



## **Compact catalogue 2014/2015**

Nexans Power Accessories Germany GmbH

## **Technical instructions and application information**

The data given were determined diligently, but do not release our customers of the duty to carry out tests themselves in order to check the suitability of the products delivered by us for the intended use. We reserve the right to modify characteristic and performance data according to the present state of technology. Processing and use of the products cannot be controlled by us and are therefore exclusively in your field of responsibility.

Our products meet the VDE standards respectively correspond to DIN pages and IEC recommendations.

Attention: Before first design in please contact manufacturer.

The products, described in this catalogue, are designed for connection of energy cable conductors (Class 1 & 2) with description of round solid (RE), round stranded (RM), as well as sector solid (SE), sector stranded (SM) and round stranded compacted (RMV).

A check on basis of the actual existing conductor dimensions by the user is indispensable. This applies also for the application of flexible conductors (Class 5 & 6).

Impact wrenches have to be approved by Nexans! Depending on different conductor material or conductor type, indicated values may differ from test values acc. to IEC 61238-1. The use of fine stranded conductors has to be approved by Nexans Power Accessories Germany GmbH.

Our responsibilities are only those listed in the latest edition of "General Terms and Conditions for the Supply of Products and Services of the Electrical and Electronics Industry". If requested we provide a copy.

Our products are mainly delivered in cartons. We only use package materials able to be recycled due to the latest packing system. Collapsible cardboard boxes are not taken back. Please try to order complete standard packages.

Reprinting, even partial, only with special allowance. We reserve the right to alter or modify the characteristics described. Illustrations and drawings may only show a close reflection and are not decisive. The weights are approximate and include the carton package. This catalogue substitutes all former editions. Types or versions not part of the catalogue you receive on request.



## ACCESSORIES FOR POWER CABLES

A compact selection of our accessories

Up to 42 kV - 1250 A

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## **Nexans Power Accessories Germany GmbH**

### **Specialist for cable accessories and cabling technology**

*Nexans Power Accessories Germany GmbH has been a leader in pre-assembled cable accessories for more than 50 years. The company is part of the Nexans Power Accessories Business Group and is represented in more than 40 countries worldwide.*

Our strength is the collaboration with the “best in the industry”. As such, the intensive research and development activities of the Nexans Power Accessories Germany GmbH are backed by the entire Nexans Group, a worldwide leader in power cables.

With energy at the basis of its development, Nexans offers an extensive range of cables and cabling solutions. The Group is a global player in the energy transmission and distribution, industry and building markets. Nexans addresses a wide series of market segments: from energy and telecom networks to energy resources (wind turbines, photovoltaic, oil and gas or mining) to transportation (shipbuilding, aerospace, automotive and automation, railways).

Nexans Power Accessories Germany GmbH is specialized in manufacturing of low, medium and high voltage accessories as well as mechanical connectors and cable lugs.

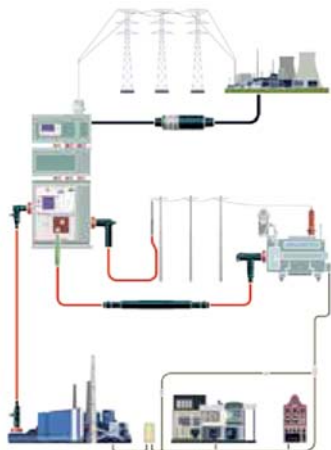
In the headquarters in Hof, the GPH standard product range of compression or mechanical connectors and cable lugs is developed and manufactured as well as customized solutions. At a second location, the focus concentrates on kitting of cable accessories from

1 kV up to 170 kV and the assembly of customized jumper cables for medium voltage applications.

With the brand name Euromold we are a European market leader for medium voltage accessories. Longtime know-how and technological advance in this area was successfully transferred into high voltage applications. We provide a complete range of cold-shrinkable and slip-on accessories, e.g. premoulded terminations and joints for cables and epoxy bushings for transformers and switchgears, up to 170 kV. For low and medium voltage applications, a series of Nexans heat-shrinkable terminations and joints up to 42 kV is available. The product range is completed by dedicated installation tools and customized product trainings in our own premises.

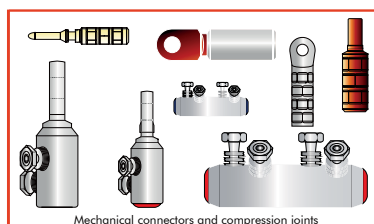
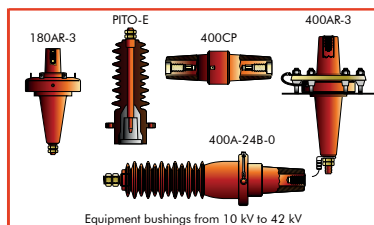
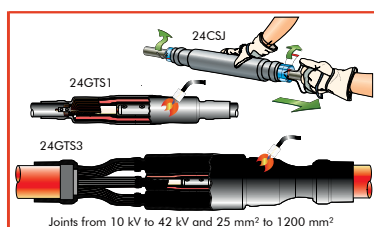
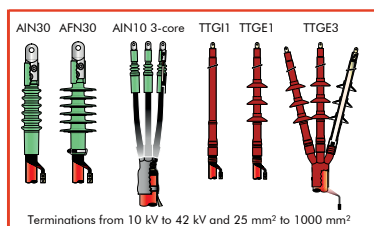
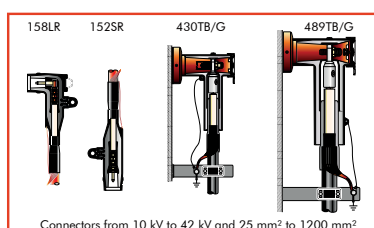
Nexans Power Accessories have set industrial and European product standards. Quality and environmental awareness are vital elements of our corporate philosophy and management system. Besides our certification according to DIN EN ISO 9001 we are acting certified in the scope of environmental protection and industrial safety.





## Nexans Power Accessories

Always the right connection



### This is where you can find us.

Wherever electricity is conducted through cables and wires. Wherever cables are connected or energy transmission and distribution is required. Wherever safety and quality have priority.

### We demonstrate competence.

Nexans products ensure operational reliability as network utilisation increases. Our references include more than 50 years of experience with over 100 million connectors and accessories used worldwide.

### What you can expect.

Our connectors and accessories have set industry standards and influenced European standards. Quality awareness is a central component of our company philosophy. Our strength lies in pooling the tasks from connection and cabling technology. We show our appreciation for our customers by providing them with expert and dedicated support.

### We are certified.

OHRIS, DIN EN ISO 9001:2008, DIN EN ISO 14001:2009

### We bear responsibility.

The Nexans Power Accessories Group currently produces accessories from 1 kV to 500 kV. As we are the Centre of Competence for cable accessories, we have taken on responsibility for research and development in the Nexans Group for connection technology.

### Advancing into the future with "Smart Grid".

Our developments are making a significant contribution to the creation of intelligent control mechanisms for automated energy network structures.

### Norms are important to us.

Our accessories meet the requirements of the following standards:

EN 61442, HD 629.1, HD 629.2, EN 50180, EN 50181, IEC 60137, IEEE 386 & 404, IEC 61238-1, VDE 0220 T100, etc.



## EPDM (ethylene propylene diene monomer) in connection technology

### Why is EPDM used for slip-on accessories all over the world?

EPDM has been used successfully as an insulating and control material for many millions of cable connectors worldwide for more than 50 years. Compared with the frequency with which other materials, such as silicone, are used for separable connectors, EPDM reaches more than 95%. The separable connectors are used at voltage levels from 3.6/6 kV to 26/45 kV (52 kV) in the medium-voltage range for all possible applications, such as switching stations, motors, transformers, trains, etc. in both indoor and outdoor facilities. Outer cone solutions have also been used for connecting high-voltage installations up to 220 kV for roughly 10 years.

The following advantages put EPDM in the pole position as the insulating and control material for separable connectors.

- A thick-walled conductive EPDM jacket with a high mechanical load capacity. A metal housing is not necessary.
- The function of the earth connection to the conductive

EPDM jacket of the connector is always ensured so that damage to the material caused by electric discharges between the surface of the connector / air and the surface of the connector / metal (earthed system parts) is impossible. The EPDM material does not release any volatile substances that collect on the surface having a negative effect on the conductivity of the shielding after a longer period of time.

- Connectors made of EPDM meet all testing requirements of the standards to the utmost satisfaction, including the re-ignition test for detecting a fault, even at low operating voltages, e.g. 6/10 kV.
- Problems when removing connectors (if systems are replaced or moved, even after decades) caused by the material sticking to the bushing of the system are impossible. The silicone based lubricant that is used when assembling the connector, does not diffuse into the material, but remains in the joint between connector and bushing. The de-energised

connector can be removed at any time, if required.

- Due to the dimensionally stable EPDM material, it is not possible to mount the pin contact in the wrong place, which often happens with "softer" materials, even with a built-in anti-twist safeguard in the cable lug area.
- Due to the hard, smooth surface of the EPDM material, damage caused by animals is not known. In this respect, operational reliability in endangered areas is ensured.
- Thanks to innovative further development of the EPDM material and the connector designs, multirange connectors are available today that are characterised by their ease of installation.

From an objective point of view, the EPDM material has clear advantages in connector technology over all other materials, just as silicone for slip-on terminations.



# ACCESSORIES FOR POWER CABLES

## Applications



AIN20 with compression cable lug



PITO-E on transformer with bushings



Transformer connection with 158LR



Transformer connection with 158LR



SF-6 system connection with 430TB



SF-6 system connection with 430TB+300SA



TS-24CSJ hybrid transition joint



AFN10 as a transformer connection



AFN20 as a transformer connection



AFN20 for smaller and larger cross-sections



GTS1 heat-shrinkable straight joint



24CSJ cold-shrinkable straight joint

# 158LR

## Interface A

### Elbow connector

Up to 24 kV - 250 A

### Application

Separable elbow connector designed to connect polymeric insulated cable to equipment (transformers, switchgear, motors...).

Also connects cable to cable, using the appropriate mating part.

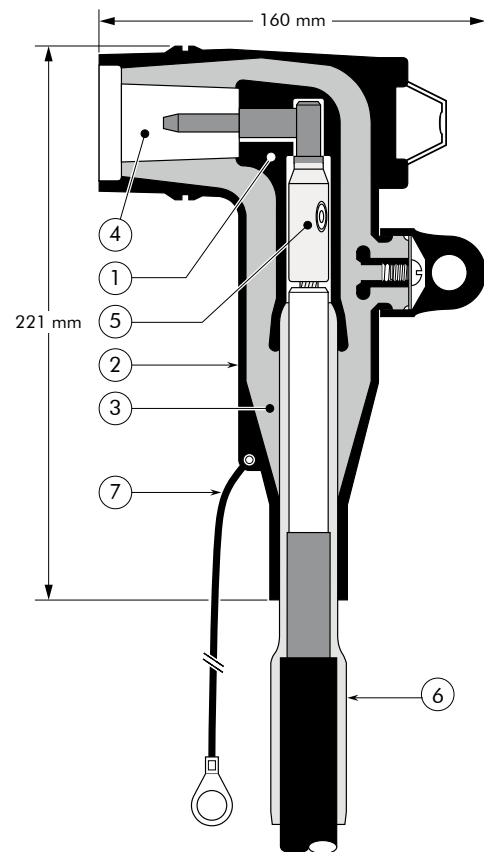
### Technical characteristics

- The thick conductive EPDM jacket provides a total safe to touch screen which ensures safety for personnel.
- Metal housing is available upon request.
- Integrated anti-twist safeguard
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

$U_0 / U (U_m)$
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
12.7/22 (24) kV

### Design

1. Conductive EPDM insert with integrated anti-twist safeguard
2. Conductive EPDM jacket.
3. Insulating EPDM layer moulded between the insert and the jacket
4. Type A - 250 A interface as described by CENELEC EN 50180 and 50181
5. Bolted or crimp conductor contact
6. Cable reducer or cable adaptor
7. Earthing lead



### Specifications and standards

The separable connector (K)158LR and (K)158LR/G meets the requirements of CENELEC HD 629.1.

Separable connector type	Nominal voltage $U_0 / U$ (kV)	Current $I_n$ (A)	Conductor cross-section (mm <sup>2</sup> )	
			min.	max.
158LR/G	6/10	250	25	95
K158LR/G	12/20	250	(25) 35	95
158LR	6/10	250	95	120
158LR	6/10	180	150	150
K158LR	12/20	250	(25) 35	120
K158LR	12/20	180	150	150

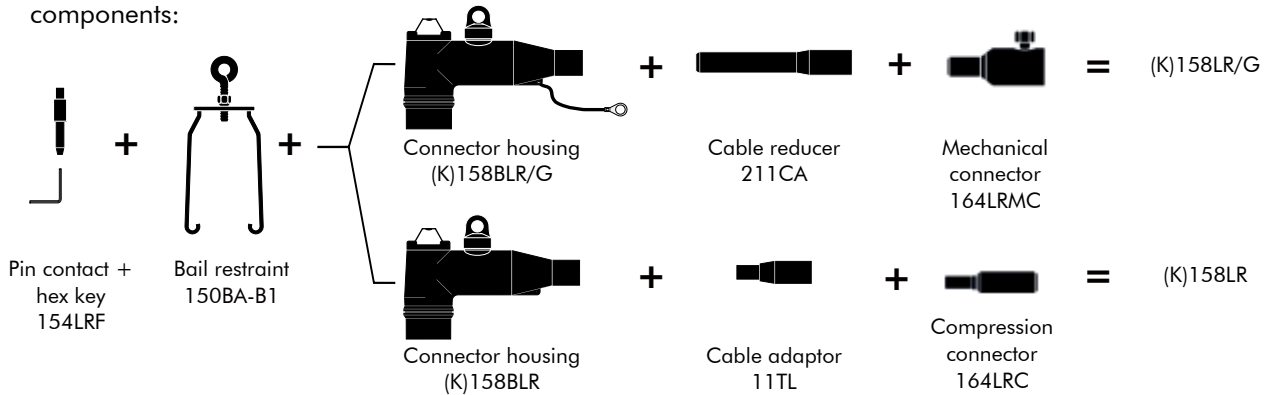
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## Kit contents

The complete (K)158LR or (K)158LR/G elbow connector kit comprises the following components:

The kit also comprises:  
+ installation instructions  
+ silicone grease  
+ wipers  
+ screen wire cable lugs



## Ordering instructions

Indicate the part number when ordering (see table).

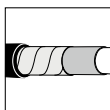
### Order example:

1 elbow connector kit for 12/20 kV, for 35-95 mm<sup>2</sup> with mechanical conductor connector.

Order according to the table: 1 kit – K158LR/G with part number 54489.

**Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen. Please contact our sales representative, when using other cable types.

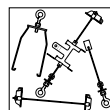
Cross-section (mm²)	Dia. over core insulation (mm)		Ordering part number for (K)158LR and 158LR/G					
	min.	max.	with mechanical connector	with compression connector				
				Al-rm(v)	Cu-rm(v)			
Nominal voltage U <sub>0</sub> /U 6/10 kV								
25	13.0	15.2	57595		44704	44705		
35	14.1	16.3				44706	43806	
50	15.3	17.5		54848	44707	43025		
70	17.0	19.2				44708	44709	
95	17.9	20.8			54849	44710	44711	
120	19.4	22.8					44712	44713
150	20.9	24.3				44714	44715	
Nominal voltage U <sub>0</sub> /U 12/20 kV (K)								
35	18.3	20.5	54489			44718	45885	
50	19.5	21.7					45886	42065
70	21.2	23.4					45889	45888
95	22.8	25.0					44719	44732
120	23.6	27.0				44734	44735	
150	25.1	28.5				59124	59125	



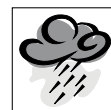
For use with copper tape screened cables.  
Order: Kit MT.



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



For adapted bail restraints: see 'Bail restraints and typical applications'.



For outdoor applications.  
Order: +MWS.



All accessories available with mechanical or compression conductor connector.

# 152SR

## Interface A

### Straight connector

Up to 24 kV - 250 A

$U_o / U (U_m)$   
 6/10 (12) kV  
 6.35/11 (12) kV  
 8.7/15 (17.5) kV  
 12/20 (24) kV  
 12.7/22 (24) kV

### Application

Separable straight connector designed to connect polymeric insulated cable to equipment (transformers, switchgear, motors...).

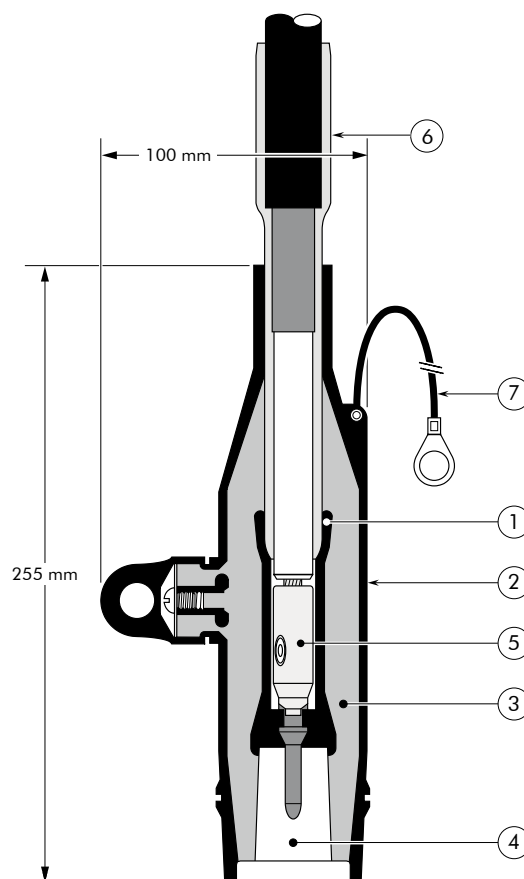
Also connects cable to cable, using the appropriate mating part.

### Technical characteristics

- The thick conductive EPDM jacket provides a total safe to touch screen which ensures safety for personnel.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

### Design

1. Conductive EPDM insert
2. Conductive EPDM jacket
3. Insulating EPDM layer moulded between the insert and the jacket
4. Type A - 250 A interface as described by CENELEC EN 50180 and 50181
5. Bolted or crimp conductor contact
6. Cable reducer or cable adaptor
7. Earthing lead



### Specifications and standards

The separable connector (K)152SR and (K)152SR/G meets the requirements of CENELEC HD 629.1.

Separable connector type	Nominal voltage $U_o / U$ (kV)	Current $I_n$ (A)	Conductor cross-section (mm <sup>2</sup> )	
			min.	max.
152SR/G	6/10	250	25	95
K152SR/G	12/20	250	(25) 35	95
152SR	6/10	250	95	120
K152SR	12/20	250	(25) 35	120

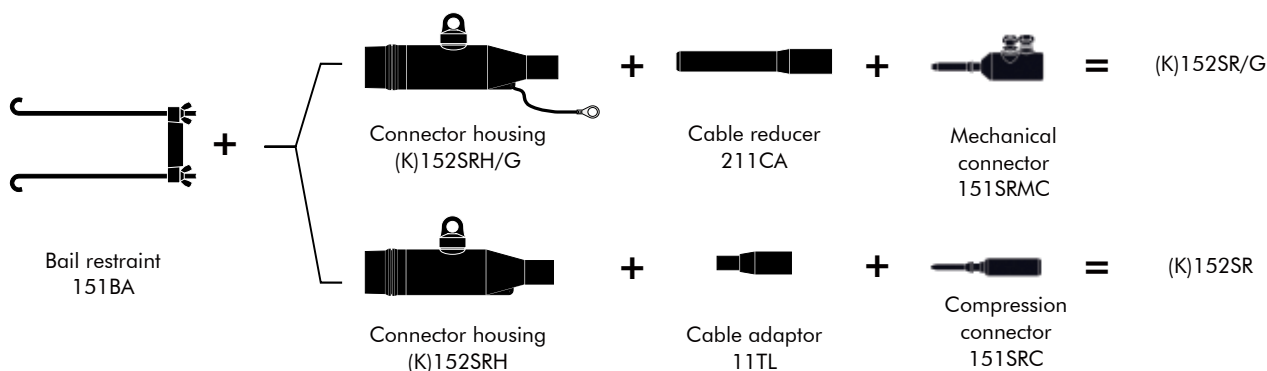
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## Kit contents

The complete (K)152SR or (K)152SR/G straight connector kit comprises the following components:

The kit also comprises:

- + installation instructions
- + silicone grease
- + wipers
- + screen wire cable lugs



## Ordering instructions

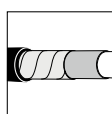
Indicate the part number when ordering (see table).

### Order example:

1 straight connector kit for 12/20 kV, for 35-95 mm<sup>2</sup> mechanical conductor connector.  
Order according to the table: 1 kit – K152SR/G with part number 54487.

**Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen. Please contact our sales representative, when using other cable types.

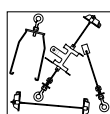
Cross-section (mm²)	Dia. over core insulation (mm)		Ordering part number for (K)152SR and 152SR/G			
	min.	max.	with mechanical connector	with compression connector		
				Al-rm(v)	Cu-rm(v)	
Nominal voltage U <sub>0</sub> /U 6/10 kV						
25	13.0	15.2	57283	54850	52138	52139
35	14.1	16.3			52140	48775
50	15.3	17.5	52141		52142	
70	17.0	19.2	52143		52144	
95	17.9	20.8	54851	44745	44746	
120	19.4	22.8		44747	44748	
Nominal voltage U <sub>0</sub> /U 12/20 kV (K)						
35	18.3	20.5	54487	44792	48227	
50	19.5	21.7		44794	48228	
70	21.2	23.4		44795	44796	
95	22.8	25.0		44797	44798	
120	23.6	27.0		44799	44800	



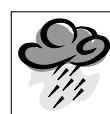
For use with copper tape screened cables.  
Order: Kit MT.



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



For adapted bail restraints: see 'Bail restraints and typical applications'.



For outdoor applications.  
Order: +MWS.



All accessories available with mechanical or compression conductor connector.

## PITO-E Interface A Termination

**Up to 24 kV - 250 A**

### Application

Separable termination designed to connect overhead lines or bus bars to equipment. Is suitable for indoor and outdoor use for medium polluted atmosphere.

### Technical characteristics

Each plug-in termination is tested for AC withstand prior to leaving the factory.

**$U_0 / U (U_m)$**   
**6/10 (12) kV**  
**6.35/11 (12) kV**  
**8.7/15 (17.5) kV**  
**12/20 (24) kV**  
**12.7/22 (24) kV**

### Design

The plug-in termination is a moulded epoxy insulated part. It meets the type A - 250 A interface as described in CENELEC EN 50180 and 50181.

### Specifications and standards

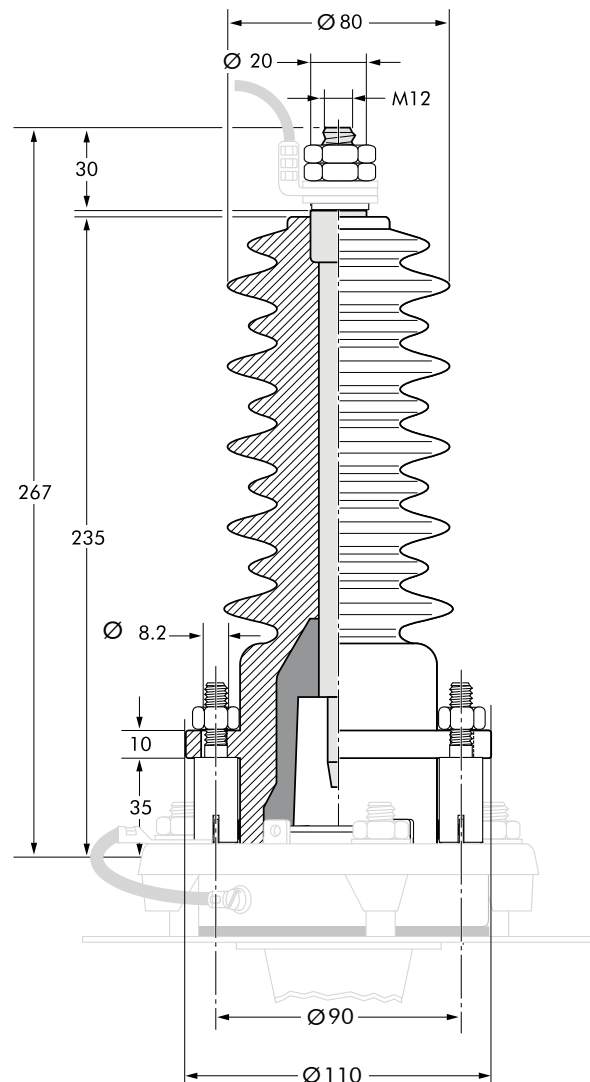
The PITO-E can be used with equipment interface parts type A that correspond to the international standard for outer cone systems according to CENELEC EN 50180 and EN 50181.

### Ordering instructions

Plug-in termination PITO-E up to 24 kV.

Dedicated fastening material:

- + 2 polyamide bolts,
- + 2 polyamide nuts,
- + 2 metal pins.

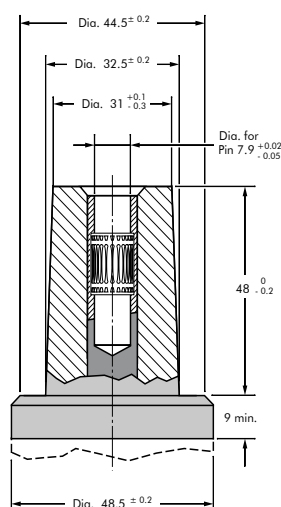


Plug-in termination type	Nominal voltage $U_0 / U$ (kV)	Current $I_n$ (A)	Creepage distance (mm)	Part number
PITO-E	12,7/22	250	510	70275

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# CONNECTING POSSIBILITIES PIN-CONNECTOR SYSTEM

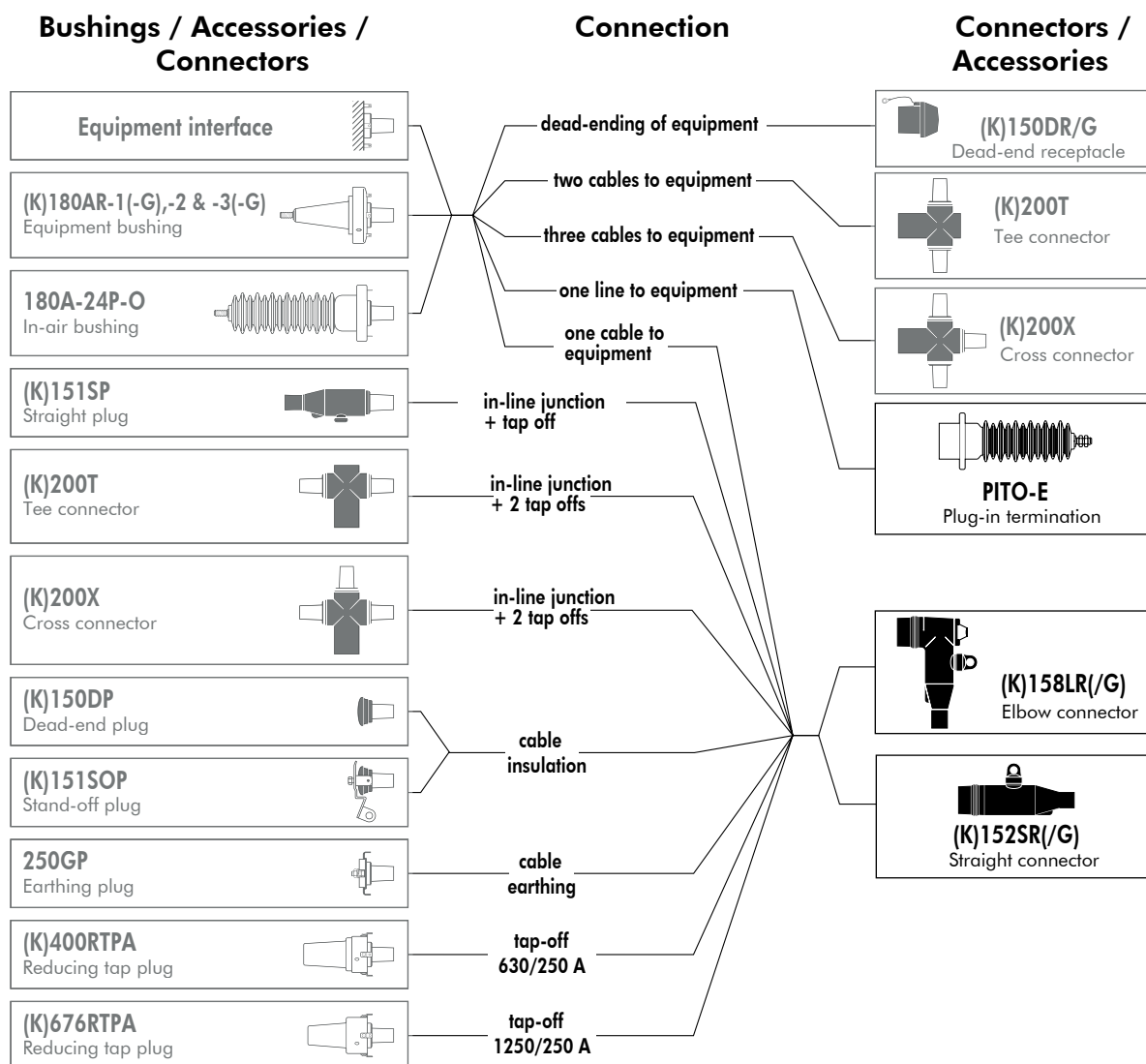
## Interface A



### Interface A

250 A outer cone acc. to  
CENELEC EN 50180 and  
EN 50181.

$U_o / U (U_m)$   
6/10 (12) kV  
6.35/11 (12) kV  
8.7/15 (17.5) kV  
12/20 (24) kV  
12.7/22 (24) kV



Products displayed in **grey** are generally available, but not included in this catalogue.



## 400LR/G

### Interface B

### Elbow connector

Up to 36 kV - 400 A

#### Application

Separable elbow connector (plug-in type) designed to connect polymeric insulated cable to equipment (transformers, switchgear, motors...). For use with other cable types please contact our sales representative.

#### Technical characteristics

- The thick conductive EPDM jacket provides a total safe to touch screen which ensures safety for personnel.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

$U_0 / U (U_m)$
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

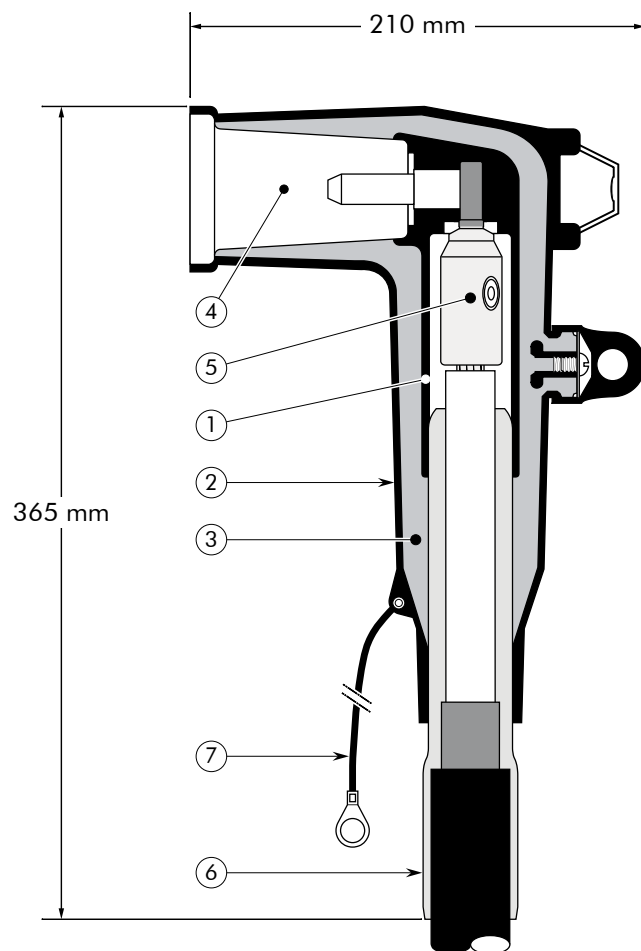
#### Design

- Conductive EPDM insert
- Conductive EPDM jacket
- Insulating EPDM layer moulded between the insert and the jacket
- Type B - 400 A interface as described by CENELEC EN 50180 and 50181
- Bolted or crimp conductor contact
- Cable reducer
- Earthing lead

The screen break design enables cable outer sheath testing without removing or dismantling the connector.

#### Specifications and standards

The separable connector 400LR/G meets the requirements of CENELEC HD 629.1.



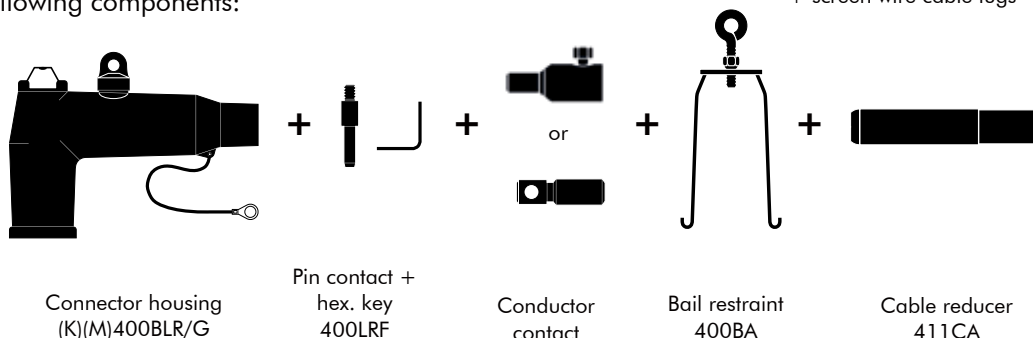
Separable connector type	Nominal voltage $U_0 / U$ (kV)	Current $I_n$ (A)	Conductor cross-section (mm <sup>2</sup> )	
			min.	max.
400LR/G	6/10	400	25	300
K400LR/G	12/20	400	35	300
M400LR/G	18/30	400	50	240

15-05-2014

## Kit contents

The complete (K)(M)400LR/G elbow connector kit comprises the following components:

The kit also comprises:  
 + installation instructions  
 + silicone grease  
 + wipers  
 + screen wire cable lugs



## Ordering instructions

Indicate the part number when ordering (see table).

### Order example:

a) 1 elbow connector kit for 12/20 kV, for 120-185 mm<sup>2</sup> with mechanical conductor connector.

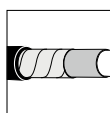
Order according to the table: 1 kit – K400LR/G with part number 52262.

b) 1 elbow connector kit for 12/20 kV, for 150 mm<sup>2</sup> with compression connector for Al conductors.

Order according to the table: 1 kit – K400LR/G with part number 48365.

**Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen. Please contact our sales representative, when using other cable types.

Cross-section (mm <sup>2</sup> )	Dia. over core insulation (mm)		Ordering part number (K)(M)400LR/G				
	min.	max.	with mechanical connector			with compression connector	
						Al-rm(v)	Cu-rm(v)
Nominal voltage U <sub>0</sub> /U 6/10 kV							
25	13.0	15.2	400LR/G-11 58164			52994	52998
35	14.1	16.3				52995	43690
50	15.3	17.5				52996	43412
70	17.0	19.2		400LR/G-15 52991		52997	52247
95	17.9	20.8				52248	52249
120	19.4	22.8				52250	52251
150	20.9	24.3		400LR/G-19 52992		52252	52253
185	22.5	25.9				52254	52255
240	25.0	28.4				400LR/G-22 52993	52256
300	27.7	30.4	52258	52259			
Nominal voltage U <sub>0</sub> /U 12/20 kV (K)							
35	18.3	20.5	K400LR/G-15 52260			52265	49447
50	19.5	21.7				52266	51781
70	21.2	23.4				K400LR/G-19 52261	52267
95	22.8	25.0	52034	51819			
120	23.6	27.0	K400LR/G-22 52262	49686	51248		
150	25.1	28.5		48365	48502		
185	26.7	30.1		K400LR/G-25 52263	52268	52269	
240	29.2	32.6	49687		52270		
300	31.2	34.6	52271		52272		
Nominal voltage U <sub>0</sub> /U 18/30 kV (M)							
50	23.8	26.7	M400LR/G-22 52273			49589	44215
70	25.5	28.4				51824	51093
95	27.1	30.0				48086	49645
120	28.6	32.0		M400LR/G-27 52274		51182	51377
150	30.1	33.5				53073	49721
185	31.7	35.1				52277	52278
240	34.2	37.6				43415	52275



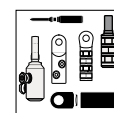
For use with copper tape screened cables.  
Order: Kit MT..



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



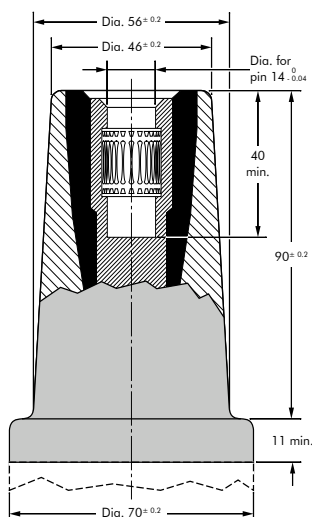
For outdoor applications.  
Order: +MWS.



All accessories available with mechanical or compression conductor connector.

# CONNECTING POSSIBILITIES PIN-CONNECTOR SYSTEM

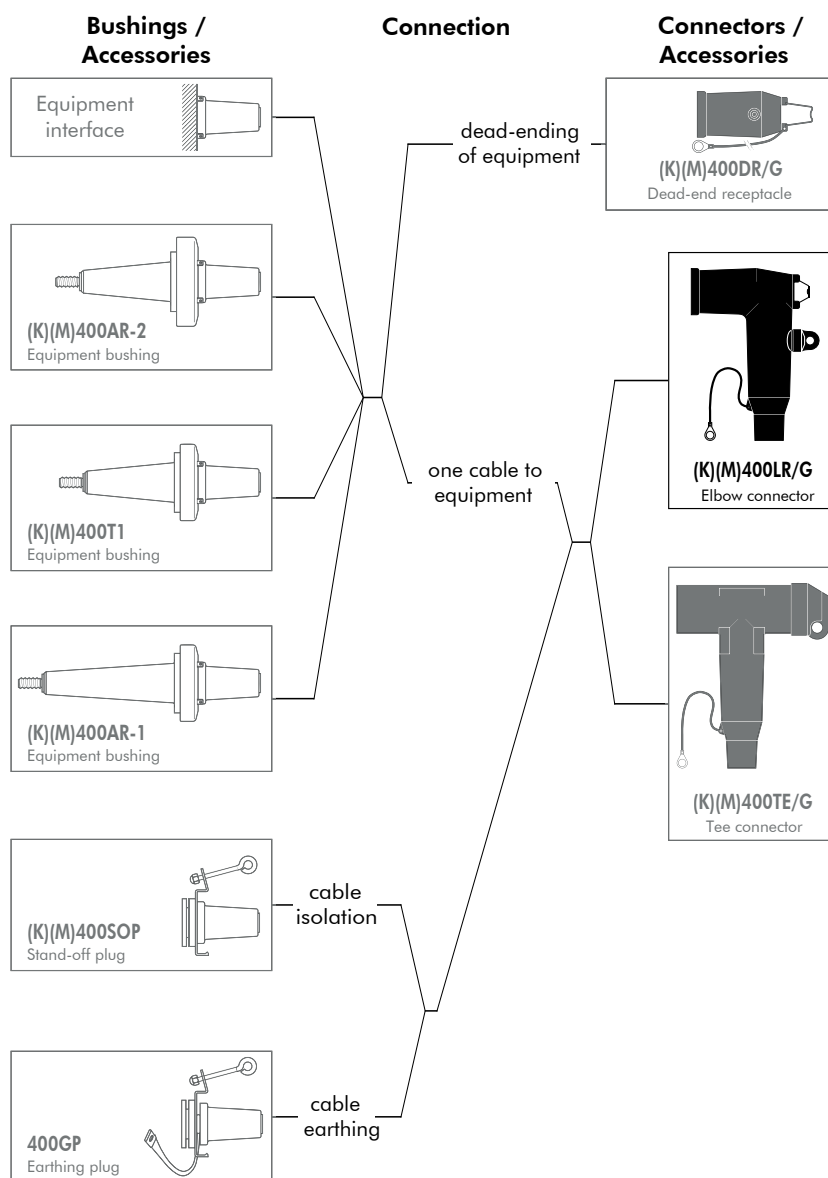
## Interface B



**Interface B**  
400 A outer cone acc. to  
CENELEC EN 50180 and  
EN 50181.

$U_o / U (U_m)$

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



Products displayed in **grey** are generally available, but not included in this catalogue.

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# INSTALLATION OVERVIEW

Interface C

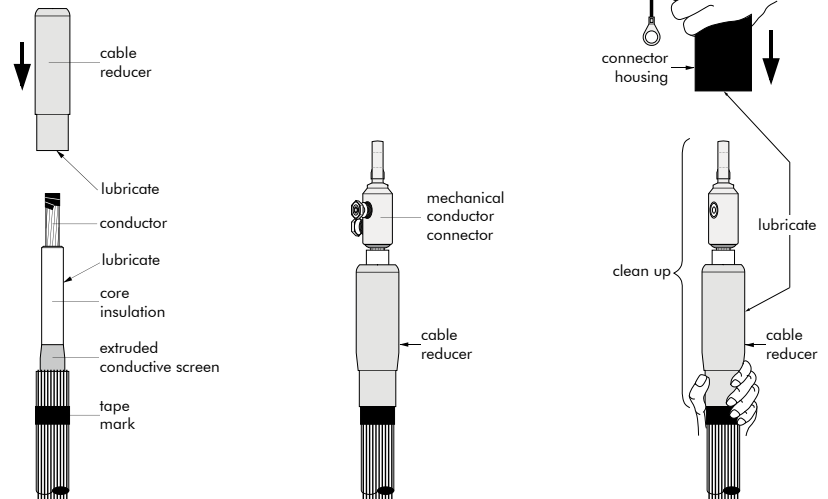
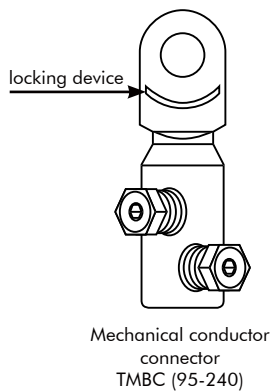
Compact tee connector for application in multiple voltage levels

430TB/G

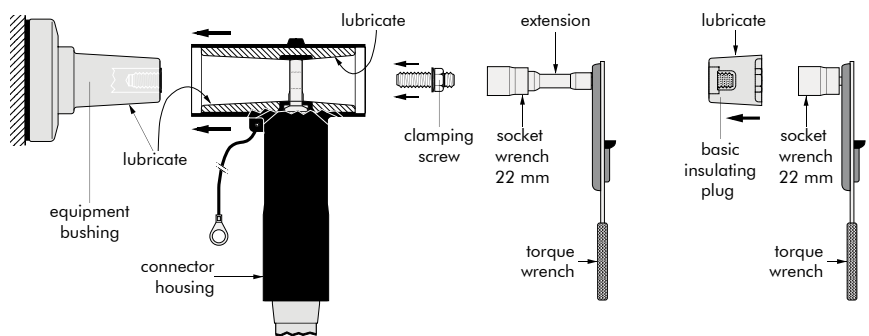
## Installation of the connector on the cable

### Advantage

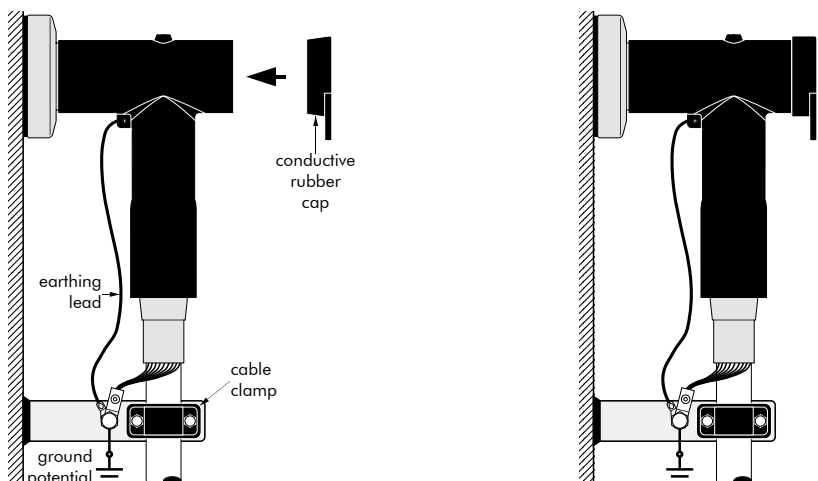
The locking device on the TMBC (95-240) mechanical conductor connector prevents the connector housing from sliding back.



## Installation of the connector on the bushing



## Earthing and cable fixing



## 430TB/G

### Interface C

#### Compact tee connector for multiple voltage levels

#### Application

Suitable for installation on polymeric insulated medium voltage cables with extruded easy strip conductive screen or bonded extruded conductive screen. For use with other cable types please contact our sales representative.

#### Technical characteristics

- The thick conductive EPDM jacket provides a total safe to touch screen to ensure safety.
- Metal housing available on request.
- Thanks to new materials the 430TB/G connectors are non-size sensitive.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

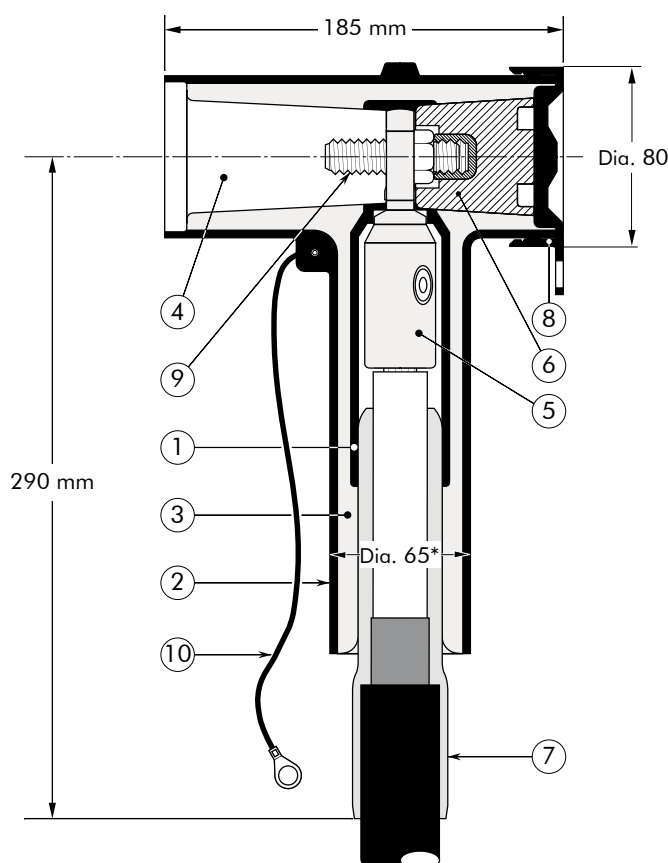
**Up to 36 kV**  
**630 A/1250 A\*\***

$U_0 / U (U_m)$
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

#### Design

1. Conductive EPDM insert
2. Conductive EPDM jacket
3. Insulating EPDM layer moulded between the insert and the jacket
4. Type C - interface as described by CENELEC EN 50180 and 50181
5. Bolted or crimp conductor contact
6. Basic insulating plug
7. Cable reducer
8. Conductive rubber cap
9. Clamping screw
10. Earth lead

The screen break design enables cable outer sheath testing without removing or dismantling the connector.



\* The indicated diameter is a die dimension. Depending on the conductor cross-section used, a deviation of up to + 5 mm is possible.

#### Specifications and standards

The 430TB/G separable connector meets the requirements of CENELEC HD 629.1. ATEX version can be delivered on request.

Separable connector type	Nominal voltage $U_0 / U$ (kV)	Current $I_n$ (A)	Conductor cross-section (mm <sup>2</sup> )	
			min.	max.
430TB/G	6/10	630/1250**	25	300
K430TB/G	12/20	630/1250**	35	300
M430TB/G	18/30	630/1250**	50	240

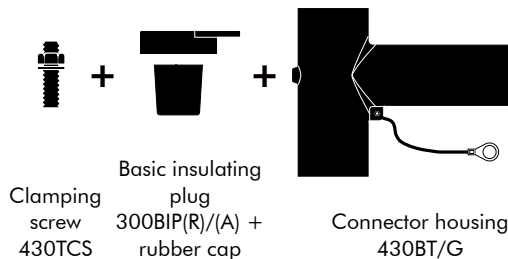
\*\* When installed on an appropriate equipment bushing.

15-05-2014

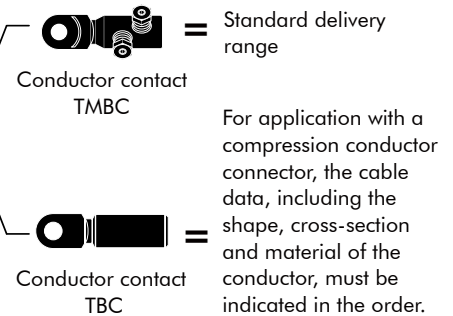


## Kit contents

The complete (K)(M)430TB/G tee connector kit comprises 3 x the following components:



The kit also comprises:  
+ installation instructions  
+ silicone grease  
+ wipers  
+ screen wire cable lugs



## Ordering instructions

Indicate the part number for multirange application when ordering (see table).

### Order example:

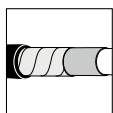
1 compact tee connector kit for 12/20 kV, for 95-240 mm<sup>2</sup> with mechanical conductor connector.

Order according to the table: 1 kit – K430TB/G with part number 49557.

**Note:** The assignment only applies to XLPE-insulated cables (dimensions according to DIN VDE 0276-620) with extruded conductive screen. For use with other cable designs contact our sales representative.

Cross-section (mm²)	Dia. over core insulation (mm)		Multirange assignment Ordering part number for (K)(M)430TB/G				
	min.	max.	with mechanical connector				
Nominal voltage U <sub>0</sub> /U 6/10 kV							
25	13.0	15.2	52146				
35	14.1	16.3					
50	15.3	17.5					
70	17.0	19.2		51201			
95	17.9	20.8					
120	19.4	22.8			52147	52148	
150	20.9	24.3					
185	22.5	25.9					
240	25.0	28.4					57303
300	27.7	30.4					
Nominal voltage U <sub>0</sub> /U 12/20 kV (K)							
35	18.3	20.5	52149				
50	19.5	21.7					
70	21.2	23.4					
95	22.8	25.0		52150***			
120	23.6	27.0					
150	25.1	28.5			49557	57304	
185	26.7	30.1					
240	29.2	32.6					53599
300	31.2	34.6					
Nominal voltage U <sub>0</sub> /U 18/30 kV (M)							
50	23.8	26.7	52940				
70	25.5	28.4					
95	27.1	30.0		57284***			
120	28.6	32.0			52941		
150	30.1	33.5					
185	31.7	35.1					
240	34.2	37.6					

\*\*\* Applicable for aluminium conductors up to 150 mm<sup>2</sup>, not applicable for copper conductors.



For use with copper tape screened cables.  
Order: Kit MT.



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



For outdoor applications.



If an ATEX certification for connectors up to 12 kV is required, contact our sales representative before ordering.



All accessories available with mechanical or compression conductor connector.



When installed on an appropriate equipment bushing: 1250 A continuously.

## 300PB/G

### Coupling connector for 430TB/G

#### Application

Separable coupling connector (bolted type) for dual cable arrangement. It has been designed to be used with 430TB/G separable tee connector.

#### Technical characteristics

- A thick conductive EPDM jacket provides a total safe to touch screen.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

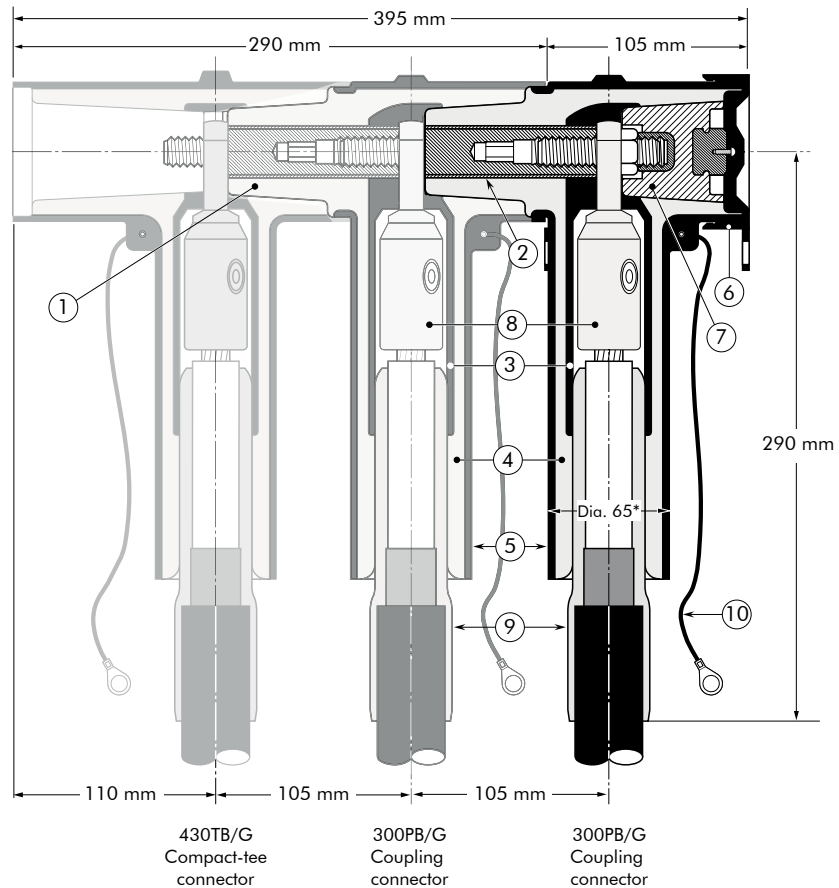
**Up to 36 kV**  
**630 A/1250 A\*\***

$U_o / U (U_m)$
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

#### Design

1. Interface designed to fit 430TB/G connector
2. Bus for 300PB/G
3. Conductive EPDM insert
4. Insulating EPDM layer moulded between the insert and the jacket
5. Conductive EPDM jacket
6. Conductive EPDM cap
7. Basic insulating plug (with VD point)
8. Bolted or crimp conductor contact
9. Cable reducer
10. Earthing lead

The screen break design enables cable outer sheath testing without removing or dismantling the connector.



\* The indicated diameter is a die dimension. Depending on the conductor cross-section used, a deviation of up to + 5 mm is possible.

#### Specifications and standards

The 300PB/G coupling connector meets the requirements of CENELEC HD 629.1. ATEX version can be delivered on request.

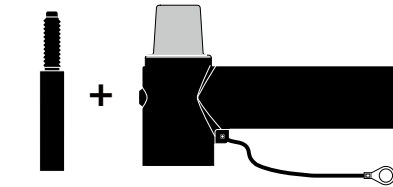
Separable connector type	Nominal voltage $U_o / U$ (kV)	Current $I_n$ (A)	Conductor cross-section (mm <sup>2</sup> )	
			min.	max.
300PB/G	6/10	630/1250**	25	300
K300PB/G	12/20	630/1250**	35	300
M300PB/G	18/30	630/1250**	50	240

\*\* When installed on an appropriate equipment bushing.

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## Kit contents

The complete (K)(M)300PBM/G coupling connector kit comprises 3 x the following components:



Contact rod

Connector housing  
300BP/G

Cable reducer  
430CA

The kit also comprises:  
+ installation instructions  
+ silicone grease  
+ wipers  
+ screen wire cable lugs



Conductor  
contact  
TMBC

= Standard delivery  
range



Conductor  
contact TBC

= For application with a  
compression conductor con-  
nector, the cable data, includ-  
ing the shape, cross-section  
and material of the conductor,  
must be indicated in the order.

## Ordering instructions

Indicate the part number for multirange application when ordering (see table).

### Order example:

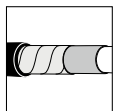
1 coupling connector kit for 12/20 kV, for 95-240 mm<sup>2</sup> with mechanical conductor connector.

Order according to the table: 1 kit – K300PB/G with part number 53005.

**Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen. Please contact our sales representative, when using other cable types.

Cross-section (mm <sup>2</sup> )	Dia. over core insulation (mm)		Multirange assignment Ordering part number for (K)(M)300PB/G				
	min.	max.	with mechanical connector				
Nominal voltage U <sub>0</sub> /U 6/10 kV							
25	13.0	15.2	52999				
35	14.1	16.3					
50	15.3	17.5					
70	17.0	19.2		53000			
95	17.9	20.8					
120	19.4	22.8			53001	53002	
150	20.9	24.3					
185	22.5	25.9					57305
240	25.0	28.4					
300	27.7	30.4					
Nominal voltage U <sub>0</sub> /U 12/20 kV (K)							
35	18.3	20.5	53003				
50	19.5	21.7					
70	21.2	23.4					
95	22.8	25.0		53004***			
120	23.6	27.0					
150	25.1	28.5			53005	57306	
185	26.7	30.1					
240	29.2	32.6					53602
300	31.2	34.6					
Nominal voltage U <sub>0</sub> /U 18/30 kV (M)							
50	23.8	26.7	52986				
70	25.5	28.4					
95	27.1	30.0					
120	28.6	32.0		57285***			
150	30.1	33.5					
185	31.7	35.1			52987		
240	34.2	37.6					

\*\*\* Applicable for aluminium conductors up to 150 mm<sup>2</sup>, not applicable for copper conductors.



For use with  
copper tape  
screened cables.  
Order: Kit MT.



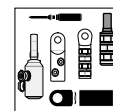
For use with  
other cable types.  
Please contact our  
representative.



For outdoor  
applications.



If an ATEX certification for  
connectors up to 12 kV is  
required, contact our sales repre-  
sentative before ordering.



All accessories available  
with mechanical or  
compression conductor  
connector.



When installed on an  
appropriate equipment  
bushing: 1250 A  
continuously.

## 300SA

### Surge arrester for 430TB/G compact tee connector

Up to 36 kV

$U_0 / U (U_m)$
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

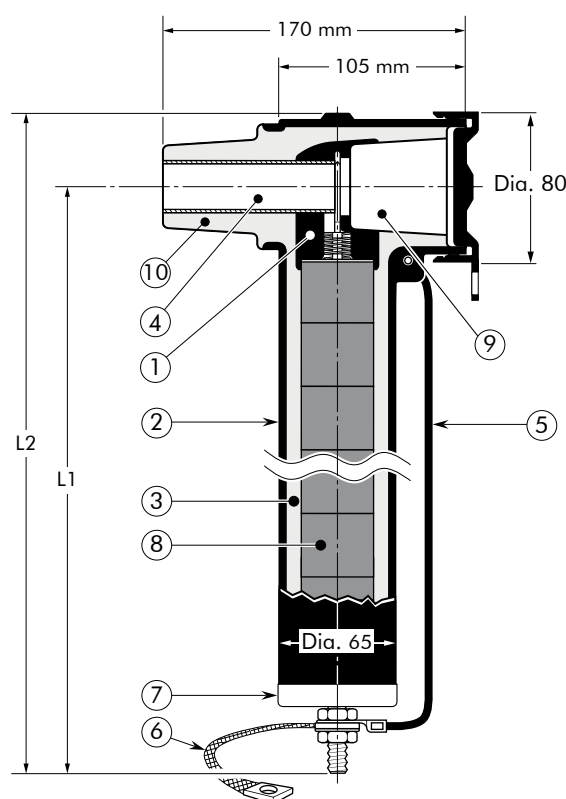
Surge arrester designed to protect 12, 24 and 36 kV class components, including transformers, equipment, cable and accessories from high voltage surges resulting from lightning or switching. It has been designed to be used with the 430TB/G separable tee connector.

### Technical characteristics

- This surge arrester is a metal oxide varistor surge arrester that may only be used in combination with a 430TB/G compact tee or a 300PB/G coupling connector.
- Each arrester is tested for AC withstand, partial discharge and critical voltage prior to leaving the factory.

### Design

- Conductive EPDM insert
- Conductive EPDM jacket
- Insulating EPDM layer moulded between the insert and the jacket
- Receptacle for contact rod
- Earth lead
- Earth connection
- Steel cap
- Metal oxide valve elements
- Basic insulating plug
- Interface designed to fit the 430TB/G tee connector.



### Specifications and standards

The 300SA surge arresters meet the test requirements of IEC 60099-4. (VDE 0675-4) ATEX version can be delivered on request.

Surge arrester type	Nominal discharge current $I_n$ (kA)	Rated voltage* $U_r$ (kV)	Max. continuous operating voltage $U_c$ (kV)	High current impulse withstand (kA)	Dimensions (mm)		Ordering part number
					L1	L2	
300SA-5-6N	5	6	4.8	65	250	290	85746
300SA-5-9N	5	9	7.2	65	250	290	85748
300SA-5-12N	5	12	9.6	65	250	290	85750
300SA-5-15N	5	15	12.0	65	250	290	85752
300SA-5-18N	5	18	14.4	65	250	290	85754
300SA-5-22N	5	22	17.6	65	250	290	On request
300SA-5-24N	5	24	19.2	65	350	390	85756
300SA-5-30N	5	30	24.0	65	350	390	85071
300SA-5-33N	5	33	26.4	65	350	390	On request
300SA-5-36N	5	36	28.8	65	350	390	85758
300SA-5-42N	5	42	33.6	65	450	490	85760
300SA-5-45N	5	45	36.0	65	450	490	85762

\* Surge arresters for other rated voltages are available on request

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## Ordering instructions

Indicate the type of surge arrester when ordering (see table). The part numbers each apply to one kit consisting of three surge arresters.

## Order example:

For a max. operating voltage of 24 kV and a nominal discharge current of 10 kA, order according to the table: Surge arrester type 300SA-10-30N with part number 77658.

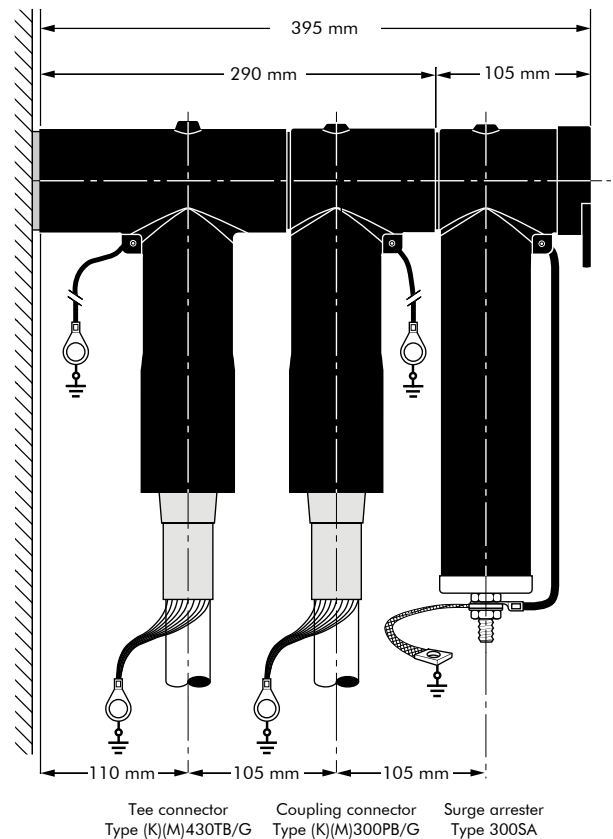
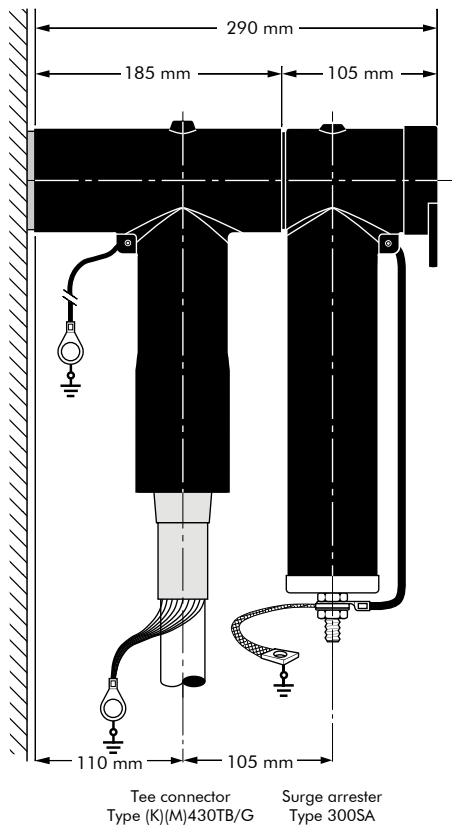
## Note:

The order information only applies to the use in compensated, high-impedance and insulated networks.

Surge arrester type	Nominal discharge current $I_n$ (kA)	Rated voltage* $U_r$ (kV)	Max. continuous operating voltage $U_c$ (kV)	High current impulse withstand (kA)	Dimensions (mm)		Ordering part number
					L1	L2	
300SA-10-6N	10	6	4.8	100	250	290	85765
300SA-10-9N	10	9	7.2	100	250	290	77812
300SA-10-12N	10	12	9.6	100	250	290	77814
300SA-10-15N	10	15	12.0	100	250	290	77642
300SA-10-18N	10	18	14.4	100	250	290	77655
300SA-10-22N	10	22	17.6	100	250	290	77656
300SA-10-24N	10	24	19.2	100	350	390	77657
300SA-10-30N	10	30	24.0	100	350	390	77658
300SA-10-33N	10	33	26.4	100	350	390	85728
300SA-10-36N	10	36	28.8	100	350	390	79976
300SA-10-42N	10	42	33.6	100	450	490	85767
300SA-10-45N	10	45	36.0	100	450	490	79978

\* Surge arresters for other rated voltages are available on request

## Typical application and dimensions





## 484TB/G

### Interface C

#### Compact tee connector for multiple voltage levels

Up to 42 kV

630 A/1250 A\*\*

$U_0 / U (U_m)$

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

20.8/36 (42) kV

### Application

Suitable for installation on polymeric insulated medium voltage cables with extruded easy strip conductive screen or bonded extruded conductive screen. For use with other cable types please contact our sales representative.

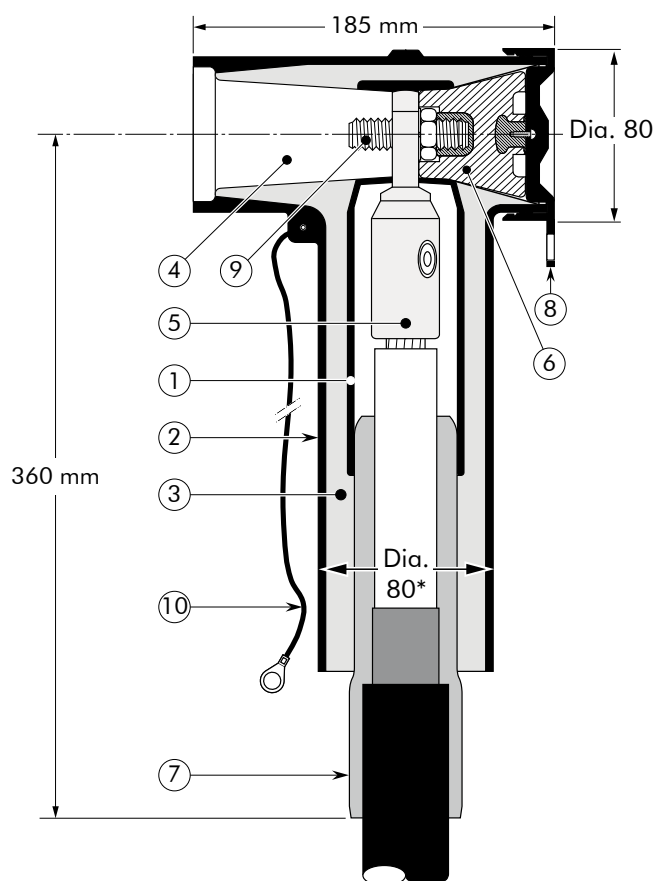
### Technical characteristics

- The thick conductive EPDM jacket provides a total safe to touch screen to ensure safety.
- Thanks to new materials the 484TB/G connectors are non-size sensitive.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

### Design

1. Conductive EPDM insert
2. Conductive EPDM jacket
3. Insulating EPDM layer moulded between the insert and the jacket
4. Type C - interface as described by CENELEC EN 50180 and 50181
5. Bolted or crimp conductor contact
6. Basic insulating plug
7. Cable reducer
8. Conductive rubber cap
9. Clamping screw
10. Earth lead

The screen break design enables cable outer sheath testing without removing or dismantling the connector.



\* The indicated diameter is a die dimension. Depending on the conductor cross-section used, a deviation of up to + 5 mm is possible.

### Specifications and standards

The 484TB/G separable connector meets the requirements of CENELEC HD 629.1. ATEX version can be delivered on request.

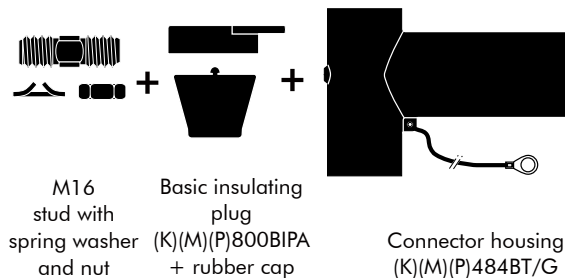
Separable connector type	Nominal voltage $U_0 / U$ (kV)	Current $I_n$ (A)	Conductor cross-section (mm <sup>2</sup> )	
			min.	max.
484TB/G	6/10	630/1250**	70	630
K484TB/G	12/20	630/1250**	35	630
M484TB/G	18/30	630/1250**	50	630
P484TB/G	20.8/36	630/1250**	50	630

\*\* When installed on an appropriate equipment bushing

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## Kit contents

The complete (K)(M)(P)484TB/G tee connector kit comprises 3x the following components:



The kit also comprises:  
+ installation instructions  
+ silicone grease  
+ wipers  
+ screen wire cable lugs

Conductor contact TMBC = Standard delivery range  
Conductor contact TBC = For application with a compression conductor connector, the cable data, including the shape, cross-section and material of the conductor, must be indicated in the order.

## Ordering instructions

Indicate the part number for multirange application when ordering (see table).

### Order example:

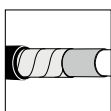
1 compact tee connector kit for 12/20 kV, for 120-240 mm<sup>2</sup> with mechanical conductor connector.

Order according to the table: K484TB/G with part number 57386.

**Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen.

\*\*\* Since the dimensions for cables at voltage level 20.8/36 (42) kV are not yet standardised, the conductor cross-sections and their assignment of diameters over core insulation given in the table are to be considered approximate values. When ordering accessories, we would like to ask you to indicate the checked diameters over core insulation.

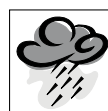
Cross-section (mm²)	Dia. over core insulation (mm)		Multirange assignment Ordering part number for (K)(M)(P)484TB/G	
	min.	max.	with mechanical connector	
Nominal voltage U <sub>0</sub> /U 6/10 kV				
70	17.0	19.2	57379	
95	17.9	20.8		
120	19.4	22.8		
150	20.9	24.3		
185	22.5	25.9	57380	
240	25.0	28.4		57381
300	27.7	30.4		
400	30.9	33.6		57382
500	33.7	36.4		
630	37.1	40.8		57383
Nominal voltage U <sub>0</sub> /U 12/20 kV (K)				
35	18.3	20.5	57384	
50	19.5	21.7		
70	21.2	23.4		
95	22.8	25.0	57385	
120	23.6	27.0		
150	25.1	28.5		
185	26.7	30.1	57386	
240	29.2	32.6		
300	31.2	34.6		57387
400	34.4	37.8		
500	37.2	40.6		57388
630	41.3	45.0		57461
Nominal voltage U <sub>0</sub> /U 18/30 kV (M)				
50	23.8	26.7	57389	
70	25.5	28.4		
95	27.1	30.0		
120	28.6	32.0		
150	30.1	33.5	57390	
185	31.7	35.1		
240	34.2	37.6		
300	36.2	39.6	57391	
400	39.4	42.8		
500	42.2	45.6		
630	46.3	50.0		57392
Nominal voltage U <sub>0</sub> /U 20.8/36 kV*** (P)				
50	23.8	26.7	57393	
70	25.5	28.4		
95	27.1	30.0		
120	28.6	32.0		
150	30.1	33.5	57394	
185	31.7	35.1		
240	34.2	37.6		
300	36.2	39.6	57395	
400	39.4	42.8		
500	42.2	54.6		
630	46.3	50.0		57396



For use with copper tape screened cables.  
Order: Kit MT.



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



For outdoor applications.



All accessories available with mechanical or compression conductor connector.



When installed on an appropriate equipment bushing: 1250 A continuously.

## 804PB/G

### Coupling connector for 484TB/G

Up to 42 kV  
630 A / 1250 A\*\*

$U_0 / U (U_m)$	
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
20.8/36	(42) kV

### Application

Separable coupling connector (bolted type) for dual cable arrangement. It has been designed to be used with 484TB/G separable tee connector.

The cable arrangement might be extended by multiple coupling connectors.

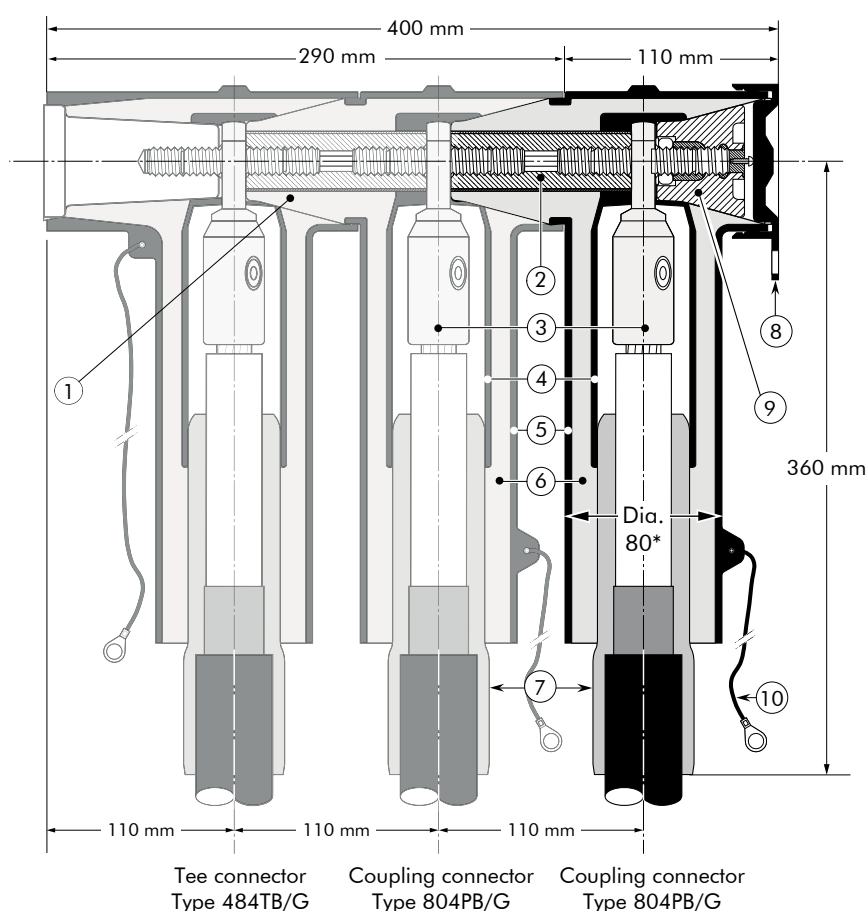
### Technical characteristics

- A thick conductive EPDM jacket provides a total safe to touch screen.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

### Design

1. Interface designed to fit 484TB/G tee connector
2. Bus for 804PB/G
3. Bolted or crimp conductor contact
4. Conductive EPDM insert
5. Conductive EPDM jacket
6. Insulating EPDM layer moulded between the insert and the jacket
7. Cable reducer
8. Conductive EPDM cap
9. Basic insulating plug (with VD point)
10. Earth lead

The screen break design enables cable outer sheath testing without removing or dismantling the connector.



\* The indicated diameter is a die dimension. Depending on the conductor cross-section used, a deviation of up to + 5 mm is possible.

### Specifications and standards

The 804PB/G coupling connector meets the requirements of CENELEC HD 629.1. ATEX version can be delivered on request.

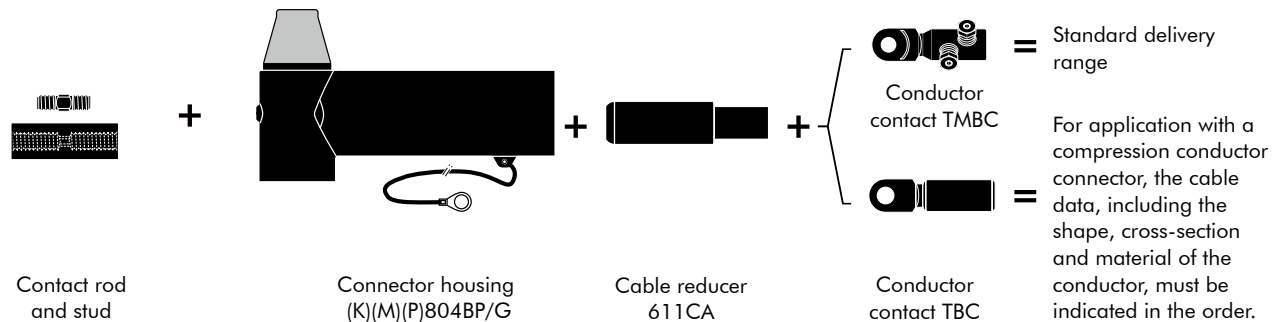
Separable connector type	Nominal voltage $U_0 / U$ (kV)	Current $I_n$ (A)	Conductor cross-section (mm <sup>2</sup> )	
			min.	max.
804PB/G	6/10	630/1250**	70	630
K804PB/G	12/20	630/1250**	35	630
M804PB/G	18/30	630/1250**	50	630
P804PB/G	20.8/36	630/1250**	50	630

\*\* When installed on an appropriate equipment bushing

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## Kit contents

The complete (K)(M)(P)804PB/G coupling connector kit comprises 3 x the following components:



## Ordering instructions

Indicate the part number for multirange application when ordering (see table).

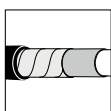
### Order example:

1 coupling connector for 12/20 kV, for 120-240 mm<sup>2</sup> with mechanical conductor connector. Order according to the table: K804PB/G with part number 57404.

**Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen.

\*\*\* Since the dimensions for cables at voltage level 20.8/36 (42) kV are not yet standardised, the conductor cross-sections and their assignment of diameters over core insulation given in the table are to be considered approximate values. When ordering accessories, we would like to ask you to indicate the checked diameters over core insulation.

Cross-section (mm²)	Dia. over core insulation (mm)		Multirange assignment Ordering part number for (K)(M)(P)804PB/G	
	min.	max.	with mechanical connector	
Nominal voltage U <sub>0</sub> /U 6/10 kV				
70	17.0	19.2	57397	
95	17.9	20.8		
120	19.4	22.8		57398
150	20.9	24.3		57399
185	22.5	25.9		
240	25.0	28.4		57400
300	27.7	30.4		
400	30.9	33.6		
500	33.7	36.4		57401
630	37.1	40.8		
Nominal voltage U <sub>0</sub> /U 12/20 kV (K)				
35	18.3	20.5	57402	
50	19.5	21.7		
70	21.2	23.4		57403
95	22.8	25.0		
120	23.6	27.0		
150	25.1	28.5		57404
185	26.7	30.1		
240	29.2	32.6		57405
300	31.2	34.6		
400	34.4	37.8		
500	37.2	40.6		57406
630	41.3	45.0		57462
Nominal voltage U <sub>0</sub> /U 18/30 kV (M)				
50	23.8	26.7	57407	
70	25.5	28.4		
95	27.1	30.0		57408
120	28.6	32.0		
150	30.1	33.5		
185	31.7	35.1		57409
240	34.2	37.6		
300	36.2	39.6		
400	39.4	42.8		
500	42.2	45.6		57410
630	46.3	50.0		
Nominal voltage U <sub>0</sub> /U 20.8/36 kV*** (P)				
50	23.8	26.7	57411	
70	25.5	28.4		
95	27.1	30.0		57412
120	28.6	32.0		
150	30.1	33.5		
185	31.7	35.1		57413
240	34.2	37.6		
300	36.2	39.6		
400	39.4	42.8		
500	42.2	54.6		57414
630	46.3	50.0		



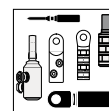
For use with copper tape screened cables.  
Order: Kit MT.



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



For outdoor applications.



All accessories available with mechanical or compression conductor connector.



When installed on an appropriate equipment bushing: 1250 A continuously.

## 489TB/G

### Interface C

#### Compact tee connector for multiple voltage levels

#### Application

The interface C T-Connector type 489TB/G is suitable for installation on polymeric insulated medium voltage cables with extruded easy strip conductive screen or bonded extruded conductive screen. For usage with other cable types please contact our sales representative.

#### Technical characteristics

- The thick conductive EPDM jacket provides a total safe to touch screen to ensure safety.
- Thanks to new materials the 489TB/G connectors are non-size sensitive.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

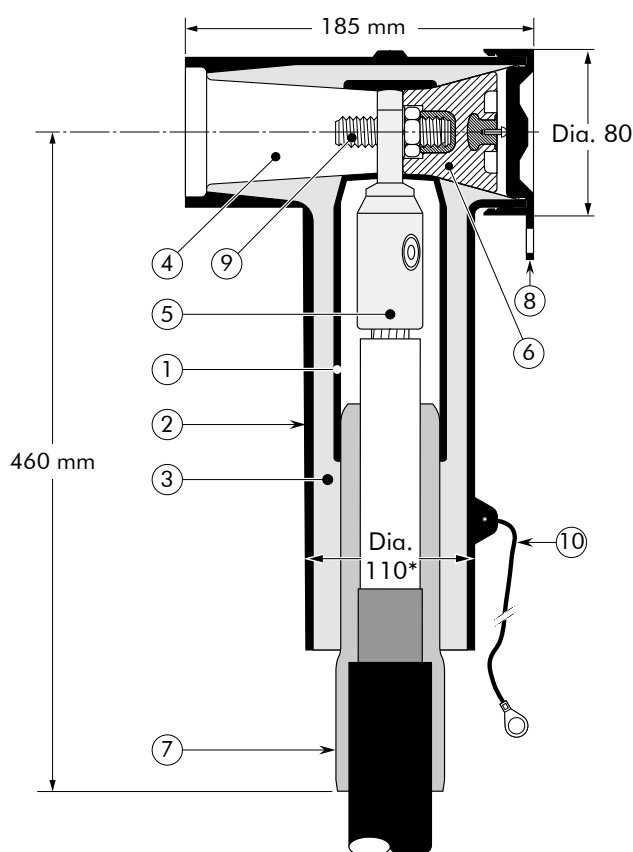
**Up to 42 kV**  
**630 A/1250 A\*\***

$U_0 / U (U_m)$
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
20.8/36 (42) kV

#### Design

1. Conductive EPDM insert
2. Conductive EPDM jacket
3. Insulating EPDM layer moulded between the insert and the jacket
4. Type C - interface as described by CENELEC EN 50180 and 50181
5. Bolted or crimp conductor contact
6. Basic insulating plug (with VD point)
7. Cable reducer
8. Conductive rubber cap
9. M16 Clamping screw with spring washer and nut
10. Earth lead

The screen break design enables cable outer sheath testing without removing or dismantling the connector.



\* The indicated diameter is a die dimension. Depending on the conductor cross-section used, a deviation of up to + 5 mm is possible.

#### Specifications and standards

The 489TB/G separable connector meets the requirements of CENELEC HD 629.1.

Separable connector type	Nominal voltage $U_0 / U$ (kV)	Current $I_n$ (A)	Conductor cross-section (mm <sup>2</sup> )***	
			min.	max.
489TB/G	6/10	630/1250**	800	1200
K489TB/G	12/20	630/1250**	800	1200
M489TB/G	18/30	630/1250**	800	1200
P489TB/G	20.8/36	630/1250**	800	1200

\*\* When installed on an appropriate equipment bushing.

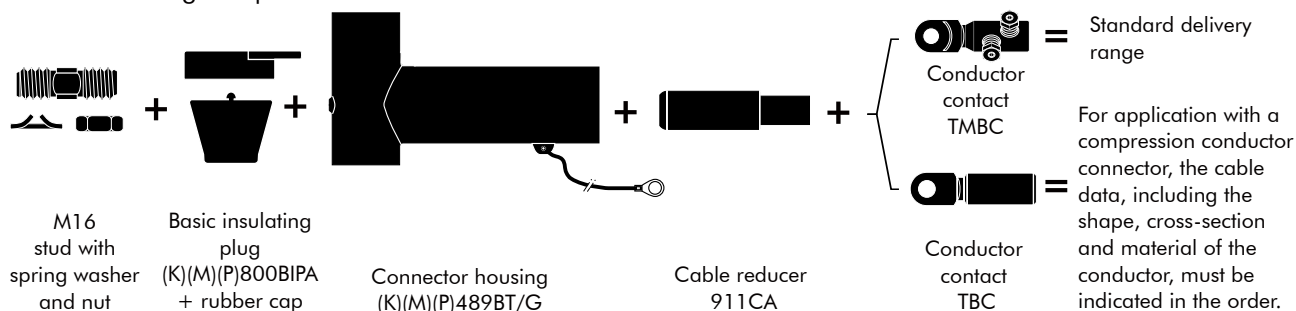
\*\*\* Other cross sections on request.

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## Kit contents

The complete (K)(M)(P)489TB/G tee connector kit comprises 3x the following components:



## Ordering instructions

Indicate the part number for multirange application when ordering (see table).

### Order example:

1 compact tee connector kit for 12/20 kV, for 800 mm<sup>2</sup> with mechanical conductor connector. Order according to the table: K489TB/G with part number 57200.

Cross-section (mm <sup>2</sup> )	Dia. over core insulation (mm)		Article classification Ordering part number for (K)(M)(P)489TB/G	
	min.	max.	with mechanical connector	
	Nominal voltage U <sub>0</sub> /U 6/10 kV			
800	40.0	44.6	57199	
1000	43.8	48.0		
1200				
On request				
Nominal voltage U <sub>0</sub> /U12/20 kV (K)				
800	44.2	48.0	57200	
1000	47.8	52.8		57201
1200			On request	
Nominal voltage U <sub>0</sub> /U 18/30 kV (M)				
800	49.2	53.8	57202	
1000	53.0	57.8		57203
1200			On request	
Nominal voltage U <sub>0</sub> /U 20.8/36 kV**** (P)				
800	49.2	53.8	57204	
1000	53.0	57.8		57205
1200			On request	

### Note:

The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen.

\*\*\*\* Since the dimensions for cables at voltage level 20.8/36 (42) kV are not yet standardised,

the conductor cross-sections and their assignment of diameters over core insulation given in the table are to be considered approximate values. When ordering accessories, we would like to ask you to indicate the checked diameters over core insulation.

For use with copper tape screened cables. Order: Kit MT.	For use with copper wire screened cables. No earthing device is necessary.	For use with other cable types. Please contact our representative.	For outdoor applications.	Components can be ordered individually.	When installed on an appropriate equipment bushing: 1250 A continuously.

## 809PB/G

### Coupling connector for 489TB/G

Up to 42 kV  
630 A/1250 A\*\*

$U_o / U (U_m)$   
6/10 (12) kV  
12/20 (24) kV  
18/30 (36) kV  
20.8/36 (42) kV

### Application

Separable coupling connector (bolted type) for dual cable arrangement. It has been designed to be used with 489TB/G separable tee connector. The cable arrangement might be extended by multiple coupling connectors.

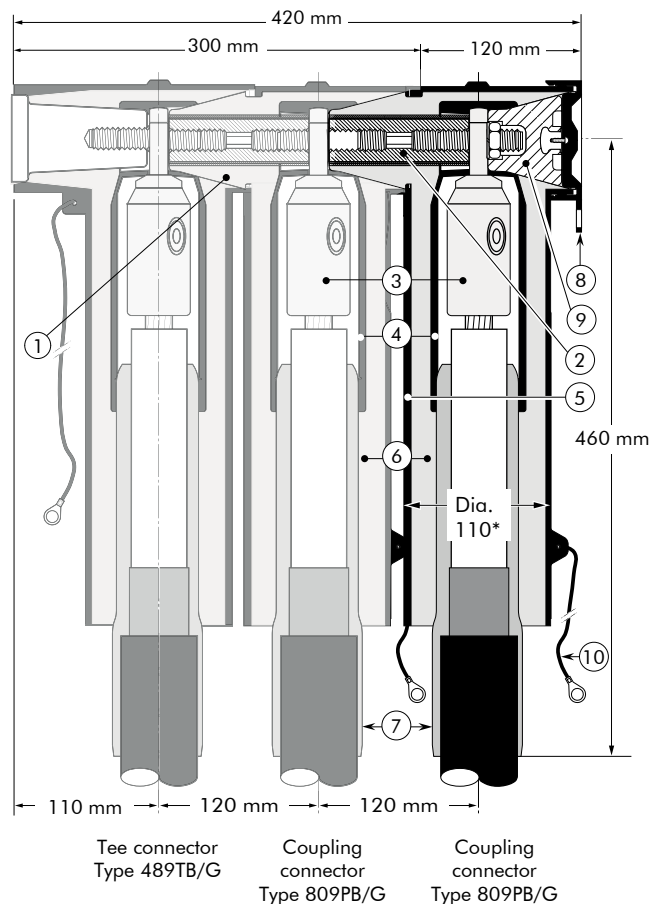
### Technical characteristics

- A thick conductive EPDM jacket provides a total safe to touch screen.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

### Design

1. Interface designed to fit 489TB/G tee connector
2. Bus for 809PB/G
3. Bolted or crimp conductor contact
4. Conductive EPDM insert
5. Conductive EPDM jacket
6. Insulating EPDM layer moulded between the insert and the jacket
7. Cable reducer
8. Conductive rubber cap
9. Basic insulating plug (with VD point)
10. Earth lead

The screen break design enables cable outer sheath testing without removing or dismantling the connector.



### Specifications and standards

The 809PB/G coupling connector meets the requirements of CENELEC HD 629.1.

\* The indicated diameter is a die dimension. Depending on the conductor cross-section used, a deviation of up to + 5 mm is possible.

Separable connector type	Nominal voltage $U_o / U$ (kV)	Current $I_n$ (A)	Conductor cross-section (mm <sup>2</sup> )***	
			min.	max.
809PB/G	6/10	630/1250**	800	1200
K809PB/G	12/20	630/1250**	800	1200
M809PB/G	18/30	630/1250**	800	1200
P809PB/G	20.8/36	630/1250**	800	1200

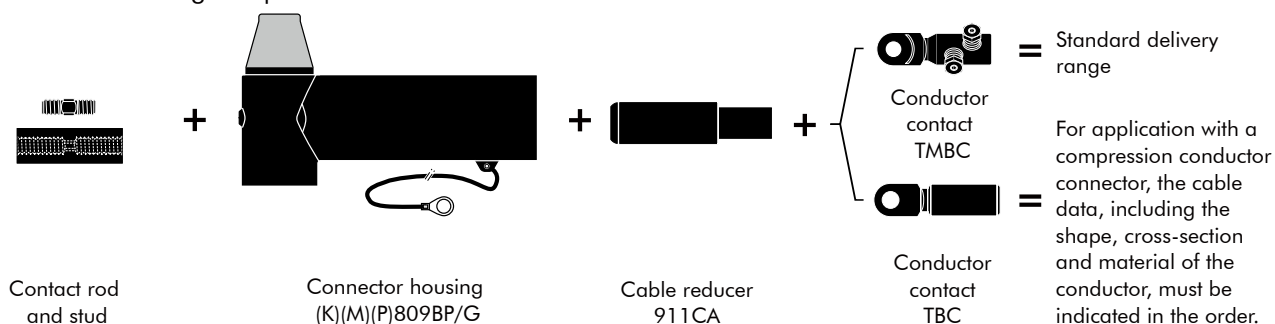
\*\* When installed on an appropriate equipment bushing.

\*\*\* Other cross sections on request.

15-05-2014

## Kit contents

The complete (K)(M)(P)809PB/G coupling connector kit comprises 3 x the following components:



## Ordering instructions

Indicate the part number for multirange application when ordering (see table).

### Order example:

1 coupling connector kit for 12/20 kV, for 800 mm<sup>2</sup> with mechanical conductor connector.

Order according to the table: K809PB/G with part number 57207.

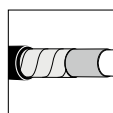
Cross-section (mm <sup>2</sup> )	Dia. over core insulation (mm)		Article classification Ordering part number for (K)(M)(P)809PB/G	
	min.	max.	with mechanical connector	
Nominal voltage U <sub>0</sub> /U 6/10 kV				
800	40.0	44.6	57206	
1000	43.8	48.0		
1200				
On request				
Nominal voltage U <sub>0</sub> /U 12/20 kV (K)				
800	44.2	48.0	57207	
1000	47.8	52.8		57208
1200			On request	
Nominal voltage U <sub>0</sub> /U 18/30 kV (M)				
800	49.2	53.8	57209	
1000	53.0	57.8		57210
1200			On request	
Nominal voltage U <sub>0</sub> /U 20.8/36 kV**** (P)				
800	49.2	53.8	57211	
1000	53.0	57.8		57212
1200			On request	

### Note:

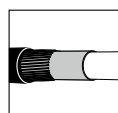
The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen.

\*\*\*\* Since the dimensions for cables at voltage level 20.8/36 (42) kV are not yet standardised, the conductor

cross-sections and their assignment of diameters over core insulation given in the table are to be considered approximate values. When ordering accessories, we would like to ask you to indicate the checked diameters over core insulation.



For use with copper tape screened cables.  
Order: Kit MT.



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



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



For outdoor applications.



Components can be ordered individually.



When installed on an appropriate equipment bushing: 1250 A continuously.

## 800SA

Surge arrester

for 484TB/G and 489TB/G compact tee connector

Up to 42 kV

630 A/1250 A

$U_0 / U (U_m)$

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

20.8/36 (42) kV

### Application

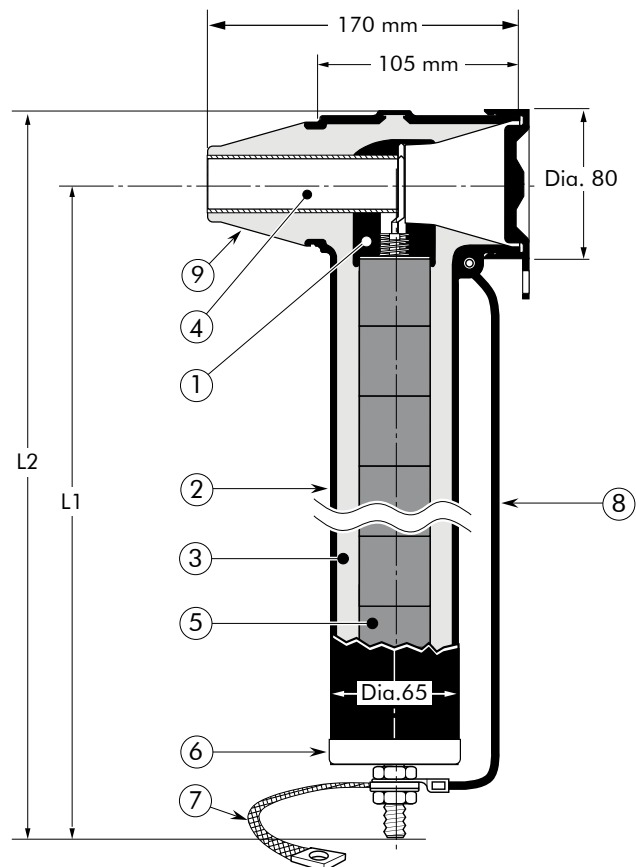
Surge arrester designed to protect 12, 24, 36 and 42 kV class components, including transformers, equipment, cable and accessories from high voltage surges resulting from lightning or switching.

### Technical characteristics

- It has been designed to be used with the 484TB/G and 489TB/G separable tee connector or 804PB/G and 809PB/G coupling connector.
- Each arrester is tested for AC withstand, partial discharge and critical voltage prior to leaving the factory.

### Design

1. Conductive EPDM insert
2. Conductive EPDM jacket
3. Insulating EPDM layer moulded between the insert and the jacket
4. Receptacle for contact rod
5. Metal oxide valve elements
6. Steel cap
7. Earth connection
8. Earth lead
9. Interface designed to fit the 484TB/G and 489TB/G tee connector



### Specifications and standards

The 800SA surge arresters meet the test requirements of IEC 60099-4.

ATEX version can be delivered on request.

## Ordering instructions

Indicate the type of surge arrester when ordering (see table). The part numbers each apply to one kit consisting of three surge arresters.

## Order example:

For a max. operating voltage of 24 kV and a nominal discharge current of 10 kA, order according to the table: Surge arrester type 800SA-10-30N with part number 85813.

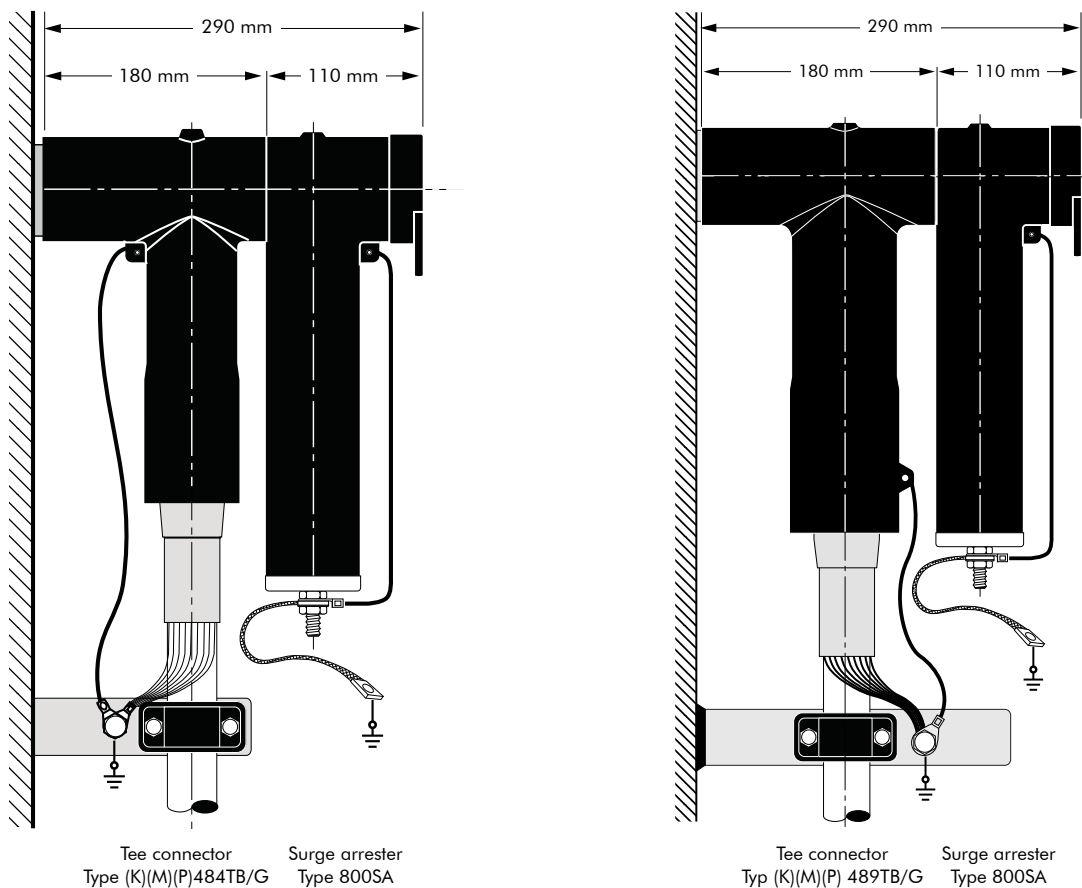
## Note:

The order information only applies to the use in compensated, high-impedance and insulated networks.

Surge arrester type	Nominal discharge current $I_n$ (kA)	Rated voltage* $U_r$ (kV)	Max. continuous operating voltage $U_c$ (kV)	High current impulse withstand (kA)	Dimensions (mm)		Ordering part number
					L1	L2	
800SA-10-6N	10	6	4.8	100	250	290	85801
800SA-10-9N	10	9	7.2	100	250	290	85803
800SA-10-12N	10	12	9.6	100	250	290	85805
800SA-10-15N	10	15	12.0	100	250	290	85807
800SA-10-18N	10	18	14.4	100	250	290	85809
800SA-10-22N	10	22	17.6	100	250	290	87149
800SA-10-24N	10	24	19.2	100	350	390	85811
800SA-10-30N	10	30	24.0	100	350	390	85813
800SA-10-33N	10	33	26.4	100	350	390	86998
800SA-10-36N	10	36	28.8	100	350	390	85815
800SA-10-42N	10	42	33.6	100	450	450	85817
800SA-10-45N	10	45	36.0	100	450	490	85819
800SA-10-51N	10	51	40.8	100	450	490	87147

\* Surge arresters for other rated voltages are available on request

## Typical application and dimensions

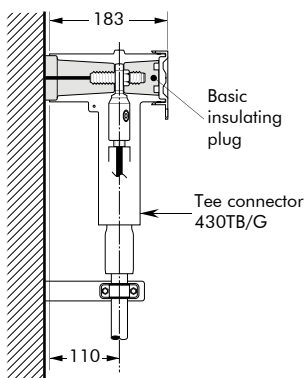


# POSSIBLE ARRANGEMENTS

## Interface C

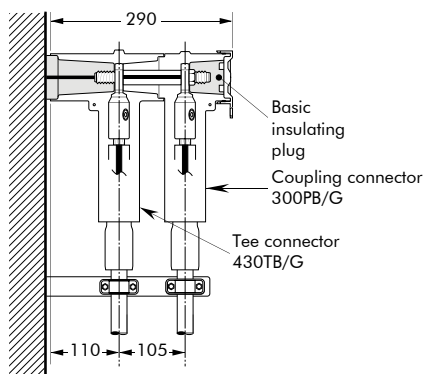
### 430TB/G

Single cable arrangement



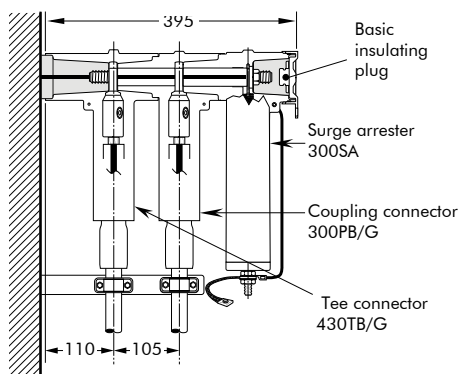
### 430TBM-P2

Dual cable arrangement



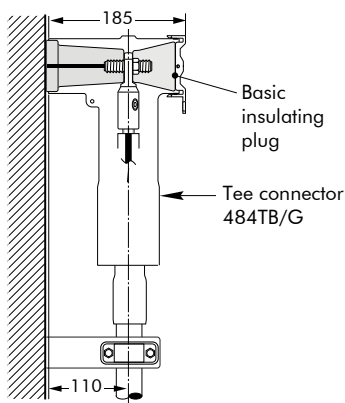
### 430TBM-P2 + 300SA

Dual cable arrangement with surge arrester



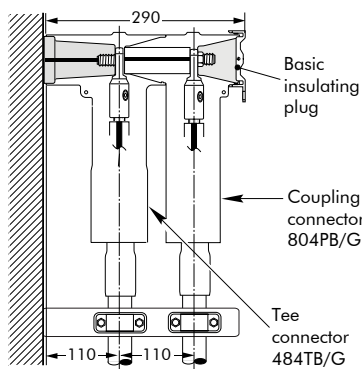
### 484TB/G

Single cable arrangement



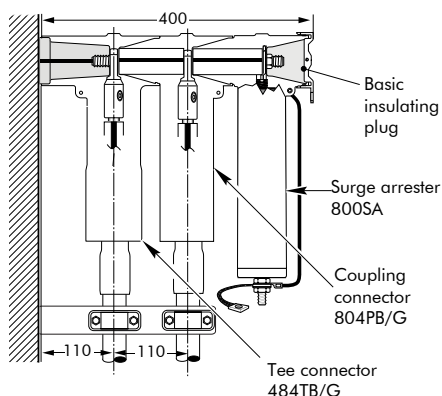
### 484TBM-P2

Dual cable arrangement



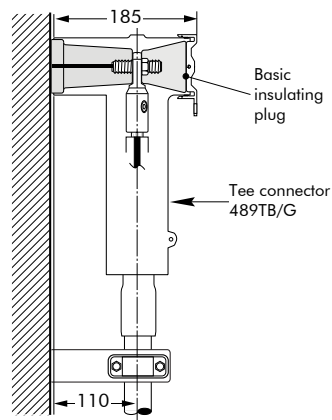
### 484TBM-P2 + 800SA

Dual cable arrangement with surge arrester



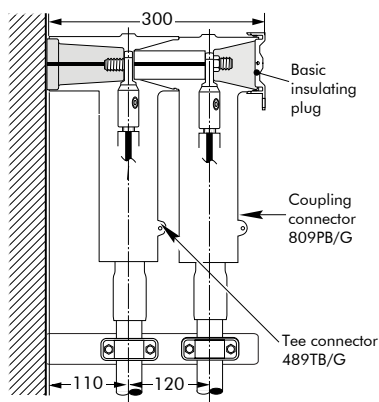
### 489TB/G

Single cable arrangement



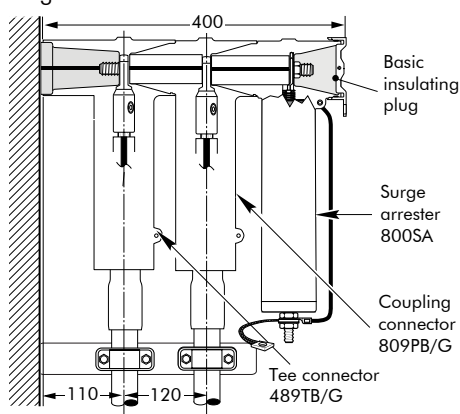
### 489TBM-P2

Dual cable arrangement



### 489TBM-P2 + 800SA

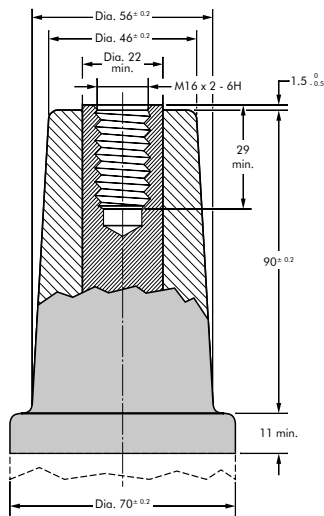
Dual cable arrangement with surge arrester



15-05-2014

# CONNECTING POSSIBILITIES BOLTED CONNECTOR SYSTEM

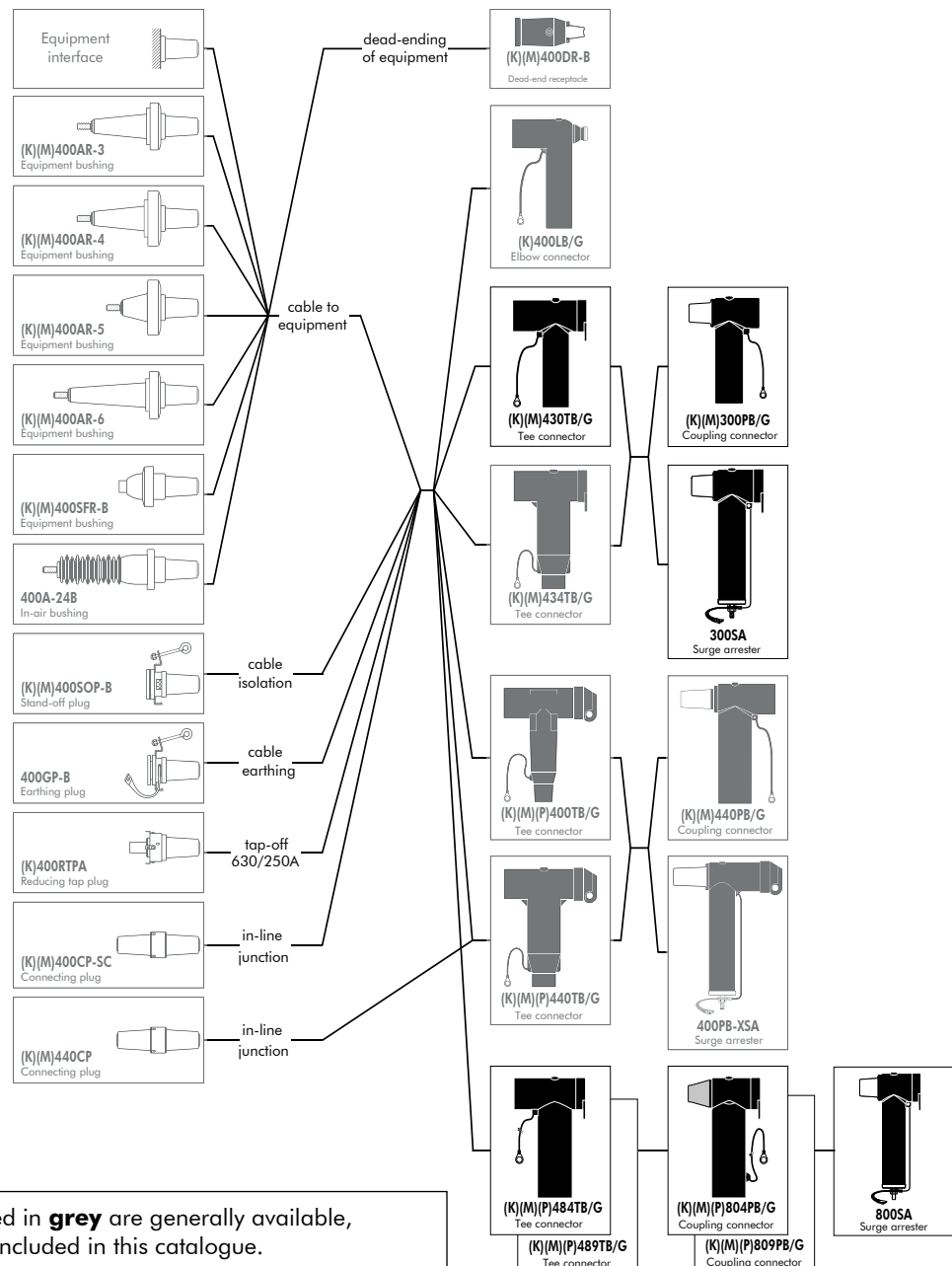
## Interface C



## Interface C1+C2

630 A / 1250 A outer cone  
acc. to CENELEC EN 50180  
and EN 50181.

$U_0 / U (U_m)$
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
20.8/36 (42) kV



Products displayed in **grey** are generally available,  
but not included in this catalogue.



## AIN Indoor slip-on termination

### Application

AIN 10, AIN 20, AIN 30 and AIN 36 termination are suitable for indoor installation on polymeric insulated medium voltage cables with extruded easy strip conductive screen or bonded extruded conductive screen. With this high quality silicone termination, the entire range of cross-sections is covered with just a few sizes

per voltage level. Another benefit given by using the AIN termination is the quick and easy assembly. The conductor can be alternatively connected with mechanical or compression cable lugs. The termination is available with additional splitting accessories for three-core, copper wire screened or copper tape screened and armored cables.

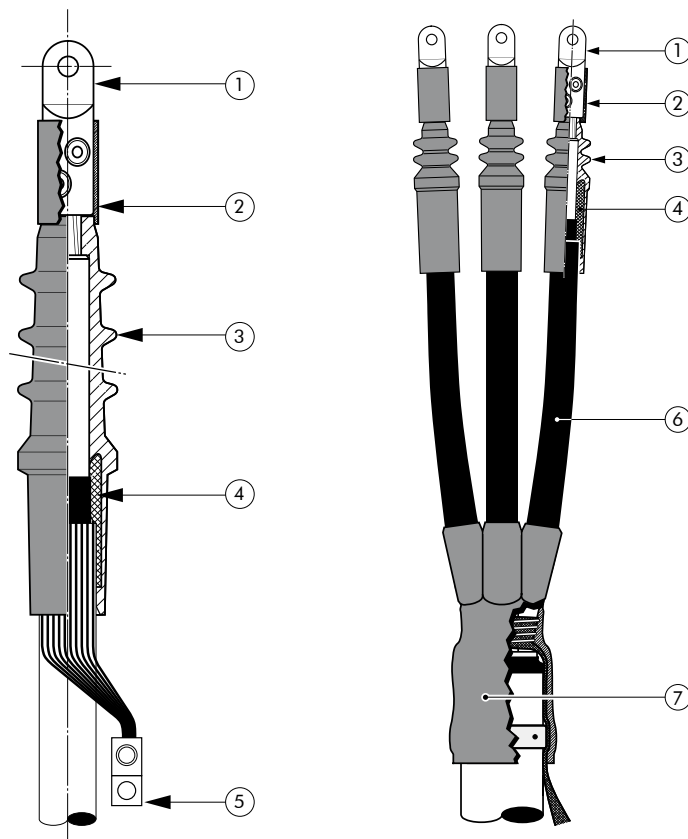
### Up to 42 kV

$U_0 / U (U_m)$	
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
20.8/36 (42)	kV

### Design

1. Longitudinally sealed mechanical or compression cable lug
2. Silicone tube or cap as additional sealing at the transition of cable lug to the termination housing when using mechanical cable lugs
3. High flexibility silicone rubber housing, ensuring a perfect fit to the cable even during load changes
4. Integrated conductive rubber insert
5. Earth cable lug
6. Heat-shrinkable tube
7. Heat-shrinkable break-out

**Example of application:**  
AIN 10 for three-core cables



### Specifications and standards

Meets the requirements of CENELEC HD 629.1

Termination type	Nominal voltage $U_0 / U$ (kV)	Conductor cross-section (mm <sup>2</sup> ) *	
		min.	max.
AIN 10	6/10	25	1000 (1200)
AIN 20	12/20	35	1000 (1200)
AIN 30	18/30	50	1000 (1200)
AIN 36	20.8/36	150	1000 (1200)

\* Other cross-section are available on request.

15-05-2014

## Kit contents

- 3 termination housings
- 3 mechanical or compression cable lugs for the conductor
- 3 mechanical or compression screen wire cable lugs
- Installation instructions
- Silicone grease
- Assembly incidentals

## Ordering instructions

Indicate the part number when ordering (see table).

### Order example:

1 AIN 20 kit for 12/20 kV, for 95-240 mm<sup>2</sup> with mechanical cable lug (palm hole diameter 13 mm).

Order according to table 2:  
1 kit – AIN 20 size 2 with part number 49756.

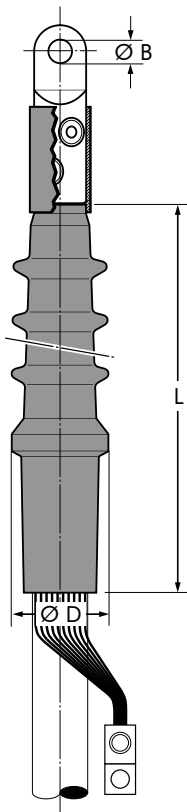
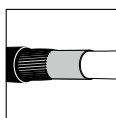


Table 1 - Classification and dimensions

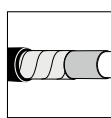
Nominal voltage $U_0/U$ (kV)	Conductor cross-section (mm <sup>2</sup> )		Dia. over core insulation (mm)		Number of sheds	L (mm)	Dia. D (mm)	Ordering part number
	min.	max.	min.	max.				
6/10	25	95	13.0	20.8	2	150	37	3 x AIN 10 Gr. 1
	120	240	19.4	28.4	2	150	43	3 x AIN 10 Gr. 2
	300	500	27.7	36.4	2	150	60	3 x AIN 10 Gr. 3
	630	800	34.0	45.0	3	225	68	3 x AIN 20 Gr. 4
	1000		39.0	50.0	7	405	98	3 x AIN 36 Gr. 5
	1200		46.0	58.0	7	405	98	3 x AIN 36 Gr. 6
12/20	35	70	18.3	23.5	3	225	47	3 x AIN 20 Gr. 1
	95	240	22.5	33.0	3	225	56	3 x AIN 20 Gr. 2
	300	500	31.0	41.0	3	225	68	3 x AIN 20 Gr. 3
	400	630	34.0	45.0	3	225	68	3 x AIN 20 Gr. 4
	630	800	39.0	50.0	7	405	98	3 x AIN 36 Gr. 5
	1000	1200	46.0	58.0	7	405	98	3 x AIN 36 Gr. 6
18/30	50	70	23.8	28.4	6	300	74	3 x AIN 30 Gr. 1
	95	240	27.1	37.6	6	300	74	3 x AIN 30 Gr. 2
	240	400	31.5	42.8	6	300	81	3 x AIN 30 Gr. 3
	400	630	39.0	50.0	7	405	98	3 x AIN 36 Gr. 5
	630	1200	46.0	58.0	7	405	98	3 x AIN 36 Gr. 6
20.8/36 **	50	70	23.8	28.4	On request			
	95	120	27.1	32.0				
	150	300	31.5	41.0	7	405	98	3 x AIN 36 Gr. 4
	400	630	39.0	50.0	7	405	98	3 x AIN 36 Gr. 5
	630	1200	46.0	58.0	7	405	98	3 x AIN 36 Gr. 6

**Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen. Please contact our sales representative, when using other cable types.

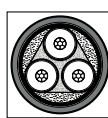
\*\* Since the dimensions for cables at voltage level 20.8/36 (42) kV are not yet standardised, the conductor cross-sections and their assignment of diameters over core insulation given in the table are to be considered approximate values. When ordering accessories, we would like to ask you to indicate the checked diameters over core insulation.



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



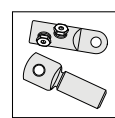
For use with copper tape screened cables.  
Order: Kit MT.



For use with three-core cables.  
Please contact our representative.



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



Can be supplied with all common types of cable lugs.

Table 2 - Ordering part number

## Indoor slip-on termination

Conductor sizes (mm²)	Dia. over core insulation (mm)		Ordering part number (1 Kit = 3 Items)					Termination type (Kit)						
			with mechanical connector		with compression connector									
	min.	max.	Ordering part number	Dia. B	Al - rm(V)	Cu - rm(V)	Dia. B							
Nominal voltage U <sub>0</sub> /U 6/10 kV														
25 35 50 70 95	13.0	20.8	52175	13	15311061	15311021	13	AIN 10 Gr. 1						
					15311062	15311022	13							
					15311063	15311023	13							
					15311064	15311024	13							
					15311065	15311025	13							
120 150 185 240	19.4	28.4	49494	13	15311066	15311026	13	AIN 10 Gr. 2						
					15311067	15311027	13							
					15311068	15311028	17							
					15311069	15311029	17							
300 400 500	27.7	36.4	51262	17	15311070	15311030	17	AIN 10 Gr. 3						
					15311071	15311031	17							
					15311072	15311032	17							
630 800	34.0	45.0	54919	21	54905 54906	54910 54908	21	AIN 20 Gr. 4						
1000	39.0	50.0	54920	21	54907	54909	21	AIN 36 Gr. 5						
1200	On request													
Nominal voltage U <sub>0</sub> /U 12/20 kV														
35 50 70	18.3	23.5	49755	13	15321062	15321022	13	AIN 20 Gr. 1						
					15321063	15321023	13							
					15321064	15321024	13							
95 120 150 185 240	22.5	33.0	49756	13	15321065	15321025	13	AIN 20 Gr. 2						
					15321066	15321026	13							
					15321067	15321027	13							
					15321068	15321028	17							
					15321069	15321029	17							
300 400 500	31.0	41.0	59085	17	15321070	15321030	17	AIN 20 Gr. 3						
					15321071	15321031	17							
					15321072	15321032	17							
400 500 630	34.0	45.0	54921	17	54959 54960 59086	54962 54963 54964	17 17 21	AIN 20 Gr. 4						
630 800					54944 54945	54946 54947	21 21		AIN 36 Gr. 5					
1000					46.0	58.0	59757			21	57230	57231	21	
1200	On request													
Nominal voltage U <sub>0</sub> /U 18/30 kV														
50 70	23.8	28.4	51361	13	44694 45159	44486 45389	13 13	AIN 30 Gr. 1						
95 120 150 185 240					45810 44640 44733 45305 44589	45334 44851 44646 45395 52188	13 13 13 17 17		AIN 30 Gr. 2					
240 300 400	31.5	42.8	52186	17	44448 45306 52189	44608 44676 45362	17 17 17	AIN 30 Gr. 3						
400 500 630					39.0	50.0	54923			17	54911 54912 54913	54927 54928 54929	17 17 21	AIN 36 Gr. 5
630 800 1000									46.0		58.0	54924	21	
1200	On request													
Nominal voltage U <sub>0</sub> /U 20.8/36 kV														
50 70	23.8	28.4	On request											
95 120														
150 185 240 300	31.5	41.0	54925	17	54933 54934 54936 54937	54948 54949 54951 54952	13 17 17 17	AIN 36 Gr. 4						
400 500 630					54938 54939 54940	54953 54954 54955	17 17 21		AIN 36 Gr. 5					
630 800 1000					46.0	58.0	54862			21	54941 54942 54943	54956 54957 54958	21 21 21	AIN 36 Gr. 6
1200					On request									

15.05-2014

## AFN

### Outdoor slip-on termination

#### Application

AFN 10, AFN 20, AFN 30 and AFN 36 termination are suitable for outdoor installation on polymeric insulated medium voltage cables with extruded easy strip conductive screen or bonded extruded conductive screen. With this high quality silicone termination, the entire range of cross-sections is covered with

just a few sizes per voltage level. Another benefit given by using the AFN termination is the quick and easy assembly. The conductor can be alternatively connected with mechanical or compression cable lugs. The termination is available with additional splitting accessories for three-core, copper wire screened or copper tape screened and armored cables.

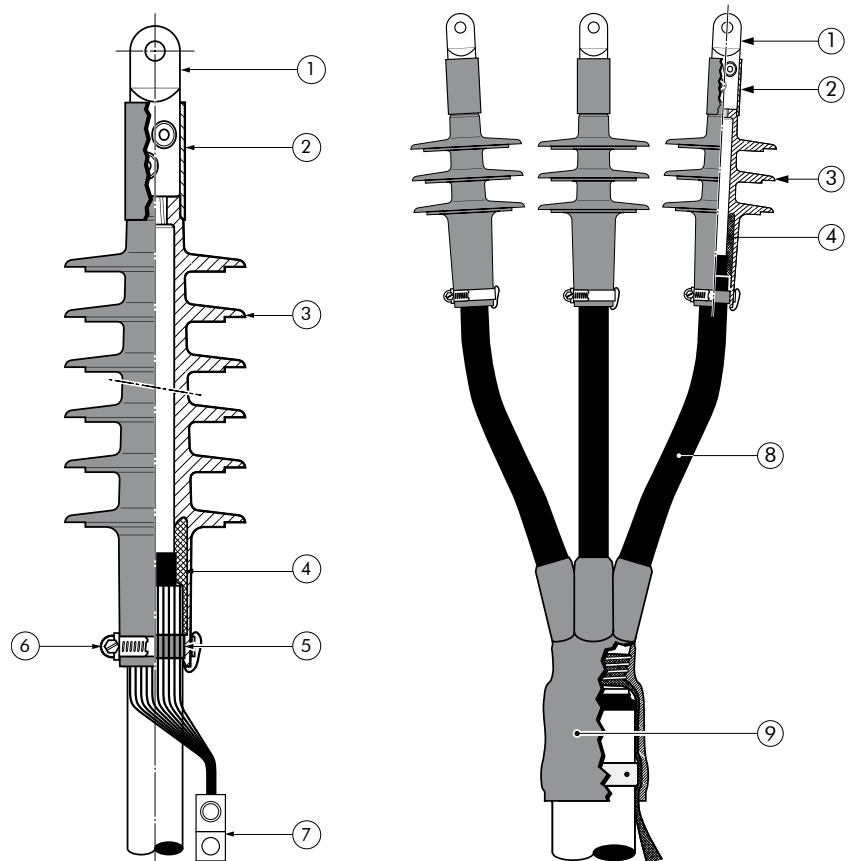
#### Up to 42 kV

$U_0 / U (U_m)$
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
20.8/36 (42) kV

#### Design

1. Longitudinally sealed mechanical or compression cable lug
2. Silicone tube or cap as additional sealing at the transition of cable lug to the termination housing when using mechanical cable lugs
3. High flexibility silicone rubber housing, ensuring a perfect fit to the cable even during load changes
4. Integrated conductive rubber insert
5. Water sealing mastic
6. Earthing clamp
7. Earth cable lug
8. Heat-shrinkable tube
9. Heat-shrinkable break-out

**Example of application:**  
AFN 10 for three-core cables



#### Specifications and standards

Meets the requirements of CENELEC HD 629.1

Termination type	Nominal voltage $U_0 / U$ (kV)	Conductor cross-section (mm <sup>2</sup> ) *	
		min.	max.
AFN 10	6/10	25	1000 (1200)
AFN 20	12/20	35	1000 (1200)
AFN 30	18/30	50	1000 (1200)
AFN 36	20.8/36	50	1000 (1200)

\* Other cross-section are available on request.

## Kit contents

- 3 termination housings
- 3 mechanical or compression cable lugs for the conductor
- 3 mechanical or compression screen wire cable lugs
- Installation instructions
- Silicone grease
- Assembly incidentals

## Ordering instructions

Indicate the part number when ordering (see table).

### Order example:

1 AFN 20 kit for 12/20 kV, for 95-240 mm<sup>2</sup> with mechanical cable lug (palm hole diameter 13 mm).  
Order according to table 2:  
1 kit – AFN 20 size 2 with part number 48793.

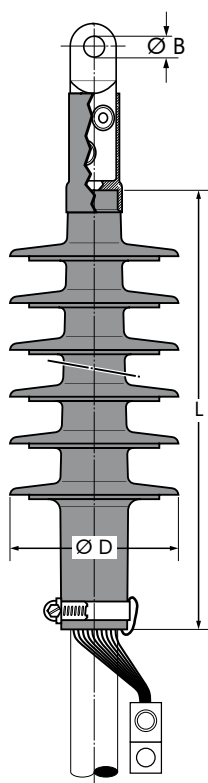
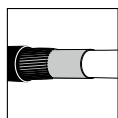


Table 1 - Classification and dimensions

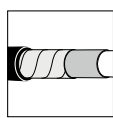
Nominal voltage $U_0/U$ (kV)	Conductor cross-section (mm <sup>2</sup> )		Dia. over core insulation (mm)		Number of sheds	L (mm)	Dia. D (mm)	Creep-age distance (mm)	Ordering part number
	min.	max.	min.	max.					
6/10	25	95	12.7	20.8	3	210	90	369	3 x AFN 10 Gr.1
	120	240	19.2	28.4	3	210	96	365	3 x AFN 10 Gr.2
	300	500	27.4	36.4	3	210	105	360	3 x AFN 10 Gr.3
	630	800	34.0	45.0	4	240	118	462	3 x AFN 20 Gr.4
	1000		39.0	50.0	7	330	127	680	3 x AFN 30 Gr.4
	1200		46.0	58.0	7	405	127	755	3 x AFN 36 Gr.6
12/20	35	70	18.3	23.5	4	240	100	480	3 x AFN 20 Gr.1
	95	240	22.5	33.0	4	240	112	499	3 x AFN 20 Gr.2
	300	500	31.0	41.0	4	240	118	462	3 x AFN 20 Gr.3
	400	630	34.0	45.0	4	240	118	462	3 x AFN 20 Gr.4
	630	800	39.0	50.0	7	330	127	680	3 x AFN 30 Gr.4
	1000	1200	46.0	58.0	7	405	127	755	3 x AFN 36 Gr.6
18/30	50	70	23.8	28.4	6	300	115	695	3 x AFN 30 Gr.1
	95	240	27.1	37.6	6	300	115	694	3 x AFN 30 Gr.2
	240	400	31.5	42.8	6	300	127	718	3 x AFN 30 Gr.3
	400	630	39.0	50.0	7	330	127	680	3 x AFN 30 Gr.4
	630	1200	46.0	58.0	7	405	127	755	3 x AFN 36 Gr.6
20.8/36 **	50	70	23.8	28.4	6	300	115	695	3 x AFN 30 Gr.1
	95	240	27.1	37.6	6	300	115	694	3 x AFN 30 Gr.2
	240	400	31.5	42.8	6	300	127	718	3 x AFN 30 Gr.3
	400	630	39.0	50.0	7	330	127	680	3 x AFN 30 Gr.4
	630	1200	46.0	58.0	7	405	127	755	3 x AFN 36 Gr.6

**Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen. Please contact our sales representative, when using other cable types.

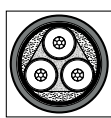
\*\* Since the dimensions for cables at voltage level 20.8/36 (42) kV are not yet standardised, the conductor cross-sections and their assignment of diameters over core insulation given in the table are to be considered approximate values. When ordering accessories, we would like to ask you to indicate the checked diameters over core insulation.



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



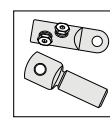
For use with copper tape screened cables. Order: Kit MT.



For use with three-core cables. Please contact our representative.



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



Can be supplied with all common types of cable lugs.

Table 2 - Ordering part number

Conductor cross-section (mm²)	Dia. over core insulation (mm)		Ordering part number (1 Kit = 3 Items)					Termination type (Kit)					
			with mechanical connector		with compression connector								
	min.	max.	Ordering part number	Dia. B	Al - rm(V)	Cu - rm(V)	Dia. B						
Nominal voltage U <sub>0</sub> /U 6/10 kV													
25 35 50 70 95	12.7	20.8	52190	13	52196	52197	13	AFN 10 Gr. 1					
120					52198	48330	13						
150					52199	49750	13						
185					52200	49877	13						
240					52201	48939	13						
300	27.4	36.4	52194	17	52202	47989	13	AFN 10 Gr. 2					
400					45599	45730	13						
500					52203	52204	17						
					45384	45090	17						
					52205	47969	17						
630	34.0	45.0	54863	21	52206	45733	17	AFN 10 Gr. 3					
800					48084	44691	17						
					54879	54864	21						
					57576	54865	21						
1000	39.0	50.0	57242	21	57243	57244	21	AFN 30 Gr. 4					
1200	On request												
Nominal voltage U <sub>0</sub> /U 12/20 kV													
35 50 70	18.3	23.5	51355	13	49628	45481	13	AFN 20 Gr. 1					
					45315	45365	13						
					49624	45521	13						
95					44564	45109	13						
120					49625	45749	13						
150	22.5	33.0	48793	13	44189	44668	13	AFN 20 Gr. 2					
185					49626	44643	17						
240					44340	44487	17						
300					45477	45403	17						
400					45598	45164	17						
500	31.0	41.0	59080	17	49630	44563	17	AFN 20 Gr. 3					
400	34.0	45.0	54965	17	54966	59081	17	AFN 20 Gr. 4					
500					54866	59082	17						
630					59084	59083	21						
					57246	57248	21						
					57247	57249	21						
630	39.0	50.0	57245	21	57246	57248	21	AFN 30 Gr. 4					
800	46.0	58.0	59758	21	57247	57249	21	AFN 36 Gr. 6					
1000					57567	57568	21						
1200					On request								
Nominal voltage U <sub>0</sub> /U 18/30 kV													
50 70					23.8	28.4	51367		13	49635	45140	13	AFN 30 Gr. 1
	49637	49636	13										
95	48677	49638	13										
120	49640	49639	13										
150	49641	48085	13										
185	27.1	37.6	51369	13	48002	45396	17	AFN 30 Gr. 2					
240					44670	44669	17						
240					52220	52219	17						
300					49642	44791	17						
400					45235	48108	17						
400	39.0	50.0	57273	17	57274	57275	17	AFN 30 Gr. 4					
500					48577	48580	17						
630					48578	48581	21						
					54917	54875	21						
					54873	54876	21						
630	46.0	58.0	54857	21	54874	54877	21	AFN 36 Gr. 6					
800													
1000													
1200					On request								
Nominal voltage U <sub>0</sub> /U 20,8/36 kV													
50 70	23.8	28.4	57250	13	57253	57263	13	AFN 30 Gr. 1					
					57254	57264	13						
95					57255	57265	13						
120					57256	57266	13						
150					57257	57267	13						
185	27.1	37.6	57251	13	57258	57268	17	AFN 30 Gr. 2					
240					57259	57269	17						
240					57260	57270	17						
300					57261	57271	17						
400					57262	57272	17						
400	39.0	50.0	57276	17	57277	57280	17	AFN 30 Gr. 4					
500					57278	57281	17						
630					57279	57282	21						
					54886	54897	21						
					54887	54898	21						
630	46.0	58.0	54860	21	54888	54899	21	AFN 36 Gr. 6					
800													
1000													
1200					On request								

## GTS1

### Heat-shrinkable single core XLPE straight joint

Up to 42 kV

$U_0 / U (U_m)$

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

20.8/36 (42) kV

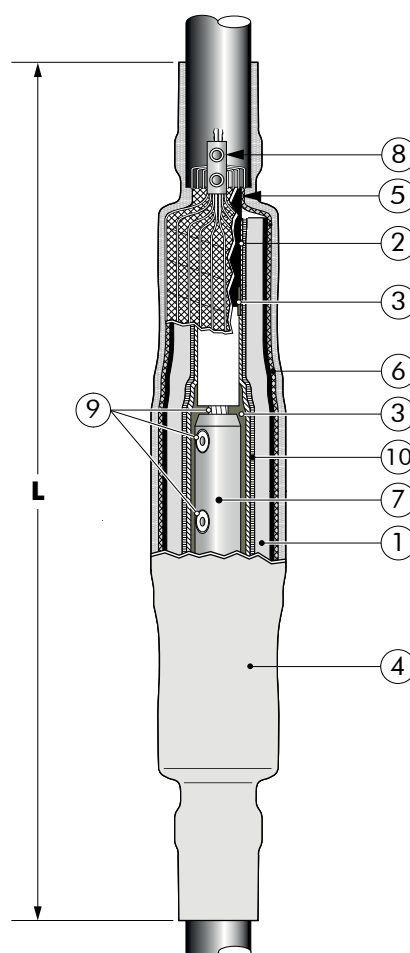
### Application

The heat-shrinkable straight joint type GTS1 is suitable for jointing polymeric insulated medium voltage cables with extruded easy strip conductive screen or bonded extruded conductive screen. With regards to the mechanical conductor connector, supplied in the joint kit, jointing of cables

with different conductor sizes or conductor materials becomes fast and easy. This heat-shrinkable joint is fully screened, submersible and suitable to be directly buried.

### Design

1. Dual wall tube
2. Stress control tube
3. Stress control mastic
4. Overall protection tube
5. Sealing mastic
6. Screen continuity (copper mesh)
7. Conductor connector
8. Screen wire connector (optionally roll springs)
9. Sealing mastic
10. Insulation sleeve (only for 36GTS1 and 42GTS1)



### Specifications and standards

Meets the requirements of CENELEC HD 629.1.

Straight joint type	Nominal voltage $U_0 / U$ (kV)	Length L (mm)	Conductor cross-section (mm <sup>2</sup> ) *	
			min.	max.
17GTS1	6/10	750 - 1000	25	1000
24GTS1	12/20	750 - 1000	35	1000 (1200)
36GTS1	18/30	1000	50	1000 (1200)
42GTS1	20.8/36	1000 - 1200	50	1000

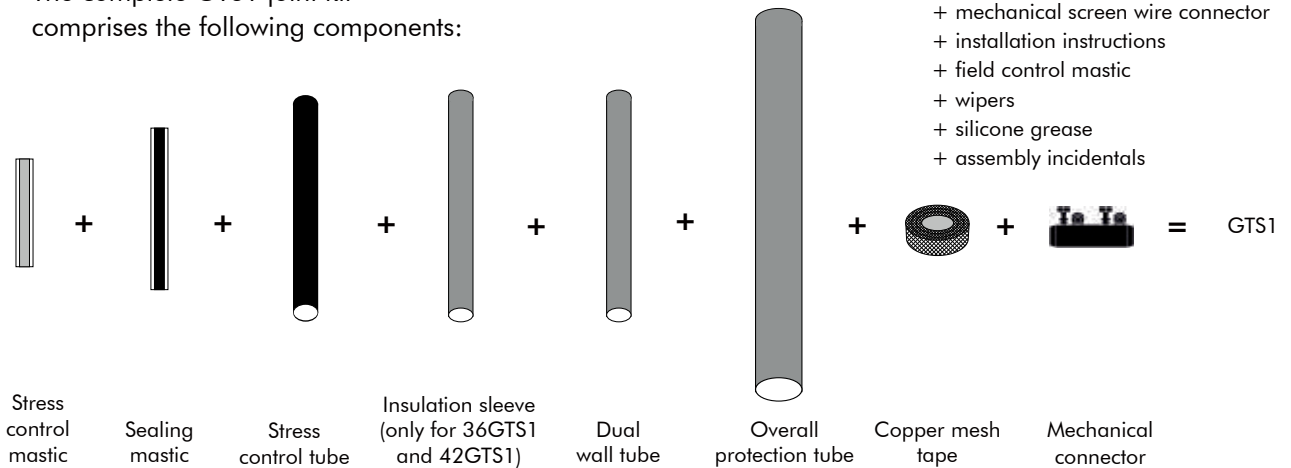
\* Other cross-sections on request.

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## Kit contents

The complete GTS1 joint kit comprises the following components:



## Ordering instructions

Select the straight joint type corresponding to both system voltage and conductor cross-section.

### Order example:

Heat-shrinkable straight joint type 24GTS1.240 for XLPE cable 12/20 kV  
70-240 mm<sup>2</sup> conductor cross-section.  
Order number: 52612

**Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen. Please contact our representative, when using other cable types.

Straight joint type	Nominal voltage U <sub>0</sub> /U (kV)	Conductor cross-section (mm²)		Conductor cross-section (mm²)															
				25	35	50	70	95	120	150	185	240	300	400	500	630	800	1000	
17GTS1.95	6/10	25	95	52606															
17GTS1.240	6/10	95	240					52607											
17GTS1.400	6/10	240	400										52608						
17GTS1.630	6/10	400	630												52609				
17GTS1.1000	6/10	800	1000														53504		
24GTS1.50	12/20	35	50	52610															
24GTS1.240	12/20	50	150	52611**															
24GTS1.240	12/20	50	240	52612															
24GTS1.240	12/20	95	240					49758											
24GTS1.300	12/20	120	300						58023										
24GTS1.400	12/20	185	400							52613									
24GTS1.630	12/20	400	630												52615				
24GTS1.1000	12/20	630	1000														53661		
36GTS1.95	18/30	50	95	52616															
36GTS1.240	18/30	95	240				52618												
36GTS1.500	18/30	185	400							52619									
36GTS1.800	18/30	400	630												52620				
36GTS1.1000	18/30	630	1000														59209		
42GTS1.95	20.8/36	50	95	57225															
42GTS1.150	20.8/36	50	150	57226**															
42GTS1.240	20.8/36	95	240					59859											
42GTS1.400	20.8/36	185	400							57227									
42GTS1.630	20.8/36	400	630												57228				
42GTS1.1000	20.8/36	630	1000														57229		

\*\* Applicable for aluminium conductors up to 150 mm<sup>2</sup>, not applicable for copper conductors.

For use with copper wire screened cables. No further earthing device is necessary.	For use with copper tape screened cables, endorse "A" to the part number. (e.g. 24GTS1.240A)	For use with other cables types. Please contact our representative.	For use with three-core cables: see GTS3.	Joining cables of different sizes possible.	Can be used with all common types of conductor connectors.

## CSJ

### Cold-shrinkable straight joint for single core XLPE cables

Up to 36 kV

$U_0 / U (U_m)$
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
18/30 (36) kV
19/33 (36) kV

### Application

The cold-shrinkable straight joint type CSJ is suitable for jointing polymeric insulated medium voltage cables with extruded easy strip conductive screen or bonded extruded conductive screen. With regards to the mechanical conductor connector, supplied in the joint kit, jointing of cables

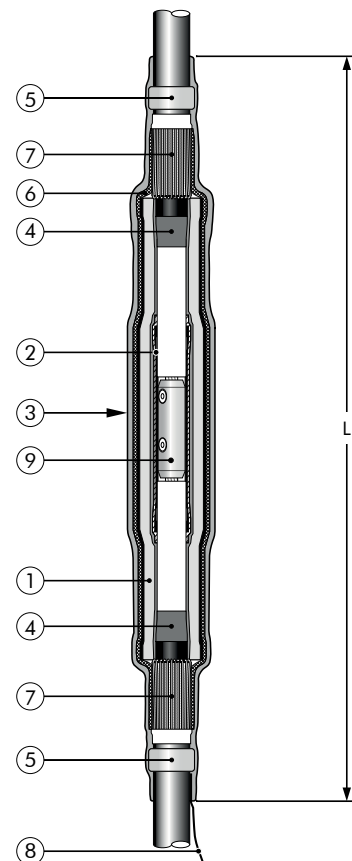
with different conductor sizes or conductor materials becomes fast and easy. This cold-shrinkable joint is fully screened, submersible and suitable to be directly buried.

### Design

1. Extruded triple layer EPDM rubber body
2. Two layer plate with a semi-conductive and a field control mastic layer
3. Overall protective EPDM cover
4. Field control mastic
5. Water sealing mastic
6. Copper stocking
7. Self-adhesive copper tape
8. Traceability tag
9. Mechanical conductor connector

### Technical characteristics

All joint bodies are tested for AC withstand prior to leaving the factory.



### Specifications and standards

The cold-shrinkable CSJ joint meets the requirements of CENELEC HD 629.1.

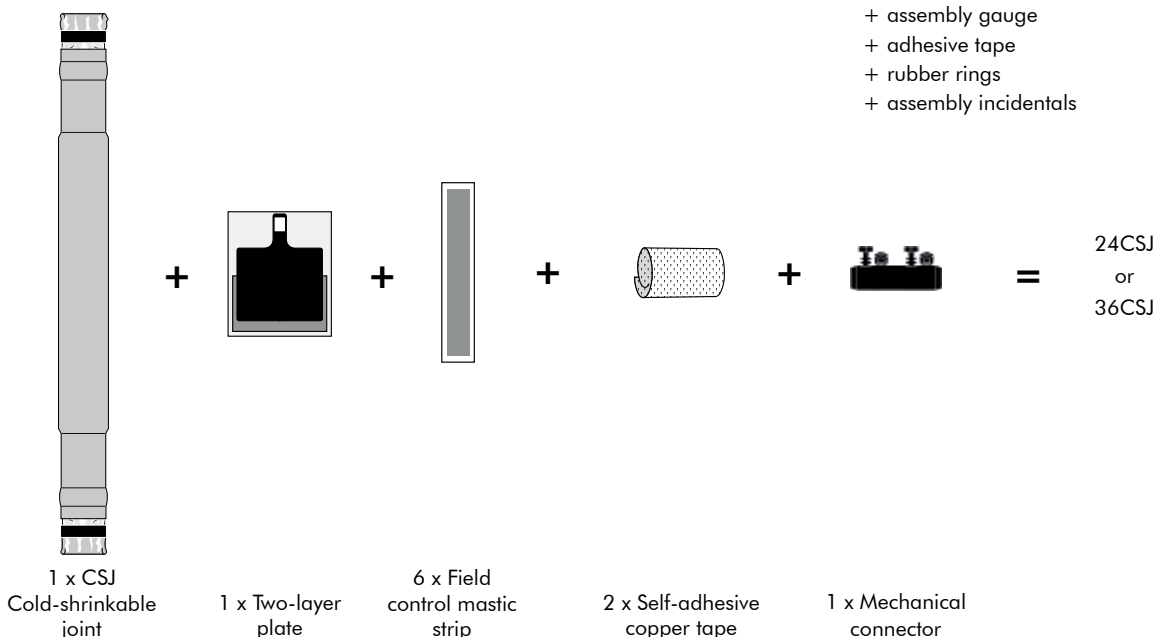
Straight joint type	Nominal voltage $U_0 / U$ (kV)	Dia. over core insulation (mm)		Dia. over outer sheath (mm)	Conductor cross-section (mm <sup>2</sup> )		L (mm)
		min.	max.		min.	max.	
24CSJ-2 Gr. 1	6/10	18	23	max. 46	95	150	ca. 750
24CSJ-2 Gr. 2	6/10	23	33	max. 46	150	240 (300)*	ca. 750
24CSJ-2 Gr. 1	12/20	18	23	max. 46	35	70	ca. 750
24CSJ-2 Gr. 2	12/20	23	33	max. 46	95	240 (300)*	ca. 750
24CSJ - 3	12/20	30	45	max. 57	240	630	ca. 850
36CSJ-2	18/30	23	36	max. 48	50	240	ca. 750
36CSJ-3	18/30	30	50	max. 57	185	400 (630)*	ca. 850

\* Conductor sizes in clamps currently available with compression joint.

15-05-2014

## Kit contents

A typical complete cold-shrinkable joint kit comprises the following components:



The kit also comprises:

- + installation instructions
- + silicone grease
- + white pen
- + gloves
- + assembly gauge
- + adhesive tape
- + rubber rings
- + assembly incidentals

## Ordering instructions

Select the straight joint type corresponding to the cable type and dia. over core insulation.

### Order example:

Cold-shrinkable straight joint  
Nominal voltage 12/20 kV,  
Conductor cross-section 95-240 mm<sup>2</sup>  
Dia. over core insulation 23-33 mm<sup>2</sup>  
Order number: 48136

Straight joint type	Nominal voltage U <sub>0</sub> /U (kV)	Conductor cross-section (mm²)												Dia. over core insulation (mm²)	Dia. over outer sheath (mm)		
		35	50	70	95	120	150	185	240	300	400	500	630			800	1000
24CSJ-2 Gr. 1	6/10				53752***											18-23	max. 46
24CSJ-2 Gr. 2	6/10						59088									23-33	max. 46
24CSJ-2 Gr. 1	12/20	59087														18-23	max. 46
24CSJ-2 Gr. 2	12/20				48136**											23-33	max. 46
24CSJ-3	12/20									52650						30-54	max. 57
24CSJ-3	12/20										51800**					30-54	max. 57
36CSJ-2 Gr. 2	18/30		53738***													23-36	max. 48
36CSJ-2 Gr. 2	18/30				53737											23-36	max. 48
36CSJ-3	18/30							57216								30-50	max. 57
36CSJ-3	18/30									57217**						30-50	max. 57

\*\* Please consider the maximum outer cable diameter

\*\*\* Applicable for aluminium conductors up to 150 mm<sup>2</sup>, not applicable for copper conductors.

<p>For use with Alupe cables. Please contact our representative</p>	<p>For use with other cable types. Please contact our representative</p>	<p>For use with three-core cables. See TT-24CSJ.</p>	<p>Can be supplied as stop joint. Please contact our representative</p>	<p>For use with fabric tape (graphite) screened cables. Order additional semi-conductive tape.</p>
-------------------------------------------------------------------------	--------------------------------------------------------------------------	----------------------------------------------------------	-------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------

## 24CSJ-S

### Cold-shrinkable compact single core straight joint

Up to 24 kV

#### Application

The cold-shrinkable straight joint 24CSJ-S is used for jointing medium-voltage cables with a copper wired screen and with extruded conductive screen.

**This product can be installed where installation space is limited.** With regards to the mechanical conductor connector, supplied in the

joint kit, jointing of cables with different conductor sizes or conductor materials becomes fast and easy. This cold-shrinkable joint is fully screened, submersible and suitable to be directly buried.

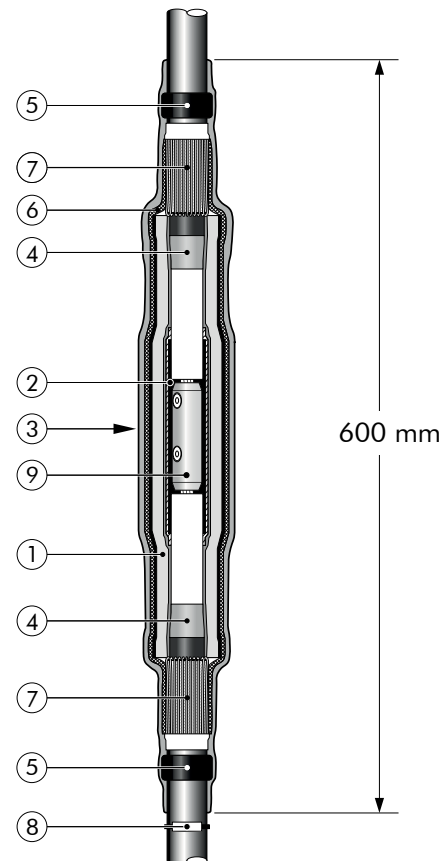
$U_o / U (U_m)$
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
12.7/22 (24) kV

#### Design

1. Extruded triple layer EPDM rubber body
2. Two layer plate with a semiconductive and a field control mastic layer
3. Overall protective EPDM cover
4. Field control mastic
5. Water sealing mastic
6. Copper stocking
7. Self-adhesive copper tape
8. Traceability tag
9. Mechanical conductor connector

#### Technical characteristics

All joint bodies are tested for AC withstand prior to leaving the factory.



#### Specifications and standards

The cold-shrinkable 24CSJ-S joint meets the requirements of CENELEC HD 629.1.

Cold-shrinkable straight joint type	Nominal voltage $U_o / U$ (kV)	Dia. over outer sheath (mm)	Dia. over core insulation (mm)		Conductor cross-section (mm <sup>2</sup> )	
		max.	min.	max.	min.	max.
24CSJ-S/M70-240	6/10	48	18	36	95	240
	12/20	48	18	36	70	240
24CSJ-S/M120-300	6/10	48	18	36	120	300
	12/20	48	18	36	120	300

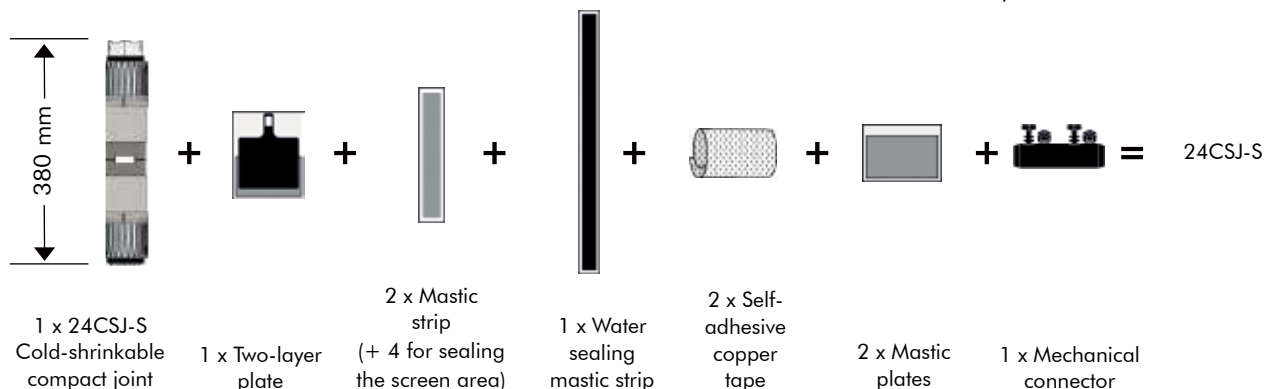
15-05-2014

## Kit contents

The complete cold-shrinkable joint kit comprises the following components:

The kit also comprises:

- + installation instructions
- + silicone grease
- + wipers
- + installation hook
- + assembly gauge
- + assembly incidentals



## Compact 24CSJ-S - Highlights

- Compact dimensions allow the same easy installation in half the space
- All components are pre-assembled on a support tube, which is pulled out in a single movement, enabling an easy and fast installation
- A triple-extruded body in a pre-installed joint reduces the number of components in the kit
- Purpose designed EPDM rubber with high recovery forces result in tight electrical interfaces and perfect sealing
- All our products are subjected to extensive testing from the time they enter our plant as raw material until they leave as finished products
- This cold shrinkable joint exceeds international performance standards including CENELEC HD 629 and IEC 60502 for joints and IEC 61238 for mechanical and crimp connectors
- No special tools or flame required
- One of the features of our cold shrinkable joint is the screen connection system. By using the pressure of the outer protection sleeve, the copper stocking integrated in the joint is kept against the metallic screen from the cable, ensuring a stable connection
- This joint can be energised immediately after installation



One box contains everything you need to joint your cables.

Ordering part number	Nominal voltage $U_0/U$ (kV)	Conductor cross-section (mm <sup>2</sup> )									Dia. over core insulation (mm)	Dia. over outer sheath (mm)
		35	50	70	95	120	150	185	240	300		
24CSJ-S/M70-240	6/10 12/20										18-36	max. 48
24CSJ-S/M120-300	6/10 12/20										18-36	max. 48

<p>For use with copper wire screened cables. No further earthing device is necessary.</p>	<p>For use with fabric tape (graphite) screened cables. Order additional semi-conductive tape.</p>	<p>For use with other cable types. Please contact our representative</p>	<p>Can be supplied as a stop joint. Please contact our representative.</p>
-------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------	----------------------------------------------------------------------------

## GTM3.1

### Heat-shrinkable three core transition joint

Up to 42 kV

$U_0 / U (U_m)$

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

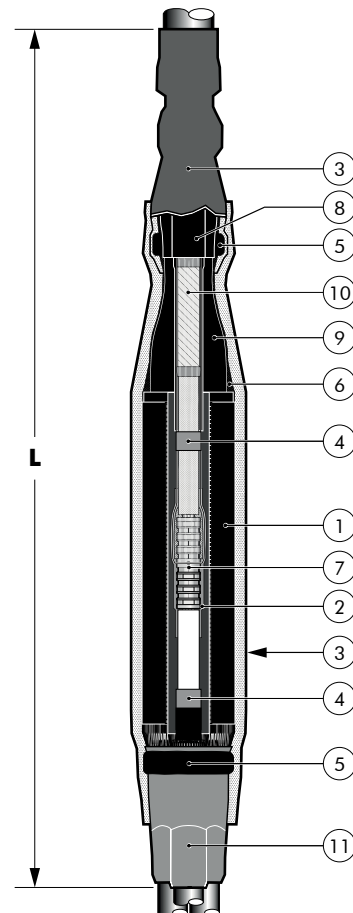
20.8/36 (42) kV

#### Application

For jointing three-core paper cables to three single core polymeric cables. For use with belted or screened cables with a common or individual lead sheath. This transition joint is fully screened, submersible and suitable to be directly buried.

#### Design

1. Dual wall tube
2. Stress control tube
3. Protection tube
4. Hi-K mastic
5. Sealing mastic
6. Screen continuity (copper braid and mesh)
7. Conductor connector (supplied on request).
8. Semi-conductive break-out (17GTM3.1)
9. Semi-conductive tubes (17GTM3.1)
10. Barrier tube
11. Break-out



#### Specifications and standards

Meets the requirements of CENELEC HD 629.2.

Straight joint type	Nominal voltage $U_0 / U$ (kV)	Length "L" (mm)	Conductor cross-section (mm <sup>2</sup> )	
			min	max
17GTM3.1	6/10	~1200	25	400
24GTM3.1	12/20	~1200	35	400
42GTM3.1*	18/30 + 20.8/36	~1800	50	400

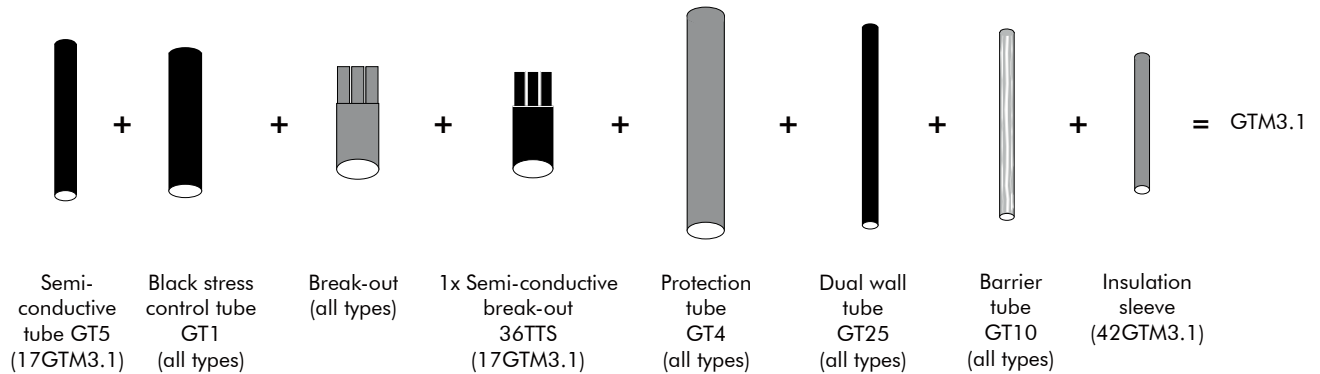
\* The joint type is suitable for voltage levels 18/30 (36) kV and 20.8/36 (42) kV (type tested for 20.8/36 (42) kV)

15-05-2014

## Kit contents

The complete GTM3.1 joint kit comprises the following components:

The kit also comprises:  
 + installation instructions  
 + mechanical conductor connector  
 + mechanical screen wire cable lug  
 + roll springs  
 + assembly incidentals



## Ordering instructions

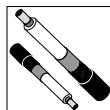
Please indicate the part number when ordering (see table). Select the order designation of the straight joint according to the cable type used and the diameter over core insulation.

### Order example:

For a paper-insulated belted cable with 6/10 kV, 3x150 mm<sup>2</sup> on an XLPE-insulated single-core cable with 6/10 kV, 120 mm<sup>2</sup>. Order according to the table: 17GTM3.1.240 part number 59854.

Straight joint type	Nominal voltage U <sub>0</sub> /U (kV)	Conductor cross-section (mm <sup>2</sup> )		Ordering part number
		min	max	
17GTM3.1.95	6/10	25	95	57288
17GTM3.1.240	6/10	95	240	59854
17GTM3.1.400	6/10	240	400	57289
24GTM3.1.50	12/20	35	50	57290
24GTM3.1.240	12/20	70	240	57291
24GTM3.1.300	12/20	120	300	58209
24GTM3.1.400	12/20	185	400	57292
42GTM3.1.95*	18/30 + 20.8/36	50	95	57293
42GTM3.1.150*	18/30 + 20.8/36	95	150	57294
42GTM3.1.240*	18/30 + 20.8/36	150	240	57295
42GTM3.1.400*	18/30 + 20.8/36	240	400	57296

\* The joint type is suitable for voltage levels 18/30 (36) kV and 20.8/36 (42) kV (type tested for 20.8/36 (42) kV)



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



For use with other cable types. Please contact our representative



# READY-TO-INSTALL, PRE-ASSEMBLED CABLES

Interface A to F connectors and terminations

## Application

Pre-assembled cables are polymeric insulated medium voltage cables, equipped with connectors and terminations. They can be used for connecting transformers and switchgears. We manufacture the pre-assembled cables specifically customized in terms of cable length and type

of accessories. The cables and flexible cables, primarily checked by us, are assembled with different conductor cross-sections and accessories, depending on customer's application.

**Up to 42 kV**

$U_o / U (U_m)$
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
20.8/36 (42) kV

## Flexible cables

Pre-assembled flexible cables, such as NTMCGCWÖU, are used in stations with little space, where the bending radii cannot be met with XLPE-insulated cables.

Due to their design

- Fine-wire, tin-plated copper conductor
- Ethylene-propylene rubber (EPR) insulation
- Fine-wire shield
- Polychloroprene (flame- and oil-resistant) outer sheath, these flexible cables can be laid with minimum bending radii of 5 times the outside

diameter. In terms of their current-carrying capacity in service and in the event of short-circuit current, EPR-insulated cables are almost equivalent to XLPE-insulated cables.

## Cables

Pre-assembled cables type N(A)2XS(2)Y are used where the space conditions inside equipment allow the minimum cable bending radius of 15 times its outside diameter.

## Dimensioning basis

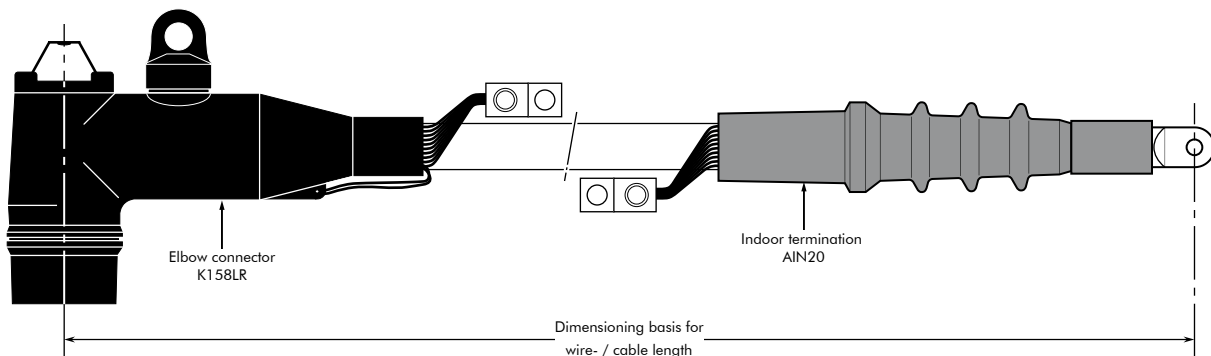
When dimensioning the preassembled cable length, we take the center points of both cable accessories as the basis. When indicating the length of the shield wire, please also specify whether the shield wire should be lead out on one or both sides.

### Accessory A

See table for accessory selection.

### Accessory B

See table for accessory selection.



15-05-2014

## Example request:

Please fill in what is applicable.

	U <sub>0</sub> /U (kV) 6/10			U <sub>0</sub> /U (kV) 12/20			U <sub>0</sub> /U (kV) 18/30			U <sub>0</sub> /U (kV) 20.8/36			* Length of shield wire
	L 1	L 2	L 3	L 1	L 2	L 3	L 1	L 2	L 3	L 1	L 2	L 3	
Conductor/ cable type													
Conductor/ cable length													
Accessory A													
Accessory B													
Partial discharge sample test	yes / no			yes / no			yes / no			yes / no			
AC withstand test	yes / no			yes / no			yes / no			yes / no			

\* If you do not indicate the length of the shield wire, we will assume a length of 500 mm for accessory "A" and "B".

## Accessory selection:

We will also assemble accessories that are not listed here.

Type	Design	Interface	Material	Assembly technique
(K)158LR/G	Elbow connector	A	EPDM	Slip-on technology
(K)152SR/G	Straight connector	A	EPDM	Slip-on technology
(K)(M)400LR/G	Elbow connector	B	EPDM	Slip-on technology
(K)(M)430TB/G	Compact tee connector	C	EPDM	Slip-on technology
(K)(M)(P)484TB/G	Compact tee connector	C	EPDM	Slip-on technology
(K)(M)(P)804PB/G	Coupling connector	C	EPDM	Slip-on technology
(K)(M)(P)489TB/G	Compact tee connector	C	EPDM	Slip-on technology
(K)(M)(P)809PB/G	Coupling connector	C	EPDM	Slip-on technology
(K)676LRA/G	Separable tee connector	D	EPDM	Slip-on technology
775LR	Separable tee connector	E	EPDM	Slip-on technology
(K)(M)(P)944TB/G	Compact tee connector	F	EPDM	Slip-on technology
AIN 10	Indoor termination	-	EPDM	Slip-on technology
AIN 20	Indoor termination	-	Silicone	Slip-on technology
AIN 30	Indoor termination	-	Silicone	Slip-on technology
AIN 36	Indoor termination	-	Silicone	Slip-on technology
AFN 10	Outdoor termination	-	Silicone	Slip-on technology
AFN 20	Outdoor termination	-	Silicone	Slip-on technology
AFN 30	Outdoor termination	-	Silicone	Slip-on technology
AFN 36	Outdoor termination	-	Silicone	Slip-on technology

## C - SERIES

### Mechanical cable lugs, type C

#### Application

Using mechanical cable lugs allows a larger, multirange conductor cross-section even for terminations. The mechanical cable lugs are generally tinplated and are offered with different palm holes, just like compression cable lugs.

#### Advantages

##### • Simple, quick installation:

With common commercially available inner and outer hexagon tools or an approved impact wrench.

##### • Minimum storage costs:

The cross-sectional area from 16 mm<sup>2</sup> to 1000 mm<sup>2</sup> is covered by just 4 types of cable lugs.

##### • Universal applicability:

Can be used for copper and aluminium conductors according to EN 60228 classes 1 & 2. For use of our mechanical connectors with class 5 flexible copper conductors, please contact us.

##### • Proven quality:

Tested for class 2 conductors according to IEC 61238-1, in failure-free operation for more than 15 years.

#### Design

##### Material

Connector Body: high strength aluminum alloy  
Bolts: brass, tin-plated, with inner and outer hexagon or aluminum alloy

##### Surface

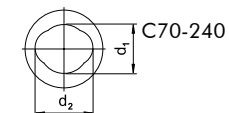
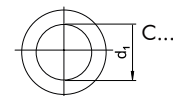
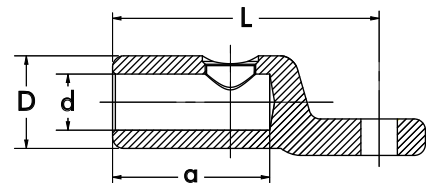
Connector Body: tin-plated

##### Center Rings

Center rings: are enclosed for centric conductor positioning.



C95-240, centric with shear-off-head bolts



Cat. no.	Conductor cross-section Aluminium (mm <sup>2</sup> )			Conductor cross-section Copper (mm <sup>2</sup> )		Number of bolts	Dimensions (mm)				Palm hole Dia. (mm)	Tool / outer and inner hexagon
	rm(v)	re	sm	rm(v)	sm		L	d <sub>1</sub>	D	a		
C16-95 x 12	16-95	16-95	25-70	16-95	25-70	1	60	12.5	24	32	13	SW13 & SW6
C16-95 x 16											17	
C50-150 x 12	25-150	25-150	35-120	25-120	35-120	1	79	15.5	30	35	13	SW17 & SW6
C50-150 x 16											17	
C70-240 x 12	70-240	70-240	70-240	70-240	70-240	2	93.5	22 <sup>1)</sup>	35	56	13	SW19 & SW6
C70-240 x 16											17	
C95-240 x 12	95-240	95-240	95-185	95-240	95-185	2	95	20	33	56	13	SW19 & SW6
C95-240 x 16											17	
C120-300 x 12	120-300	120-300	120-240	120-300	120-240	2	105	25	38	67	13	SW22 & SW6
C120-300 x 16											17	
C185-400 x 12	185-400	185-400	185-300	185-400	185-300	3	120	26	42	82	13	SW22 & SW6
C185-400 x 16											17	
C300-500 x 12	300-500	300-500	300-400	300-500	300-400	3	130	34	52	94	13	SW24 & SW8
C300-500 x 16											17	
C300-500 x 20											21	
C400-630 x 12	400-630	400-630	400-500	400-630	400-500	3	130	34	52	94	13	SW24 & SW8
C400-630 x 16											17	
C400-630 x 20											21	
C630-1000 x 20	630-1000	630-1000		630-1000		4	165	41	65	105	21	SW22 & SW8

<sup>1)</sup> Dimension d<sub>2</sub> = 26

## Technical details

The bolt has an inner and outer hexagon. Both are related to the various shear-off-areas of the bolt and their different torque moments.

The torque moments follow the rule that large conductor cross sections need high torque moments and smaller cross sections need lower torque moments.

The installation instruction describes the use of both hexagons and of the various center rings and inserts, for the respective conductor types.

## Centring of the conductor

For the centric position of smaller conductor cross-sections in the conductor channel, we use centring rings that must be pressed all the way into the channel of the cable lug before assembling

the corresponding conductor cross-section. The centring rings differ in colour and are assigned to the respective type of conductor. Appropriate assembly instructions describe

which type of conductor the centring rings are to be used for. The conductor is centred using a centring insert in the case of the largest cross-sectional area.

## Ordering instructions

Please indicate the part number when ordering (see table). The centring rings or centring inserts are part of the scope of delivery.

### Order example:

1 mechanical cable lug, for 95-240 mm<sup>2</sup>, palm hole: 17 mm. Order according to the table: 1 C95-240 x 16 with part number G6502 40 17.

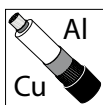
## Specifications and standards

The mechanical connectors have been tested according to IEC 61238-1 or VDE 0220 part 100 respectively.

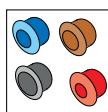
Cable lug type	Ordering part number
C16-95 x 12 C16-95 x 16	G6502 40 20 G6502 40 33
C50-150 x 12 C50-150 x 16	G6502 40 09 G6502 40 32
C70-240 x 12 C70-240 x 16	G6502 40 36 G6502 40 40
C95-240 x 12 C95-240 x 16	G6502 40 10 G6502 40 17
C120-300 x 12 C120-300 x 16	G6502 40 23 G6502 40 26
C185-400 x 12 C185-400 x 16	G6502 40 30 G6502 40 19
C300-500 x 12 C300-500 x 16	G6502 40 34 G6502 40 37
C400-630 x 12 C400-630 x 16 C400-630 x 20	G6502 40 28 G6502 40 31 G6502 40 29
C630-1000 x 20	G6502 51 10

## Product range

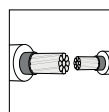
A complete overview of our GPH products (ferrules & lugs) can be found in catalogue modules A, B, C and D.



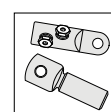
It is possible to connect different conductor materials.



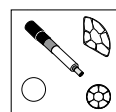
We use centring rings for the centric position of small conductor cross-sections.



It is possible to connect different conductor cross-sections.



Can be supplied with all common types of cable lugs.



Can be used for all conductor shapes.

## Cable lugs compression type, Cu

### Standard type, with and without inspection hole

#### Application

For isolated, non-compacted copper conductors.

#### Technical note

Sector shaped conductors must be rounded with special dies.

#### Design

##### Material

Connector body: Copper  
Palm: plan stamped

**Surface:** tin-plated

KU-L: without inspection hole

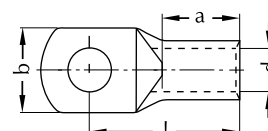
KU-L-S: with inspection hole



**KU-L**



**KU-L-S**



The compression of the KU-L Series does not accord to the DIN requirements. Special compression tools are available on request.

Cat. no.		Conductor cross-section (mm <sup>2</sup> ) strand.	Dimensions (mm)				Flat hole diameter (mm)	Weight 100 pcs. (approx. kg)
KU-L	KU-L-S		d	a	l	b		
6 x 5 KU-L	6 x 5 KU-L-S	6	3.5	9	21	10.5	5.4	0.4
6 x 6 KU-L	6 x 6 KU-L-S				21	11.5	6.5	0.4
6 x 8 KU-L	6 x 8 KU-L-S				21	15.5	8.5	0.4
6 x 10 KU-L	6 x 10 KU-L-S				21	17.0	10.5	0.5
10 x 5 KU-L	10 x 5 KU-L-S	10	4.5	9	21	12.0	5.5	0.4
10 x 6 KU-L	10 x 6 KU-L-S				21	12.0	6.5	0.4
10 x 8 KU-L	10 x 8 KU-L-S				23	14.5	8.5	0.4
10 x 10 KU-L	10 x 10 KU-L-S				25.5	17.0	10.5	0.5
16 x 5 KU-L	16 x 5 KU-L-S	16	5.5	12	26	12.0	5.5	0.5
16 x 6 KU-L	16 x 6 KU-L-S				26	12.0	6.5	0.7
16 x 8 KU-L	16 x 8 KU-L-S				28	13.5	8.5	0.8
16 x 10 KU-L	16 x 10 KU-L-S				30	17.0	10.5	0.8
16 x 12 KU-L	16 x 12 KU-L-S				32	20.0	13.0	0.8
25 x 6 KU-L	25 x 6 KU-L-S	25	7.0	13	27	14.0	6.5	1.0
25 x 8 KU-L	25 x 8 KU-L-S				29	16.0	8.5	1.0
25 x 10 KU-L	25 x 10 KU-L-S				33	17.5	10.5	1.1
25 x 12 KU-L	25 x 12 KU-L-S				34	20.0	13.0	1.0
35 x 6 KU-L	35 x 6 KU-L-S	35	8.5	15	31	18.0	6.5	1.0
35 x 8 KU-L	35 x 8 KU-L-S				32	18.0	8.5	1.0
35 x 10 KU-L	35 x 10 KU-L-S				34	18.0	10.5	1.1
35 x 12 KU-L	35 x 12 KU-L-S				37	22.0	13.0	1.0

15-05-2014

# Cable lugs compression type, Cu

## Standard type, with and without inspection hole

### Product range

A complete overview of our GPH products (ferrules & lugs) can be found in catalogue modules A, B, C and D.

Table on page 52 continued

Cat. no.		Conductor cross-section (mm <sup>2</sup> ) strand.	Dimensions (mm)				Flat hole diameter (mm)	Weight 100 pcs. (approx. kg)
KU-L	KU-L-S		d	a	l	b		
50 x 8 KU-L 50 x 10 KU-L 50 x 12 KU-L 50 x 16 KU-L	50 x 8 KU-L-S 50 x 10 KU-L-S 50 x 12 KU-L-S 50 x 16 KU-L-S	50	3.5	9	21 21 21 21	10.5 11.5 15.5 17.0	5.4 6.5 8.5 10.5	0.4 0.4 0.4 0.5
70 x 8 KU-L 70 x 10 KU-L 70 x 12 KU-L 70 x 16 KU-L 70 x 20 KU-L	70 x 8 KU-L-S 70 x 10 KU-L-S 70 x 12 KU-L-S 70 x 16 KU-L-S 70 x 20 KU-L-S	70	12.0	19	41 40 42 50 52	23.0 23.0 23.0 29.0 31.0	8.5 10.5 13.0 17.0 21.0	3.5 3.6 3.6 3.6 4.6
95 x 8 KU-L 95 x 10 KU-L 95 x 12 KU-L 95 x 16 KU-L 95 x 20 KU-L	95 x 8 KU-L-S 95 x 10 KU-L-S 95 x 12 KU-L-S 95 x 16 KU-L-S 95 x 20 KU-L-S	95	13.5	22	48 48 48 53 58	25.0 25.0 25.0 31.0 31.0	8.5 10.5 13.0 17.0 21.0	4.7 4.8 4.9 5.3 6.1
120 x 10 KU-L 120 x 12 KU-L 120 x 16 KU-L 120 x 20 KU-L	120 x 10 KU-L-S 120 x 12 KU-L-S 120 x 16 KU-L-S 120 x 20 KU-L-S	120	15.0	25	54 54 56 59	28.0 28.0 29.0 34.0	10.5 13.0 17.0 21.0	6.7 6.7 6.9 6.9
150 x 10 KU-L 150 x 12 KU-L 150 x 16 KU-L 150 x 20 KU-L	150 x 10 KU-L-S 150 x 12 KU-L-S 150 x 16 KU-L-S 150 x 20 KU-L-S	150	16.5	27	57 58 59 61	31.0 31.0 31.0 33.0	10.5 13.0 17.0 21.0	8.8 8.6 8.7 8.8
185 x 12 KU-L 185 x 16 KU-L 185 x 20 KU-L	185 x 12 KU-L-S 185 x 16 KU-L-S 185 x 20 KU-L-S	185	19.0	30	66 66 68	35.0 35.0 35.0	13.0 17.0 21.0	11.5 11.6 11.8
240 x 12 KU-L 240 x 16 KU-L 240 x 20 KU-L	240 x 12 KU-L-S 240 x 16 KU-L-S 240 x 20 KU-L-S	240	21.0	34	75 71 73	38.0	13.0 17.0 21.0	13.9 13.6 13.8
300 x 12 KU-L 300 x 16 KU-L 300 x 20 KU-L	300 x 12 KU-L-S 300 x 16 KU-L-S 300 x 20 KU-L-S	300	24.0	45	90 87 87	43.0	13.0 17.0 21.0	23.8 23.7 23.8
400 x 16 KU-L 400 x 20 KU-L	400 x 16 KU-L-S 400 x 20 KU-L-S	400	27.5	50	96	48.0	17.0 21.0	28.4 28.5
500 x 16 KU-L 500 x 20 KU-L	500 x 16 KU-L-S 500 x 20 KU-L-S	500	31.0	65	122 120	55.0	17.0 21.0	45.2 46.9
625 x 16 KU-L 625 x 20 KU-L	625 x 16 KU-L-S 625 x 20 KU-L-S	625	34.0	70	124 120	59.0	17.0 21.0	43.9 46.9

# Compression cable lugs, Cu

acc. to DIN 46235

## Application

For isolated, non-compacted copper conductors.

## Technical note

Sector shaped conductors must be rounded with special dies.

## Product range

A complete overview of our GPH products (ferrules & lugs) can be found in catalogue modules A, B, C and D.

## Design

### Material

Connector Body: Copper

### Surface:

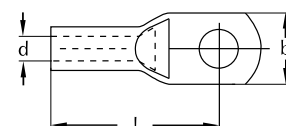
KU: uncoated  
KU-V: tin-plated



KU



KU-V



Cat. no.		Conductor cross-section (mm <sup>2</sup> ) strand.	Dimensions (mm)			Flat hole diameter (mm)	Die code no.	Number of compressions		Weight 100 pcs. (approx. kg)
KU	KU-V		d	l	b			mech.	hydr.	
6 x 5 KU 6 x 6 KU	6 x 5 KU-V 6 x 6 KU-V	6	3.8	24	8.5	5.4 6.5	5	1		0.6
10 x 5 KU 10 x 6 KU	10 x 5 KU-V 10 x 6 KU-V	10	4.5	27	9.0	5.4 6.5	6	1		0.6
<sup>1)</sup> 10 x 6 KU-S <sup>1)</sup> 10 x 8 KU-S <sup>1)</sup> 10 x 10 KU-S <sup>1)</sup> 10 x 12 KU-S	<sup>1)</sup> 10 x 6 KU-S-V <sup>1)</sup> 10 x 8 KU-S-V <sup>1)</sup> 10 x 10 KU-S-V <sup>1)</sup> 10 x 12 KU-S-V	10	4.5	36 36 36 38	13.0 13.0 17.0 20.0	6.5 8.5 10.5 13.0	8	2		1.8 1.7 1.8 1.9
16 x 6 KU 16 x 8 KU 16 x 10 KU <sup>2)</sup> 16 x 12 KU	16 x 6 KU-V 16 x 8 KU-V 16 x 10 KU-V <sup>2)</sup> 16 x 12 KU-V	16	5.5	36	13.0 13.0 17.0 21.0	6.5 8.5 10.5 13.0	8	2	1	1.8 1.4 1.5 1.7
<sup>2)</sup> 25 x 6 KU 25 x 8 KU 25 x 10 KU 25 x 12 KU 25 x 16 KU	<sup>2)</sup> 25 x 6 KU-V 25 x 8 KU-V 25 x 10 KU-V 25 x 12 KU-V 25 x 16 KU-V	25	7.0	38 42	14.0 16.0 17.0 19.0 25.0	6.5 8.5 10.5 13.0 17.0	10	2	1	2.2 2.1 2.2 2.2 2.4
<sup>2)</sup> 35 x 6 KU 35 x 8 KU 35 x 10 KU 35 x 12 KU <sup>2)</sup> 35 x 16 KU	<sup>2)</sup> 35 x 6 KU-V 35 x 8 KU-V 35 x 10 KU-V 35 x 12 KU-V <sup>2)</sup> 35 x 16 KU-V	35	8.2	42 46	17.0 17.0 19.0 21.0 26.0	6.5 8.5 10.5 13.0 17.0	12	2	1	3.6 3.3 3.5 3.3 3.7

<sup>1)</sup> These cable lugs are longer than DIN-type lugs, with two compressions marks instead of one and die code no. 8 instead of no. 6.

<sup>2)</sup> These cable lugs are manufactured as a special model, different from DIN 46235.



# Compression cable lugs, Cu

acc. to DIN 46235

Table on page 54 continued

Cat. no.		Conductor cross-section (mm <sup>2</sup> ) strand.	Dimensions (mm)			Flat hole diameter (mm)	Die code no.	Number of compressions		Weight 100 pcs. (approx. kg)
KU	KU-V		d	l	b			mech.	hydr.	
50 x 8 KU	50 x 8 KU-V	50	10.0	52	20.0	8.5	14	3	1	4.4
50 x 10 KU	50 x 10 KU-V				22.0	10.5				4.5
50 x 12 KU	50 x 12 KU-V				24.0	13.0				4.4
50 x 16 KU	50 x 16 KU-V				28.0	17.0				5.0
70 x 8 KU	70 x 8 KU-V	70	11.5	55	24.0	8.5	16	3	1	6.1
70 x 10 KU	70 x 10 KU-V				24.0	10.5				6.1
70 x 12 KU	70 x 12 KU-V				24.0	13.0				6.2
70 x 16 KU	70 x 16 KU-V				30.0	17.0				5.9
70 x 20 KU	70 x 20 KU-V				32.0	21.0				7.0
95 x 10 KU	95 x 10 KU-V	95	13.5	65	28.0	10.5	18	4	2	9.2
95 x 12 KU	95 x 12 KU-V				28.0	13.0				9.2
95 x 16 KU	95 x 16 KU-V				32.0	17.0				9.1
<sup>2)</sup> 95 x 20 KU	<sup>2)</sup> 95 x 20 KU-V				34.0	21.0				10.4
120 x 10 KU	120 x 10 KU-V	120	15.5	70	32.0	10.5	20	4	2	11.4
120 x 12 KU	120 x 12 KU-V				32.0	13.0				11.6
120 x 16 KU	120 x 16 KU-V				32.0	17.0				11.0
120 x 20 KU	120 x 20 KU-V				38.0	21.0				12.8
150 x 10 KU	150 x 10 KU-V	150	17.0	78	34.0	10.5	22	4	2	16.9
150 x 12 KU	150 x 12 KU-V				34.0	13.0				16.4
150 x 16 KU	150 x 16 KU-V				34.0	17.0				16.3
150 x 20 KU	150 x 20 KU-V				40.0	21.0				17.0
185 x 10 KU	185 x 10 KU-V	185	19.0	82	37.0	10.5	25	5	2	19.3
185 x 12 KU	185 x 12 KU-V				37.0	13.0				19.4
185 x 16 KU	185 x 16 KU-V				37.0	17.0				19.1
185 x 20 KU	185 x 20 KU-V				40.0	21.0				20.0
240 x 12 KU	240 x 12 KU-V	240	21.5	92	42.0	13.0	28	5	2	28.5
240 x 16 KU	240 x 16 KU-V				42.0	17.0				28.9
240 x 20 KU	240 x 20 KU-V				45.0	21.0				28.0
<sup>2)</sup> 300 x 12 KU	<sup>2)</sup> 300 x 12 KU-V	300	24.5	100		13.0	32		2	38.1
300 x 16 KU	300 x 16 KU-V					17.0				37.5
300 x 20 KU	300 x 20 KU-V					21.0				38.5
<sup>3)</sup> 400 x 16 KU	<sup>3)</sup> 400 x 16 KU-V	400	26.0	115		17.0	38		3	79.8
<sup>3)</sup> 400 x 20 KU	<sup>3)</sup> 400 x 20 KU-V					21.0				76.6
<sup>3)</sup> 500 x 16 KU	<sup>3)</sup> 500 x 16 KU-V	500	29.0	125		17.0	42		3	97.8
<sup>3)</sup> 500 x 20 KU	<sup>3)</sup> 500 x 20 KU-V					21.0				96.0
400 x 16 KU-S	400 x 16 KU-S-V	400	27.5	115		17.0	38		3	68.8
400 x 20 KU-S	400 x 20 KU-S-V					21.0				66.0
500 x 16 KU-S	500 x 16 KU-S-V	500	31.0	125		17.0	42		3	85.0
500 x 20 KU-S	500 x 20 KU-S-V					21.0				83.5
625 x 16 KU	625 x 16 KU-V	625	34,5	135		17.0	44		3	79.4
625 x 20 KU	625 x 20 KU-V					21.0				77.9
800 x 20 KU	800 x 20 KU-V	800	40.0	165	75.0	21.0	52		3	146.9
1000 x 20 KU	1000 x 20 KU-V	1000	44.0	165	85.0	21.0	58		3	191.1

<sup>1)</sup> These cable lugs are longer than DIN-type lugs, with two compressions marks instead of one and die code no. 8 instead no. 6.

<sup>2)</sup> These cable lugs are manufactured as a special model, different from DIN 46235.

<sup>3)</sup> Inside diameter adapted.

## Cable lugs compression type, Cu longitudinally sealed, RMV-type

### Application

For use with round stranded compacted copper conductors according to DIN EN 60228 or copper cable conductors according to VDE 0295-RMV class 2.

### Technical note

When using **round stranded compacted conductors (RMV)**, we recommend the application of RMV-series. Please note page 57!

### Design

#### Material

Connector body: Copper  
Palm: plan stamped

#### Surface

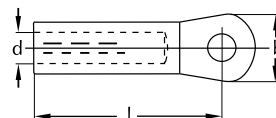
KU-F: uncoated  
KU-F-V: tin-plated



RMV ... KU-F



RMV ... KU-F-V



Cat. no.		Conductor cross-section (mm <sup>2</sup> ) RMV	Dimensions (mm)			Flat hole diameter (mm)	Die code no.	Number of compressions		Weight 100 pcs. (approx. kg)
RMV... KU-F	RMV... KU-F-V		d	l	b			mech.	hydr.	
RMV 50 x 12 KU-F	RMV 50 x 12 KU-F-V	50	9	48	25	13	14	3	1	4.2
RMV 70 x 12 KU-F	RMV 70 x 12 KU-F-V	70	11	49	25	13	16	4	2	6.4
RMV 95 x 12 KU-F	RMV 95 x 12 KU-F-V	95	12.5	56	25	13	18	4	2	8.8
RMV 120 x 10 KU-F	-	120	14	62	30	10.5	20	4	2	12.2
RMV 120 x 12 KU-F	RMV 120 x 12 KU-F-V	120	14	62	30	13	20	4	2	12.2
-	RMV 120 x 16 KU-F-V	120	14	62	30	17	20	4	2	12.2
-	RMV 120 x 20 KU-F-V	120	14	62	38	21	20	4	2	12.2
RMV 150 x 12 KU-F	RMV 150 x 12 KU-F-V	150	15.5	63	30	13	22	4	2	15.6
RMV 185 x 10 KU-F	-	185	17.5	69	30	10.5	25	4	2	19.1
RMV 185 x 12 KU-F	RMV 185 x 12 KU-F-V	185	17.5	69	30	13	25	4	2	19.1
RMV 185 x 16 KU-F	RMV 185 x 16 KU-F-V	185	17.5	69	30	17	25	4	2	19.0
RMV 240 x 10 KU-F	RMV 240 x 10 KU-F-V	240	20	74	38	10.5	28	-	2	22.1
RMV 240 x 12 KU-F	RMV 240 x 12 KU-F-V	240	20	74	38	13	28	-	2	22.1
RMV 240 x 16 KU-F	RMV 240 x 16 KU-F-V	240	20	74	38	17	28	-	2	21.9
RMV 300 x 12 KU-F	RMV 300 x 12 KU-F-V	300	22	85	38	13	32	-	2	36.5
RMV 300 x 16 KU-F	RMV 300 x 16 KU-F-V	300	22	85	38	17	32	-	2	36.5

**Attention:** Please note page 57! Other types on request.

# Cable lugs compression type, Cu

## longitudinally sealed, RMV-type

### Product range

A complete overview of our GPH products (ferrules & lugs) can be found in catalogue modules A, B, C and D.

### Information on round stranded compacted conductors (RMV)

For the use of compression cable lugs with medium-voltage cables. Due to the increasing capacity utilisation of the medium voltage power grids and the use of round

compacted copper conductors, we recommend using compression cable lugs with an adjusted inner diameter (RMV-series).

#### Example:

"240 KU-F-V" when using a 240 mm<sup>2</sup> RMV conductor, catalogue no. "RMV 240 KU-F-V"

Conductor cross-section (mm <sup>2</sup> )	Inner diameter of barrel RMV (mm)	Inner diameter of barrel DIN 46235 (mm)
50	9	9.8
70	DIN	11.2
95	12.5	13.2
120	14	14.7
150	15.5	16.3
185	17.5	18.3
240	20	21
300	22	23.3

# Cable lugs compression type, Al

longitudinally sealed, acc. to DIN 46329

## Application

For aluminum conductors and aluminum cable conductors

## Technical note

When using **round stranded compacted conductors (RMV)**, we recommend the application of RMV-series.  
Please note page 60!

Sector shaped conductors must be rounded with special dies.

## Design

### Material

Connector Body: Aluminium  
Palm: plan stamped

### Surface

ALU-F: uncoated  
ALU-F-V: tin-plated

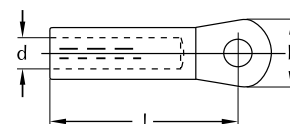
Cable lugs filled with compound and sealed in plastic.



ALU-F



ALU-F-V



Cat. no.		Conductor cross-section (mm <sup>2</sup> )		Dimensions (mm)			Flat hole diameter (mm)	Die code no.	Number of compressions		Weight 100 pcs. (approx. kg)
ALU-F	ALU-F-V	rm/sm	se	d	l	b			mech.	hydr.	
16 x 8 ALU-F	16 x 8 ALU-F-V	16	25	5.4	50	20	8.5	12	4	2	1.4
16 x 10 ALU-F	16 x 10 ALU-F-V					25	10.5				1.3
25 x 8 ALU-F	25 x 8 ALU-F-V	25	35	6.8	50	20	8.5	12	4	2	1.5
25 x 10 ALU-F	25 x 10 ALU-F-V					25	10.5				1.4
25 x 12 ALU-F	25 x 12 ALU-F-V					25	13.0				1.4
35 x 8 ALU-F	35 x 8 ALU-F-V	35	50	8.0	62	25	8.5	14	5	2	2.6
35 x 10 ALU-F	35 x 10 ALU-F-V						10.5				2.4
35 x 12 ALU-F	35 x 12 ALU-F-V						13.0				2.3
50 x 8 ALU-F	50 x 8 ALU-F-V	50	70	9.8	62	25	8.5	16	5	2	2.5
50 x 10 ALU-F	50 x 10 ALU-F-V						10.5				2.4
50 x 12 ALU-F	50 x 12 ALU-F-V						13.0				2.3
70 x 8 ALU-F	70 x 8 ALU-F-V	70	95	11.2	72	25	8.5	18	6	3	3.5
70 x 10 ALU-F	70 x 10 ALU-F-V						10.5				3.3
70 x 12 ALU-F	70 x 12 ALU-F-V						13.0				
95 x 8 ALU-F	95 x 8 ALU-F-V	95	120	13.2	78	25	8.5	22	6	3	7.4
95 x 10 ALU-F	95 x 10 ALU-F-V				78	25	10.5				7.0
95 x 12 ALU-F	95 x 12 ALU-F-V				78	25	13.0				6.7
95 x 16 ALU-F	95 x 16 ALU-F-V				80	30	17.0				
120 x 10 ALU-F	120 x 10 ALU-F-V	120	150	14.7	84	30	10.5	22	6	3	6.8
120 x 12 ALU-F	120 x 12 ALU-F-V						13.0				6.5
120 x 16 ALU-F	120 x 16 ALU-F-V						17.0				
150 x 10 ALU-F	150 x 10 ALU-F-V	150	185	16.3	90	30	10.5	25	6	3	8.8
150 x 12 ALU-F	150 x 12 ALU-F-V						13.0				8.4
150 x 16 ALU-F	150 x 16 ALU-F-V						17.0				9.3

15-05-2014

# Cable lugs compression type, Al

longitudinally sealed, acc. to DIN 46329

## Product range

A complete overview of our  
GPH products (ferrules & lugs)  
can be found in catalogue  
modules A, B, C and D.

Table on page 58 continued

Cat. no.		Conductor cross-section (mm <sup>2</sup> )		Dimensions (mm)			Flat hole diameter (mm)	Die code no.	Number of compressions		Weight 100 pcs. (approx. kg)
ALU-F	ALU-F-V	rm/sm	se	d	l	b			mech.	hydr.	
185 x 10 ALU-F	185 x 10 ALU-F-V	185	240	18.3	91	30	10.5	28	6	3	11.1
185 x 12 ALU-F	185 x 12 ALU-F-V						13.0				11.0
185 x 16 ALU-F	185 x 16 ALU-F-V						17.0				11.2
240 x 12 ALU-F	240 x 12 ALU-F-V	240	300	21.0	103	38	13.0	32	8	3	15.9
240 x 16 ALU-F	240 x 16 ALU-F-V						17.0				15.5
240 x 20 ALU-F	240 x 20 ALU-F-V						21.0				16.2
300 x 12 ALU-F	300 x 12 ALU-F-V	300		23.3	103	38	13.0	34	8	3	17.4
300 x 16 ALU-F	300 x 16 ALU-F-V						17.0				19.1
300 x 20 ALU-F	300 x 20 ALU-F-V						21.0				
400 x 12 ALU-F	400 x 12 ALU-F-V	400		26.0	116	38	13.0	38		3	34.0
400 x 16 ALU-F	400 x 16 ALU-F-V						17.0				35.5
400 x 20 ALU-F	400 x 20 ALU-F-V						21.0				
500 x 12 ALU-F	500 x 12 ALU-F-V	500		29.0	122	44	13.0	44		4	40.5
500 x 16 ALU-F	500 x 16 ALU-F-V						17.0				40.3
500 x 20 ALU-F	500 x 20 ALU-F-V						21.0				
<sup>1)</sup> 400 x 16 ALU-F-S	<sup>1)</sup> 400 x 16 ALU-F-V-S	400		28.0	116	44	17.0	42		3	34.0
<sup>1)</sup> 400 x 20 ALU-F-S	<sup>1)</sup> 400 x 20 ALU-F-V-S						21.0				35.5
<sup>1)</sup> 500 x 16 ALU-F-S	<sup>1)</sup> 500 x 16 ALU-F-V-S	500		31.0	122	46	17.0	46		4	40.5
<sup>1)</sup> 500 x 20 ALU-F-S	<sup>1)</sup> 500 x 20 ALU-F-V-S						21.0				40.3

<sup>1)</sup> These cable lugs are not according to DIN 46329

# Cable lugs compression type, Al

## longitudinally sealed, RMV-type

### Application

For use with round stranded compacted aluminium conductors according to DIN EN 60228 or aluminium cable conductors according to VDE 0295-RMV class 2.

### Technical Note

When using **round stranded compacted conductors (RMV)**, we recommend the application of RMV-series. Please note page 61!

Sector-shaped conductors must be rounded with special dies. Deep indent compression cable lugs available on request.

### Design

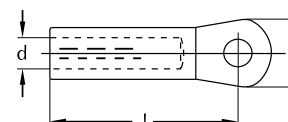
#### Material

Connector Body: Aluminium  
Palm: plan stamped

#### Surface

ALU-F: uncoated  
ALU-F-V: tin-plated

Cable lugs filled with compound and sealed in plastic.



RMV ... ALU-F

RMV ... ALU-F-V

Cat. no.		Conductor cross-section (mm <sup>2</sup> ) RMV	Dimensions (mm)			Flat hole diameter (mm)	Die code no.	Number of compressions		Weight 100 pcs. (approx. kg)
RMV... ALU-F	RMV... ALU-F-V		d	l	b			mech.	hydr.	
RMV 50 x 10 ALU-F		50	9	62	25	10.5	16	5	-	2.4
RMV 50 x 12 ALU-F	RMV 50 x 12 ALU-F-V	50	9	62	25	13	16	5	-	2.3
RMV 70 x 12 ALU-F		70	11.2	72	25	13	18	6	3	3.3
RMV 95 x 10 ALU-F		95	12.5	78	25	10.5	22	6	-	7.4
RMV 95 x 12 ALU-F	RMV 95 x 12 ALU-F-V	95	12.5	78	25	13	22	6	-	7.0
RMV 95 x 16 ALU-F	RMV 95 x 16 ALU-F-V	95	12.5	78	30	17	22	6	-	6.7
RMV 120 x 16 ALU-F	RMV 120 x 16 ALU-F-V	120	14	84	30	13	22	6	-	6.8
RMV 150 x 8 ALU-F		150	15.5	90	30	8.5	25	6	-	9.0
	RMV 150 x 10 ALU-F-V	150	15.5	90	30	10.5	25	6	-	8.8
RMV 150 x 12 ALU-F	RMV 150 x 12 ALU-F-V	150	15.5	90	30	13	25	6	-	8.4
RMV 150 x 16 ALU-F	RMV 150 x 16 ALU-F-V	150	15.5	90	30	17	25	6	-	9.3
	RMV 150 x 20 ALU-F-V	150	15.5	90	30	21	25	6	-	-
RMV 185 x 12 ALU-F	RMV 185 x 12 ALU-F-V	185	17.5	91	30	13	28	6	-	11.0
RMV 185 x 16 ALU-F	RMV 185 x 16 ALU-F-V	185	17.5	91	30	17	28	6	-	11.2
RMV 240 x 8 ALU-F		240	20	103	38	8.5	32	8	-	-
RMV 240 x 12 ALU-F	RMV 240 x 12 ALU-F-V	240	20	103	38	13	32	8	-	15.9
RMV 240 x 16 ALU-F	RMV 240 x 16 ALU-F-V	240	20	103	38	17	32	8	-	15.5
RMV 240 x 20 ALU-F	RMV 240 x 20 ALU-F-V	240	20	103	38	21	32	8	-	16.2
RMV 300 x 12 ALU-F	RMV 300 x 12 ALU-F-V	300	22	103	38	13	34	8	3	-
RMV 300 x 16 ALU-F	RMV 300 x 16 ALU-F-V	300	22	103	38	17	34	8	3	17.4
RMV 300 x 20 ALU-F		300	22	103	38	21	34	8	3	19.1

**Attention:** Please note page 61! Other types on request.

15-05-2014

# Cable lugs compression type, Al

## longitudinally sealed, RMV-type

### Product range

A complete overview of our GPH products (ferrules & lugs) can be found in catalogue modules A, B, C and D.

### Information on round stranded compacted conductors (RMV)

For the use of compression cable lugs with medium-voltage cables. Due to the increasing capacity utilisation of the medium voltage power grids and the use of round

compacted aluminium conductors, we recommend using compression cable lugs with an adjusted inner diameter (RMV-series).

#### Example:

"240 ALU-F-V" when using a 240 mm<sup>2</sup> RMV conductor, catalogue no. "RMV 240 ALU-F-V"

Conductor cross-section (mm <sup>2</sup> )	Inner diameter of barrel RMV (mm)	Inner diameter of barrel DIN 46329 (mm)
50	9	9.8
70	DIN	11.2
95	12.5	13.2
120	14	14.7
150	15.5	16.3
185	17.5	18.3
240	20	21
300	22	23.3



## M - SERIES

### Mechanical connectors, type M

#### Application

Our mechanical connectors are assembled with multiple shear-off-head bolts and are therefore a reliable and economical way of connecting identical or different conductor cross-sections and conductor materials.

#### Advantages

##### • Simple, quick installation:

With common commercially available inner and outer hexagon tools or an approved impact wrench.

##### • Minimum storage costs:

The cross-sectional area from 16 mm<sup>2</sup> to 1000 mm<sup>2</sup> is covered by just 4 types of connectors.

##### • Universal applicability:

Can be used for copper and aluminium conductors according to EN 60228 classes 1 & 2. For use of our mechanical connectors with class 5 flexible copper conductors, please contact us.

##### • Proven quality:

Tested for class 2 conductors according to IEC 61238-1, in failure-free operation for more than 15 years.

#### Design

##### Material

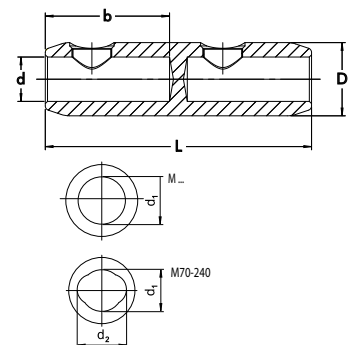
Connector body: Aluminiumlegierung  
Bolts: brass, tin-plated,  
with inner and outer  
hexagon

##### Surface

Connector body: tin-plated



M95-240 centric, with shear-off-head bolts and transverse grooving



Cat. no.		Conductor cross-section Aluminium (mm <sup>2</sup> )			Conductor cross-section Copper (mm <sup>2</sup> )		Number of bolts	Dimensions (mm)				Tool / outer and inner hexagon
		rm(v)	re	sm	rm(v)	sm		L	d <sub>1</sub>	D	b	
M16-95		16-95	16-95	25-70	16-95	25-70	2	70	12.5	24	32	SW13 & SW6
M50-150		25-150	25-150	35-120	25-120	35-120	2	85	15.5	30	35	SW17 & SW6
M50-150/ 16-95	1.Seite	25-150	25-150	35-120	25-120	35-120	2	85	15.5	30	35	SW17 & SW6
	2.Seite	16-95	10-95	25-70	10-70	25-70			12.5		35	SW13 & SW6
M70-240		(50 <sup>2</sup> )70-240	70-240	70-240	(50 <sup>2</sup> )70-240	70-240	4	120	22 <sup>1)</sup>	35	56	SW19 & SW6
M95-240		95-240	95-240	95-185	95-240	95-185	4	120	20	33	56	SW19 & SW6
M95-240/ 16-95	1.Seite	95-240	95-240	95-185	95-240	95-185	3	120	20	33	56	SW19 & SW6
	2.Seite	16-95	16-95	25-70	16-70	25-70			12.5		56	SW13 & SW6
M120-300		120-300	120-300	120-240	120-300	120-240	4	142	25	38	67	SW22 & SW6
M120-300/ 16-95	1.Seite	120-300	120-300	120-240	120-300	120-240	3	142	25	38	67	SW22 & SW6
	2.Seite	16-95	10-95	25-70	10-70	25-70			12.5		32	SW13 & SW6
M120-300/ 95-240	1.Seite	120-300	120-300	120-240	120-300	120-240	4	142	25	38	67	SW22 & SW6
	2.Seite	95-240	95-240	95-185	95-240	95-185			20		60	SW19 & SW6
M185-400		185-400	185-400	185-300	185-400	185-300	6	170	26	42	82	SW22 & SW6
M185-400/ 95-240	1.Seite	185-400	185-400	185-300	185-400	185-300	5	170	26	42	82	SW22 & SW6
	2.Seite	95-240	95-240	95-185	95-240	95-185			20		56	SW19 & SW6
M300-500		300-500	300-500	300-400	300-500	300-400	6	200	34	52	94	SW24 & SW8
M400-630		400-630	400-630	400-500	400-630	400-500	6	200	34	52	94	SW24 & SW8
M400-630/ 120-300	1.Seite	400-630	400-630	400-500	400-630	400-500	5	200	34	52	94	SW24 & SW8
	2.Seite	120-300	120-300	120-240	120-300	120-240			25		67	SW22 & SW6
M630-1000		630-1000	630-1000	/	630-1000	/	8	220	41	65	105	SW22 & SW8

<sup>1)</sup> Dimension d<sub>2</sub>=26.

<sup>2)</sup> must be ordered separately

## Technical details

The bolt has an inner and outer hexagon. Both are related to the various shear-off-areas of the bolt and their different torque moments.

The torque moments follow the rule that large conductor cross sections need high torque moments and smaller cross sections need lower torque moments.

The installation instruction describes the use of both hexagons and of the various center rings and inserts, for the respective conductor types.

## Centring of the conductor

For the centric position of smaller conductor cross-sections in the conductor channel, we use centring rings that must be pressed all the way into the channel of the connector before assembling

the corresponding conductor cross-section. The centring rings differ in colour and are assigned to the respective type of conductor. Appropriate assembly instructions describe which type

of conductor the centring rings are to be used for. The conductor is centred using a centring insert in the case of the largest cross-sectional area.

## Ordering instructions

Please indicate the part number when ordering (see table). The centring rings or centring inserts are part of the scope of delivery.

### Order example

1 mechanical connector for 95-240 mm<sup>2</sup>. Order according to the table:  
1 M95-240 with part number G6402 50 16.

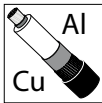
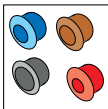
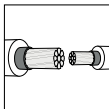
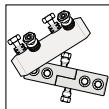
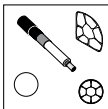
Mechanical connector type	Ordering part number
M16-95	G6402 50 31
M50-150	G6402 50 15
M50-150/16-95	G6402 50 37
M70-240	G6402 50 60
M95-240	G6402 50 16
M95-240/16-95	G6402 50 36
M120-300	G6402 50 33
M120-300/16-95	G6402 50 38
M120-300/95-240	G6402 50 40
M185-400	G6402 50 27
M185-400/95-240	G6402 50 35
M300-500	G6402 50 62
M400-630	G6402 50 44
M400-630/120-300	G6402 50 54
M630-1000	G6402 51 10

## Specifications and standards

The mechanical connectors have been tested according to IEC 61238-1 or VDE 0220 part 100 respectively.

## Product range

A complete overview of our GPH products (ferrules & lugs) can be found in catalogue modules A, B, C and D.

 <p>It is possible to connect different conductor materials.</p>	 <p>We use centring rings for the centric position of small conductor cross-sections.</p>	 <p>It is possible to connect different conductor cross-sections.</p>	 <p>Can be supplied with all common types of cable lugs.</p>	 <p>Can be used for all conductor shapes.</p>
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## D - SERIE

### Mechanical connectors, type D

#### Application

With the low-voltage mechanical connectors of the D-series, both identical and different conductor cross-sections can be implemented in the area of application, irrespective of the conductor material, shape and design. A total of seven connector sizes are available.

#### Advantages

##### • Simple, quick installation:

With common commercially available inner and outer hexagon tools or an approved impact wrench.

##### • Minimum storage costs:

The cross-sectional area from 1.5 mm<sup>2</sup> to 240 mm<sup>2</sup> is covered by just 3 types of connectors.

##### • Universal applicability:

Can be used for copper and aluminium conductors according to EN 60228 classes 1 & 2. For use of our mechanical connectors with class 5 flexible copper conductors, please contact us.

##### • Proven quality:

Our D-series connectors are a consistent further development of the long-term proven and tested SV-series.

#### Design

##### Material:

Connector body: brass- (D1,5-16 SV)  
or high strength aluminium alloy

Bolts: brass- or high strength aluminium alloy  
tin-plated,  
with inner and outer hexagon

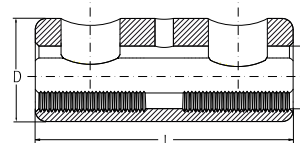
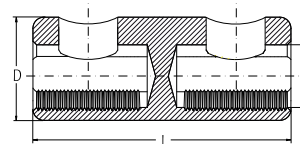
##### Surface:

D ...-V: tin-plated



**D25-185 SV-T-V-K**

**D1,5-16 SV-S-V-K**



##### Bolts:

D ...: with hexagon socket bolts

D ...-K: with shear-off-head bolts

##### Connector Body:

D ...-S: with inspection hole at right angles to the barrel

D ...-T: with oil stop

Cat. no	AL acc. to VDE0295 table 5-9 (mm <sup>2</sup> )				CU acc. to VDE0295 table 5-9 (mm <sup>2</sup> )			Number of bolts	Dimensions (mm)			Torque moment (Nm)	Tool / outer and inner hexagon	
	rm	sm	re	se	rm	sm	re		L	D	d		shear-off head bolt	hexagon socket bolt
D1,5-16 SV(-T/-S)-V-K <sup>1),3)</sup>	10-16		10-16		1.5-16		1.5-16	2	30	12	6.1	4	SW8	
D1,5-16 SV(-T/-S)-V <sup>1),3)</sup>					1.5-16		1.5-16	2	30	12	6.1	4		SW3 <sup>4)</sup>
D1,5-35 SV(-T/-S)-V-K <sup>3)</sup>	10-35	35	10-35	35	1.5-35	35	1.5-35	2	36	16	9.0		SW5 <sup>2)</sup>	
D10-35 SV(-T/-S)-V(-K) <sup>3)</sup>	10-35	35	10-35	35	10-35	35	10-35	2	36	16	9.0	10	SW10	SW5
D25-50 SV(-T/-S)-V(-K)	25-50	35-50	25-50	35-50	25-50	35-50	25-35	2	36	18	10.0	12	SW10	SW5
D4-50 SV(-T/-S)-V-K	10-50	35-50	10-50	35-50	4-50	35-50	4-35	2	36	18	10.0		SW5 <sup>2)</sup>	
D16-95 SV(-T/-S)-V(-K)	16-95	35-95	16-95	35-95	16-95	35-95	16-35	2	55	25	14.0	22	SW10	SW6
D25-150 SV(-T/-S)-V-K	25-150	35-150	25-150	35-150	25-150	35-150	16-35	2	70	28	17.0		SW6 <sup>2) 5)</sup>	
D35-150 SV(-T/-S)-V(-K)	35-150	35-150	50-150	50-150	35-150	35-150	35	2	70	28	17.0	30	SW13 <sup>5)</sup>	SW6 <sup>5)</sup>
D25-185 SV(-T/-S)-V-K	25-185	35-185	25-185	35-185	25-185	35-185	25-35	4	80	32	19.0		SW6 <sup>2)</sup>	
D70-185 SV(-T/-S)-V(-K)	70-185	70-185	70-185	70-185	70-185	70-185		4	80	32	19.0	30	SW13	SW6
D50-240 SV(-T/-S)-V-K	50-240	50-240	50-240	50-240	50-240	50-240		4	120	35	22.0		SW6 <sup>2)</sup>	
D120-240 SV(-T/-S)-V(-K)	120-240	120-240	120-240	120-240	120-240	120-240		4	120	35	22.0	38	SW17	SW6

<sup>1)</sup> Connector Body: Brass <sup>2)</sup> Double shear-off-head bolt <sup>3)</sup> without sector channel

<sup>4)</sup> Hexagon socket bolt, steel

<sup>5)</sup> Bolt, brass (tin plated)

## Bolt system

We use grub screws with inner hexagons as well as single and multiple shear-off-head bolts that are equipped with an inner or outer hexagon.

Both are related to the various shear-off-areas of the bolt and their different torque moments. The torque moments follow the

rule that large conductor cross-sections need higher torque moments and smaller cross sections need lower torque moments.

The installation instruction describes the use of both hexagons and of the various center rings and inserts, for the

respective conductor types.

Grub screws are tightened with the prescribed torque.

## Ordering instructions

Please indicate the part number when ordering (see table).

### Order example

1 mechanical connector kit for 50-240 mm<sup>2</sup> with oil stop. Order according to the table: 1 mechanical connector kit D50-240 SV-T-V-K with part number G6602 17 27 (set of 4).

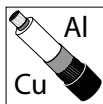
## Specifications and standards

The mechanical connectors have been tested according to IEC 61238-1 or VDE 0220 part 100 respectively.

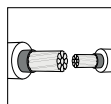
## Product range

A complete overview of our GPH products (ferrules & lugs) can be found in catalogue modules A, B, C and D.

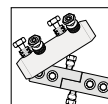
Mechanical connector type	Ordering part number
D1.5-16 SV-T-V-K D1.5-16 SV-S-V-K D1.5-16 SV-T-V D1.5-16 SV-S-V	G6603 01 01 G6603 01 02 G6603 01 03 G6603 01 04
D10-35 SV-T-V-K D10-35 SV-S-V-K D10-35 SV-T-V D10-35 SV-S-V	G6602 17 01 G6602 17 02 G6602 17 03 G6602 17 04
D4-50 SV-T-V-K D4-50 SV-S-V-K D25-50 SV-T-V-K D25-50 SV-S-V-K D25-50 SV-T-V D25-50 SV-S-V	G6602 17 05 G6602 17 06 G6602 17 07 G6602 17 08 G6602 17 09 G6602 17 10
D16-95 SV-T-V-K D16-95 SV-S-V-K D16-95 SV-T-V D16-95 SV-S-V	G6602 17 11 G6602 17 12 G6602 17 13 G6602 17 14
D25-150 SV-T-V-K D25-150 SV-S-V-K D35-150 SV-T-V-K D35-150 SV-S-V-K D35-150 SV-T-V D35-150 SV-S-V	G6602 17 15 G6602 17 16 (4ER-SET) G6602 17 17 G6602 17 18 G6602 17 19 G6602 17 20
D25-185 SV-T-V-K D25-185 SV-S-V-K D70-185 SV-T-V-K D70-185 SV-S-V-K D70-185 SV-T-V D70-185 SV-S-V	G6602 17 21 G6602 17 22 G6602 17 23 G6602 17 24 G6602 17 25 G6602 17 26
D50-240 SV-T-V-K D50-240 SV-S-V-K	G6602 17 27 (4ER-SET) G6602 17 28 (4ER-SET)



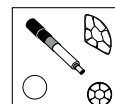
It is possible to connect different conductor materials.



It is possible to connect different conductor cross-sections.



Different designs available.



Can be used for all conductor shapes.

## SVMS / SVMS-P

**Heat-shrinkable in-line joints including mechanical connectors without/with parking position, suitable for installation under voltage, design acc. to DIN V 47640**

### Application

SVMS / SVMS-P joints are designed for all 3 ½, 4 and 5 core polymeric insulated cables (e.g. N(A)YY, N(A)YC(W)Y) with PVC or XLPE insulation as well as for PVC or PE outer sheaths. The joints are designed for use of mechanical connectors accommodating copper or

aluminum conductors. Joints offer a sealed indoor or outdoor application, fully submersible or directly buried.

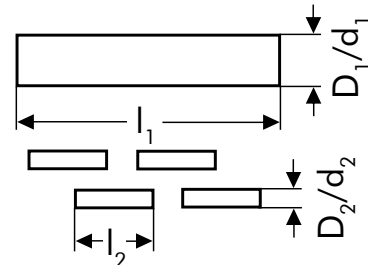
$U_o / U (U_m)$   
0.6/1 (1.2) kV

### Design

The joints consist of number 4 up to 5 of inner and 1 outer heat-shrinkable tube. All tubing in the kit is thick-walled and co-extruded with adhesive quality. Tubes dimensions are according to DIN V 47640.

### Technical characteristics

For application SVMS-P including a parking position on conductors for mechanical contacts a connector without oil stop is mandatory. Tube lengths for inner joints are than different to SVMS once.



### Specifications and standards

Heat-shrinkable tubes meet the requirements of CENELEC HD 631.2 S1. The dimensions of the mechanical connectors, that have been tested according to IEC 61238-1 or VDE 0220 part 100 respectively, correspond to DIN V 47640.



## Kit contents

The heat-shrinkable in-line joints are composed with following components:

- 4 (5) x inner joints
- 1 x overall protection tube
- 4 (5) x mechanical connectors with/without oil stop
- installation instructions

### SVMS HEAT-SHRINKABLE IN-LINE JOINT incl. mechanical connectors with oil stop up to 0.6/1 (1.2) kV without parking position for the connector on the conductors

Joint type	Dimensions outer tubes			Dimensions inner tubes			Ordering part number
	$I_1$	$D_1/d_1$	Qty. / KIT	$I_2$	$D_2/d_2$	Qty. / KIT	
SVMS Gr. 1    4 x 4-16	360	43/12	1	100	15/4	4	53182
SVMS Gr. 1B    5 x 4-16	360	43/12	1	100	15/4	5	53619
SVMS Gr. 2    4 x 16*-35	370	55/16	1	100	22/6	4	53183
SVMS Gr. 3    4 x 25-50	440	70/21	1	130	22/6	4	53184
SVMS Gr. 4    4 x 35-95	630	85/25	1	160	33/8	4	53185
SVMS Gr. 5    4 x 35-150	780	110/26	1	210	33/8	4	53186
SVMS Gr. 6    4 x 95-150	780	110/26	1	210	43/12	4	53187
SVMS Gr. 7    4 x 95*-240	950	130/36	1	260	43/12	4	53188

\* Only for PVC-insulated cables according to DIN VDE 0276 - 603

### SVMS-P HEAT-SHRINKABLE IN-LINE JOINT incl. mechanical connectors without oil stop up to 0.6/1 (1.2) kV with parking position for the connector on the conductors

Joint type	Dimensions outer tubes			Dimensions inner tubes			Ordering part number
	$I_1$	$D_1/d_1$	Qty. / KIT	$I_2$	$D_2/d_2$	Qty. / KIT	
SVMS-P Gr. 1    4 x 4-16	420	43/12	1	120	15/4	4	53189
SVMS-P Gr. 1B    5 x 4-16	420	43/12	1	120	15/4	5	57768
SVMS-P Gr. 2    4 x 16*-35	430	55/16	1	120	22/6	4	53190
SVMS-P Gr. 3    4 x 25-50	500	70/21	1	155	22/6	4	53191
SVMS-P Gr. 4    4 x 35-95	710	85/25	1	190	33/8	4	53192
SVMS-P Gr. 5    4 x 35-150	890	110/26	1	250	33/8	4	53193
SVMS-P Gr. 6    4 x 95-150	890	110/26	1	250	43/12	4	53194
SVMS-P Gr. 7    4 x 95*-240	1100	130/36	1	330	43/12	4	53195

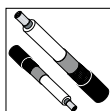
\* Only for PVC-insulated cables according to DIN VDE 0276 - 603

## Ordering instructions

Select the order part number of the joint type according to the cable type and the conductor cross-section.

### Example

Heat-shrinkable in-line joint for a 4 core polymeric insulated cable, nominal voltage 0.6/1 kV, conductor cross-section 35-150 mm<sup>2</sup>  
Part number: 53186



For use with other cross section, please contact our representative.



For use with other cables, please contact our representative.

## Cable preparation tools for installation

**MV accessories**

### I Rheycut II peeling tool with stop ring, size 1



Article numbers: peeling tool 51494 / spare cutter 51495

The peeling tool is suitable for removing the extruded outer semi-conductive cable screen of medium voltage cables. Field of application: Diameter over core insulation between 10 mm up to 52 mm. Depending on the required length of the outer semi-con layer it is possible to use the tool with or without length control. By using the tool without the length

control the semi-con layer can be removed up to a length of 25 mm measured from cut-off edge of outer cable sheath. Cutting depth is around 0.75 mm. In the event of semi-conductive screen thicker than this you can adjust the cutting depth of the blade up to a maximum of 1.2 mm.

### I 2-in-1 cable sheath and cable insulation cutter, size 1



Article numbers: cable sheath 59117 / spare cutter 51488

The tool is engineered for professional and safe stripping of the outer cable sheath of medium voltage cables having a minimum outer diameter of 15 mm up to maximum diameter of 57 mm.

The tool is also suitable for removing polymeric insulation of medium voltage cables in the aforementioned range.

It has been designed to provide spiral cutting (longitudinal) as well as circumferential cutting. The blade is specially formed with a guiding system lifting the material while cutting it to avoid any damages to the layers underneath. Cutting depth is adjustable.

### I Chamfering tool, size 1



Article numbers: chamfering tool 43523 / spare cutter 44129

The chamfering tool is suitable for XLPE cable insulation for a range of diameter from 12 mm to 45 mm.

This very simple to handle tool removes sharp edges at the cut-off edge of cable insulation to avoid possible damage to and to ease installation of slip-on accessories.

Due to its specially formed blade a radius is produced at the cut-off edge. This reduces enormously the force required to install non-size sensitive slip-on accessories.

### I Rheycut® Insulation Stripping Tool



Article numbers: 40001 for 10 kV; 40002 for 20 kV; 40003 for 30 kV  
Article numbers: spare cutter: 41083 for 10 kV; 41084 for 20 kV; 41085 for 30 kV

Tool for removing the core insulation of PVC or XLPE insulated medium voltage cables. Separate tools for voltage level of 10 kV, 20 kV and 30 kV can be delivered. Therefore no adjustment

of voltage level or conductor cross-section is necessary. Damaging the cable conductor is impossible due to the fixed cutting depth.



## Cable preparation tools for installation

MV accessories - for cables with conductor cross-sections > 500 mm<sup>2</sup>

### Rheycut II peeling tool with stop ring, size 2

Article numbers: peeling tool 55152 / spare cutter 51495



The peeling tool is suitable for removing the extruded outer semi-conductive cable screen of medium voltage cables. Field of application: Diameter over core insulation between 15 mm up to 60 mm. Depending on the required length of the outer semi-con layer it is possible to use the tool with or without length control.

By using the tool without the length control the semi-con layer can be removed up to a length of 25 mm measured from cut-off edge of outer cable sheath.

In the event of semi-conductive screen thicker than this you can adjust the cutting depth of the blade up to a maximum of 1.2 mm.

### 2-in-1 cable sheath and cable insulation cutter, size 2

Article numbers: cable sheath 59118 / spare cutter 55541



The tool is engineered for professional and safe stripping of the outer cable sheath of medium voltage cables having a minimum outer diameter of 20 mm up to maximum diameter of 70 mm. The tool is also suitable for removing polymeric insulation of medium voltage cables in the aforementioned range. It has been designed to provide

spiral cutting (longitudinal) as well as circumferential cutting. The blade is specially formed with a guiding system lifting the material while cutting it to avoid any damages to the layers underneath. Cutting depth is adjustable.

### Chamfering tool, size 2

Article numbers: chamfering tool 55154 / spare cutter 44129



The chamfering tool is suitable for XLPE cable insulation for a range of diameter from 15 mm to 60 mm. This very simple to handle tool removes sharp edges at the cut-off edge of cable insulation to avoid possible damage to and to ease

installation of slip-on accessories. Due to its specially formed blade a radius is produced at the cut-off edge. This reduces enormously the force required to install non-size sensitive slip-on accessories.

## I Tool case complete, size 1 (for cross-sections up to 500 mm<sup>2</sup>)

Ordering part number:

Tool case complete 51426

## I Tool case complete, size 2 (for cross-sections > 500 mm<sup>2</sup>)

Ordering part number:

Tool case complete 55155



(Figure: Tool case complete, size 1, for cross-sections up to 500 mm<sup>2</sup>)

**Scope of delivery:** Rigid case, two-in-one cable sheath and cable insulation cutter, chamfering tool, devices (stop rings, silicone grease and allen key for tooling adjustments)

## I Catalogue selection

Here you can find an overview of the available catalogues for our GPH and Nexans products. You can order these catalogues by phone or download the data from our web page.

**[www.nexans-power-accessories.com](http://www.nexans-power-accessories.com)**

- Heat-shrinkable straight joints and accessories up to 0.6/1 (1.2) kV
- Heat-shrink technology up to 18/30 (36) kV
- Cold-shrinkable joints
- Medium voltage equipment bushings
- Cold-shrinkable terminations
- Heat-shrinkable terminations
- High Voltage Accessories up to 170 kV
- Separable connectors for interface A
- Separable connectors for interface B
- Separable connectors for interface C
- Separable connectors for interface D
- Separable connectors for interface E
- Separable connectors for interface F

### Ferrules & lugs

- Catalogue A – clamps
- Catalogue B – compression joints
- Catalogue C – compression cable lugs
- Catalogue D – mechanical connectors, mechanical cable lugs and tools

## DMV65 Torque amplifier

### Application

The torque amplifier DMV65 is appropriate for a gentle removal of shear-off-head bolts of mechanical connectors using standard cordless screwdrivers. The tool enables an optimum clamping force using mechanical GPH connectors with conductor cross-sections up to 630 mm<sup>2</sup>. The DMV65 ensures outstanding installation quality for mechanical connectors and cable lugs up to Ø 52 mm.

### Technical characteristics

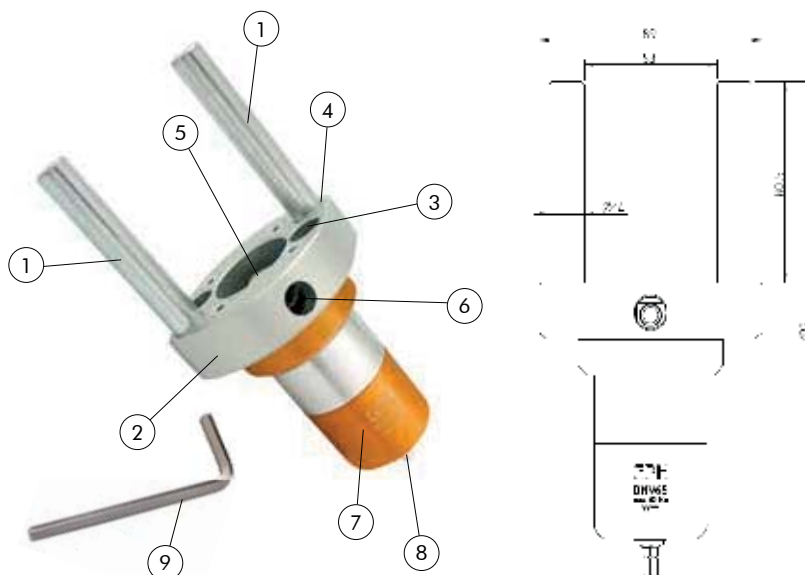
- Bit-entry
- ½" Square for mounting of the socket wrench
- Rod length 80,5 mm
- Transmission ratio 1:24
- Max. engine torque 65 Nm
- Min. driving torque 5 Nm

### Important notice

- The torque amplifier is not approved for live working installation.
- The tool does not have to be used for installation with impact wrenches.
- Consider the installation instruction of the respective mechanical connector or cable lug.

### Design

1. Rods, assembled, length 80,5 mm
2. Rod socket
3. Inner tapped hole for Ø < 40 mm
4. Outer tapped hole for Ø < 53 mm
5. ½" Square with ball coupling
6. Release hole
7. Gearbox
8. Bit-entry
9. Hexagon socket key SW5



### Material

- Operating parts and rods manufactured of high-strength quality steel
- Engine body made of aluminium with anodised surface

### Kit contents

- Rods, loose, length 100 mm
- Hexagon socket key SW5
- Nylon bag
- Instruction manual



### Ordering instructions

Cat.-No.	max. engine torque (Nm)	Package	Dimensions (mm)	Weight (g)
DREHMOMENTVERSTÄRKER DMV65	65	Nylon bag	199 x 89 x 63	ca. 941

## CABLE DATA SHEET / INQUIRY FORM

**Nexans Power Accessories  
Germany GmbH**

Ferdinand-Porsche-Straße 12  
D-95028 Hof/Saale

Phone: +49(0)9281 / 8306 - 0

Fax: +49(0)9281 / 8306 - 480

E-Mail: [Kundenzentrum.Hof@nexans.com](mailto:Kundenzentrum.Hof@nexans.com)

**Company:**

Customer ID:

Address:

Phone:

Fax:

E-Mail:

### Cable data:

#### Cable type:

Single core

Three core

Other

☐  
☐  
☐

Single core flexible rubber insulated cable

Three core flexible rubber insulated cable

Standard

☐  
☐

#### Conductor material:

Aluminium

Copper

☐  
☐

cross section ..... mm<sup>2</sup>

#### Conductor shape:

stranded conductor

solid conductor

flexible sector conductor

solid sector conductor

flexible conductor

☐  
☐  
☐  
☐  
☐

RM(V)

RE

SM

SE

RF

Other .....

#### System voltage:

3.6/6 (7.2) 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

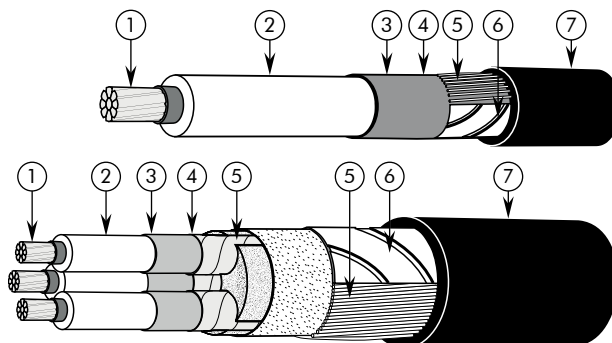
19/33 (36) kV

20.8/36 (42) kV

Other: kV

☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐  
☐

#### Type of cable:



XLPE ☐

PVC ☐

EPR ☐

graphite coated ☐

easy strip ☐

Wire screen ☐

Tape screen ☐

Cross section .....

Armour Max. Current ..... A

1. Ø Conductor

..... mm

2. Ø Core insulation

..... mm

3. Ø Semi-conductive screen

..... mm

4. Semi-conductive layer

bonded ☐

5. Metal screen

Al ☐

Cu ☐

6. Armour type

Yes ☐

No ☐

7. Outer sheath diameter:

..... mm





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