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 Nexans



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Heat-shrinkable  
medium voltage  
accessories

Catalogue 2008





## Introduction

Nexans power accessories include products applied to connect cables together (joints) or cables to various type of equipment (terminations).

As voltage levels increase, the technologies used demand complex solutions which require know how in numerous areas, such as electric field control as well as high mechanical and thermal strains.

## Nexans power accessories manufacturing plant at Offida

The power accessories group of Nexans Italia S.p.a., established in October 1969, has commercial offices in Vimercate

(near Milano) with a manufacturing plant for accessories and components in Offida.

Using today's most advanced technologies, Nexans produces and delivers power cables accessories for all levels up to 36 kV.

In the Offida plant, Nexans has the heat-shrink production unit to supply heat-shrinkable tubes to all corporate and customers requirements worldwide.

With wide experience in manufacturing power cable accessories Nexans has the ability to work with customers on a local level and to offer them solutions adapted to comply with national standards and therefore meeting country specific needs.

While every care is taken to ensure that the information contained in this publication is correct, no legal responsibility can be accepted for any inaccuracy. Nexans Italia S.p.a. reserves the right to alter or modify the characteristics of its products described in this catalogue as standards and technology evolve.



# HEAT-SHRINKABLE MEDIUM VOLTAGE ACCESSORIES

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# TTGI1

## HEAT-SHRINKABLE SINGLE CORE XLPE INDOOR TERMINATION

Up to 36 kV

6/10 (12) kV  
6.35/11 (12) kV  
8.7/15 (17.5) kV  
12/20 (24) kV  
12.7/22 (24) kV  
18/30 (36) kV  
19/33 (36) kV

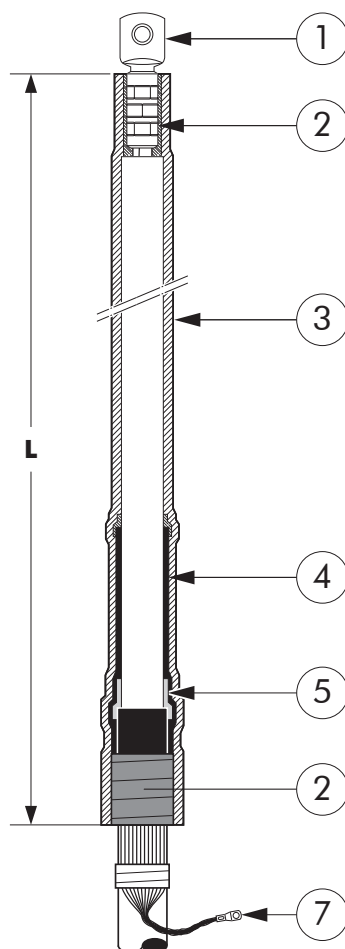
### Application

Heat-shrinkable terminations for polymeric cables, are widely used by power utilities and in industrial applications. For use indoor in controlled environmental conditions.

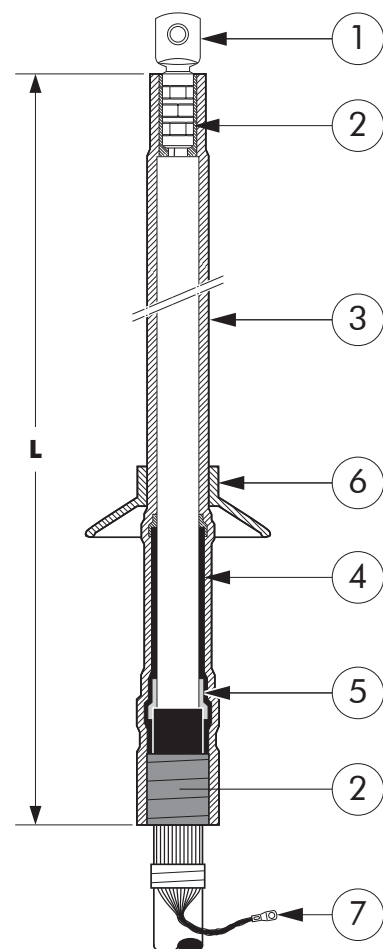
### Design

1. Cable lug (supplied on request).
2. Water sealing mastic.
3. Anti-tracking heat-shrinkable tube.
4. Stress control heat-shrinkable tube.
5. Stress control mastic.
6. Anti-tracking shed (only for 36TTGI1).
7. Earthing lug.

17TTGI1 & 24TTGI1



36TTGI1



### Specifications and standards

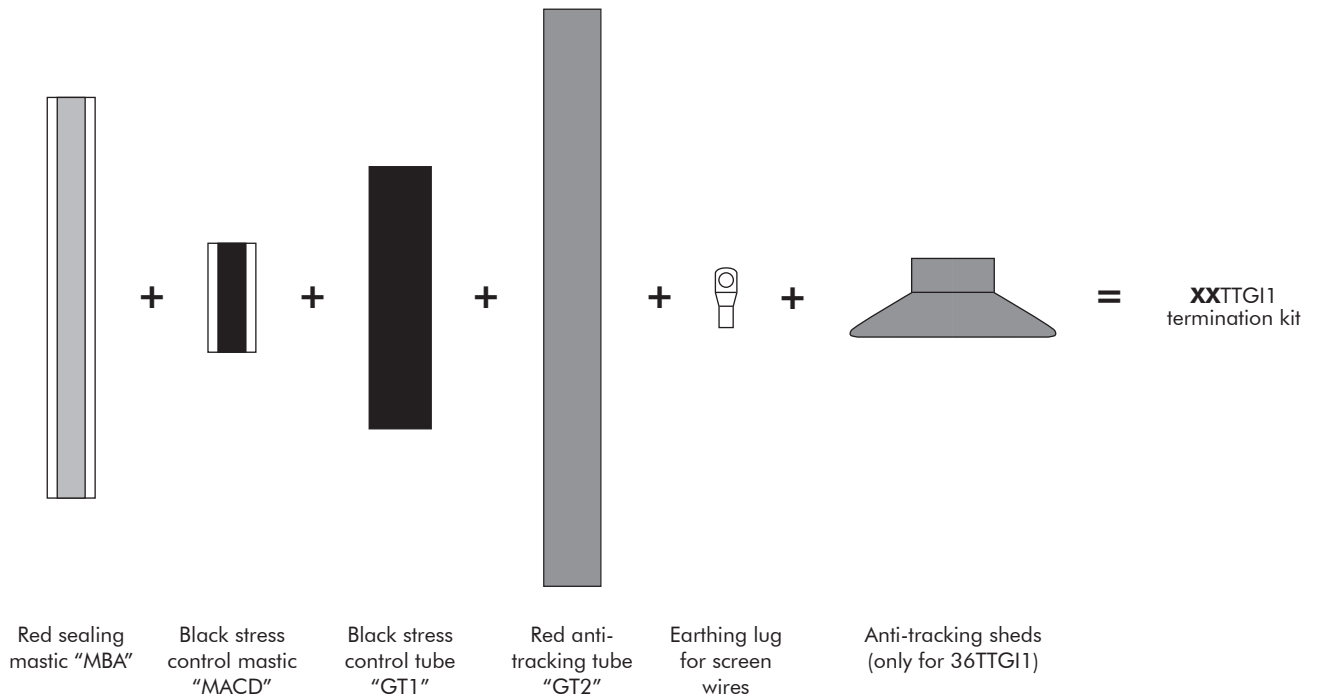
Meets the requirements of CENELEC HD 629.1 and IEC 60502-4.

Termination type	Voltage $U_m$ (kV)	Length "L" (mm)	Conductor sizes (mm <sup>2</sup> )	
			min.	max.
17TTGI1	12 & 17.5	480	25	630
24TTGI1	24	520	25	630
36TTGI1	36	620	35	630

## Kit contents

The complete TTGI1 termination kit comprises the following components:

The kit also comprises installation instructions.



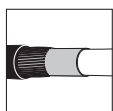
## Ordering instructions

Select the part number corresponding to both system voltage and conductor size.

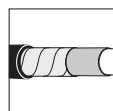
### Example:

An indoor termination for a 24 kV, 150 mm<sup>2</sup> stranded aluminium cable with copper wire screen is requested, without cable lug.  
Order: 24TTGI1.240i.

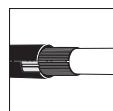
Ordering part number	Voltage U <sub>0</sub> /U (kV)	Conductor size range (mm <sup>2</sup> )	
		min.	max.
17TTGI1.50i	6/10 & 6.35/11 & 8.7/15	25	50
17TTGI1.120i	6/10 & 6.35/11 & 8.7/15	70	120
17TTGI1.300i	6/10 & 6.35/11 & 8.7/15	150	300
17TTGI1.630i	6/10 & 6.35/11 & 8.7/15	400	630
24TTGI1.95i	12/20 & 12.7/22	25	95
24TTGI1.240i	12/20 & 12.7/22	50	240
24TTGI1.630i	12/20 & 12.7/22	300	630
36TTGI1.150i	18/30 & 19/33	35	150
36TTGI1.300i	18/30 & 19/33	150	300
36TTGI1.630i	18/30 & 19/33	400	630



For use with copper wire screened cables. An earthing lug is included.



For use with copper tape screened cables. Order: -Ai instead of -i (e.g. 24TTGI1.240Ai).



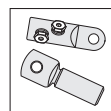
For use with aluminium tape screened cables (C 33-226). Please contact our representative.



For use with three-core cables: see TTGI3.



For use with other cables. Please contact our representative.



Can be supplied with all common types of cable lugs.

# TTGE1

## HEAT-SHRINKABLE SINGLE CORE XLPE OUTDOOR TERMINATION

Up to 36 kV

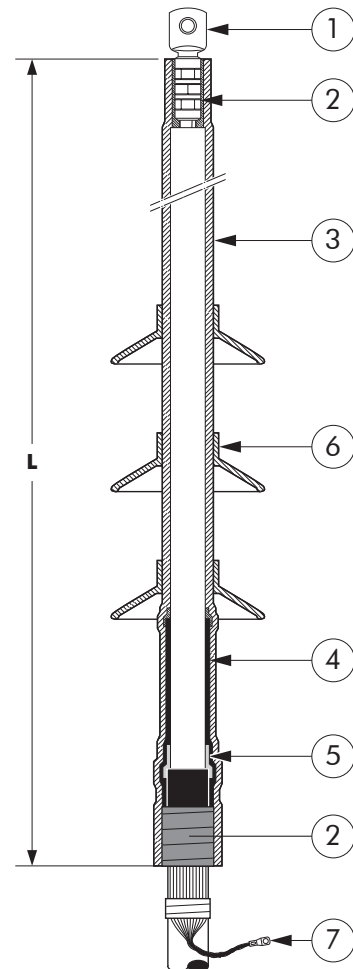
6/10 (12) kV  
6.35/11 (12) kV  
8.7/15 (17.5) kV  
12/20 (24) kV  
12.7/22 (24) kV  
18/30 (36) kV  
19/33 (36) kV

### Application

Heat-shrinkable terminations for polymeric cables, are widely used by power utilities and in industrial applications. For use outdoors and exposed to prolonged sunshine and other weather conditions.

### Design

1. Cable lug (supplied on request).
2. Water sealing mastic.
3. Anti-tracking heat-shrinkable tube.
4. Stress control heat-shrinkable tube.
5. Stress control mastic.
6. Anti-tracking sheds.
7. Earthing lug.



### Specifications and standards

Meets the requirements of CENELEC HD 629.1 and IEC 60502-4.

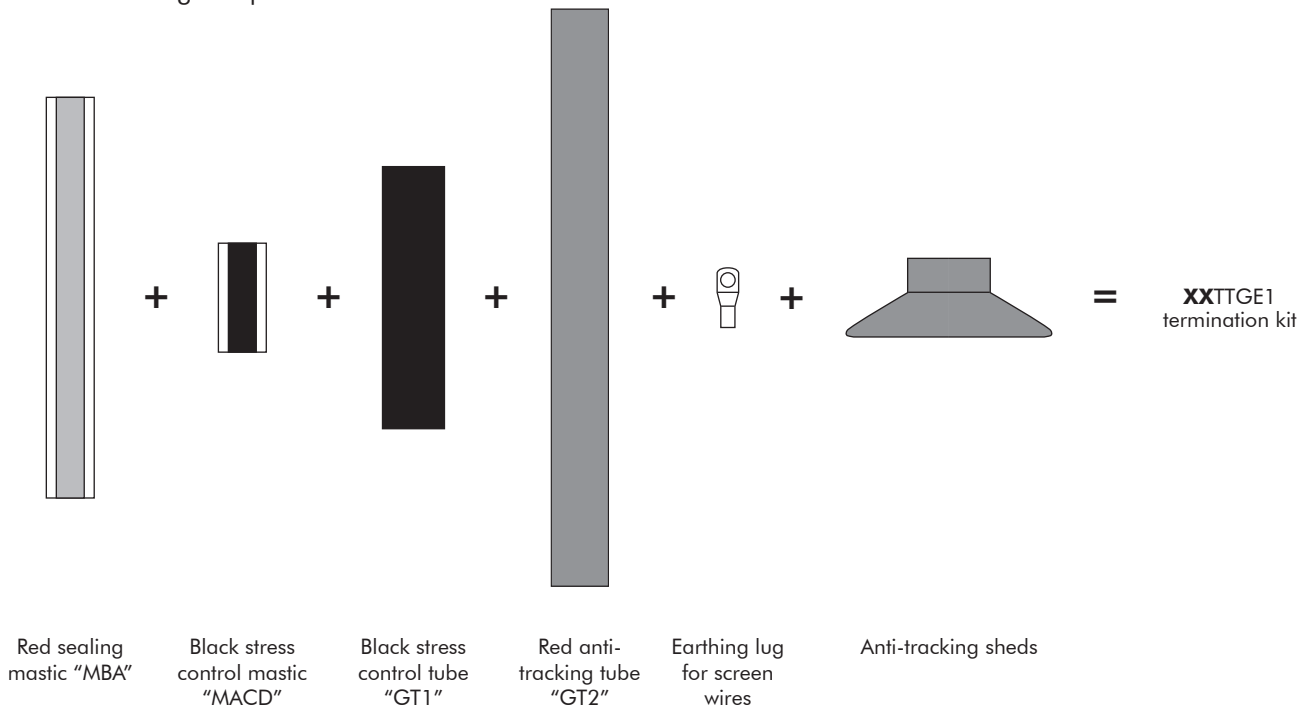
Termination type	Voltage $U_m$ (kV)	Length "L" (mm)	Conductor sizes (mm <sup>2</sup> )		Number of sheds	Creepage length (mm)
			min.	max.		
17TTGE1	12 & 17.5	480	25	630	2	600
24TTGE1	24	520	25	630	3	700
36TTGE1	36	620	35	630	3	800

07/2008

## Kit contents

The complete TTGE1 termination kit comprises the following components:

The kit also comprises installation instructions.



## Ordering instructions

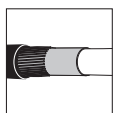
Select the part number corresponding to both system voltage and conductor size.

### Example:

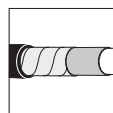
An outdoor termination for a 12 kV, 240 mm<sup>2</sup> stranded aluminium cable with copper wire screen is requested, without cable lug.

Order: 17TTGE1.300i.

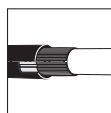
Ordering part number	Voltage U <sub>0</sub> /U (kV)	Conductor size range (mm <sup>2</sup> )	
		min.	max.
17TTGE1.50i	6/10 & 6.35/11 & 8.7/15	25	50
17TTGE1.120i	6/10 & 6.35/11 & 8.7/15	70	120
17TTGE1.300i	6/10 & 6.35/11 & 8.7/15	150	300
17TTGE1.630i	6/10 & 6.35/11 & 8.7/15	400	630
24TTGE1.95i	12/20 & 12.7/22	25	95
24TTGE1.240i	12/20 & 12.7/22	50	240
24TTGE1.630i	12/20 & 12.7/22	300	630
36TTGE1.150i	18/30 & 19/33	35	150
36TTGE1.300i	18/30 & 19/33	150	300
36TTGE1.630i	18/30 & 19/33	400	630



For use with copper wire screened cables. Earthing lug is included.



For use with copper tape screened cables. Order: -Ai instead of -i (e.g. 17TTGE1.300Ai).



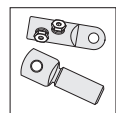
For use with aluminium tape screened cables (C 33-226). Please contact our representative.



For use with three-core cables: see TTGE3.



For use with other cables. Please contact our representative.



Can be supplied with all common types of cable lugs.

# TTGI3

## HEAT-SHRINKABLE THREE CORE XLPE INDOOR TERMINATION

Up to 36 kV

6/10	(12)	kV
6.35/11	(12)	kV
8.7/15	(17.5)	kV
12/20	(24)	kV
12.7/22	(24)	kV
18/30	(36)	kV
19/33	(36)	kV

### Application

Heat-shrinkable terminations for three core polymeric cables, are widely used by power utilities and in industrial applications.

An earthing kit for both copper wires and copper tape screen, is included in the kit.

For use indoor in controlled environmental conditions.

### Design

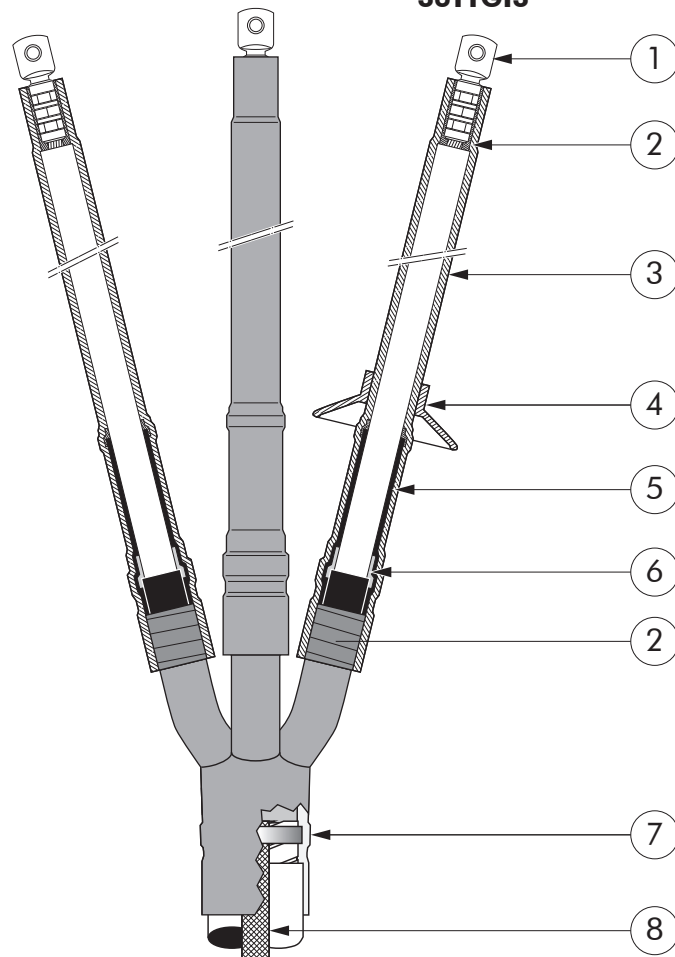
1. Cable lug (supplied on request).
2. Water sealing mastic.
3. Anti-tracking heat-shrinkable tube.
4. Anti-tracking sheds (only for 36TTGI3).
5. Stress control heat-shrinkable tube.
6. Stress control mastic.
7. Break-out.
8. Flexible tinned copper braid.

### Specifications and standards

Meets the requirements of CENELEC HD 629.1 and IEC 60502-4.

17TTGI3 & 24TTGI3

36TTGI3



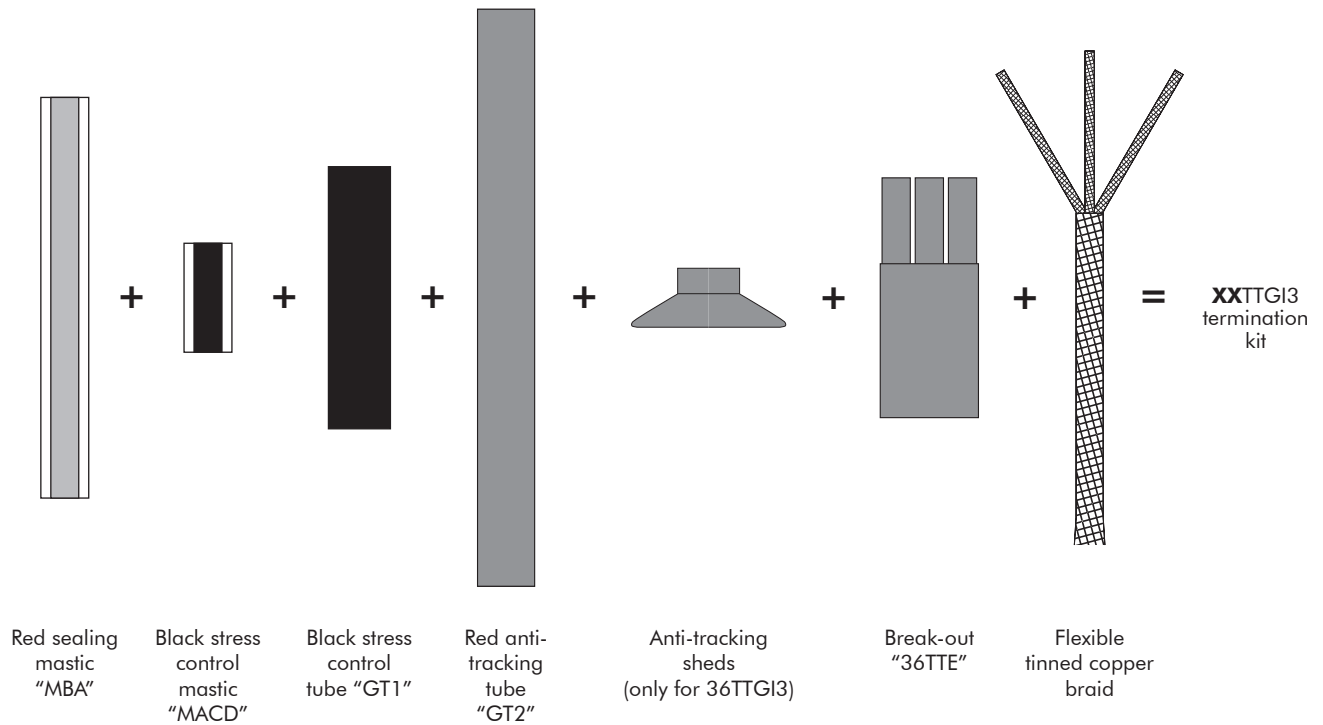
Termination type	Voltage Um (kV)	Conductor sizes (mm <sup>2</sup> )	
		min.	max.
17TTGI3	12 & 17.5	25	630
24TTGI3	24	25	630
36TTGI3	36	35	400

07/2008

## Kit contents

The complete TTGI3 termination kit comprises the following components:

The kit also comprises installation instructions, roll springs, a metallic clamp and an earthing lug for copper screen wires.



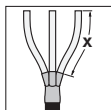
## Ordering instructions

Select the part number corresponding to both system voltage and conductor size.

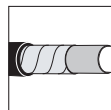
### Example:

The cable is 12 kV, 3 x 150 mm<sup>2</sup> stranded aluminium, with an individual copper tape screen and a steel wire armour. Order: 17TTGI3.300w.

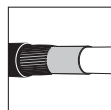
Ordering part number	Voltage U <sub>0</sub> /U (kV)	Conductor size range (mm <sup>2</sup> )	
		min.	max.
17TTGI3.50w	6/10 & 6.35/11 & 8.7/15	25	50
17TTGI3.120w	6/10 & 6.35/11 & 8.7/15	70	120
17TTGI3.300w	6/10 & 6.35/11 & 8.7/15	150	300
17TTGI3.630w	6/10 & 6.35/11 & 8.7/15	400	630
24TTGI3.95w	12/20 & 12.7/22	25	95
24TTGI3.240w	12/20 & 12.7/22	50	240
24TTGI3.630w	12/20 & 12.7/22	300	630
36TTGI3.120w	18/30 & 19/33	35	120
36TTGI3.300w	18/30 & 19/33	150	300
36TTGI3.400w	18/30 & 19/33	240	400



For tail length 'X' of 1200 mm. Order: -1200 mm.



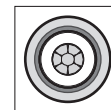
For use with copper tape screened cables. No further earthing device is necessary.



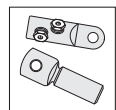
For use with copper wire screened cables. No further earthing device is necessary.



For use with other cable types. Please contact our representative.



For use with single core cables: see TTGI1.



Can be supplied with all common types of cable lugs.

# TTGE3

## HEAT-SHRINKABLE THREE CORE XLPE OUTDOOR TERMINATION

Up to 36 kV

6/10	(12)	kV
6.35/11	(12)	kV
8.7/15	(17.5)	kV
12/20	(24)	kV
12.7/22	(24)	kV
18/30	(36)	kV
19/33	(36)	kV

### Application

Heat-shrinkable terminations for three core polymeric cables, are widely used by power utilities and in industrial applications.

An earthing kit for both copper wires and copper tape screen, is included in the kit.

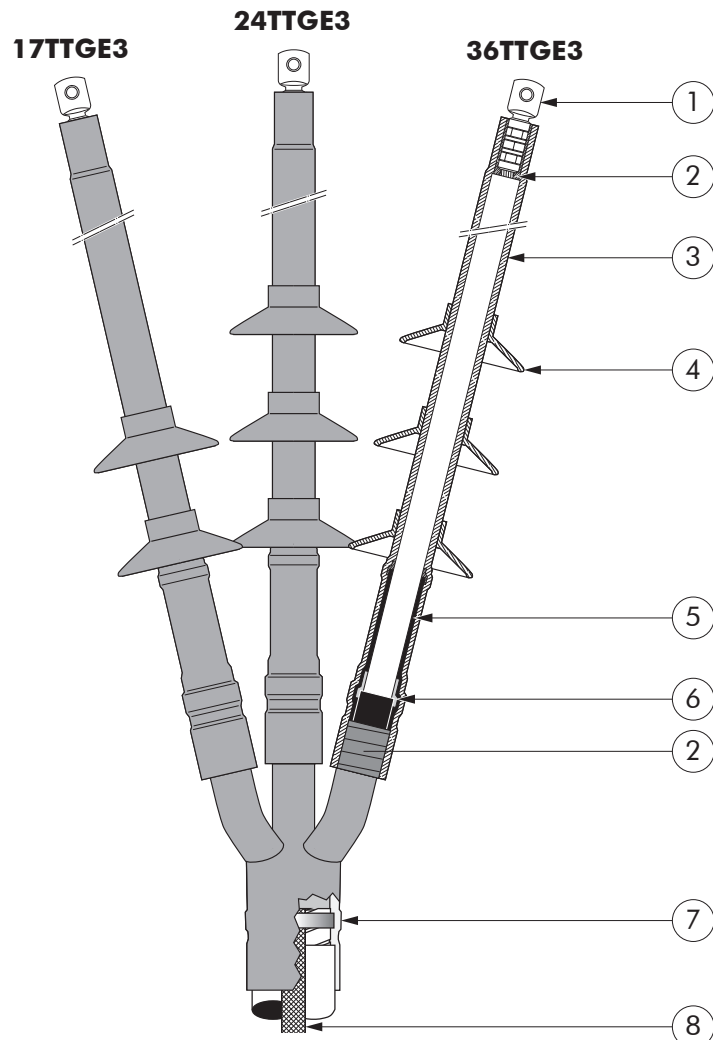
For use outdoors and exposed to prolonged sunshine and other weather conditions.

### Design

1. Cable lug (supplied on request).
2. Water sealing mastic.
3. Anti-tracking heat-shrinkable tube.
4. Anti-tracking sheds.
5. Stress control heat-shrinkable tube.
6. Stress control mastic.
7. Break-out.
8. Flexible tinned copper braid.

### Specifications and standards

Meets the requirements of CENELEC HD 629.1 and IEC 60502-4.



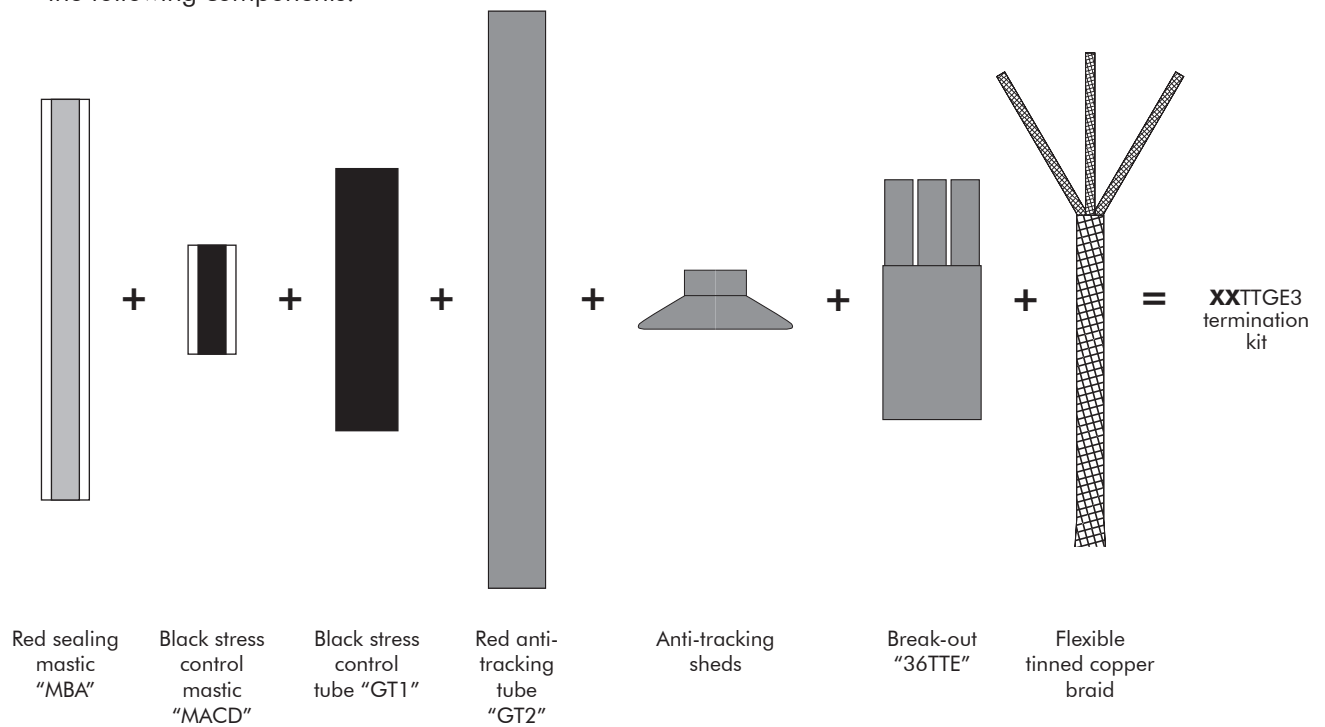
Termination type	Voltage $U_m$ (kV)	Conductor sizes (mm <sup>2</sup> )		Number of sheds	Creepage length (mm)
		min.	max.		
17TTGE3	12 & 17.5	25	630	2	700
24TTGE3	24	25	630	3	860
36TTGE3	36	35	400	3	1380

07/2008

## Kit contents

The complete TTGE3 termination kit comprises the following components:

The kit also comprises installation instructions, roll springs, a metallic clamp and an earthing lug for copper screen wires.



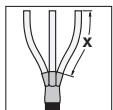
## Ordering instructions

Select the part number corresponding to both system voltage and conductor size.

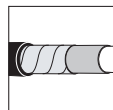
### Example:

The cable is 24 kV, 3 x 120 mm<sup>2</sup> stranded aluminium, with an individual copper tape screen and a steel wire armour.  
Order: 24TTGE3.240w.

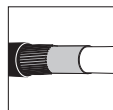
Ordering part number	Voltage U <sub>0</sub> /U (kV)	Conductor size range (mm <sup>2</sup> )	
		min.	max.
17TTGE3.50w	6/10 & 6.35/11 & 8.7/15	25	50
17TTGE3.120w	6/10 & 6.35/11 & 8.7/15	70	120
17TTGE3.300w	6/10 & 6.35/11 & 8.7/15	150	300
17TTGE3.630w	6/10 & 6.35/11 & 8.7/15	400	630
24TTGE3.95w	12/20 & 12.7/22	25	95
24TTGE3.240w	12/20 & 12.7/22	50	240
24TTGE3.630w	12/20 & 12.7/22	300	630
36TTGE3.120w	18/30 & 19/33	35	120
36TTGE3.300w	18/30 & 19/33	150	300
36TTGE3.400w	18/30 & 19/33	240	400



For tail length 'X' of 1200 mm.  
Order: -1200 mm.



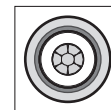
For use with copper tape screened cables. No further earthing device is necessary.



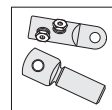
For use with copper wire screened cables. No further earthing device is necessary.



For use with other cable types. Please contact our representative.



For use with single core cables: see TTG11.



Can be supplied with all common types of cable lugs.

# GTS1

## HEAT-SHRINKABLE SINGLE CORE XLPE STRAIGHT JOINT

Up to 36 kV

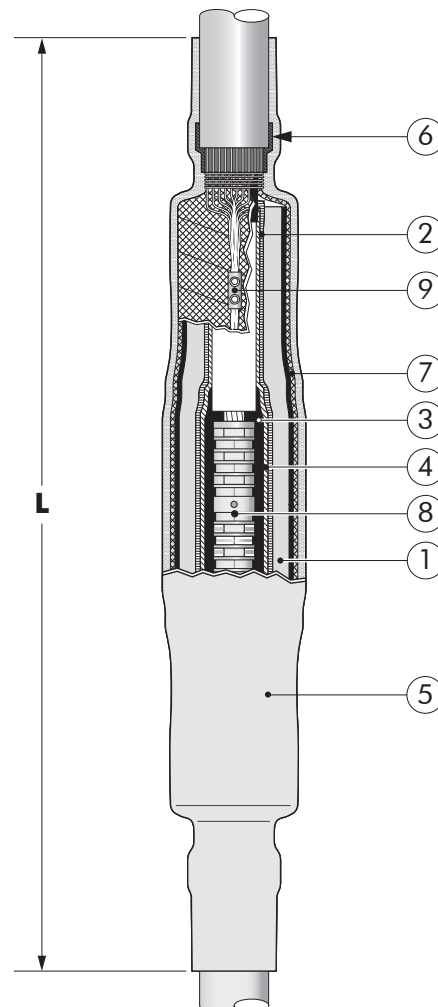
6/10	(12)	kV
6.35/11	(12)	kV
8.7/15	(17.5)	kV
12/20	(24)	kV
12.7/22	(24)	kV
18/30	(36)	kV
19/33	(36)	kV

### Application

For jointing polymeric cable to be laid in air or directly buried. The product is fully screened and fully submersible.

### Design

1. Dual wall tube type GT25.
2. Stress control tube GT1.
3. Stress control mastic MNAC.
4. Non-tracking tube GT2 (only for 36GTS1).
5. Overall protection tube GT4.
6. Sealing mastic NGAF.
7. Screen continuity (copper mesh).
8. Conductor connector (supplied on request).
9. Ferrule for screen wires.



### Specifications and standards

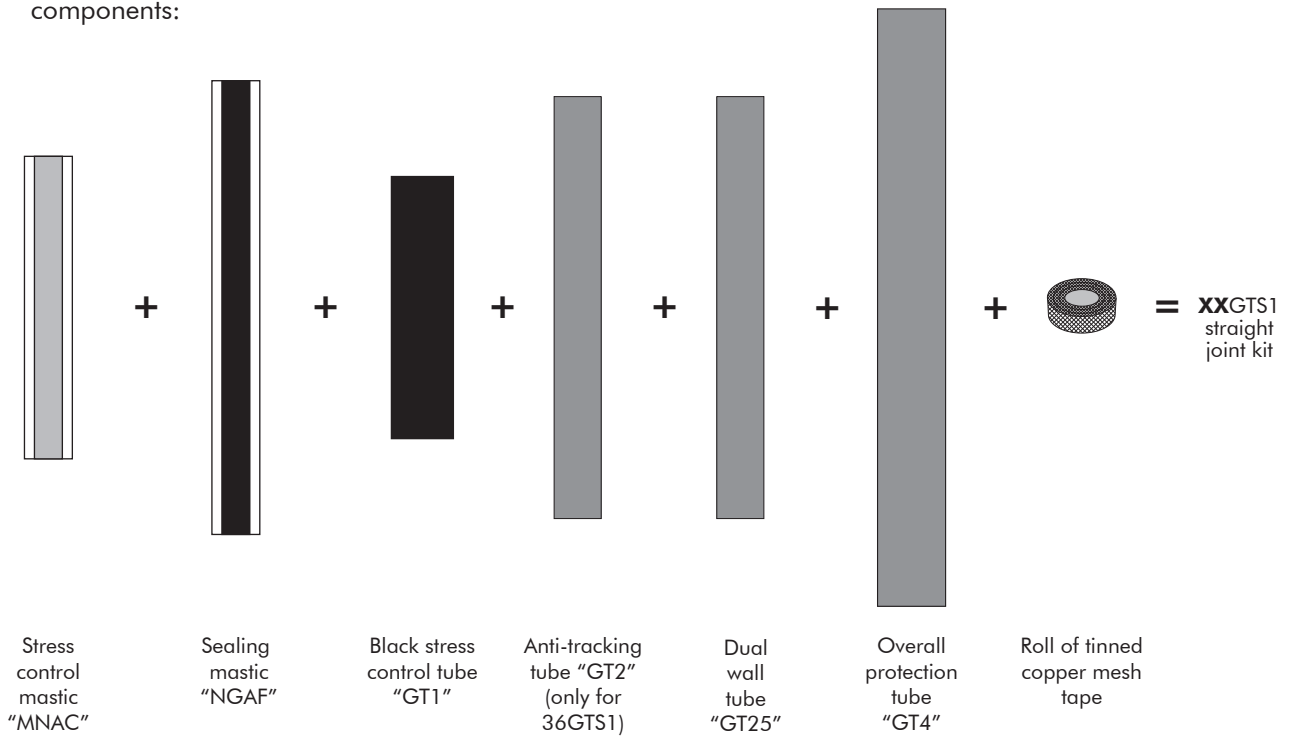
Meets the requirements of CENELEC HD 629.1 and IEC 60502-4.

Straight Joint type	Voltage $U_m$ (kV)	Length "L" (mm)	Conductor sizes (mm <sup>2</sup> )	
			min.	max.
17GTS1	12 & 17.5	750	25	630
24GTS1	24	750	25	630
36GTS1	36	750 - 1000	35	630

07/2008

## Kit contents

The complete GTS1 joint kit comprises the following components:



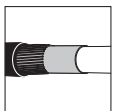
## Ordering instructions

Select the part number corresponding to both system voltage and conductor size.

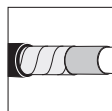
### Example:

The copper wire screened cable is 12 kV, 150 mm<sup>2</sup> stranded aluminium.  
Order: 17GTS1.240w.

Ordering part number	Voltage U <sub>0</sub> /U (kV)	Conductor size range (mm <sup>2</sup> )	
		min.	max.
17GTS1.50w	6/10 & 6.35/11 & 8.7/15	25	50
17GTS1.95w	6/10 & 6.35/11 & 8.7/15	50	95
17GTS1.240w	6/10 & 6.35/11 & 8.7/15	95	240
17GTS1.630w	6/10 & 6.35/11 & 8.7/15	240	630
24GTS1.50w	12/20 & 12.7/22	25	50
24GTS1.240w	12/20 & 12.7/22	50	240
24GTS1.400w	12/20 & 12.7/22	150	400
24GTS1.630w	12/20 & 12.7/22	400	630
36GTS1.95i	18/30 & 19/33	35	95
36GTS1.240i	18/30 & 19/33	70	240
36GTS1.400i	18/30 & 19/33	120	400
36GTS1.630i	18/30 & 19/33	400	630



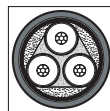
For use with copper wire screened cables. No further earthing device is necessary.



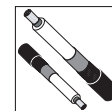
For use with copper tape screened cables. Order: -Aw/-Ai instead of -w/-i (e.g. 17GTS1.240Aw).



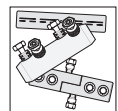
For use with other cable types. Please contact our representative.



For use with three-core cables: see GTS3.



When jointing cables of different sizes, please contact our representative.



Can be supplied with all common types of conductor connectors.

# GTS3

## HEAT-SHRINKABLE THREE CORE XLPE STRAIGHT JOINT

Up to 36 kV

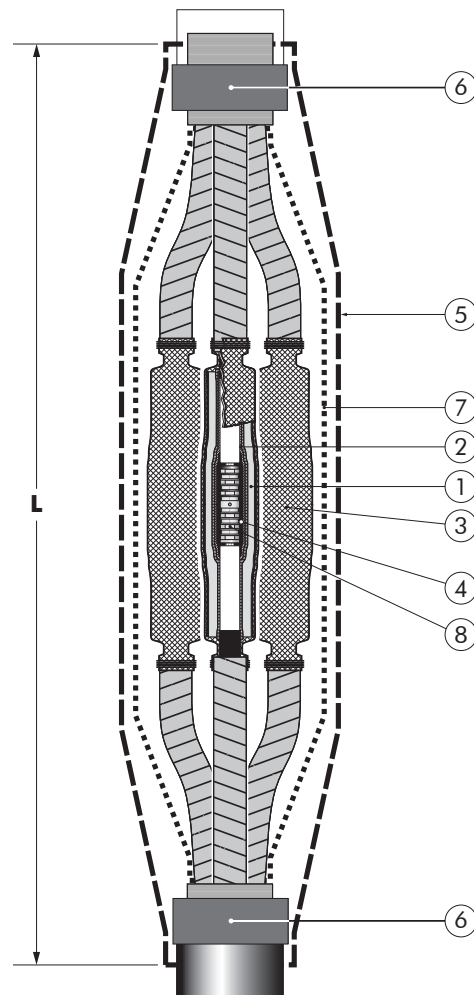
6/10	(12)	kV
6.35/11	(12)	kV
8.7/15	(17.5)	kV
12/20	(24)	kV
12.7/22	(24)	kV
18/30	(36)	kV
19/33	(36)	kV

### Application

For jointing three core polymeric cable to be directly buried. The product is fully screened and fully submersible.

### Design

1. Dual wall tube type GT25.
2. Stress control tube GT1.
3. Screen continuity (copper mesh).
4. Stress control mastic MNAC.
5. Overall protection tube GT3 & GT8.
6. Sealing mastic NGAF.
7. Canister.
8. Conductor connector (supplied on request).
9. Non-tracking tube GT2 (only for 36GTS3 - not shown).



### Specifications and standards

Meets the requirements of CENELEC HD 629.1 and IEC 60502-4.

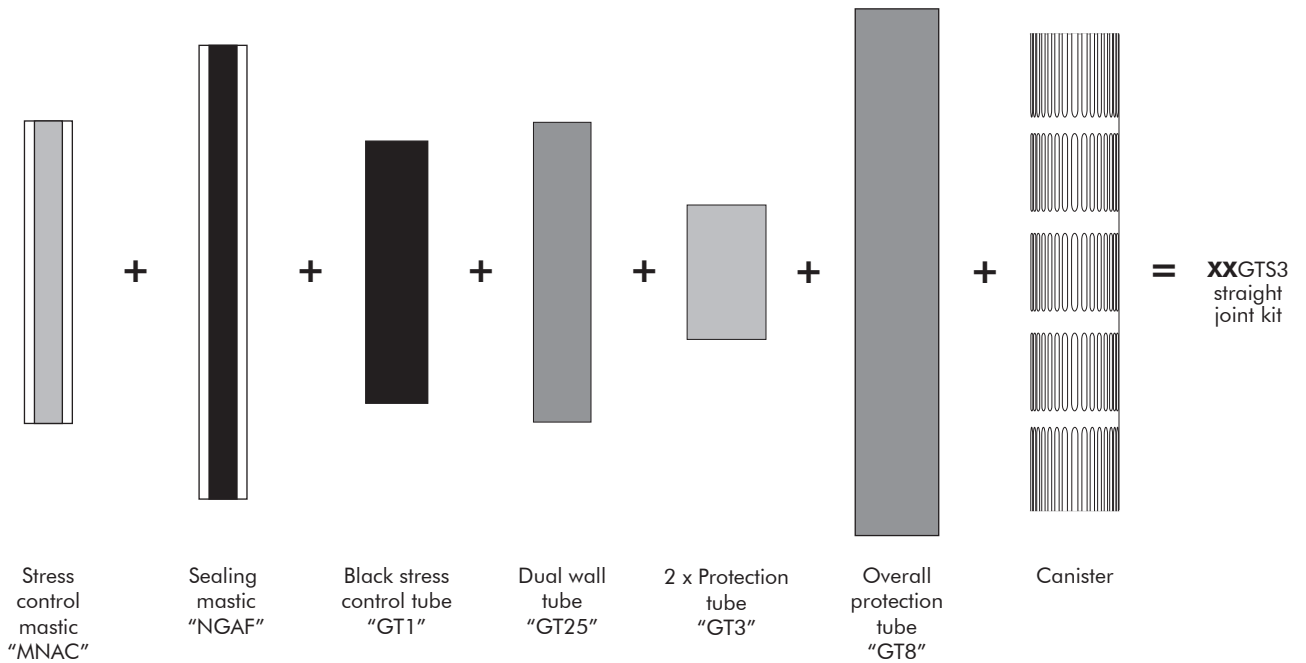
Straight Joint type	Voltage $U_m$ (kV)	Length "L" (mm)	Conductor sizes (mm <sup>2</sup> )	
			min.	max.
17GTS3	12 & 17.5	1200	25	400
24GTS3	24	1200	25	400
36GTS3	36	1400 - 2300	35	400

07/2008

## Kit contents

The complete GTS3 joint kit comprises the following components:

The kit also comprises installation instructions, semi-conductive tape, adhesive tape, a copper braid, tinned copper mesh tape, armour continuity roll springs and a ferrule for the screen wire connection.



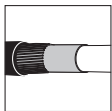
## Ordering instructions

Select the part number corresponding to both system voltage and cable dimensions.

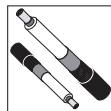
### Example:

The cable is 24 kV, 3 x 120 mm<sup>2</sup> stranded aluminium with an individual copper tape screen and a steel wire armour.  
Order: 24GTS3.240k.

Ordering part number	Voltage U <sub>0</sub> /U (kV)	Conductor size range (mm <sup>2</sup> )	
		min.	max.
17GTS3.50k	6/10 & 6.35/11 & 8.7/15	25	50
17GTS3.95k	6/10 & 6.35/11 & 8.7/15	50	95
17GTS3.300k	6/10 & 6.35/11 & 8.7/15	95	300
17GTS3.400k	6/10 & 6.35/11 & 8.7/15	240	400
24GTS3.50k	12/20 & 12.7/22	25	50
24GTS3.240k	12/20 & 12.7/22	50	240
24GTS3.400k	12/20 & 12.7/22	150	400
36GTS3.95k	18/30 & 19/33	35	95
36GTS3.240k	18/30 & 19/33	70	240
36GTS3.400k	18/30 & 19/33	150	400



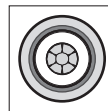
For use with copper wire screened cables. No further earthing device is necessary.



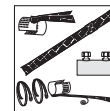
When jointing cables of different sizes, please contact our representative.



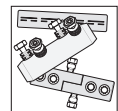
For use with other cable types. Please contact our representative.



For use with single core cables: see GTS1.



Different types of screen continuity kits can be supplied. Please contact our representative.



Can be supplied with all common types of conductor connectors.







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