| <b>MONOi3 W</b>   | Heat-shrink MV indoor termination for three core polymeric cables with STA or SWA armor P. 22                          |
| <b>MONOe3 W</b>   | Heat-shrink MV outdoor termination for three core polymeric cables with STA or SWA armor P. 23                         |
| <b>MONOi3 CW</b>  | Heat-shrink MV indoor termination for non armored three core polymeric cables with copper wire screen P. 24            |
| <b>MONOe3 CW</b>  | Heat-shrink MV outdoor termination for non armored three core polymeric cables with copper wire screen P. 25           |
| <b>TK NOT ARM</b> | Heat-shrink trifurcations kits for MV applications cables without armor P. 26  |
| <b>TK ARM</b>     | Heat-shrink trifurcations kits for MV applications cables with armor P. 27   |
| <b>TTGI1 Z</b>    | Heat-shrink MV indoor termination for single core polymeric cables with Cu wire/tape screen, AL wire/tape armor P. 28  |
| <b>TTGE1 Z</b>    | Heat-shrink MV outdoor termination for single core polymeric cables with Cu wire/tape screen, AL wire/tape armor P. 29 |
| <b>52TTGI1</b>    | Heat-shrink LHV indoor terminations for single core polymeric cables with Cu wire screen P. 30                         |
| <b>52TTGE1</b>    | Heat-shrink LHV outdoor termination for single core polymeric cables with Cu wire screen P. 31                         |

# MONOi I

## HEAT-SHRINK MV INDOOR TERMINATION FOR SINGLE CORE POLYMERIC CABLES WITH Cu WIRE SCREEN

Up to 20,8/36 (42) kV

### APPLICATION

The "MONOi" terminations are a single component solution, for single core polymeric cables.

### TECHNICAL FEATURES

The "MONOi" indoor terminations are designed for max system voltages of 42 kV for compact switchgears as well as for installations where space is limited.

Easy, quick to install, reducing installation time and errors.

The kit consists of a stress control mastic pad, a co extruded dual wall tube and red anti-tracking sealing mastic.

The design accommodates various conductor lugs.

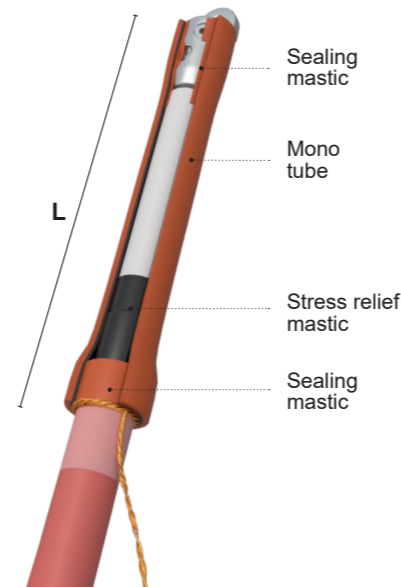
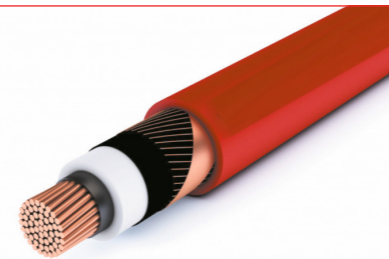
MC types are supplied with "GPH" mechanical conductor lugs.

Each "MONOi" termination kit contains material to allow for 3 phase installation.



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv) | Type             | Section (mm²) | DOI insulation (mm) | DOE outer sheath (mm) | L min (mm) |
|---------|------------------|---------------|---------------------|-----------------------|------------|
| 12 kV   | 3x12MONOi1.95i   | 25-95         | 12-20               | 20-34                 | 300        |
|         | 3x12MONOi1.240i  | 70-240        | 16-30               | 24-40                 | 300        |
|         | 3x12MONOi1.300i  | 95-300        | 18-32               | 26-44                 | 300        |
|         | 3x12MONOi1.400i  | 185-400       | 22-36               | 28-48                 | 350        |
|         | 3x12MONOi1.630i  | 400-630       | 26-42               | 36-54                 | 350        |
|         | 3x12MONOi1.1000i | 630-1000      | 34-52               | 42-58                 | 400        |
|         | 3x12MONOi1.1200i | 1000-1200     | 44-58               | 48-64                 | 400        |
| 24 kV   | 3x24MONOi1.95i   | 25-95         | 14-26               | 24-42                 | 350        |
|         | 3x24MONOi1.240i  | 70-240        | 18-34               | 30-44                 | 350        |
|         | 3x24MONOi1.300i  | 95-300        | 20-38               | 32-50                 | 350        |
|         | 3x24MONOi1.400i  | 185-400       | 25-40               | 36-52                 | 350        |
|         | 3x24MONOi1.630i  | 400-630       | 30-46               | 38-60                 | 400        |
|         | 3x24MONOi1.1000i | 630-1000      | 36-56               | 44-64                 | 400        |
|         | 3x24MONOi1.1200i | 1000-1200     | 46-60               | 52-66                 | 450        |
| 36 kV   | 3x36MONOi1.95i   | 25-95         | 20-32               | 30-44                 | 450        |
|         | 3x36MONOi1.240i  | 70-240        | 22-38               | 36-52                 | 450        |
|         | 3x36MONOi1.300i  | 95-300        | 24-42               | 38-54                 | 450        |
|         | 3x36MONOi1.400i  | 185-400       | 28-46               | 42-60                 | 450        |
|         | 3x36MONOi1.630i  | 400-630       | 32-52               | 44-66                 | 500        |
|         | 3x36MONOi1.1000i | 630-1000      | 42-60               | 48-70                 | 500        |
|         | 3x36MONOi1.1200i | 1000-1200     | 48-64               | 54-72                 | 500        |
| 42 kV   | 3x42MONOi1.95i   | 25-95         | 20-34               | 34-50                 | 500        |
|         | 3x42MONOi1.240i  | 70-240        | 26-42               | 38-54                 | 500        |
|         | 3x42MONOi1.300i  | 95-300        | 28-46               | 40-60                 | 500        |
|         | 3x42MONOi1.400i  | 185-400       | 32-48               | 42-64                 | 550        |
|         | 3x42MONOi1.630i  | 400-630       | 34-56               | 46-68                 | 550        |
|         | 3x42MONOi1.1000i | 630-1000      | 44-62               | 50-74                 | 550        |
|         | 3x42MONOi1.1200i | 1000-1200     | 50-66               | 56-76                 | 550        |



# MONOe I

## HEAT-SHRINK MV OUTDOOR TERMINATION FOR SINGLE CORE POLYMERIC CABLES WITH Cu WIRE SCREEN

Up to 20,8/36 (42) kV

### APPLICATION

The "MONOe" terminations are a single component solution, for single core polymeric cables.

### TECHNICAL FEATURES

The "MONOe" outdoor terminations are designed for max system voltages of 42 kV. Easy, quick to install, reducing installation time and errors.

The kit consists of a stress control mastic pad, a co extruded dual wall tube and red anti-tracking sealing mastic.

Anti-tracking rain sheds are supplied to withstand outdoor environments.

The design accommodates various conductor lugs.

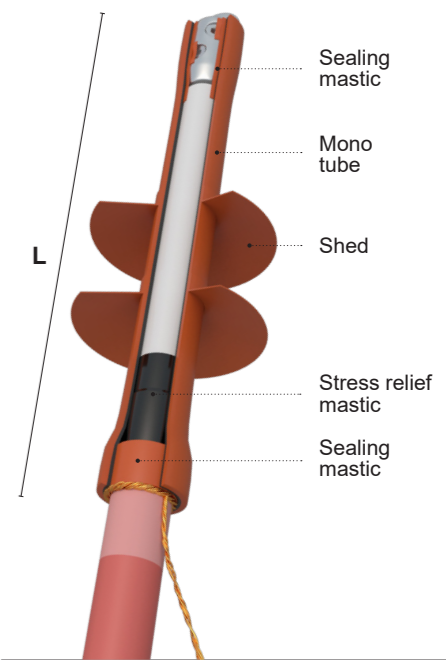
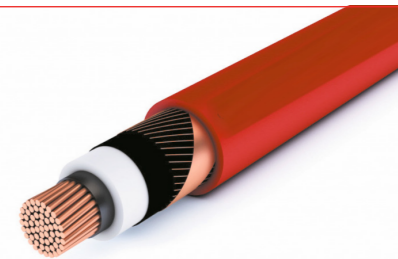
MC types are supplied with "GPH" mechanical conductor lugs.

Each "MONOe" termination kit contains material to allow for 3 phase installation.



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv) | Type             | Section (mm²) | DOI insulation (mm) | DOE outer sheath (mm) | L min (mm) |
|---------|------------------|---------------|---------------------|-----------------------|------------|
| 12 kV   | 3x12MONOe1.95i   | 25-95         | 12-20               | 20-34                 | 500        |
|         | 3x12MONOe1.240i  | 70-240        | 16-30               | 24-40                 | 500        |
|         | 3x12MONOe1.300i  | 95-300        | 18-32               | 26-44                 | 500        |
|         | 3x12MONOe1.400i  | 185-400       | 22-36               | 28-48                 | 500        |
|         | 3x12MONOe1.630i  | 400-630       | 26-42               | 36-54                 | 500        |
|         | 3x12MONOe1.1000i | 630-1000      | 34-52               | 42-58                 | 500        |
|         | 3x12MONOe1.1200i | 1000-1200     | 44-58               | 48-64                 | 500        |
| 24 kV   | 3x24MONOe1.95i   | 25-95         | 14-26               | 24-42                 | 500        |
|         | 3x24MONOe1.240i  | 70-240        | 18-34               | 30-44                 | 500        |
|         | 3x24MONOe1.300i  | 95-300        | 20-38               | 32-50                 | 500        |
|         | 3x24MONOe1.400i  | 185-400       | 25-40               | 36-52                 | 500        |
|         | 3x24MONOe1.630i  | 400-630       | 30-46               | 38-60                 | 600        |
|         | 3x24MONOe1.1000i | 630-1000      | 36-56               | 44-64                 | 600        |
|         | 3x24MONOe1.1200i | 1000-1200     | 46-60               | 52-66                 | 600        |
| 36 kV   | 3x36MONOe1.95i   | 25-95         | 20-32               | 30-44                 | 550        |
|         | 3x36MONOe1.240i  | 70-240        | 22-38               | 36-52                 | 550        |
|         | 3x36MONOe1.300i  | 95-300        | 24-42               | 38-54                 | 550        |
|         | 3x36MONOe1.400i  | 185-400       | 28-46               | 42-60                 | 650        |
|         | 3x36MONOe1.630i  | 400-630       | 32-52               | 44-66                 | 650        |
|         | 3x36MONOe1.1000i | 630-1000      | 42-60               | 48-70                 | 650        |
|         | 3x36MONOe1.1200i | 1000-1200     | 48-64               | 54-72                 | 650        |
| 42 kV   | 3x42MONOe1.95i   | 25-95         | 20-34               | 34-50                 | 650        |
|         | 3x42MONOe1.240i  | 70-240        | 26-42               | 38-54                 | 650        |
|         | 3x42MONOe1.300i  | 95-300        | 28-46               | 40-60                 | 650        |
|         | 3x42MONOe1.400i  | 185-400       | 32-48               | 42-64                 | 650        |
|         | 3x42MONOe1.630i  | 400-630       | 34-56               | 46-68                 | 750        |
|         | 3x42MONOe1.1000i | 630-1000      | 44-62               | 50-74                 | 750        |
|         | 3x42MONOe1.1200i | 1000-1200     | 50-66               | 56-76                 | 750        |



# MONOi AI

## HEAT-SHRINK MV INDOOR TERMINATION FOR SINGLE CORE POLYMERIC CABLES WITH Cu TAPE SCREEN

Up to 20,8/36 (42) kV

### APPLICATION

The "MONOi A" terminations are a single component solution, for single core polymeric cables

### TECHNICAL FEATURES

The "MONOi A" indoor terminations are designed for max system voltages of 42 kV, for compact switchgears as well as for installations where space is limited.

Easy, quick to install, reducing installation time and errors.

The kit consists of a stress control mastic pad, a co extruded dual wall tube and red anti-tracking sealing mastic.

A solderless roll force spring and an earthing braid is included in the kit.

The design accommodates various conductor lugs.

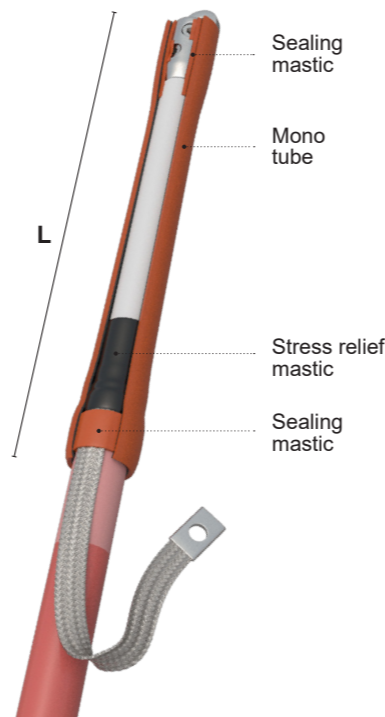
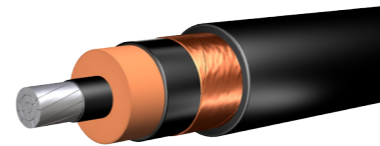
MC types are supplied with "GPH" mechanical conductor lugs.

Each "MONOi A" termination kit contains material to allow for 3 phase installation.



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv) | Type              | Section (mm <sup>2</sup> ) | DOI insulation (mm) | DOE outer sheath (mm) | L min (mm) |
|---------|-------------------|----------------------------|---------------------|-----------------------|------------|
| 12 kV   | 3x12MONOi1.95Ai   | 25-95                      | 12-20               | 20-34                 | 300        |
|         | 3x12MONOi1.240Ai  | 70-240                     | 16-30               | 24-40                 | 300        |
|         | 3x12MONOi1.300Ai  | 95-300                     | 18-32               | 26-44                 | 300        |
|         | 3x12MONOi1.400Ai  | 185-400                    | 22-36               | 28-48                 | 350        |
|         | 3x12MONOi1.630Ai  | 400-630                    | 26-42               | 36-54                 | 350        |
|         | 3x12MONOi1.1000Ai | 630-1000                   | 34-52               | 42-58                 | 400        |
|         | 3x12MONOi1.1200Ai | 1000-1200                  | 44-58               | 48-64                 | 400        |
| 24 kV   | 3x24MONOi1.95Ai   | 25-95                      | 14-26               | 24-42                 | 350        |
|         | 3x24MONOi1.240Ai  | 70-240                     | 18-34               | 30-44                 | 350        |
|         | 3x24MONOi1.300Ai  | 95-300                     | 20-38               | 32-50                 | 350        |
|         | 3x24MONOi1.400Ai  | 185-400                    | 25-40               | 36-52                 | 400        |
|         | 3x24MONOi1.630Ai  | 400-630                    | 30-46               | 38-60                 | 400        |
|         | 3x24MONOi1.1000Ai | 630-1000                   | 36-56               | 44-64                 | 400        |
|         | 3x24MONOi1.1200Ai | 1000-1200                  | 46-60               | 52-66                 | 450        |
| 36 kV   | 3x36MONOi1.95Ai   | 25-95                      | 20-32               | 30-44                 | 450        |
|         | 3x36MONOi1.240Ai  | 70-240                     | 22-38               | 36-52                 | 450        |
|         | 3x36MONOi1.300Ai  | 95-300                     | 24-42               | 38-54                 | 450        |
|         | 3x36MONOi1.400Ai  | 185-400                    | 28-46               | 42-60                 | 450        |
|         | 3x36MONOi1.630Ai  | 400-630                    | 32-52               | 44-66                 | 500        |
|         | 3x36MONOi1.1000Ai | 630-1000                   | 42-60               | 48-70                 | 500        |
|         | 3x36MONOi1.1200Ai | 1000-1200                  | 48-64               | 54-72                 | 500        |
| 42 kV   | 3x42MONOi1.95Ai   | 25-95                      | 20-34               | 34-50                 | 500        |
|         | 3x42MONOi1.240Ai  | 70-240                     | 26-42               | 38-54                 | 500        |
|         | 3x42MONOi1.300Ai  | 95-300                     | 28-46               | 40-60                 | 500        |
|         | 3x42MONOi1.400Ai  | 185-400                    | 32-48               | 42-64                 | 550        |
|         | 3x42MONOi1.630Ai  | 400-630                    | 34-56               | 46-68                 | 550        |
|         | 3x42MONOi1.1000Ai | 630-1000                   | 44-62               | 50-74                 | 550        |
|         | 3x42MONOi1.1200Ai | 1000-1200                  | 50-66               | 56-76                 | 550        |



# MONOe AI

## HEAT-SHRINK MV OUTDOOR TERMINATION FOR SINGLE CORE POLYMERIC CABLES WITH Cu TAPE SCREEN

Up to 20,8/36 (42) kV

### APPLICATION

The "MONOe A" terminations are a single component solution, for single core polymeric cables.

### TECHNICAL FEATURES

The "MONOe A" outdoor terminations are designed for max system voltages of 42 kV.

Easy, quick to install, reducing installation time and errors.

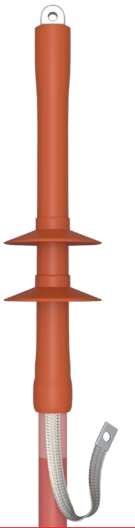
The kit consists of a stress control mastic pad, a co extruded dual wall tube and red anti-tracking sealing mastic. Anti-tracking rain sheds are supplied to withstand outdoor environments.

A solderless roll force spring and an earthing braid is included in the kit.

The design accommodates various conductor lugs.

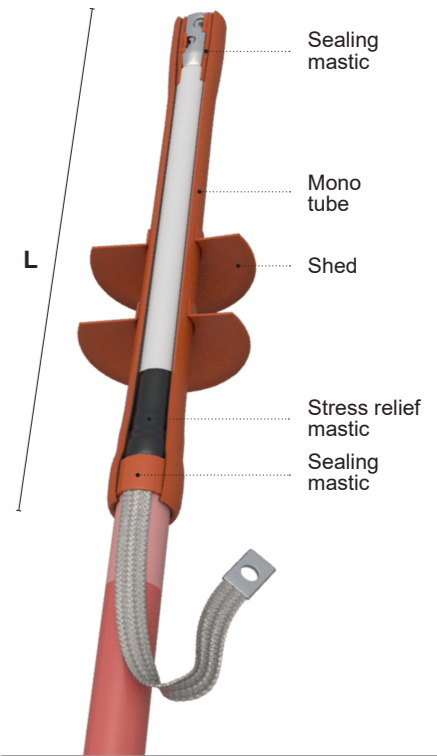
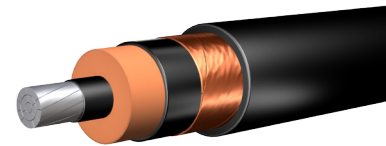
MC types are supplied with "GPH" mechanical conductor lugs.

Each "MONOe A" termination kit contains material to allow for 3 phase installation



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv) | Type              | Section (mm <sup>2</sup> ) | DOI insulation (mm) | DOE outer sheath (mm) | L min (mm) |
|---------|-------------------|----------------------------|---------------------|-----------------------|------------|
| 12 kV   | 3x12MONOe1.95Ai   | 25-95                      | 12-20               | 20-34                 | 500        |
|         | 3x12MONOe1.240Ai  | 70-240                     | 16-30               | 24-40                 | 500        |
|         | 3x12MONOe1.300Ai  | 95-300                     | 18-32               | 26-44                 | 500        |
|         | 3x12MONOe1.400Ai  | 185-400                    | 22-36               | 28-48                 | 500        |
|         | 3x12MONOe1.630Ai  | 400-630                    | 26-42               | 36-54                 | 500        |
|         | 3x12MONOe1.1000Ai | 630-1000                   | 34-52               | 42-58                 | 500        |
|         | 3x12MONOe1.1200Ai | 1000-1200                  | 44-58               | 48-64                 | 500        |
| 24 kV   | 3x24MONOe1.95Ai   | 25-95                      | 14-26               | 24-42                 | 500        |
|         | 3x24MONOe1.240Ai  | 70-240                     | 18-34               | 30-44                 | 500        |
|         | 3x24MONOe1.300Ai  | 95-300                     | 20-38               | 32-50                 | 500        |
|         | 3x24MONOe1.400Ai  | 185-400                    | 25-40               | 36-52                 | 500        |
|         | 3x24MONOe1.630Ai  | 400-630                    | 30-46               | 38-60                 | 600        |
|         | 3x24MONOe1.1000Ai | 630-1000                   | 36-56               | 44-64                 | 600        |
|         | 3x24MONOe1.1200Ai | 1000-1200                  | 46-60               | 52-66                 | 600        |
| 36 kV   | 3x36MONOe1.95Ai   | 25-95                      | 20-32               | 30-44                 | 550        |
|         | 3x36MONOe1.240Ai  | 70-240                     | 22-38               | 36-52                 | 550        |
|         | 3x36MONOe1.300Ai  | 95-300                     | 24-42               | 38-54                 | 550        |
|         | 3x36MONOe1.400Ai  | 185-400                    | 28-46               | 42-60                 | 650        |
|         | 3x36MONOe1.630Ai  | 400-630                    | 32-52               | 44-66                 | 650        |
|         | 3x36MONOe1.1000Ai | 630-1000                   | 42-60               | 48-70                 | 650        |
|         | 3x36MONOe1.1200Ai | 1000-1200                  | 48-64               | 54-72                 | 650        |
| 42 kV   | 3x42MONOe1.95Ai   | 25-95                      | 20-34               | 34-50                 | 650        |
|         | 3x42MONOe1.240Ai  | 70-240                     | 26-42               | 38-54                 | 650        |
|         | 3x42MONOe1.300Ai  | 95-300                     | 28-46               | 40-60                 | 650        |
|         | 3x42MONOe1.400Ai  | 185-400                    | 32-48               | 42-64                 | 650        |
|         | 3x42MONOe1.630Ai  | 400-630                    | 34-56               | 46-68                 | 750        |
|         | 3x42MONOe1.1000Ai | 630-1000                   | 44-62               | 50-74                 | 750        |
|         | 3x42MONOe1.1200Ai | 1000-1200                  | 50-66               | 56-76                 | 750        |



# MONOi FCI

## HEAT-SHRINK MV INDOOR TERMINATION FOR SINGLE CORE POLYMERIC CABLES WITH AI TAPE SCREEN

Up to 20,8/36 (42) kV

### APPLICATION

The "MONOi FCI" terminations are a single component solution, for single core polymeric cables.

### TECHNICAL FEATURES

The "MONOi FCI" indoor terminations are designed for max system voltages of 42 kV, for compact switchgears as well as for installations where space is limited. Easy, quick to install, reducing installation time and errors.

The kit consists of a stress control mastic pad, a co extruded dual wall tube and red anti-tracking sealing mastic.

A cheese-rasp + earthing braid is included in the kit.

The design accommodates various conductor lugs.

MC types are supplied with "GPH" mechanical conductor lugs.

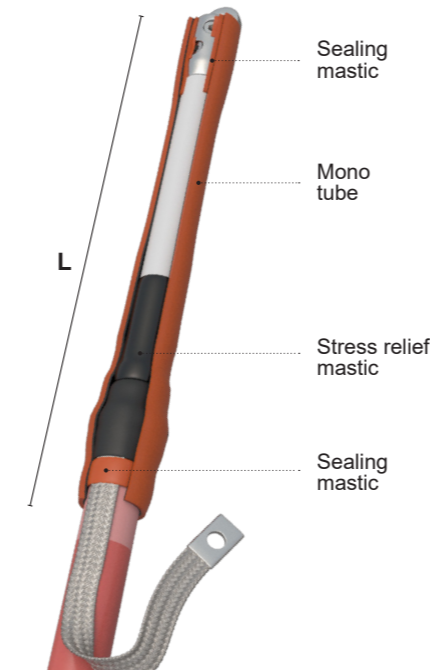
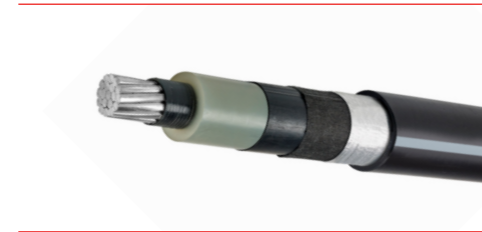
Each "MONOi FCI" termination kit contains material to allow for 3 phase installation.

WSK 2.0 type with "T" braid and roll force spring instead of cheese rasp available upon request.



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv) | Type               | Section (mm²) | DOI insulation (mm) | DOE outer sheath (mm) | L min (mm) |
|---------|--------------------|---------------|---------------------|-----------------------|------------|
| 24 kV   | 3x24MONOi1.95FCi   | 25-95         | 14-26               | 24-42                 | 350        |
|         | 3x24MONOi1.240FCi  | 70-240        | 18-34               | 30-44                 | 350        |
|         | 3x24MONOi1.300FCi  | 95-300        | 20-38               | 32-50                 | 350        |
|         | 3x24MONOi1.400FCi  | 185-400       | 25-40               | 36-52                 | 400        |
|         | 3x24MONOi1.630FCi  | 400-630       | 30-46               | 38-60                 | 400        |
|         | 3x24MONOi1.1000FCi | 630-1000      | 36-56               | 44-64                 | 400        |
|         | 3x24MONOi1.1200FCi | 1000-1200     | 46-60               | 52-66                 | 450        |
| 36 kV   | 3x36MONOi1.95FCi   | 25-95         | 20-32               | 30-44                 | 450        |
|         | 3x36MONOi1.240FCi  | 70-240        | 22-38               | 36-52                 | 450        |
|         | 3x36MONOi1.300FCi  | 95-300        | 24-42               | 38-54                 | 450        |
|         | 3x36MONOi1.400FCi  | 185-400       | 28-46               | 42-60                 | 450        |
|         | 3x36MONOi1.630FCi  | 400-630       | 32-52               | 44-66                 | 500        |
|         | 3x36MONOi1.1000FCi | 630-1000      | 42-60               | 48-70                 | 500        |
|         | 3x36MONOi1.1200FCi | 1000-1200     | 48-64               | 54-72                 | 500        |
| 42 kV   | 3x42MONOi1.95FCi   | 25-95         | 20-34               | 34-50                 | 500        |
|         | 3x42MONOi1.240FCi  | 70-240        | 26-42               | 38-54                 | 500        |
|         | 3x42MONOi1.300FCi  | 95-300        | 28-46               | 40-60                 | 500        |
|         | 3x42MONOi1.400FCi  | 185-400       | 32-48               | 42-64                 | 550        |
|         | 3x42MONOi1.630FCi  | 400-630       | 34-56               | 46-68                 | 550        |
|         | 3x42MONOi1.1000FCi | 630-1000      | 44-62               | 50-74                 | 550        |
|         | 3x42MONOi1.1200FCi | 1000-1200     | 50-66               | 56-76                 | 550        |



# MONOe FCI

## HEAT-SHRINK MV OUTDOOR TERMINATION FOR SINGLE CORE POLYMERIC CABLES WITH AI TAPE SCREEN

Up to 20,8/36 (42) kV

### APPLICATION

The "MONOe FCI" terminations are a single component solution, for single core polymeric cables.

### TECHNICAL FEATURES

The "MONOe FCI" outdoor terminations are designed for max system voltages of 42 kV.

Easy, quick to install, reducing installation time and errors.

The kit consists of a stress control mastic pad, a co extruded dual wall tube and red anti-tracking sealing mastic. Anti-tracking rain sheds are supplied to withstand outdoor environments.

A cheese-rasp + earthing braid is included in the kit.

The design accommodates various conductor lugs.

MC types are supplied with "GPH" mechanical conductor lugs.

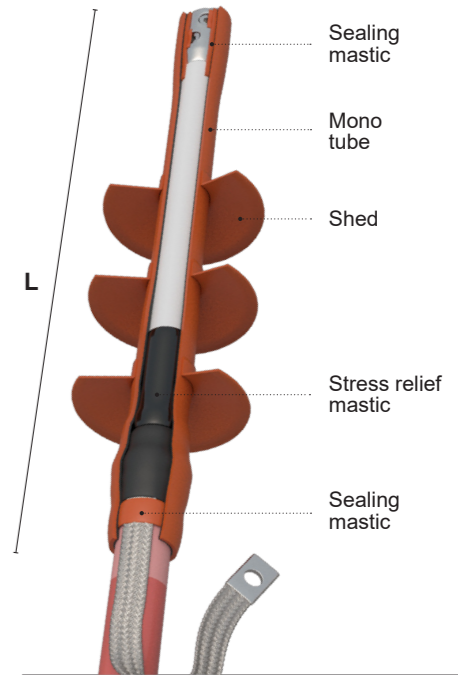
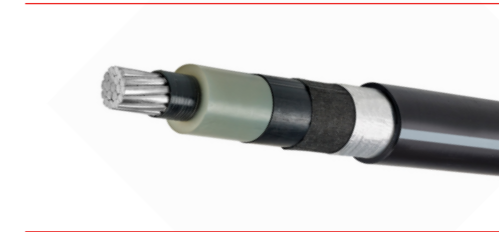
Each "MONOe FCI" termination kit contains material to allow for 3 phase installation.

WSK 2.0 type with "T" braid and roll force spring instead of cheese rasp available upon request.



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv) | Type               | Section (mm²) | DOI insulation (mm) | DOE outer sheath (mm) | L min (mm) |
|---------|--------------------|---------------|---------------------|-----------------------|------------|
| 24 kV   | 3x24MONOe1.95FCi   | 25-95         | 14-26               | 24-42                 | 500        |
|         | 3x24MONOe1.240FCi  | 70-240        | 18-34               | 30-44                 | 500        |
|         | 3x24MONOe1.300FCi  | 95-300        | 20-38               | 32-50                 | 500        |
|         | 3x24MONOe1.400FCi  | 185-400       | 25-40               | 36-52                 | 500        |
|         | 3x24MONOe1.630FCi  | 400-630       | 30-46               | 38-60                 | 600        |
|         | 3x24MONOe1.1000FCi | 630-1000      | 36-56               | 44-64                 | 600        |
|         | 3x24MONOe1.1200FCi | 1000-1200     | 46-60               | 52-66                 | 600        |
| 36 kV   | 3x36MONOe1.95FCi   | 25-95         | 20-32               | 30-44                 | 550        |
|         | 3x36MONOe1.240FCi  | 70-240        | 22-38               | 36-52                 | 550        |
|         | 3x36MONOe1.300FCi  | 95-300        | 24-42               | 38-54                 | 550        |
|         | 3x36MONOe1.400FCi  | 185-400       | 28-46               | 42-60                 | 550        |
|         | 3x36MONOe1.630FCi  | 400-630       | 32-52               | 44-66                 | 650        |
|         | 3x36MONOe1.1000FCi | 630-1000      | 42-60               | 48-70                 | 650        |
|         | 3x36MONOe1.1200FCi | 1000-1200     | 48-64               | 54-72                 | 650        |
| 42 kV   | 3x42MONOe1.95FCi   | 25-95         | 20-34               | 34-50                 | 650        |
|         | 3x42MONOe1.240FCi  | 70-240        | 26-42               | 38-54                 | 650        |
|         | 3x42MONOe1.300FCi  | 95-300        | 28-46               | 40-60                 | 650        |
|         | 3x42MONOe1.400FCi  | 185-400       | 32-48               | 42-64                 | 650        |
|         | 3x42MONOe1.630FCi  | 400-630       | 34-56               | 46-68                 | 750        |
|         | 3x42MONOe1.1000FCi | 630-1000      | 44-62               | 50-74                 | 750        |
|         | 3x42MONOe1.1200FCi | 1000-1200     | 50-66               | 56-76                 | 750        |



# MONOi3 W

## HEAT-SHRINK MV INDOOR TERMINATION FOR THREE CORE POLYMERIC CABLES WITH STA OR SWA ARMOR

Up to 20,8/36 (42) kV

### APPLICATION

The "MONOi3 W" indoor terminations are designed for armored three core polymeric cables with Cu wire or tape screen.

### TECHNICAL FEATURES

The "MONOi3 W" indoor terminations are designed for max system voltages of 42 kV, for compact switchgears as well as for installations where space is limited. Easy, quick to install, reducing installation time and errors.

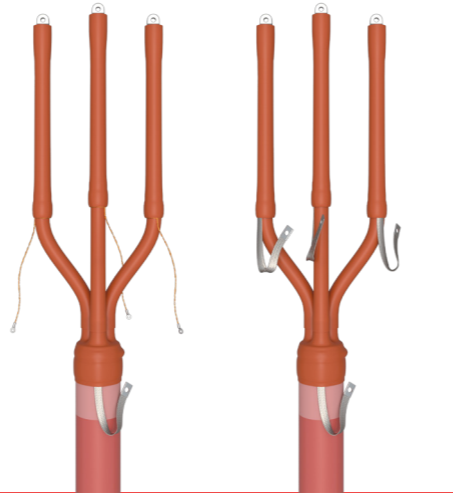
The kit consists of a stress control mastic pad, a co extruded dual wall tube and red anti-tracking sealing mastic.

Red anti-tracking break-out and red anti-tracking tubes "GT2" with adjustable length "D" are included in the kit.

The design accommodates various conductor lugs.

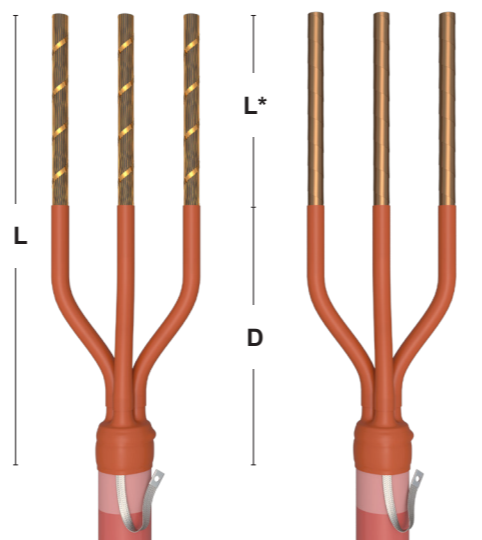
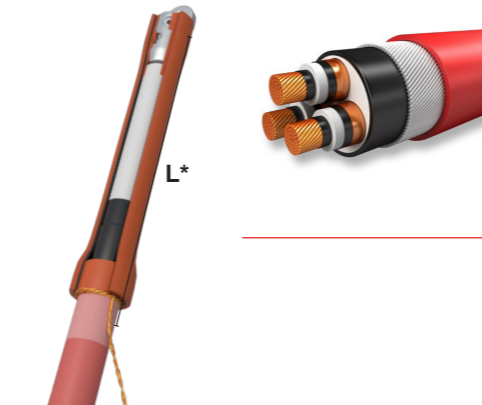
MC types are supplied with "GPH" mechanical conductor lugs

Right angle or straight heat-shrinkable boots are available on request.



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv) | Type          | Section (mm²) | DOI insulation (mm) | DOE outer sheath (mm) | L min (mm) |
|---------|---------------|---------------|---------------------|-----------------------|------------|
| 12 kV   | 12MONOi3.95W  | 25-95         | 12-20               | 38-56                 | 500        |
|         | 12MONOi3.240W | 70-240        | 16-30               | 46-72                 | 500        |
|         | 12MONOi3.300W | 95-300        | 18-32               | 48-82                 | 600        |
|         | 12MONOi3.400W | 185-400       | 22-36               | 58-84                 | 600        |
| 24 kV   | 24MONOi3.95W  | 25-95         | 14-26               | 40-62                 | 650        |
|         | 24MONOi3.240W | 70-240        | 18-34               | 48-76                 | 650        |
|         | 24MONOi3.300W | 95-300        | 20-38               | 52-84                 | 650        |
|         | 24MONOi3.400W | 185-400       | 25-40               | 62-90                 | 650        |
| 36 kV   | 36MONOi3.95W  | 25-95         | 20-32               | 58-76                 | 950        |
|         | 36MONOi3.240W | 70-240        | 22-38               | 64-90                 | 950        |
|         | 36MONOi3.300W | 95-300        | 24-42               | 68-94                 | 950        |
|         | 36MONOi3.400W | 185-400       | 28-46               | 78-102                | 950        |
| 42 kV   | 42MONOi3.95W  | 25-95         | 20-34               | 60-90                 | 1000       |
|         | 42MONOi3.240W | 70-240        | 26-42               | 66-110                | 1000       |
|         | 42MONOi3.300W | 95-300        | 28-46               | 70-120                | 1000       |
|         | 42MONOi3.400W | 185-400       | 32-48               | 80-130                | 1000       |



# MONOe3 W

## HEAT-SHRINK MV OUTDOOR TERMINATION FOR THREE CORE POLYMERIC CABLES WITH STA OR SWA ARMOR

Up to 20,8/36 (42) kV

### APPLICATION

The "MONOe3 W" outdoor terminations are designed for armored three core polymeric cables with Cu wire or tape screen.

### TECHNICAL FEATURES

The "MONOe3 W" outdoor terminations are designed for max system voltages of 42 kV.

Easy, quick to install, reducing installation time and errors.

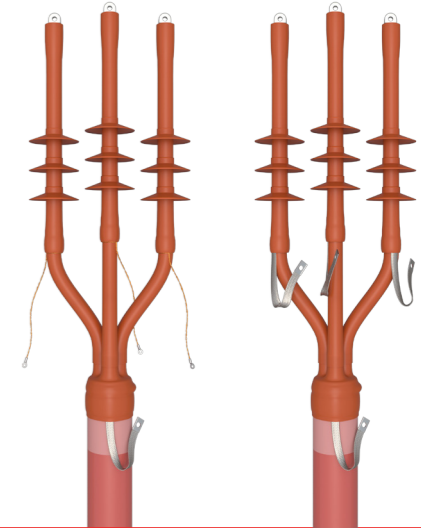
The kit consists of a stress control mastic pad, a co extruded dual wall tube and red anti-tracking sealing mastic.

Red anti-tracking break-out and red anti-tracking tubes "GT2" with adjustable length "D" are included in the kit.

Anti-tracking rain sheds are supplied to withstand outdoor environments.

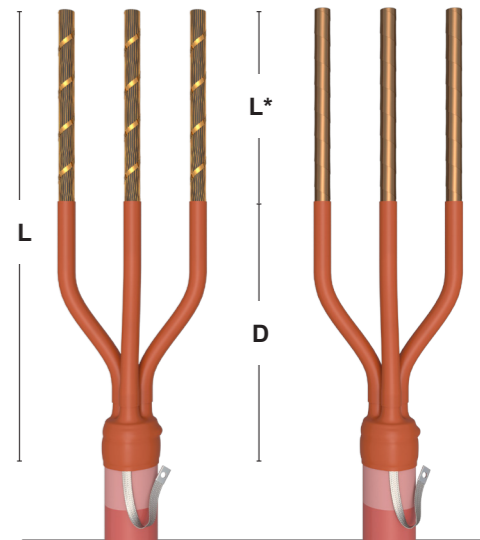
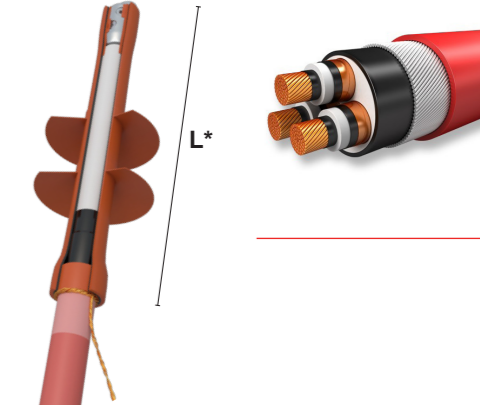
The design accommodates various conductor lugs.

MC types are supplied with "GPH" mechanical conductor lugs



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv) | Type          | Section (mm²) | DOI insulation (mm) | DOE outer sheath (mm) | L min (mm) |
|---------|---------------|---------------|---------------------|-----------------------|------------|
| 12 kV   | 12MONOe3.95W  | 25-95         | 12-20               | 38-56                 | 690        |
|         | 12MONOe3.240W | 70-240        | 16-30               | 46-72                 | 690        |
|         | 12MONOe3.300W | 95-300        | 18-32               | 48-82                 | 690        |
|         | 12MONOe3.400W | 185-400       | 22-36               | 58-84                 | 690        |
| 24 kV   | 24MONOe3.95W  | 25-95         | 14-26               | 40-62                 | 800        |
|         | 24MONOe3.240W | 70-240        | 18-34               | 48-76                 | 800        |
|         | 24MONOe3.300W | 95-300        | 20-38               | 52-84                 | 800        |
|         | 24MONOe3.400W | 185-400       | 25-40               | 62-90                 | 800        |
| 36 kV   | 36MONOe3.95W  | 25-95         | 20-32               | 58-76                 | 1000       |
|         | 36MONOe3.240W | 70-240        | 22-38               | 64-90                 | 1000       |
|         | 36MONOe3.300W | 95-300        | 24-42               | 68-94                 | 1000       |
|         | 36MONOe3.400W | 185-400       | 28-46               | 78-102                | 1000       |
| 42 kV   | 42MONOe3.95W  | 25-95         | 20-34               | 60-90                 | 1100       |
|         | 42MONOe3.240W | 70-240        | 26-42               | 66-110                | 1100       |
|         | 42MONOe3.300W | 95-300        | 28-46               | 70-120                | 1100       |
|         | 42MONOe3.400W | 185-400       | 32-48               | 80-130                | 1100       |



# MONOi3 CW

## HEAT-SHRINK MV INDOOR TERMINATION FOR NON ARMORED THREE CORE POLYMERIC CABLES WITH COPPER WIRE SCREEN

Up to 20,8/36 (42) kV

### APPLICATION

The "MONOi3 CW" indoor terminations are designed for armored three core polymeric cables with common Cu wire screen.

### TECHNICAL FEATURES

The "MONOi3 CW" indoor terminations are designed for max system voltages of 42 kV, for compact switchgears as well as for installations where space is limited. Easy, quick to install, reducing installation time and errors.

The kit consists of a stress control mastic pad, a co extruded dual wall tube and red anti-tracking sealing mastic.

Red anti-tracking break-out and red anti-tracking tubes "GT2" with adjustable length "D" are included in the kit.

The design accommodates various conductor lugs.

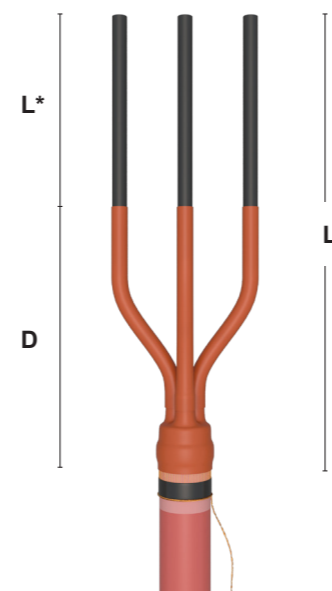
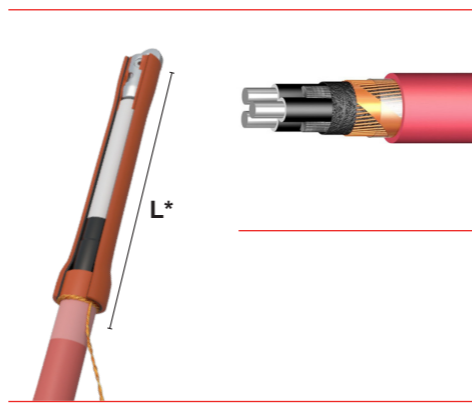
MC types are supplied with "GPH" mechanical conductor lugs.

Right angle or straight heat-shrinkable boots are available on request.



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv) | Type           | Section (mm²) | DOI insulation (mm) | DOE outer sheath (mm) | L min (mm) |
|---------|----------------|---------------|---------------------|-----------------------|------------|
| 12 kV   | 12MONOi3.95CW  | 25-95         | 12-20               | 38-56                 | 500        |
|         | 12MONOi3.240CW | 70-240        | 16-30               | 46-72                 | 500        |
|         | 12MONOi3.300CW | 95-300        | 18-32               | 48-82                 | 600        |
|         | 12MONOi3.400CW | 185-400       | 22-36               | 58-84                 | 600        |
| 24 kV   | 24MONOi3.95CW  | 25-95         | 14-26               | 40-62                 | 650        |
|         | 24MONOi3.240CW | 70-240        | 18-34               | 48-76                 | 650        |
|         | 24MONOi3.300CW | 95-300        | 20-38               | 52-84                 | 650        |
|         | 24MONOi3.400CW | 185-400       | 25-40               | 62-90                 | 650        |
| 36 kV   | 36MONOi3.95CW  | 25-95         | 20-32               | 58-76                 | 950        |
|         | 36MONOi3.240CW | 70-240        | 22-38               | 64-90                 | 950        |
|         | 36MONOi3.300CW | 95-300        | 24-42               | 68-94                 | 950        |
|         | 36MONOi3.400CW | 185-400       | 28-46               | 78-102                | 950        |
| 42 kV   | 42MONOi3.95CW  | 25-95         | 20-34               | 60-90                 | 1000       |
|         | 42MONOi3.240CW | 70-240        | 26-42               | 66-110                | 1000       |
|         | 42MONOi3.300CW | 95-300        | 28-46               | 70-120                | 1000       |
|         | 42MONOi3.400CW | 185-400       | 32-48               | 80-130                | 1000       |



# MONOe3 CW

## HEAT-SHRINK MV OUTDOOR TERMINATION FOR NON ARMORED THREE CORE POLYMERIC CABLES WITH COPPER WIRE SCREEN

Up to 20,8/36 (42) kV

### APPLICATION

The "MONOe3 CW" outdoor terminations are designed for armored three core polymeric cables with common Cu wire screen.

### TECHNICAL FEATURES

The "MONOe3 CW" outdoor terminations are designed for max system voltages of 42 kV. Easy, quick to install, reducing installation time and errors.

The kit consists of a stress control mastic pad, a co extruded dual wall tube and red anti-tracking sealing mastic.

Red anti-tracking break-out and red anti-tracking tubes "GT2" with adjustable length "D" are included in the kit.

Anti-tracking rain sheds are supplied to withstand outdoor environments. The design accommodates various conductor lugs.

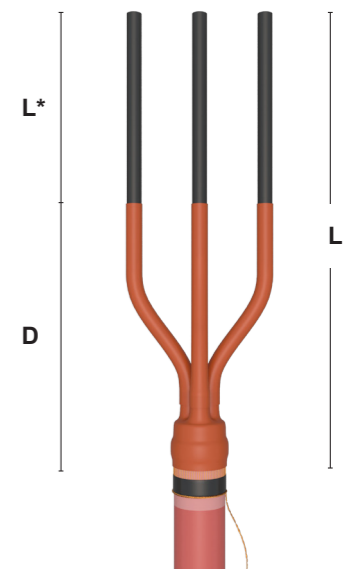
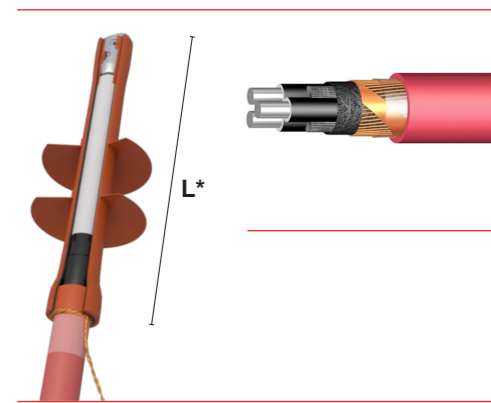
MC types are supplied with "GPH" mechanical conductor lugs.

MC types are supplied with "GPH" mechanical conductor lugs.



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv) | Type           | Section (mm²) | DOI insulation (mm) | DOE outer sheath (mm) | L min (mm) |
|---------|----------------|---------------|---------------------|-----------------------|------------|
| 12 kV   | 12MONOe3.95CW  | 25-95         | 12-20               | 38-56                 | 690        |
|         | 12MONOe3.240CW | 70-240        | 16-30               | 46-72                 | 690        |
|         | 12MONOe3.300CW | 95-300        | 18-32               | 48-82                 | 690        |
|         | 12MONOe3.400CW | 185-400       | 22-36               | 58-84                 | 690        |
| 24 kV   | 24MONOe3.95CW  | 25-95         | 14-26               | 40-62                 | 800        |
|         | 24MONOe3.240CW | 70-240        | 18-34               | 48-76                 | 800        |
|         | 24MONOe3.300CW | 95-300        | 20-38               | 52-84                 | 800        |
|         | 24MONOe3.400CW | 185-400       | 25-40               | 62-90                 | 800        |
| 36 kV   | 36MONOe3.95CW  | 25-95         | 20-32               | 58-76                 | 1000       |
|         | 36MONOe3.240CW | 70-240        | 22-38               | 64-90                 | 1000       |
|         | 36MONOe3.300CW | 95-300        | 24-42               | 68-94                 | 1000       |
|         | 36MONOe3.400CW | 185-400       | 28-46               | 78-102                | 1000       |
| 42 kV   | 42MONOe3.95CW  | 25-95         | 20-34               | 60-90                 | 1100       |
|         | 42MONOe3.240CW | 70-240        | 26-42               | 66-110                | 1100       |
|         | 42MONOe3.300CW | 95-300        | 28-46               | 70-120                | 1100       |
|         | 42MONOe3.400CW | 185-400       | 32-48               | 80-130                | 1100       |



# TK NOT ARM

## HEAT-SHRINK TRIFURCATIONS KITS FOR MV APPLICATIONS CABLES WITHOUT ARMOR

Up to 26/45 (52) kV

### APPLICATION

Designed to accommodate not armored, three core cables to 3 single core terminations.

### TECHNICAL FEATURES

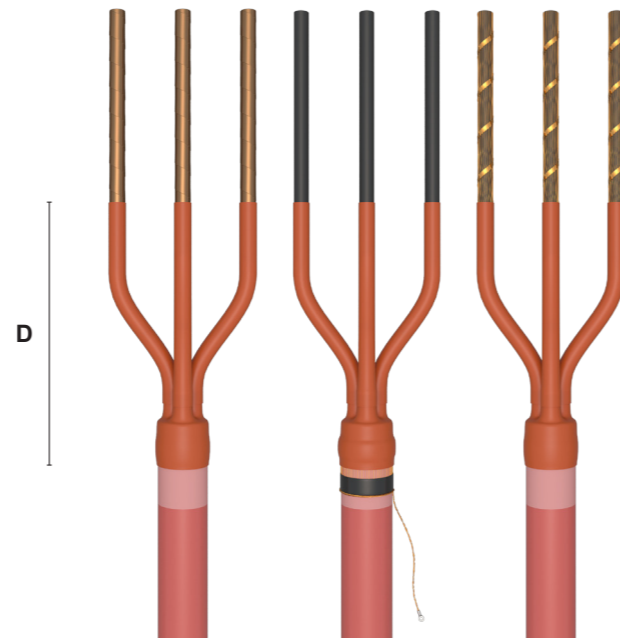
The **TK A/1** kit consists of an anti-tracking breakout for the cable crotch area, 1 pc of "GT2" anti-tracking tube to cover the cores.

The red anti-tracking tubes "GT2" in the kit can be selected from 3 different spool lengths to be adjusted, by cutting in 3 parts, according to the required tail length "D" (800,1200,1600 mm).



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv)     | Type      | Section (mm²) | Insul. tube (m) |
|-------------|-----------|---------------|-----------------|
| 12 kV       | TK1A-2M/1 | 25-95         | 2               |
|             | TK2A-2M/1 | 70-240        | 2               |
|             | TK3A-2M/1 | 95-300        | 2               |
|             | TK4A-2M/1 | 185-400       | 2               |
| 17/24 kV    | TK1A-3M/1 | 25-95         | 3               |
|             | TK2A-3M/1 | 70-240        | 3               |
|             | TK3A-3M/1 | 95-300        | 3               |
|             | TK4A-3M/1 | 185-400       | 3               |
| 36/42/52 kV | TK1A-5M/1 | 25-95         | 5               |
|             | TK2A-5M/1 | 70-240        | 5               |
|             | TK3A-5M/1 | 95-300        | 5               |
|             | TK4A-5M/1 | 185-400       | 5               |



# TK ARM

## HEAT-SHRINK TRIFURCATIONS KITS FOR MV APPLICATIONS CABLES WITH ARMOR

Up to 26/45 (52) kV

### APPLICATION

Designed to accommodate armored, three core cables to 3 single core terminations.

### TECHNICAL FEATURES

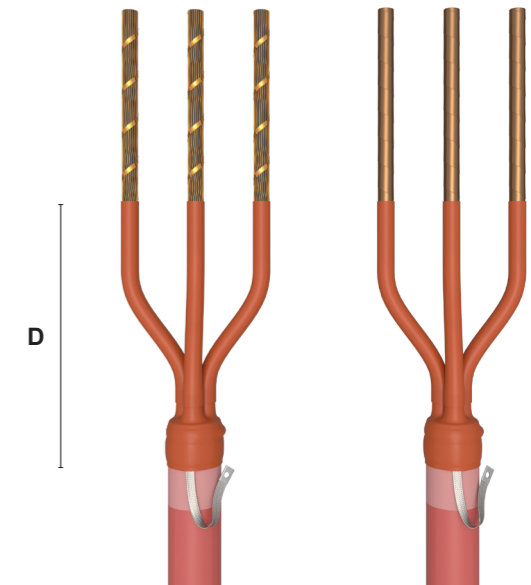
The **TK A** kit consists of an anti-tracking breakout for the cable crotch area, 1 pc of "GT2" anti-tracking tube to cover the cores, plus an earthing braid kit (consisting of a worm clip, tinned copper braid with water blocking and a connection point). A sealing mastic is provided to ensure water/moisture penetration.

The red anti-tracking tubes "GT2" in the kit can be selected from 3 different spool lengths to be adjusted, by cutting in 3 parts, according to the required tail length (800,1200,1600 mm).



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv)     | Type    | Section (mm²) | Insul. tube (m) |
|-------------|---------|---------------|-----------------|
| 12 kV       | TK1A-2M | 25-95         | 2               |
|             | TK2A-2M | 70-240        | 2               |
|             | TK3A-2M | 95-300        | 2               |
|             | TK4A-2M | 185-400       | 2               |
| 17/24 kV    | TK1A-3M | 25-95         | 3               |
|             | TK2A-3M | 70-240        | 3               |
|             | TK3A-3M | 95-300        | 3               |
|             | TK4A-3M | 185-400       | 3               |
| 36/42/52 kV | TK1A-5M | 25-95         | 5               |
|             | TK2A-5M | 70-240        | 5               |
|             | TK3A-5M | 95-300        | 5               |
|             | TK4A-5M | 185-400       | 5               |



# TTGI1 Z

## HEAT-SHRINK MV INDOOR TERMINATION FOR SINGLE CORE POLYMERIC CABLES WITH Cu WIRE/TAPE SCREEN, Al WIRE/TAPE ARMOR

Up to 20,8/36 (42) kV

### APPLICATION

“TTGI1 Zi” heat-shrink medium voltage indoor terminations for single core polymeric insulated cables with either Cu wire screen or Cu tape screen with aluminium wire/ tape armor.

### TECHNICAL FEATURES

The “TTGI Zi” indoor terminations utilize stress control tubing with stress grading mastic to control the electric field. The cut of the semi-conductive screen on the termination is covered by stress control mastic strip, acting as both stress control and void filler. The stress control tubing completes the control of the electric field. The lug barrel is covered with anti-tracking mastic to create complete environmental seal.

Anti-tracking mastic is also used to seal the earth/armor connection.

“GT2” anti-tracking tube completes the termination and covers armor connection.

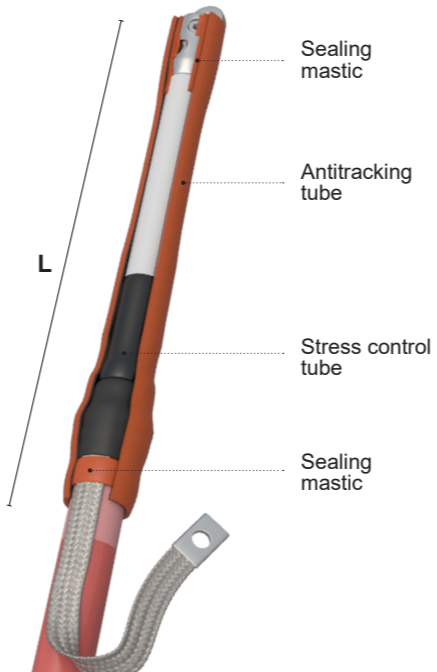
The design accommodates various conductor lugs.

MC types are supplied with “GPH” mechanical conductor lugs.



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv)  | Type           | Section (mm²) | DOI insulation (mm) | DOE outer sheath (mm) | L (mm) |
|----------|----------------|---------------|---------------------|-----------------------|--------|
| 12/17 kV | 17TTGI1.50Zi   | 25-50         | 12-18               | 18-28                 | 540    |
|          | 17TTGI1.150Zi  | 70-150        | 16-28               | 26-40                 | 540    |
|          | 17TTGI1.400Zi  | 185-400       | 18-32               | 34-46                 | 540    |
|          | 17TTGI1.630Zi  | 400-630       | 20-36               | 34-56                 | 540    |
|          | 17TTGI1.1000Zi | 630-1000      | 36-50               | 50-68                 | 540    |
| 24 kV    | 24TTGI1.95Zi   | 25-95         | 14-26               | 20-38                 | 580    |
|          | 24TTGI1.185Zi  | 70-240        | 18-34               | 28-44                 | 580    |
|          | 24TTGI1.400Zi  | 95-300        | 28-40               | 34-52                 | 580    |
|          | 24TTGI1.630Zi  | 400-630       | 25-46               | 42-62                 | 580    |
|          | 24TTGI1.1000Zi | 500-1000      | 30-54               | 44-72                 | 580    |
| 36 kV    | 36TTGI1.120Zi  | 35-120        | 20-32               | 30-44                 | 680    |
|          | 36TTGI1.300Zi  | 95-300        | 22-40               | 36-54                 | 680    |
|          | 36TTGI1.630Zi  | 300-630       | 40-52               | 42-66                 | 680    |
|          | 36TTGI1.1000Zi | 500-1000      | 44-56               | 52-78                 | 680    |
| 42 kV    | 42TTGI1.120Zi  | 25-120        | 22-36               | 32-46                 | 820    |
|          | 42TTGI1.300Zi  | 95-300        | 28-38               | 38-56                 | 820    |
|          | 42TTGI1.630Zi  | 400-630       | 42-56               | 42-70                 | 820    |
|          | 42TTGI1.1000Zi | 630-1000      | 44-62               | 54-82                 | 820    |



# TTGE1 Z

## HEAT-SHRINK MV OUTDOOR TERMINATION FOR SINGLE CORE POLYMERIC CABLES WITH Cu WIRE/TAPE SCREEN, Al WIRE/TAPE ARMOR

Up to 20,8/36 (42) kV

### APPLICATION

“TTGE1 Zi” heat-shrink medium voltage outdoor terminations for single core polymeric insulated cables with either Cu wire screen or Cu tape screen with aluminium wire/ tape armor.

### TECHNICAL FEATURES

The “TTGE Zi” indoor terminations utilize stress control tubing with stress grading mastic to control the electric field. The cut of the semi-conductive screen on the termination is covered by stress control mastic strip, acting as both stress control and void filler. The stress control tubing completes the control of the electric field. The lug barrel is covered with anti-tracking mastic to create complete environmental seal.

Anti-tracking mastic is also used to seal the earth/armor connection.

“GT2” anti-tracking tube completes the termination and covers armor connection.

Rain sheds are included in the kit.

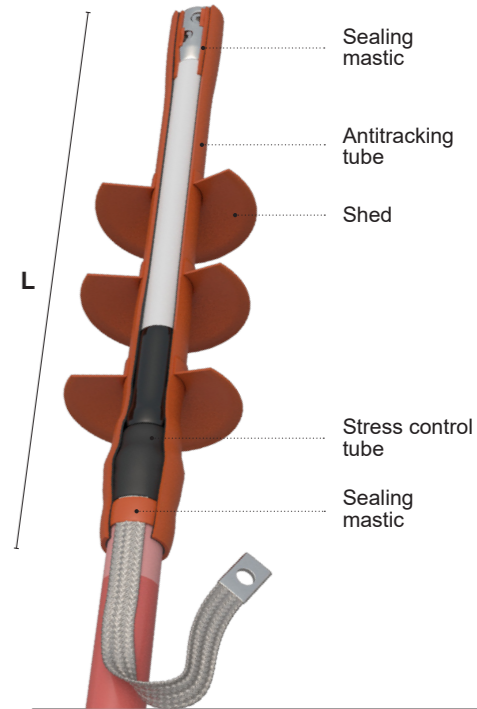
The design accommodates various conductor lugs.

MC types are supplied with “GPH” mechanical conductor lugs.



Type tested acc.  
Cenelec HD 629.1  
IEC 60502-4

| Um (Kv)  | Type           | Section (mm²) | DOI insulation (mm) | DOE outer sheath (mm) | L (mm) |
|----------|----------------|---------------|---------------------|-----------------------|--------|
| 12/17 kV | 17TTGE1.50Zi   | 25-50         | 12-18               | 18-28                 | 540    |
|          | 17TTGE1.150Zi  | 70-150        | 16-28               | 26-40                 | 540    |
|          | 17TTGE1.400Zi  | 185-400       | 18-32               | 34-46                 | 540    |
|          | 17TTGE1.630Zi  | 400-630       | 20-36               | 34-56                 | 540    |
|          | 17TTGE1.1000Zi | 630-1000      | 36-50               | 50-68                 | 540    |
| 24 kV    | 24TTGE1.95Zi   | 25-95         | 14-26               | 20-38                 | 580    |
|          | 24TTGE1.185Zi  | 70-240        | 18-34               | 28-44                 | 580    |
|          | 24TTGE1.400Zi  | 95-300        | 28-40               | 34-52                 | 580    |
|          | 24TTGE1.630Zi  | 400-630       | 25-46               | 42-62                 | 580    |
|          | 24TTGE1.1000Zi | 500-1000      | 30-54               | 44-72                 | 580    |
| 36 kV    | 36TTGE1.120Zi  | 35-120        | 20-32               | 30-44                 | 680    |
|          | 36TTGE1.300Zi  | 95-300        | 22-40               | 36-54                 | 680    |
|          | 36TTGE1.630Zi  | 300-630       | 40-52               | 42-66                 | 680    |
|          | 36TTGE1.1000Zi | 500-1000      | 44-56               | 52-78                 | 680    |
| 42 kV    | 42TTGE1.120Zi  | 25-120        | 22-36               | 32-46                 | 820    |
|          | 42TTGE1.300Zi  | 95-300        | 28-38               | 38-56                 | 820    |
|          | 42TTGE1.630Zi  | 400-630       | 42-56               | 42-70                 | 820    |
|          | 42TTGE1.1000Zi | 630-1000      | 44-62               | 54-82                 | 820    |





# 52TTGI1

## HEAT-SHRINK MV INDOOR TERMINATIONS FOR SINGLE CORE POLYMERIC CABLES WITH Cu WIRE SCREEN

Up to 26/42 (52) kV

### APPLICATION

The "52TTGI1" terminations are designed for single core polymeric cables.

### TECHNICAL FEATURES

A stress control patch is applied at the screen cut of the termination and helps to control the field together with stress control tubing.

Semiconductive tubing creates a bridge for leakage currents placed onto and covering the screen wires or earth braid.

Another layer of stress control mastic covers the top end of the semiconductive tubing.

Red anti-tracking mastic is wrapped onto the top end of the tubing.

The lug and cable outer sheath is sealed with anti-tracking mastic.

Heavy wall anti-tracking tube and anti-tracking rain sheds complete the termination.

A solderless roll force spring and an earthing braid are included in the kit (type Ai).

The design accommodates various conductor lugs.

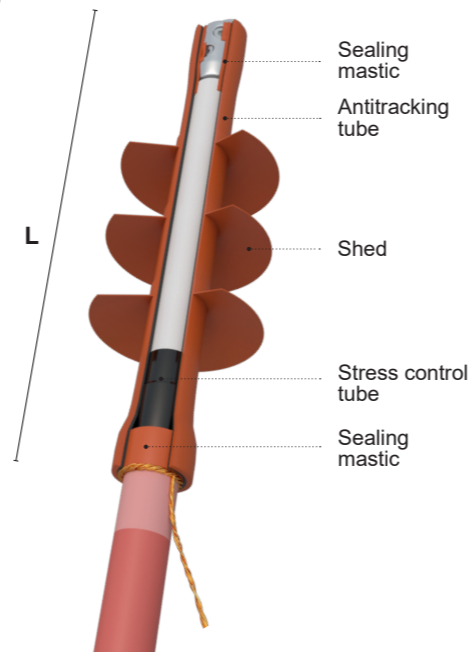
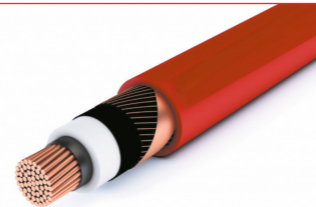
MC types are supplied with "GPH" mechanical conductor lugs.

For cable with Al foil screen please ask to our sales representative.



Meet the requirements.  
IEC 60840

| Um (Kv) | Type          | Section (mm <sup>2</sup> ) | DOI insulation (mm) | DOE outer sheath (mm) | L (mm) |
|---------|---------------|----------------------------|---------------------|-----------------------|--------|
| 52 kV   | 52TTGI1.95i   | 25-95                      | 26-32               | 30-44                 | 900    |
|         | 52TTGI1.240i  | 70-240                     | 28-40               | 32-46                 | 900    |
|         | 52TTGI1.400i  | 185-400                    | 32-46               | 36-50                 | 900    |
|         | 52TTGI1.630i  | 400-630                    | 38-52               | 44-56                 | 900    |
|         | 52TTGI1.1200i | 630-1200                   | 46-64               | 52-70                 | 900    |



# 52TTGE1

## HEAT-SHRINK MV OUTDOOR TERMINATION FOR SINGLE CORE POLYMERIC CABLES WITH Cu WIRE SCREEN

Up to 26/42 (52) kV

### APPLICATION

The "52TTGE1" terminations are designed for single core polymeric cables.

### TECHNICAL FEATURES

A stress control patch is applied at the screen cut of the termination and helps to control the field together with stress control tubing.

Semiconductive tubing creates a bridge for leakage currents placed onto and covering the screen wires or earth braid.

Another layer of stress control mastic covers the top end of the semiconductive tubing.

Red anti-tracking mastic is wrapped onto the top end of the tubing.

The lug and cable outer sheath is sealed with anti-tracking mastic.

Heavy wall anti-tracking tube and anti-tracking rain sheds complete the termination.

A solderless roll force spring and an earthing braid are included in the kit (type Ai).

The design accommodates various conductor lugs.

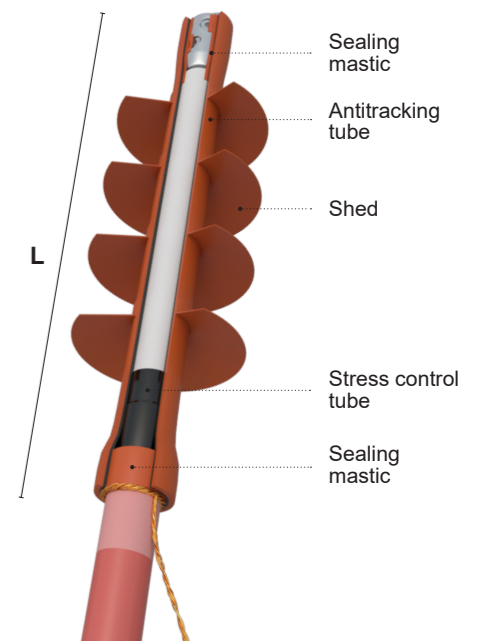
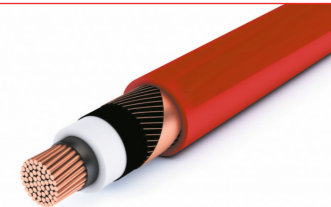
MC types are supplied with "GPH" mechanical conductor lugs.

For cable with Al foil screen please ask to our sales representative.



Meet the requirements.  
IEC 60840

| Um (Kv) | Type          | Section (mm <sup>2</sup> ) | DOI insulation (mm) | DOE outer sheath (mm) | L (mm) |
|---------|---------------|----------------------------|---------------------|-----------------------|--------|
| 52 kV   | 52TTGE1.95i   | 25-95                      | 26-32               | 30-44                 | 900    |
|         | 52TTGE1.240i  | 70-240                     | 28-40               | 32-46                 | 900    |
|         | 52TTGE1.400i  | 185-400                    | 32-46               | 36-50                 | 900    |
|         | 52TTGE1.630i  | 400-630                    | 38-52               | 44-56                 | 900    |
|         | 52TTGE1.1200i | 630-1200                   | 46-64               | 52-70                 | 900    |



- QUICK AND EASY TO INSTALL, SHORT DESIGN
- EXCELLENT INSULATING PROPERTIES
- ADVANCED SCREEN CONNECTION AND ARMOUR CONTINUITY
- INTEGRATED STRESS CONTROL FOR THE WHOLE TERMINATION LENGTH (MONO type)
- PROOF AGAINST WATER PENETRATION AND CHEMICALS AGGRESSION
- SUITABLE FOR CRIMPING OR MECHANICAL CONDUCTOR LUGS
- COMPLIANT TO REACH REGULATIONS
- PREMIUM TECHNICAL SUPPORT
- MADE IN EU
- REDUCED N<sup>o</sup> OF KITS TO COVER TO FULL RANGE OF CROSS SECTION AND VOLTAGES UP TO 42 kV
- EASY POSITIONING OF THE STRESS RELIEF VOID FILLING PAD (MONO type)
- UNLIMITED SHELF LIFE OF TUBING IF PROPERLY STORED

#### **Nexans Electrify the Future.**

For many years we have been producing single, double and tripie layer heat-shrink tubing with excellent materials and processing properties. This enables us to combine a comprehensive range of technically mature and high-quality power cable accessories in accordance with international industry standards and European norms. Our products are competitive due to quality, performance and technical advance.

Please ask for straight joints, transition joints, terminations, tubes, end caps and mastics for single and threecore cables in low and medium voltage applications.

**Nexans Power Accessories**

[sales.npai@nexans.com](mailto:sales.npai@nexans.com)

[www.nexans.com/power\\_accessories](http://www.nexans.com/power_accessories)

