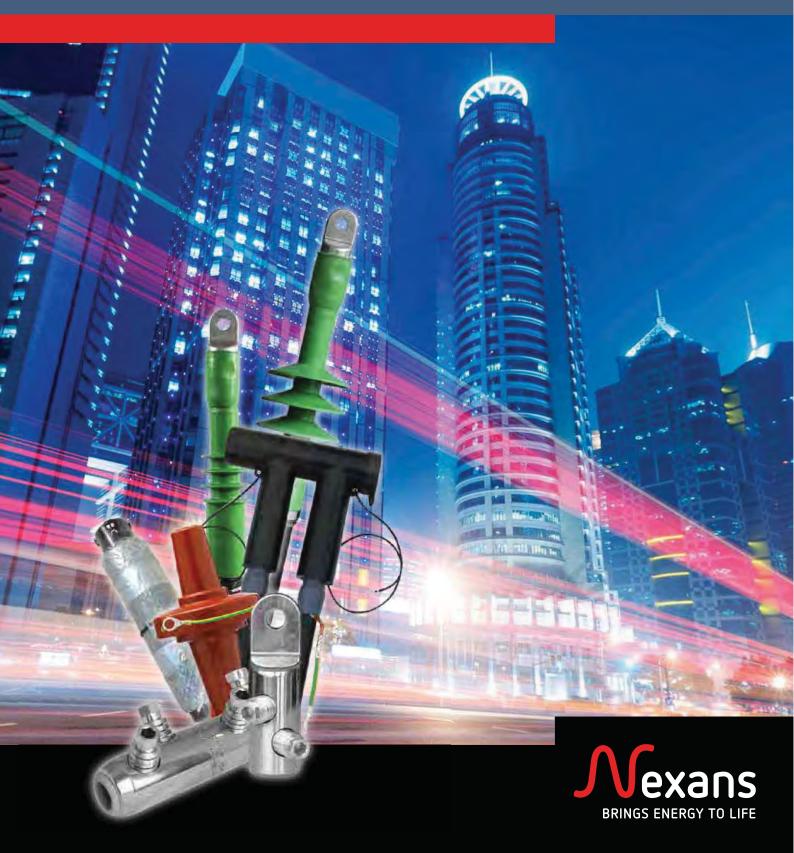
## EUROMOLD®/GPH® COMPACT CATALOGUE

CONNECTORS • TERMINATIONS • JOINTS • JUMPERS CONNECTION TECHNOLOGY • TOOLS



# Nexans

#### 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 bare 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) for conductor temperatures up to 90 °C. All conductor filling materials like tapes, yarn, powder or similar need to be completely removed before the installation. A check on basis of the actual existing conductor dimensions by the user is indispensable. This applies also for the application of Class 6 conductors or other special conductor types.

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 /.

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". We can provide a copy on request.

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 are available on request.

## LET'S GET CONNECTED!

Nexans Power Accessories is the leading European specialized innovator, manufacturer and distributor of low, medium and high voltage accessories as well as connection technology for energy transmission and distribution networks.



**Nexans brings energy to life** through an extensive range of advanced cabling and connectivity solutions. For over 120 years, innovation has been the company's hallmark, enabling Nexans to drive a safer, smarter and more efficient future together with its customers. Today, the Nexans Group is committed to facilitating energy transition by empowering its customers in four main business areas: Building & Territories (including utilities, smart grids, e-mobility), High Voltage & Projects (covering offshore wind farms, submarine interconnections, land high voltage), Telecom & Data (covering data transmission, telecom networks, hyperscale data centers, LAN) and Industry & Solutions (including renewables, transportation, Oil & Gas, automation).

**Nexans Power Accessories** has been a leader in pre-assembled cable accessories for more than 60 years. The company is represented in more than 40 countries worldwide.

The standard product range of **GPH**<sup>®</sup> compression or mechanical connectors and cable lugs is developed and produced as well as customized solutions. Nexans also manufactures ready-to-install pre-assembled cable lengths and factory tested cable bridges for industrial applications.

With the brand name **EUROMOLD**<sup>®</sup> we are a European market leader for medium voltage accessories. We offer the entire portfolio of separable connectors for interfaces A to F in proven EPDM technology with at least 3 mm conductive jacket. In this scope, longtime know-how and technological advance was successfully transferred into high voltage applications. We provide a complete range of cold-shrinkable and slip-on accessories up to 170 kV. For the connection of low and medium voltage cables, a series of Nexans heat-shrinkable terminations and joints up to 42 kV are available. An extensive range of additional equipment and a variety of dedicated installation training and tooling make Nexans a strong partner in the transmission and distribution of energy.

Nexans Power Accessories have set industrial standards and shaped European norms. Quality- and environmental awareness are central components of the corporate philosophy and management system. In addition to being certified according to DIN EN ISO 9001, we are also certified in the important sectors of environmental protection, energy and occupational safety.

#### 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 PROVE COMPETENCE.

Nexans products ensure operational reliability as network utilisation increases. Our references are more than 10 million connectors and cable lugs, 1.1 million premanufactured accessories and around 33,000 jumpers per year.

#### WE TAKE RESPONSIBILITY.

Nexans Power Accessories 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 R&D in the Nexans Group for cable connection technology.

#### STANDARDS 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.

#### WE ARE CERTIFIED.

DIN EN ISO 9001:2015, DIN EN ISO 14001:2015, DIN EN ISO 50001, OHRIS



A compact selection of our accessories up to 42 kV, 1250 A

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A compact selection of our accessories up to 42 kV, 1250 A

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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 several million of cable connectors worldwide for more than 55 years. Compared with the frequency of which other materials, such as silicone, are used for separable connectors, EPDM reaches more than 95%. 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 switch gears, 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 15 years.

I

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

• Thick-walled conductive EPDM jacket with 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 accumulating on the surface having negative effects on the conductivity of the shielding after a longer period of time.

• Connectors made of EPDM meet all international standard testings to the utmost satisfaction, including the reignition 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 gap between connector and bushing. De-energised connectors 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 a wrong place, which often happens using "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 technological advance 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.

Examples of application





AIS20 with mechanical cable lug



Transformer connection with 200LR



TS-24CSJ hybrid transition joint



AFN20 for smaller and larger cross-sections



PITO-E on transformer with bushings



SF-6 system connection with 480TB



AFN10 as a transformer connection



GTS1 heat-shrinkable straight joint





Transformer connection with 158LR



SF-6 system connection with 480TB+800SA

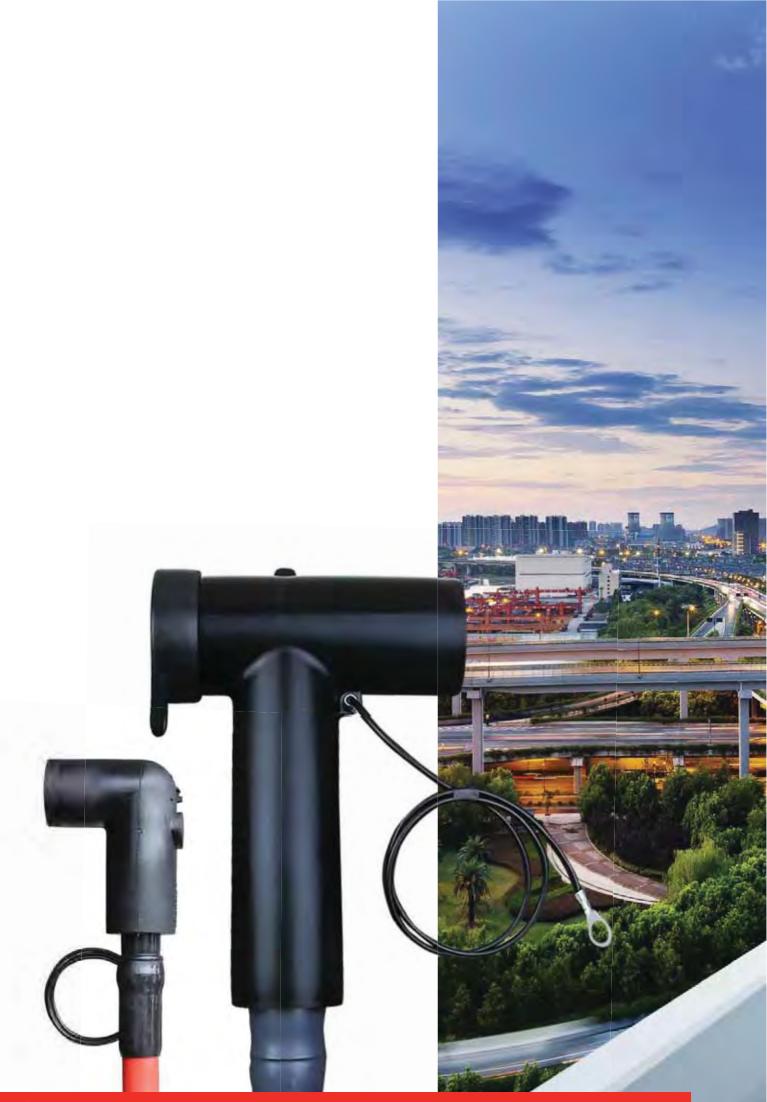


AIP20 as a transformer connection



24CSJA-S cold-shrinkable straight joint

02-09-2019



## **EUROMOLD® SEPARABLE CONNECTORS** up to 42 kV



## 200LR/G EUROMOLD® Elbow connector

I

Interface A up to 24 kV, 250 A

#### 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.
- New, compact design.
- Self-locking bolted contact with anti-twist system.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

U <sub>0</sub> / U (	<b>U</b> )
6/10 (12)	) kV
6.35/11 (12)	kV
8.7/15 (17.5)	kV
12/20 (24)	kV
12.7/22 (24)	

•

#### Design

- Conductive EPDM insert with integrated anti-twist and locking system
- 2. Conductive EPDM jacket
- Insulating EPDM layer between insert and jacket (with voltage detection point)
- 4. Type A interface as described by CENELEC EN 50180 and 50181
- 5. Bolted conductor contact
- 6. Earthing lead
- 7. Cable reducer

## Specifications and standards

The elbow connector 200LR/G meets the requirements of CENELEC HD 629.1.

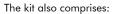
200 mm	

– 110 mm —

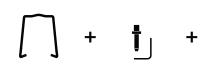
Separable connector         Nominal voltage         Current         Conductor cross-section (mm²)				
type	U <sub>o</sub> /U (kV)	I <sub>n</sub> (A)	min.	max.
200LR/G K200LR/G	6/10 12/20	250 250	25 35	150 150

#### I Kit contents

The complete (K)200LR/G elbow connector kit comprises 3 x the following components:



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



Bail restraint 200LRBA

I

Pin contact + hex. key

Connector housing (K)200BLR/G (with voltage detection point (K)200BLR/G/VD)





Conductor contact 200LRMC-25.95



Conductor contact 200LRMC-120.150

#### **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 contact. Order according to the table: 1 kit - K200LR/G with part number 501471.

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

Cross- section (mm²)	Dia. over core insulation (mm)		Ordering part number for (K)200LR/G with mechanical conductor contact LRMC		
	min.	max.	without voltage detection point with voltage detection		
			Nominal voltage U <sub>0</sub> /U 6/10	0 kV	
25 35 50 70 95	13.0	21.0	501470	502527	
120 150	21.5	28.5	502535	502539	
		١	lominal voltage  U <sub>0</sub> /U 12/20	kV (K)	
35 50 70 95	17.5	25.0	501471	502528	
120 150	21.5	28.5	502536	502540	



Order : KIT MT.





For outdoor applications.

**Nexans Power Accessories** 

## 200SR/G EUROMOLD® Straight connector

I

Interface A up to 24 kV, 250 A

#### 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.

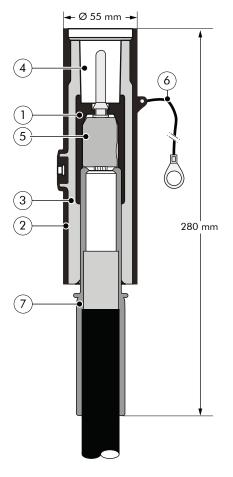
#### **Technical characteristics**

- The thick conductive EPDM jacket provides a total safe to touch screen to ensure safety.
- New, compact design.
- Self-locking bolted contact with anti-twist system.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

U <sub>0</sub> / U (	U)
6/10 (12)	kV
6.35/11 (12)	kV
8.7/15 (17.5)	
12/20 (24)	
12.7/22 (24)	kV

#### Design

- Conductive EPDM insert with integrated anti-twist and locking system
- 2. Conductive EPDM jacket
- Insulating EPDM layer between insert and jacket (with voltage detection point)
- 4. Type A interface as described by CENELEC EN 50180 and 50181
- 5. Bolted conductor contact
- 6. Earthing lead
- 7. Cable reducer



## Specifications and standards

The straight connector 200SR/G meets the requirements of CENELEC HD 629.1.

Separable connector	Nominal voltage	Current	Conductor cross-section (mm <sup>2</sup> )		
type	U <sub>o</sub> /U (kV)	I <sub>n</sub> (A) min.		max.	
200SR/G K200SR/G	6/10 12/20	250 250	25 35	150 150	

#### The kit also comprises: Kit contents + installation instructions The complete (K)200SR/G + silicone grease straight connector kit comprises + wipers 3 x the following components: + screen wire cable lugs Conductor contact 200SRMC-25.95 ζ Bail restraint Connector housing Cable reducer Conductor contact 200SRBA (K)200SRH/G 200CA-W 200SRMC-120.150 (with voltage detection point (K)200SRH/G/VD)

#### Ordering instructions

Indicate the part number when ordering (see table).

#### **Order example:**

I

I

1 straight connector kit for 12/20 kV, for 35-95 mm<sup>2</sup> with mechanical conductor contact. Order according to the table: 1 kit – K200SR/G with part number 501473.

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

Cross- section (mm²)	insul	ver core ation nm)	Ordering part number for (K)200SR/G mechanical conductor contact SRMC		
	min.	max.	without voltage detection point	with voltage detection point	
			Nominal voltage U <sub>0</sub> /U 6/10	) kV	
25 35					
50	13.0	21.0	501472	502529	
70					
95 120					
150	21.5	28.5	502537	502541	
		ľ	Nominal voltage  U <sub>0</sub> /U 12/20	kV (K)	
35					
50	175	05.0	501470	500500	
70	17.5	25.0	501473	502530	
95					
120	21.5	28.5	502538	502542	
150	21.5	20.5	502556	502542	



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





For outdoor applications.

**Nexans Power Accessories** 

## PITO-E EUROMOLD® Termination

Interface A 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

T

Each plug-in termination is tested for AC withstand prior to leaving the factory. U<sub>o</sub> / U (U<sub>m</sub>) 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 by CENELEC EN 50180 and 50181.

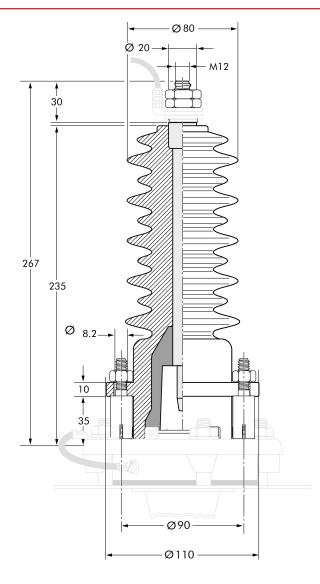
## Specifications and standards

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.

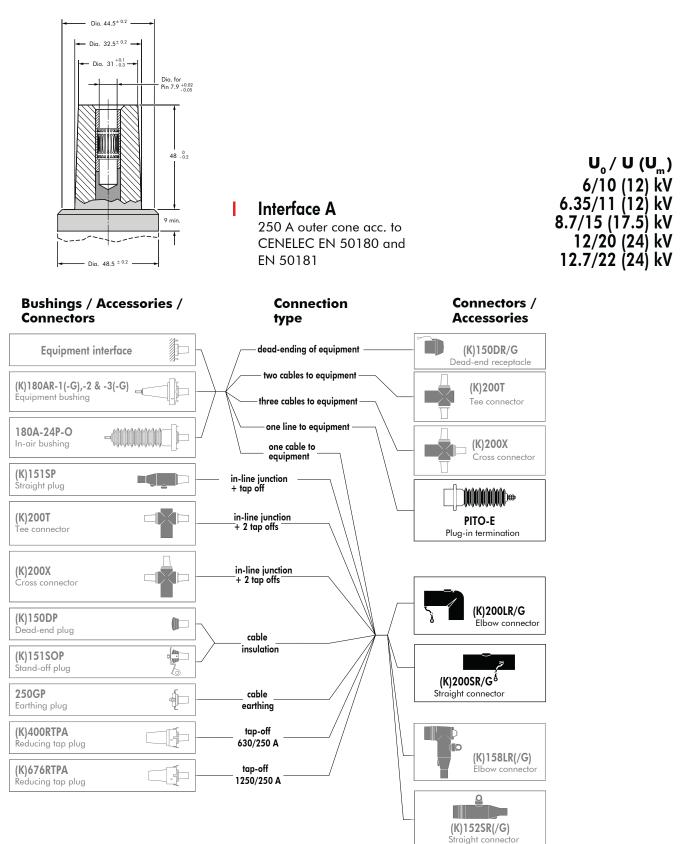


Plug-in termination type	Nominal voltage U <sub>0</sub> /U (kV)	Current I <sub>n</sub> (A)	Creepage distance (mm)	Part number
PITO-E	12.7/22	250	510	70275

02-09-2019

## CONNECTING POSSIBILITIES EUROMOLD® PIN-CONNECTOR SYSTEM

Interface A



## 400LR/G **EUROMOLD®** Elbow connector

T

Interface B up to 36 kV, 400 A

#### Application

**Technical characteristics** 

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

<b>U</b> <sub>0</sub> /	<b>U (</b>	<b>U</b> )
6/10	(12)	kV
6.35/11		
8.7/15 (1	7.5)	kV
12/2Ò	(24)	kV
12.7/22	(24)	kV
18/30	(36)	kV
19/33	(36)	kV

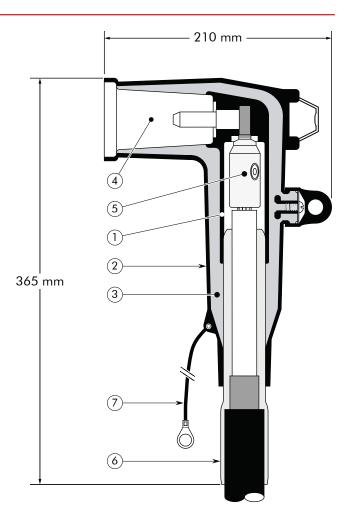
#### Design

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

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

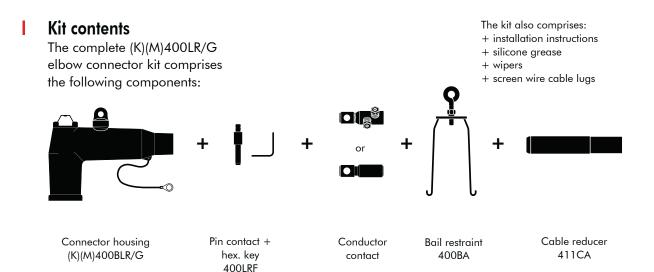
#### Specifications and standards

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



Separable connector	Nominal voltage U <sub>o</sub> /U (kV)	Current I <sub>n</sub> (A)	Conductor cross-section (mm²)		
type			min.	max.	
400LR/G	6/10	400	25	300	
K400LR/G	12/20	400	35	300	
M400LR/G	18/30	400	50	240	

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### Ordering instructions

Indicate the part number when ordering (see table).

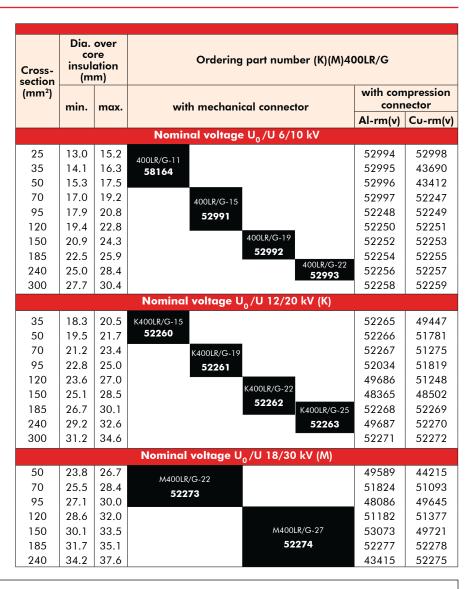
#### **Order example:**

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 and stranded conductors. Please contact our sales representative, when using other cable types.





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

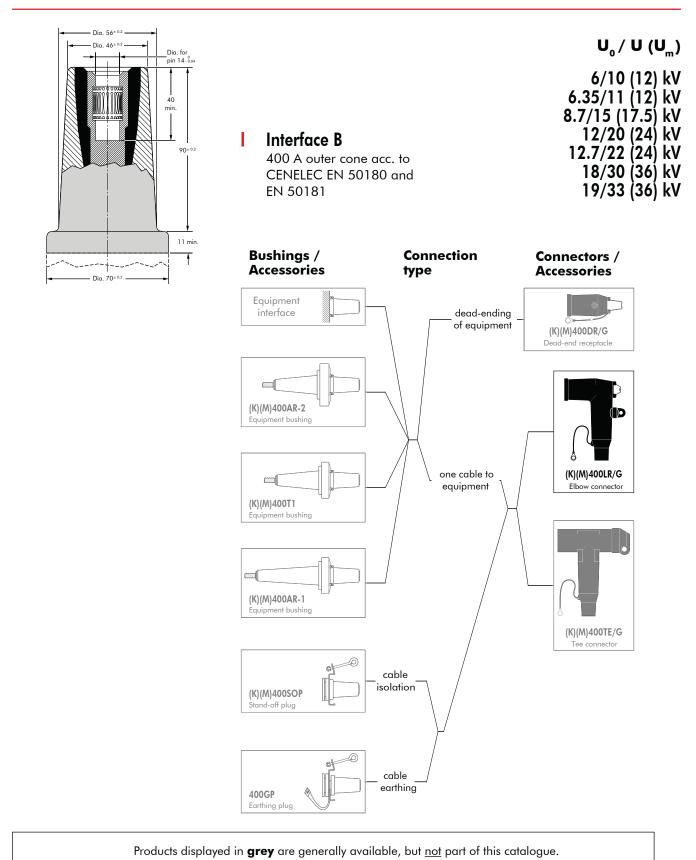


All accessories available with mechanical or compression conductor connector.

**Nexans Power Accessories** 

## **CONNECTING POSSIBILITIES EUROMOLD® PIN-CONNECTOR SYSTEM**

Interface B

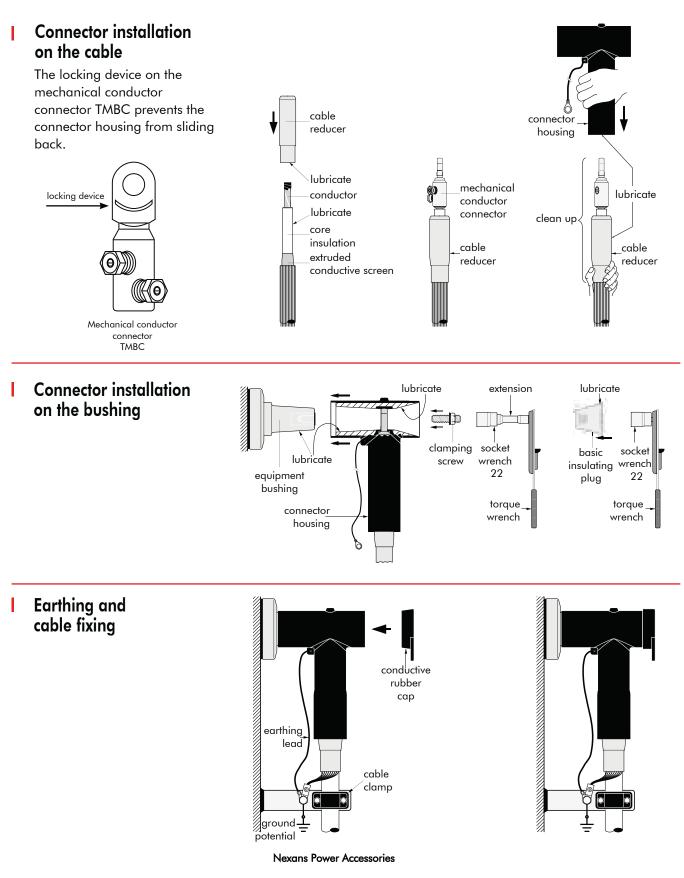


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## **INSTALLATION OVERVIEW**

Interface C

### 480TB/G EUROMOLD® Compact tee connector for application in multiple voltage levels



### 480TB/G EUROMOLD® Compact tee connector for multiple voltage levels

Interface C

up to 42 kV, 630 A/1250  $A^{1)}$ 

polymeric insulated medium

voltage cables with extruded

bonded extruded conductive

easy strip conductive screen or

screen. For use with other cable

types please contact our sales

#### Application Suitable for installation on

**Technical characteristics** 

- The thick conductive EPDM jacket provides a total safe to touch screen to ensure safety.
- Metal housing available on request.
- For use with test rod 800TR/800TR-A.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

<b>U</b> <sub>0</sub> /	U (I	<b>U</b> )
6/10	(12)	k٧
6.35/11	(12)	kV
8.7/15 (1	7.5)	kV
12/20	(24)	kV
12.7/22	(24)	kV
18/30	(36)	kV
19/33	(36)	kV
20.8/36	(42)	kV

02-09-2019

#### Design

L

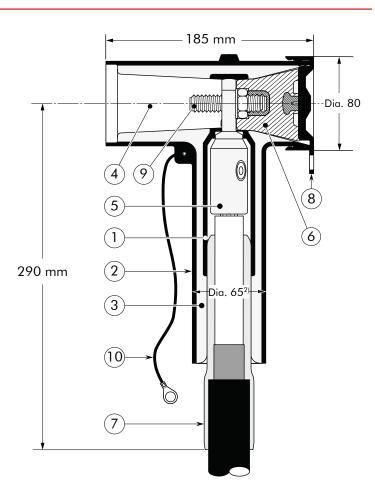
representative.

- 1. Conductive EPDM insert
- 2. Conductive EPDM jacket
- 3. Insulating EPDM layer
- 4. Type C1+C2 interface as described by CENELEC EN 50180 and 50181
- 5. Bolted or crimp conductor contact
- 6. Basic insulating plug (with voltage detection point, standard from 30 kV)
- 7. Cable reducer
- 8. Conductive rubber cap
- Clamping screw 430 TCS (optional M16 stud with spring washer and nut)
- 10. Earth lead

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

## Specifications and standards

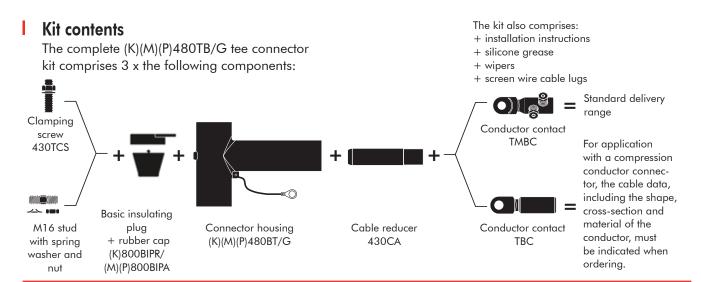
The 480TB/G separable connector meets the requirements of CENELEC HD 629.1. ATEX version can be delivered on request.



<sup>2)</sup> 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	Nominal voltage	Current	Conductor cross-section (mm <sup>2</sup> )	
type	U <sub>o</sub> /U (kV)	I <sub>n</sub> (A)	min.	max.
480TB/G	6/10	630/1250 <sup>1)</sup>	25	300
K480TB/G	12/20	630/1250 <sup>1)</sup>	35	300
M480TB/G	18/30	630/1250 <sup>1)</sup>	50	300
P480TB/G	20.8/36	630/1250 <sup>1)</sup>	50	240

<sup>1)</sup>When installed on appropriate equipment bushing.



Dia. over core

insulation (mm)

max.

15.2

16.3

17.5

19.2

20.8

22.8

24.3

25.9

28.4

30.4

20.5

21.7

23.4

25.0

27.0

28.5

30.1

32.6

34.6

26.7

28.4

30.0

32.0

33.5

35.1

37.6

39.6

26.7

28.4

30.0

32.0

33.5

35.1

37.6

min.

13.0

14.1

15.3

17.0

17.9

19.4

20.9

22.5

25.0

27.7

18.3

19.5

21.2

22.8

23.6

25.1

26.7

29.2

31.2

23.8

25.5

27.1

28.6

30.1

31.7

34.2

36.9

23.8

25.5

27.1

28.6

30.1

31.7

34.2

Cross-

section

 $(mm^2)$ 

25

35

50

70

95

120

150

185

240

300

35

50

70

95

120

150

185

240

300

50

70

95

120

150

185

240

300

50

70

95

120

150

185

240

#### **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 95-300 mm<sup>2</sup> with mechanical conductor connector and clamping screw 430 TCS. Order according to the table: 1 kit - K480TB/G with part number 501133.

Note: The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen and stranded conductors. <sup>3)</sup> 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.



please contact our representative.



For outdoor applications





Multirange assignment

Ordering part number for (K)(M)(P)480TB/G

with mechanical connector TMBC

with clamping screw 430TCS / with M16 stud

501127/

501128

501133/

501134

501139/

501140

501129/

501130

501135/

501136

501141/

501142

Nominal voltage U<sub>o</sub>/U 6/10 kV

Nominal voltage U<sub>0</sub>/U 12/20 kV (K)

Nominal voltage U<sub>0</sub>/U 18/30 kV (M)

Nominal voltage U<sub>0</sub>/U 20.8/36 kV<sup>3)</sup> (P)

501143/

501144

501125/

501126

501131/

501132

501137/

501138

All accessories available with mechanical or compression conductor connector

When installed or appropriate equipment bushing: 1250 A continuously.

501145/

501146

0
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0
N.
ЭĽ.
0
0
2

For use with

copper tape

screened cables

Order: Kit MT.

For use with other cable types

### 800PB/G EUROMOLD<sup>®</sup> Coupling connector for 480TB/G, 484TB/G and 489TB/G

Interface C

up to 42 kV, 630 A/1250 A<sup>1)</sup>

#### Application

Separable coupling connector 800PB/G for dual cable arrangement. It has been designed to be used with 480TB/G, 484TB/G or 489TB/G separable tee connector.

The cable arrangement might be extended by multiple coupling connectors.

#### Design

- 1. Interface designed to fit 480TB/G, 484TB/G or 489TB/G tee connector
- 2. Bus for 800PB/G
- 3. Bolted or crimp conductor contact
- 4. Conductive EPDM insert
- 5. Conductive EPDM jacket
- Insulating EPDM layer moulded between the insert and the jacket
- 7. Cable reducer
- 8. Conductive EPDM cap
- Basic insulating plug (with voltage detection point, standard from 30 kV)
- 10. Earth lead

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

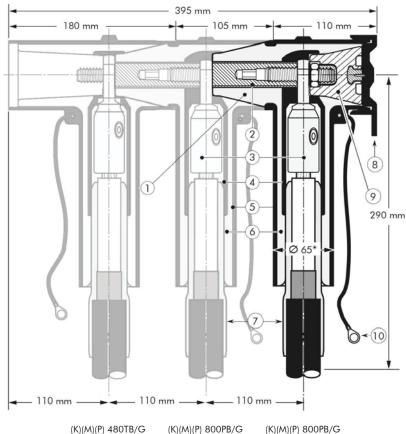
## Specifications and standards

The 800PB/G coupling connector meets the requirements of CENELEC HD 629.1. ATEX version can be delivered on request.

Technical	<b>characteristics</b>
-----------	------------------------

- A thick conductive EPDM jacket provides a total safe to touch screen.
- For use with test rod 800TR/800TR-A.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

<b>U</b> <sub>0</sub> /	U (	<b>U</b> )
6/10	(12)	kV
6.35/11	(12)	kV
8.7/15 (1	7.5)	kV
12/2Ò	(24)	kV
12.7/22	(24)	kV
18/30	(36)	kV
19/33	(36)	kV
20.8/36	(42)	kV



(K)(M)(P) 480TB/G (K)(M)(P) 800PB/G Compact tee connector Coupling connector (K)(M)(P) 800PB/G Coupling connector

02-09-2019

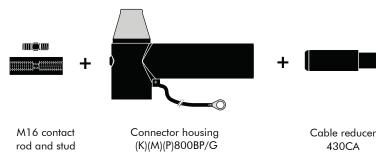
 $^{\rm 2)}$  The indicated diameter is a die dimension. Depending on the conductor cross-section used, a deviation of up to +5 mm is possible.

Separable connector	Nominal voltage	Current	Conductor cros	s-section (mm²)
type	U <sub>o</sub> /U (kV)	I <sub>n</sub> (A)	min.	max.
800PB/G	6/10	630/1250 <sup>1)</sup>	25	300
K800PB/G	12/20	630/1250 <sup>1)</sup>	35	300
M800PB/G	18/30	630/1250 <sup>1)</sup>	50	300
P800PB/G	20.8/36	630/1250 <sup>1)</sup>	50	240

<sup>1)</sup> When installed on appropriate equipment bushing.

#### L Kit contents

The complete (K)(M)(P)800PB/G coupling connector kit comprises 3 x the following components:



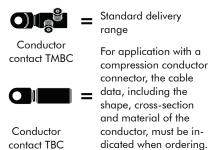
The kit also comprises:

+ installation instructions

+ silicone grease

+ wipers

+ screen wire cable lugs



For application with a compression conductor connector, the cable data, including the shape, cross-section

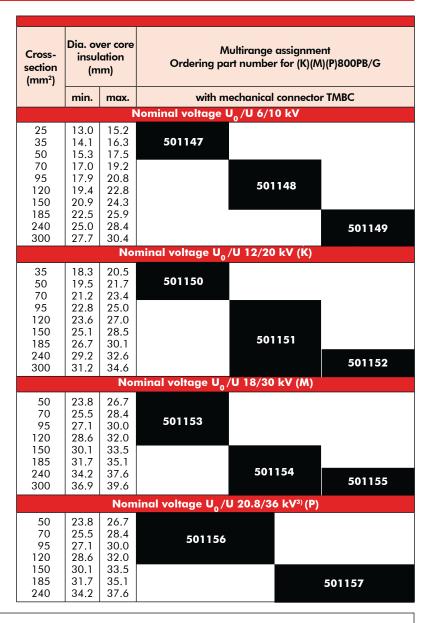
#### **Ordering instructions**

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

#### **Order example:**

1 coupling connector kit for 12/20 kV, for 95-300 mm<sup>2</sup> with mechanical conductor connector. Order according to the table: K800PB/G with part number 501151.

Note: The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen and stranded conductors. <sup>3)</sup> Since the dimensions for cables at voltage level 20.8/36 (42) kV are not yet standardised, the conductor crosssections 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 outdoor

applications

430CA







When installed on appropriate equipment bushing: 1250 A continuously.

02-09-2019

For use with

copper tape

screened cables

Order: Kit MT.



other cable types please contact our representative.

**Nexans Power Accessories** 

### 484TB/G EUROMOLD® Compact tee connector for multiple voltage levels

Interface C

up to 42 kV, 630 A/1250  $A^{11}$ 

polymeric insulated medium

voltage cables with extruded

bonded extruded conductive

types please contact our sales

easy strip conductive screen or

screen. For use with other cable

#### Application Suitable for installation on

#### **Technical characteristics**

- The thick conductive EPDM jacket provides a total safe to touch screen to ensure safety.
- For multiple voltage levels.
- For use with test rod 800TR/800TR-A.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

U <sub>0</sub> /	U (I	U <sub>m</sub> )
6/10	(12)	k٧
6.35/11	(12)	kV
8.7/15 (1	Ż.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

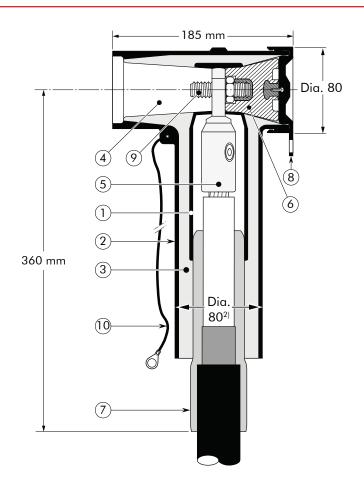
representative.

- 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 voltage detection point)
- 7. Cable reducer
- 8. Conductive rubber cap
- 9. Clamping screw M16 with spring washer and nut
- 10. Earth lead

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

## Specifications and standards

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

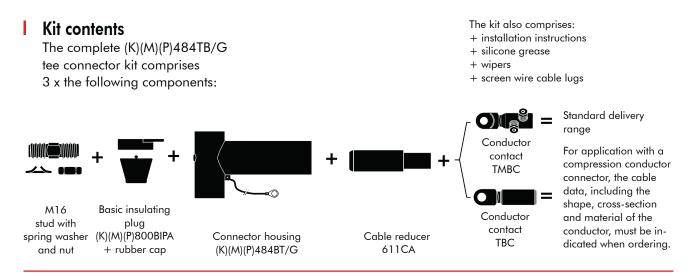


<sup>2)</sup> The indicated diameter is a die dimension. Depending on the conductor cross-section used, a deviation of up to +5 mm is possible.

02-09-2019

Separable connector	Nominal voltage	Current	Conductor cross-section (mm <sup>2</sup> )	
type	U <sub>o</sub> /U (kV)	I <sub>n</sub> (A)	min.	max.
484TB/G K484TB/G M484TB/G P484TB/G	6/10 12/20 18/30 20.8/36	630/1250 <sup>1)</sup> 630/1250 <sup>1)</sup> 630/1250 <sup>1)</sup> 630/1250 <sup>1)</sup>	240 240 240 240	630 630 630 630

<sup>1)</sup>When installed on appropriate equipment bushing



Dia. over core

insulation (mm)

Cross-

#### **Ordering instructions** I

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

#### **Order example:**

1 compact tee connector kit for 12/20 kV, for 240-400 mm<sup>2</sup> with mechanical conductor connector.

Order according to the table: K484TB/G with part number 57387.

Note: The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen and stranded conductors. <sup>4)</sup> 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.

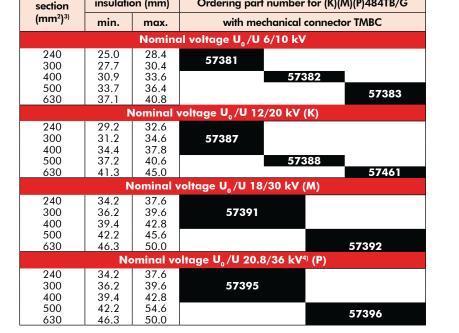






other cable types please contact our representative

**Nexans Power Accessories** 



Multirange assignment

Ordering part number for (K)(M)(P)484TB/G

<sup>3)</sup> Other cross-sections available on request.



For outdoor

applications.





All accessories available with mechanical or compression conductor connector



appropriate equipment bushing: 1250 A continuously.

02-09-2019

23

### 804PB/G EUROMOLD<sup>®</sup> Coupling connector for 480TB/G, 484TB/G and 489TB/G

I

Interface C

up to 42 kV, 630 A/1250 A<sup>1)</sup>

#### Application

Separable coupling connector 804PB/G for dual cable arrangement. It has been designed to be used with 480TB/G, 484TB/G or 489TB/G separable tee connector. The cable arrangement might

be extended by multiple coupling connectors.

#### Design

- 1. Interface designed to fit 480TB/G, 484TB/G or 489TB/G tee connector
- 2. Bus for 804PB/G
- Bolted or crimp conductor contact
- 4. Conductive EPDM insert
- 5. Conductive EPDM jacket
- Insulating EPDM layer moulded between the insert and the jacket
- 7. Cable reducer
- 8. Conductive EPDM cap
- 9. Basic insulating plug (with voltage detection point)
- 10. Earth lead

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

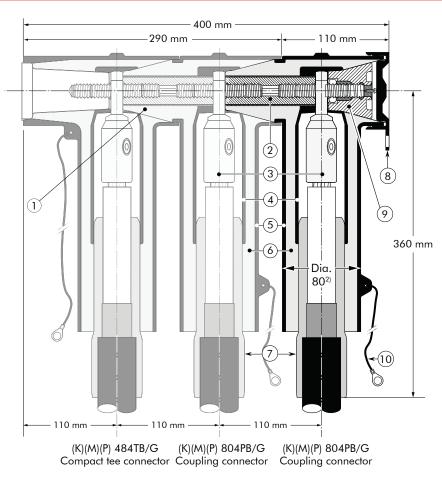
#### Specifications and standards

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

#### **Technical characteristics**

- A thick conductive EPDM jacket provides a total safe to touch screen.
- For use with test rod 800TR/800TR-A.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

<b>U</b> <sub>0</sub> /	<b>U (</b>	U_)
6/10	(12)	kV
6.35/11	(12)	kV
8.7/15 (1	7.5)	kV
12/2Ò		-
12.7/22		
18/30	· · · · · ·	
19/33	· · · · · · · · · · · · · · · · · · ·	
20.8/36		
20.0/00	(74)	IX V



<sup>2)</sup> 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	Nominal voltage	Current	Conductor cros	s-section (mm²)
type	U <sub>o</sub> /U (kV)	I <sub>n</sub> (A)	min.	max.
804PB/G	6/10	630/1250 <sup>1)</sup>	240	630
K804PB/G	12/20	630/1250 <sup>1)</sup>	240	630
M804PB/G	18/30	630/1250 <sup>1)</sup>	240	630
P804PB/G	20.8/36	630/1250 <sup>1)</sup>	240	630

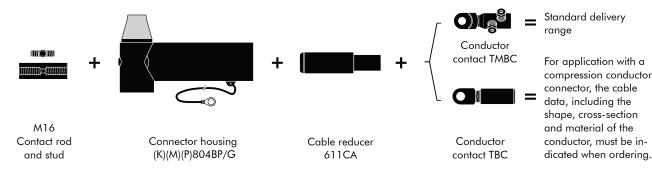
02-09-2019

<sup>1)</sup>When installed on appropriate equipment bushing.

L

#### 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 240-400 mm<sup>2</sup> with mechanical conductor connector. Order according to the table: K804PB/G with part number 57405.

**Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen and stranded conductors. <sup>4)</sup> 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 other cable types please contact our representative

**Nexans Power Accessories** 

Dia. over core Multirange assignment Cross-Ordering part number for (K)(M)(P)804PB/G insulation (mm) section (mm<sup>2</sup>)<sup>3)</sup> with mechanical connector TMBC min. max. oltage U<sub>o</sub>/U 6/10 kV Nomina 240 28.4 25.0 57399 300 27.7 30.4 400 30.9 33.6 57400 500 33.7 36.4 57401 630 37.1 40.8 Nominal voltage U<sub>o</sub>/U 12/20 kV (K) 240 29.2 32.6 57405 300 31.2 34.6 400 37.8 34.4 57406 500 37.2 40.6 630 41.3 45.0 57462 Nominal voltage U<sub>o</sub>/U 18/30 kV (M) 240 34.2 37.6 57409 300 39.6 36.2 400 39.4 42.8 500 42.2 45.6 57410 50.0 630 46.3 Nominal voltage  $U_{0}/U$  20.8/36 kV<sup>4)</sup> (P) 240 34.2 37.6 57413 300 36.2 39.6 400 39.4 42.8 500 42.2 54.6 57414

The kit also comprises:

+ silicone grease

+ wipers

+ installation instructions

+ screen wire cable lugs

46.3 <sup>3)</sup> Other cross-sections available on request.

50.0

630



For outdoor

applications.







When installed on appropriate equipment bushing: 1250 A continuously

### 489TB/G EUROMOLD® Compact tee connector for multiple voltage levels

Interface C

up to 42 kV, 630 A/1250  $A^{1)}$ 

polymeric insulated medium

voltage cables with extruded

bonded extruded conductive

easy strip conductive screen or

screen. For use with other cable types please contact our sales

#### Application Suitable for installation on

#### | Technical characteristics

- The thick conductive EPDM jacket provides a total safe to touch screen to ensure safety.
- For multiple voltage levels.
- For use with test rod 800TR/800TR-A.
- Each separable connector is tested for AC withstand and partial discharge prior to leaving the factory.

U <sub>0</sub> /	U (I	U)
6/10	(12)	k٧
6.35/11	(12)	kV
8.7/15 (1	7.5)	kV
12/20	(24)	kV
12.7/22	(24)	k٧
18/30	(36)	k٧
19/33	(36)	kV
20.8/36	(42)	kV

#### Design

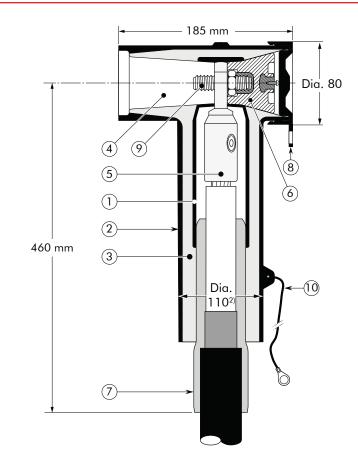
representative.

- 1. Conductive EPDM insert
- 2. Conductive EPDM jacket
- 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 voltage detection 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.

#### Specifications and standards

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

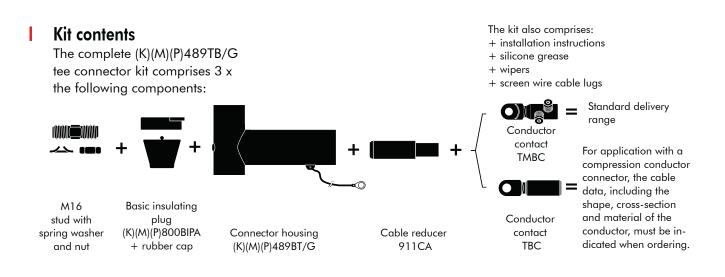


 $^{\rm 2)}$  The indicated diameter is a die dimension. Depending on the conductor cross-section used, a deviation of up to +5 mm is possible.

Separable connector	Nominal voltage	Current	Conductor cros	s-section (mm²)
type	U <sub>o</sub> /U (kV)	I <sub>n</sub> (A)	min.	max.
489TB/G	6/10	630/1250 <sup>1)</sup>	800	1200
K489TB/G	12/20	630/1250 <sup>1)</sup>	800	1200
M489TB/G	18/30	630/1250 <sup>1)</sup>	800	1200
P489TB/G	20.8/36	630/1250 <sup>1)</sup>	800	1200

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<sup>1)</sup> When installed on appropriate equipment bushing.



#### 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.

#### Note:

I

The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen and stranded conductors. <sup>4)</sup> 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

**Nexans Power Accessories** 

Dia. over core Article classification Cross-Ordering part number for (K)(M)(P)489TB/G insulation (mm) section (mm<sup>2</sup>)<sup>3)</sup> with mechanical connector TMBC min. max. Nominal voltage U<sub>o</sub>/U 6/10 kV 800 40.0 44.6 57199 1000 43.8 48.0 1200 On request Nominal voltage U<sub>o</sub>/U12/20 kV (K) 57200 800 44.2 48.0 1000 52.8 57201 47.8 1200 On request Nominal voltage U<sub>o</sub> /U 18/30 kV (M) 800 49.2 53.8 57202 53.0 1000 57.8 57203 1200 On request Nominal voltage U<sub>0</sub> /U 20.8/36 kV<sup>4)</sup> (P) 57204 800 49.2 53.8 57205 1000 53.0 57.8 1200 On request

<sup>3)</sup> Other cross-sections available on request.



For outdoor

applications.



Components can be ordered individually.

When installed on appropriate equipment bushing: 1250 A continuously.

27

### 809PB/G EUROMOLD<sup>®</sup> Coupling connector for 480TB/G, 484TB/G and 489TB/G

I

Interface C

up to 42 kV, 630 A/1250 A<sup>1)</sup>

#### Application

Separable coupling connector 809PB/G for dual cable arrangement. It has been designed to be used with 480TB/G, 484TB/G or 489TB/G separable tee connector. The cable arrangement might be extended by multiple

coupling connectors.

#### Design

- 1. Interface designed to fit 480TB/G, 484TB/G and 489TB/G tee connector
- 2. Bus for  $809 \mbox{PB/G}$
- Bolted or crimp conductor contact
- 4. Conductive EPDM insert
- 5. Conductive EPDM jacket
- Insulating EPDM layer moulded between the insert and the jacket
- 7. Cable reducer
- 8. Conductive rubber cap
- 9. Basic insulating plug (with voltage detection point)
- 10. Earth lead

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

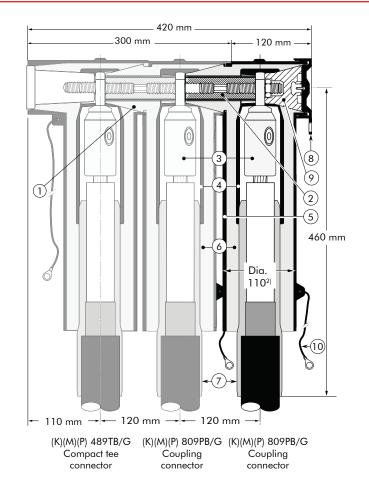
### Specifications and standards

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



- 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.

U <sub>o</sub> /	U (	U)
6/10	(12)	kV
12/20		
18/30	(36)	kV
20.8/36	(42)	kV



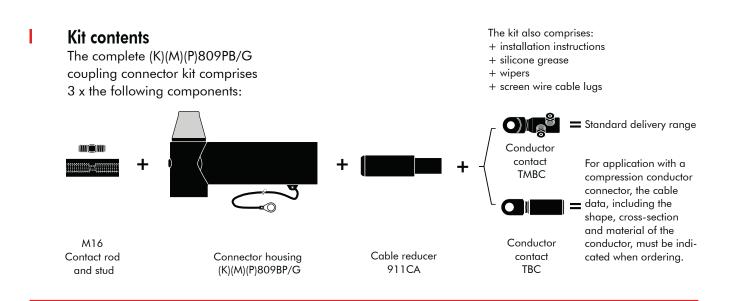
 $^{2)}\mbox{The}$  indicated diameter is a die dimension. Depending on the conductor cross-section used, a deviation of up to +5 mm is possible.

Separable connector	Nominal voltage	Current	Conductor cross-section (mm <sup>2</sup> )		
type	U <sub>o</sub> /U (kV)	I <sub>n</sub> (A)	min.	max.	
809PB/G	6/10	630/1250 <sup>1)</sup>	800	1200	
K809PB/G	12/20	630/1250 <sup>1)</sup>	800	1200	
M809PB/G	18/30	630/1250 <sup>1)</sup>	800	1200	
P809PB/G	20.8/36	630/1250 <sup>1)</sup>	800	1200	

02-09-2019

<sup>1)</sup> When installed on appropriate equipment bushing.

I



### 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

table: K809PB/G with part number 57207.

Cross- section (mm²) <sup>3)</sup>	Dia. over core insulation (mm)		Article classification Ordering part number for (K)(M)(P)809PB/G	
()	min.	max.	with mechanical	connector TMBC
		Nom	inal voltage U <sub>0</sub> /U 6/10 k <sup>v</sup>	V
800	40.0	44.6		
1000	43.8	48.0	572	206
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 re	quest
	1	Nomino	al voltage U <sub>0</sub> /U 18/30 kV	(M)
800	49.2	53.8	57209	
1000	53.0	57.8		57210
1200			On re	quest
	1	Nominal	voltage U <sub>0</sub> /U 20.8/36 kV	<sup>(4)</sup> (P)
800	49.2	53.8	57211	
1000	53.0	57.8		57212
1200			On re	quest

#### Note:

The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen and stranded conductors. <sup>4)</sup> Since the dimensions for cables at voltage level 20.8/36 (42) kV are not yet standardised, the conductor <sup>3)</sup> Other cross-sections available on request.

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 other cable types please contact our representative.

**Nexans Power Accessories** 

**9** 

For outdoor applications.



When installed on appropriate equipment bushing: 1250 A continuously.

### 800SA EUROMOLD<sup>®</sup> Surge arrester for 480TB/G, 484TB/G and 489TB/G Compact tee connector

Interface C

up to 42 kV, 630 A/1250 A

#### Application

Technical characteristics

- Surge arrester 800SA 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.
- This metal oxide varistor has been designed to be used in combination with 480TB/G, 484TB/G and 489TB/G separable tee connector, 800PB/G, 804PB/G and 809PB/G coupling connector or 480BE/G bushing extender.
- Each arrester is tested for AC withstand prior to leaving the factory.

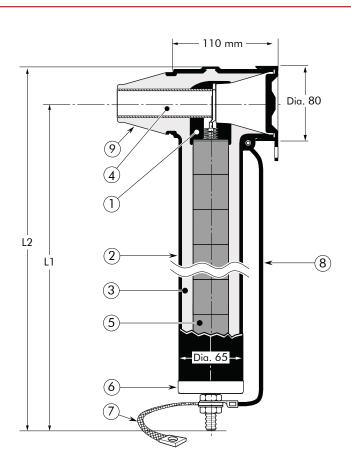
<b>U</b> <sub>0</sub> /	<b>U (</b>	<b>U</b> )
6/10	(12)	kV
6.35/11	(12)	kV
8.7/15 (1		kV
12/20		kV
12.7/22		kV
18/30	(36)	kV
19/33	(36)	kV
20.8/36	(42)	kV

#### Design

- 1. Conductive EPDM insert
- 2. Conductive EPDM jacket
- 3. Insulating EPDM layer
- 4. Receptacle for contact rod
- 5. Metal oxide valve elements
- 6. Steel cap
- 7. Earth connection
- 8. Earth lead
- Interface designed to fit 480TB/G, 484TB/G and 489TB/G tee connector, 800PB/G, 804PB/G and 809PB/G coupling connector or 480BE/G bushing extender

#### Specifications and standards

The 800SA surge arrester meets 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.

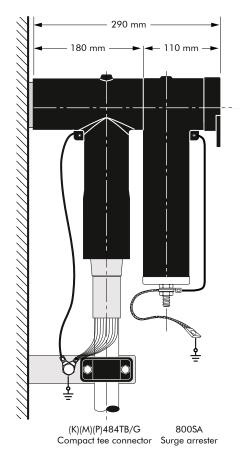
#### Note:

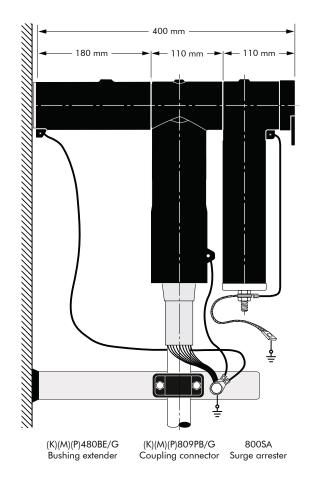
The order information only applies to the use in compensated, high-impedance networks. Products for divergent parameters available on request.

Surge arrester	Nominal dis- charge current	Rated voltage <sup>1)</sup>	tage <sup>1)</sup> operating voltage pulse withstand (mm)		ating voltage pulse withstand (mm)	Ordering part number	
type	l <sub>n</sub> (kA)	U <sub>r</sub> (kV)	U <sub>c</sub> (kV)	(kA)	L1	L2	nomber
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	490	85817
800SA-10-45N	10	45	36.0	100	450	490	85819
800SA-10-51N	10	51	40.8	100	450	490	87147

<sup>1)</sup> Surge arresters for other rated voltages available on request.

## I Typical application and dimensions





#### 480BE/G EUROMOLD<sup>®</sup> Asymmetrical bushing extender Interface C

Т

up to 42 kV, 1250 A<sup>1)</sup>

#### Application

#### Technical characteristics

- The separable bushing extender with earth lead provides an extension piece to allow cables to stand away from equipment. It has been designed to be used in combination with coupling connector 800PB/G, 804PB/G or 809PB/G.
- The thick conductive EPDM jacket provides a total safe to touch screen to ensure safety.
- Each bushing extender is tested for AC withstand and partial discharge prior to leaving the factory.

U₀ / U (	( <b>U</b> )
6/10 (12	) kV
6.35/11 (12	
8.7/15 (17,5	) kV
12/20 (24	
12.7/22 (24	
18/30 (36	
20.8/36 (42	

#### Design

- 1. Conductive EPDM insert
- 2. Conductive EPDM jacket
- Insulating EPDM layer moulded between the insert and the jacket
- 4. Type C1 + C2 interface as described by CENELEC EN 50180 and 50181

5. Earth lead

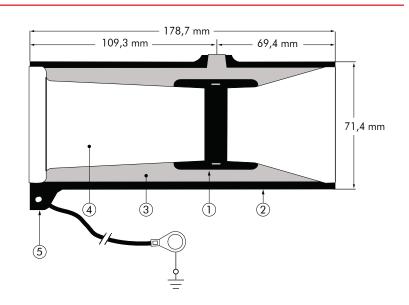
For use with coupling connectors with compact plug and interface C equipment bushing as described by CENELEC EN 50180 and EN 50181.

## Specifications and standards

The 480BE/G bushing extender meets the requirements of CENELEC HD 629.1.

Asymmetrical bushing extender type	Nominal voltage U₀/U (kV)	Current I <sub>n</sub> (A)
480BE/G	6/10	1250")
K480BE/G	12/20	12501)
M480BE/G	18/30	1250 <sup>1)</sup>
P480BE/G	20.8/36	12501)

<sup>1)</sup> When installed on appropriate equipment bushing.



L

## 400TR/800TR/800TR-A EUROMOLD® Test rod for cable testing

L

Interface C

#### Application

The test rod can be used as galvanic contact to the conductor for cable fault location, cable testing, phasing checks etc. The test lead may be connected by cable lug or insulated test pins.

#### Technical characteristics

Use 400TR for the following connector types:

- Tee connector 400TE
- Tee connector 400TB/G
- Tee connector 440TB/G
- Coupling connector 440PB/G
- Compact tee connector 430TB/G
- Coupling connector 300PB/G

Use 800TR for the following connector types:

- Compact tee connector 480TB/G, 484TB/G and 489TB/G
- Coupling connector 800PB/G, 804PBG and 809PB/G

#### Design

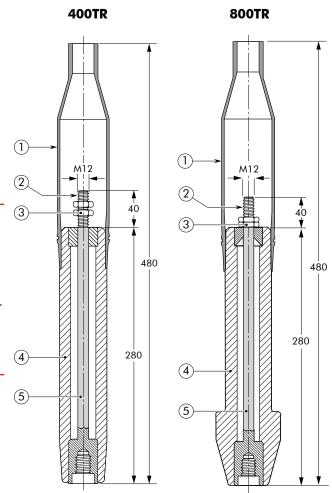
- 1. Conductive EPDM insulating shroud
- 2. Threaded rod for test connection
- 3. M12 nuts for connecting the lest lead
- 4. Insulation
- 5. Copper test rod stem

#### **Installation**

The test rod is screwed into the connector instead of the basic insulating plug. Then the test lead is connected to the threaded stem and the insulating shroud moved to its final position.

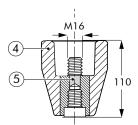
#### Ordering instructions

Simply specify test rod 400TR, 800TR or screwed adapter 800TR-A



#### 800TR-A

Screwed adapter 800TR-A to be used with test rod 400TR.



Test rod type	Maximum AC test voltage (50 Hz - 1 min)	Maximum DC test voltage (8 x U <sub>0</sub> - 30 min)	Impulse voltage (1.2 x 50 μs) min	Ordering part number
400TR	36 kV	96 kV	95 kV	70126
800TR	36 kV	96 kV	95 kV	85830
800TR-A	36 kV	96 kV	95 kV	87493

## **POSSIBLE ARRANGEMENTS**

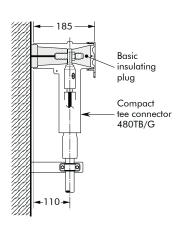
L

L

Interface C

#### 480TB/G

Single cable arrangement

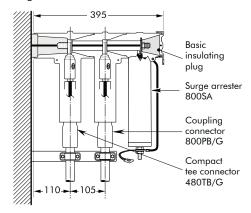


#### **480TB/G-P2** Dual cable arrangement

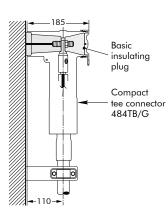
290 Basic insulating plug Coupling connector 800PB/G Compact tee connector 480TB/G

480TB/G-P2 + 800SA

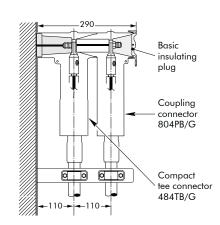
Dual cable arrangement with surge arrester



Single cable arrangement

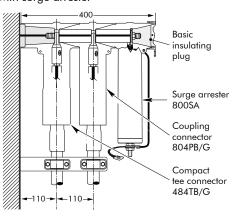


**484TB/G-P2** Dual cable arrangement



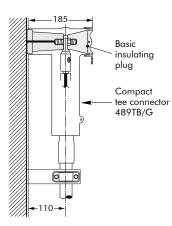
#### 484TB/G-P2 + 800SA

Dual cable arrangement with surge arrester

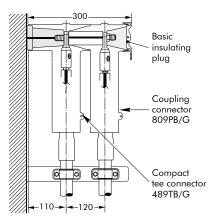


#### 489TB/G

Single cable arrangement

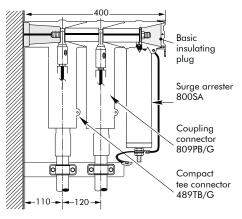


Uual cable arrangement



#### 489TB/G-P2 + 800SA

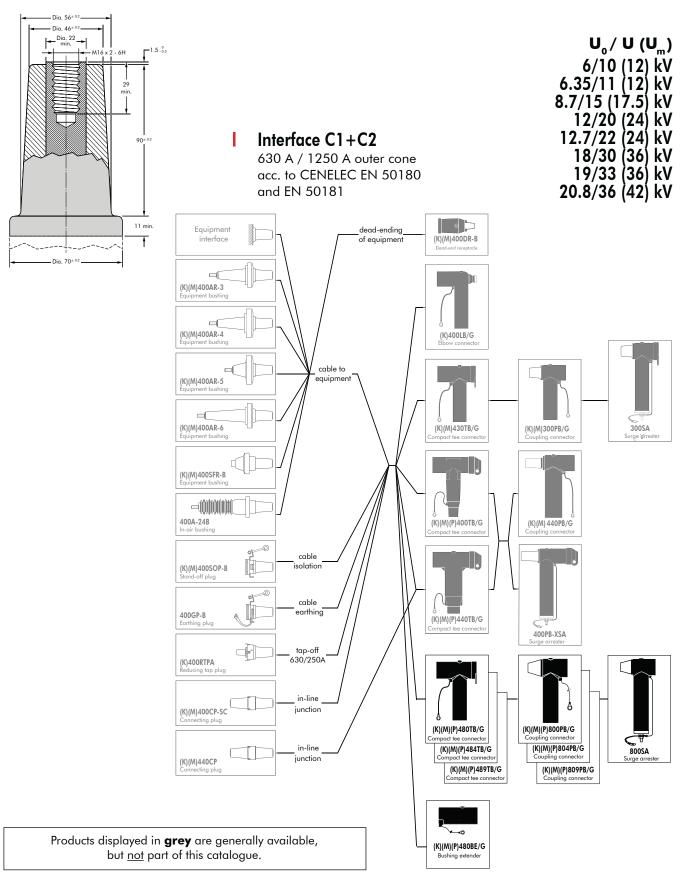
Dual cable arrangement with surge arrester



02-09-2019

# CONNECTING POSSIBILITIES EUROMOLD® BOLTED CONNECTOR SYSTEM

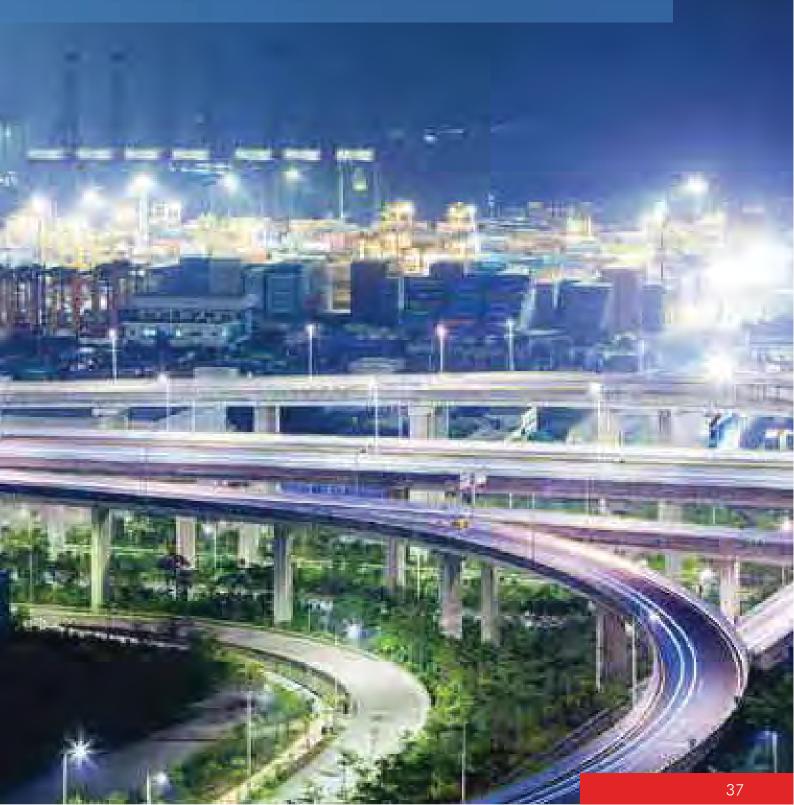
Interface C



**Nexans Power Accessories** 



# **SLIP-ON TERMINATIONS** up to 42 kV



# AIS Indoor slip-on termination

up to 24 kV

# Application

The AIS 20 termination is 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, a wide range of cross-sections is covered per voltage level.

#### Design

- 1. Longitudinally sealed mechanical cable lug
- Integrated silicone tube as sealing element when using mechanical cable lugs
- 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

AlS termination is the quick and easy assembly. The conductor can be connected with mechanical cable lugs. The termination is available with additional splitting accessories for three-core, copper wire screened or copper tape screened and armored cables.

3)

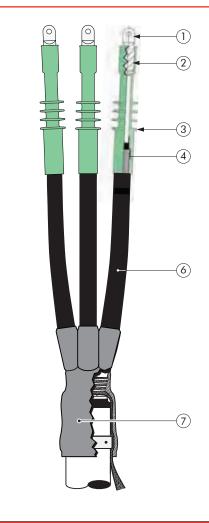
(4)

5

Another benefit given by using the

 $U_o / U (U_m)$ 

6/10	(12)	kV
6.35/11		
8.7/15 (1		
12/2Ò		
12.7/22	(24)	kV



#### Specifications and standards Meets the requirements of

CENELEC HD 629.1

Termination	Nominal voltage	Conductor cross-section (mm²) <sup>1)</sup>		
type	U <sub>0</sub> /U (kV)	min.	max.	
AIS 20	6/10	150	300 <sup>2)</sup>	
AIS 20	12/20	70	300 <sup>2)</sup>	

<sup>1)</sup> Other cross-sections are available on request.

<sup>2)</sup> When using mechanical cable lugs for conductor cross-section greater than 240 mm<sup>2</sup>, an additional sealing element is required.

# Kit contents

- 3 termination housings
- 3 mechanical cable lugs for the conductor

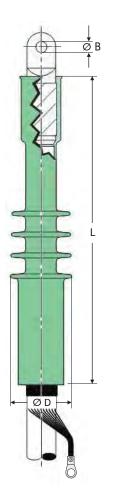
# Ordering instructions

Indicate the part number when ordering (see table).

#### **Order example:**

1 AIS 20 kit for 12/20 kV, for 70-240 mm<sup>2</sup> with mechanical cable lug (palm hole diameter 13 mm).

Order according to table 2: 1 kit – AIS 20 with part number 500027.



- 3 mechanical screen wire cable lugs
- Installation instructions
- Additional sealing element for 300 mm<sup>2</sup> application

- Silicone grease
- Assembly incidentals

#### Table 1 - Classification and dimensions

Nominal voltage U <sub>0</sub> /U	cross-s	luctor section m²)	Dia. over core insulation (mm)		insulation Number		L (mm)	Dia. D <sup>3)</sup> (mm)	Termination type	
(kV)	min.	max.	min.	max.						
6/10	150 150	240 300	20.0	35.0	25.0	4	270	53	415 20	
12/20	70 95	240 300	20.9		4	270	23	AIS 20		

#### Table 2 - Ordering part number

Conductor cross- section	insul	er core ation m)	Ordering p (1 Kit = with me cable	Termination type (Kit)		
(mm²)	min.	max.	Dia. B=13 mm Dia. B=17 mm			
	Nom	inal voltag	e U <sub>0</sub> /U (U <sub>m</sub> ) 6/	10 (12) kV		
150 185 240	00.0	25.0	500025	500293		
150 185 240 300	20.9	35.0	500292 <sup>4)</sup>	500026 <sup>4)</sup>	AIS 20	
	Nomi	nal voltage	∍ U <sub>o</sub> /U (U <sub>m</sub> ) 12,	/20 (24) kV		
70 95 120 150 185 240	20.0	35.0	500027	500268	415 20	
95 120 150 185 240 300	120 150 185 240	35.0	500294 <sup>4)</sup>	500028 <sup>4)</sup>	- AIS 20	

<sup>3)</sup> The indicated diameter is a mould dimension. Depending on the conductor cross-section used, a deviation of up to +5 mm is possible.

<sup>4)</sup> Supplied with additional sealing element.

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



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.

For use with copper wire

# AIP Indoor slip-on termination

up to 24 kV

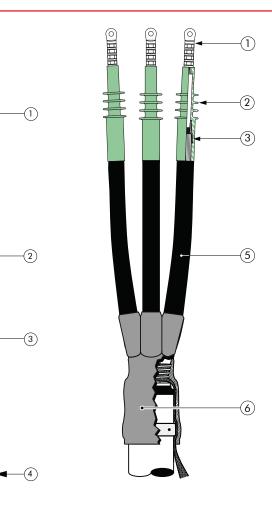
# Application

The AIP 20 termination is 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, a wide range of cross-sections is covered per voltage level.

Design

- 1. Longitudinally sealed compression cable lug
- High flexibility silicone rubber housing, ensuring a perfect fit to the cable even during load changes
- 3. Integrated conductive rubber insert
- 4. Earth cable lug
- 5. Heat-shrinkable tube
- 6. Heat-shrinkable break-out

Another benefit given by using the AIP termination is the quick and easy assembly. The conductor can be connected with compression cable lugs. The termination is available with additional splitting accessories for three-core, copper wire screened or copper tape screened and armored cables. U<sub>0</sub> / U (U<sub>m</sub>) 6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV



# Specifications and standards

Meets the requirements of CENELEC HD 629.1

Termination type	Nominal voltage	Conductor cross-section (mm <sup>2</sup> ) <sup>1)</sup>		
	U <sub>0</sub> /U (kV)	min.	max.	
AIP 20	6/10	70	150	
AIP 20	12/20	25	120	

<sup>1)</sup> Other cross-sections are available on request.

# Kit contents

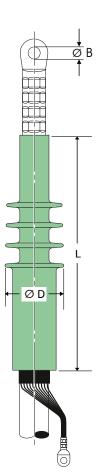
- 3 termination housings
- 3 compression cable lugs for the conductor
- 3 compression screen wire cable lugs
- Installation instructions
- Silicone grease
- Assembly incidentals

### **Ordering instructions**

Indicate the part number when ordering (see table).

#### Order example:

1 AIP 20 kit for 12/20 kV, for 70 mm<sup>2</sup> with compression cable lug (palm hole diameter 13 mm). Order according to table 2: 1 kit – AIP 20 with part number 500011.



#### Table 1 - Classification and dimensions

Nominal voltage U <sub>0</sub> /U	cross-s	Conductor cross-section (mm²)		Dia. over core insulation (mm)		insulation		L (mm)	Dia. D <sup>3)</sup> (mm)	Termination type
(kV)	min.	max.	min.	max.						
6/10	70	150	17.0	27.0	4	220	40			
12/20	25	120	17.0	27.0	4	230	49	AIP 20		

#### Table 2 - Ordering part number

Conductor cross- section	Dia. over core insulation (mm)		Order (1 wit	Termination type (Kit)				
(mm²)	min.	max.	Al-rm(V)	Cu-rm(V)	Dia. B (mm)			
	N	ominal v	oltage U <sub>0</sub> /U	(U <sub>m</sub> ) 6/10 (	12) kV			
70			500004	500014				
95	17.0	17.0	17.0	27.0	500005	500015	13	AIP 20
120				17.0	17.0	27.0	500006	500016
150			500007	500017				
	No	ominal vo	ltage U <sub>0</sub> /U	(U <sub>m</sub> ) 12/20 (	24) kV			
25 <sup>2)</sup>			500008	500018				
35			500009	500019				
50	17.0	27.0	500010	500020	13	AIP 20		
70	17.0	27.0	500011	500021	13	AIF 20		
95			500012	500022				
120			500324	500325				

 $^{\rm 2)}\mbox{Cross-section}$  25  $\mbox{mm}^2$  according to DIN VDE 0276-620 unavailable.

<sup>3)</sup>The indicated diameter is a mould dimension. Depending on the conductor cross-section used, a deviation of up to +5 mm is possible.

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



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.

# AIN Indoor slip-on termination

up to 24 kV

### **I** Application

AIN 10, AIN 20, AIN 30 and AIN 36 terminations 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

### Design

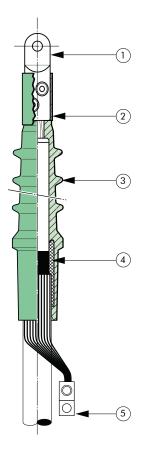
- Longitudinally sealed mechanical or compression cable lug
- Silicone tube or cap as additional sealing at the transition of cable lug to the termination housing when using mechanical cable lugs
- High flexibility silicone rubber housing, ensuring a perfect fit to the cable even during load changes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

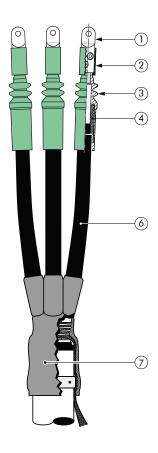
# Specifications and standards

Meets the requirements of CENELEC HD 629.1

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.

<b>U</b> <sub>0</sub> /	U (I	<b>U</b> )
6/10	(12)	kV
6.35/11	(12)	kV
8.7/15 (1	7.5)	k٧
12/20	(24)	k٧
12.7/22	(24)	k٧
18/30	(36)	k٧
19/33	(36)	k٧
20.8/36	(42)	kV





Termination	Nominal voltage	Conductor cross	-section (mm²) <sup>1)</sup>
type	U <sub>0</sub> /U (kV)	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)

<sup>1)</sup> Other cross-sections are available on request.

#### I Kit contents

- 3 termination housings
- 3 mechanical or compression cable lugs for the conductor

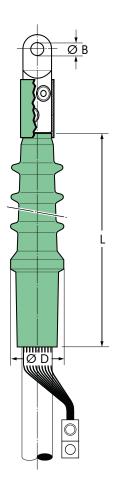
#### **Ordering instructions** L

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.



- 3 mechanical or compression screen wire cable lugs
- Installation instructions
- Silicone grease
- Assembly incidentals

Nominal voltage U <sub>0</sub> /U	Conductor cross-section (mm²)		Dia. over core insulation (mm)		Number of sheds	L (mm)	Dia. D (mm)	Ordering part number	
(kV)	min.	max.	min. max.						
	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	
6/10	300	500	27.7	36.4	2	150	60	3 x AIN 10 Gr. 3	
0/10	630	800	34.0	45.0	3	225	68	3 x AIN 20 Gr. 4	
	10	00	39.0	50.0	7	405	98	3 x AIN 36 Gr. 5	
	12	00	46.0	58.0	7	405	98	3 x AIN 36 Gr. 6	
	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	
10/00	300	500	31.0	41.0	3	225	68	3 x AIN 20 Gr. 3	
12/20	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	
	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	
18/30	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	
	50	70	23.8	28.4					
	95	120	27.1	32.0		0	n reques	51	
20.8/36 <sup>2)</sup>	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	

<sup>2)</sup> 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.

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



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



screened cables. Order: Kit MT.



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

**Nexans Power Accessories** 



with For use other cable types please contact our representative.



Can be supplied with all common types of cable lugs.

# Table 2 - Ordering part number

	Dia. over core insulation Ordering part number (1 Kit = 3 Items)								
Conductor	Conductor Dia. over core insulation (mm)								
sizes	m)		with mechanic	al connector	with cor	npression conr	nector	Termination type (Kit)	
(mm²)	min.	max.	Ordering part number	Dia. B	Al - rm(V)	Cu - rm(V)	Dia. B	iype (kii)	
			Nominal v	oltage U <sub>0</sub> /U	6/10 kV				
25					15311061	15311021	13		
35 50	13.0	20.8	52175	13	15311062 15311063	15311022 15311023	13 13	AIN 10 Gr. 1	
70	10.0	20.0	52175	10	15311064	15311024	13		
95					15311065	15311025	13		
120 150					15311066 15311067	15311026 15311027	13 13		
185	19.4	28.4	49494	13	15311068	15311028	17	AIN 10 Gr. 2	
240					15311069	15311029	17		
300 400	27.7	36.4	51262	17	15311070 15311071	15311030 15311031	17 17	AIN 10 Gr. 3	
500	27.7	00.4	51202	17	15311072	15311032	17		
630	34.0	45.0	54919	21	54905	54910	21	AIN 20 Gr. 4	
800	39.0	50.0		21	54906 54907	54908 54909	<u>21</u> 21	AIN 36 Gr. 5	
1000	39.0	50.0	54920			54909	21	Ally 30 Gr. 5	
1200			Nominal vo	On rec Itage U <sub>o</sub> /U 1	2/20 kV				
35					15321062	15321022	13		
50	18.3	23.5	49755	13	15321063	15321023	13	AIN 20 Gr. 1	
70					15321064	15321024	13		
95 120					15321065 15321066	15321025 15321026	13 13		
150	22.5	33.0	49756	13	15321067	15321027	13	AIN 20 Gr. 2	
185					15321068	15321028	17		
240 300					15321069 15321070	15321029 15321030	<u>17</u> 17		
400	31.0	41.0	59085	17	15321070	15321030	17	AIN 20 Gr. 3	
500					15321072	15321032	17		
400 500	34.0	45.0	54921	17	54959 54960	54962 54963	17 17	AIN 20 Gr. 4	
630	54.0	45.0	54721	17	59086	54964	21		
630	39.0	50.0	54922	21	54944	54946	21	AIN 36 Gr. 5	
800 1000	46.0	58.0	59757	21	54945 57230	54947 57231	<u>21</u> 21	AIN 36 Gr. 6	
1200	40.0	58.0	57757	On rec		57231	21	AIN 30 GI. 0	
1200			Nominal vo	oltage U <sub>0</sub> /U 1	8/30 kV				
50	23.8	28.4	51361	13	44694	44486	13	AIN 30 Gr. 1	
70	23.0	20.4	51301	13	45159	45389	13	AIN 30 GI. I	
95 120					45810 44640	45334 44851	13 13		
150	27.1	37.6	51363	13	44733	44646	13	AIN 30 Gr. 2	
185					45305	45395	17		
240 240					<u>44589</u> 44448	52188 44608	<u>17</u> 17		
300	31.5	42.8	52186	17	45306	44676	17	AIN 30 Gr. 3	
400 400					52189 54911	45362 54927	<u>17</u> 17		
500	39.0	50.0	54923	17	54912	54928	17	AIN 36 Gr. 5	
630					54913	54929	21		
630 800	46.0	58.0	54924	21	54914 54915	54930 54931	21 21	AIN 36 Gr. 6	
1000	40.0	50.0	54724	21	54916	54932	21		
1200				On rec	luest				
			Nominal vol	tage U <sub>0</sub> /U 20	0.8/36 kV				
50 70	23.8	28.4			~				
95	27.1	32.0	]		On rec	luest			
120 150					54933	54948	13		
185	21 5	41.0	E 4005	17	54933	54948	13		
240	31.5	41.0	54925	17	54936	54951	17	AIN 36 Gr. 4	
<u>300</u> 400					54937 54938	54952 54953	<u>17</u> 17		
500	39.0	50.0	54926	17	54938	54953	17	AIN 36 Gr. 5	
630					54940	54955	21		
630 800	46.0	58.0	54862	21	54941 54942	54956 54957	21 21	AIN 36 Gr. 6	
	40.0	0.01	J400Z	<b>Z</b> I			21	AIN 30 Gr. 0	
1000					54943	54958	21		

# AFS Outdoor slip-on termination

up to 24 kV

### **Application**

AFS terminations are suitable for outdoor installation on polymeric insulated medium voltage cables with extruded easy strip conductive screen or bonded extruded conductive screen. This high-quality silicone termination covers a large range of cross-sections with just two sizes per voltage level. Another benefit is the quick and easy assembly. The conductor is connected with mechanical cable lugs. Available with additional splitting accessories for three-core cables.

<b>U</b> <sub>0</sub> /	U (I	J <sub>m</sub> )
6/10	(12)	kV
6.35/11		
8.7/15 (1		kV
12/20		
12.7/22	(24)	kV

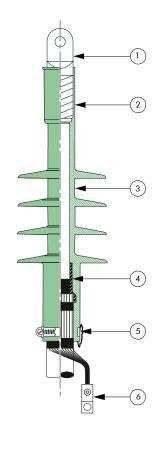
# Design

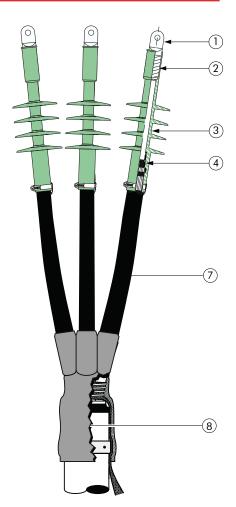
L

- 1. Longitudinally sealed mechanical cable lug
- 2. Integrated silicone tube as sealing element
- High flexibility silicone rubber housing, ensuring a perfect fit to the cable even during load changes
- 4. Integrated conductive rubber insert
- 5. Earthing clamp
- 6. Earthing cable lug
- 7. Heat-shrinkable tube
- 8. Heat-shrinkable break-out

# Specifications and standards

This termination meets the requirements of CENELEC HD 629.1.





Termination	Nominal voltage	Conductor cross	-section (mm²) <sup>1)</sup>
type	U <sub>0</sub> /U (kV)	min.	max.
AFS 20	6/10	70	300
AFS 20	12/20	25	300

<sup>1)</sup> Other cross-sections are available on request.

45

# Kit contents

- 3 termination housings
- 3 mechanical cable lugs for the conductor

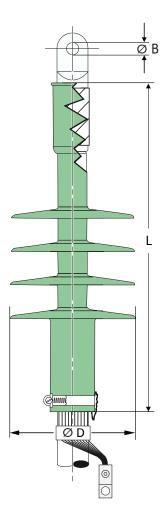
#### Ordering instructions

Indicate the part number when ordering (see table).

#### **Order example:**

1 AFS 20 kit for 12/20 kV, for 70-240 mm<sup>2</sup> with mechanical cable lug (palm hole diameter 13 mm).

Order according to table 2: 1 kit – AFS 20 size 2 with part number 501520.



For use with copper wire

screened cables no earthing

device is necessary.

- 3 mechanical screen wire cable lugs
- Installation instructions
- Silicone grease
- Assembly incidentals

#### Table 1 - Classification and dimensions

Nominal voltage U <sub>0</sub> /U	cross-	luctor section m²)	Dia. over core insulation (mm)		L (mm)	Dia. D <sup>2)</sup> (mm)	Termination type
(kV)	min.	max.	min.	max.			
6/10	70 70	95 150	17.0	27.0	295		AFS 20-1
12/20	25 25	95 120	17.0	27.0	295	100	
6/10	150 150	240 300	20.9	35.0	325	~100	AFS 20-2
12/20	70 95	240 300	20.9		325		AF3 20-2

#### Table 2 - Ordering part number

Conductor cross- section	insul	rer core ation m)	C	(1 Kit = with me	art numbe 3 Items) chanical e lug	er	Termination type (Kit)
(mm²)	min.	max.	13	a. B mm		mm	
	ľ	lominal	voltage U	₀/U (U <sub>m</sub> )	6/10 (12)	kV	
70 95 120 150	17.0	27.0	501513	501514 <sup>3)</sup>	501523	501524 <sup>3)</sup>	AFS 20-1
150 185 240 300	20.9	35.0	501515	501517	501525	501527	AFS 20-2
	N	ominal v	voltage U <sub>(</sub>	<sub>ס</sub> ∕ע (ט <sub>m</sub> )	12/20 (24	) kV	
25 50 70 95 120	17.0	27.0	501518	501519	501621	501622	AFS 20-1
70 95 120 150 185 240 300	20.9	35.0	<sup>501520</sup> 501	<sup>521</sup> 501522	<sup>501623</sup> 501	624 501625	AFS 20-2

<sup>2)</sup> Cross-section 25 mm<sup>2</sup> according to DIN VDE 0276-620 unavailable.

<sup>3)</sup>The indicated diameter is a mould dimension. Depending on the conductor cross-section used, a deviation of up to +5 mm is possible.

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



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.

02-09-2019

# ΔFN **Outdoor slip-on termination**

up to 42 kV

#### Application I

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 highquality silicone termination, the entire range of cross-sections is covered with

#### Design

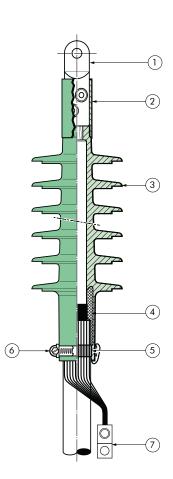
- 1. Longitudinally sealed mechanical or compression cable lug
- 2. Silicone tube or cap as additional sealing at the transition of cable lug to the termination housing when using mechanical cable lugs
- 3. High flexibility silicone rubber housing, ensuring a perfect fit to the cable even during load 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

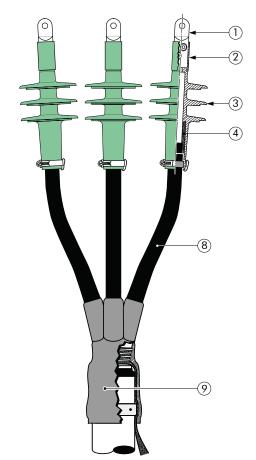
#### Specifications and standards

Meets the requirements of CENELEC HD 629.1

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.

<b>U</b> <sub>0</sub> /	U (I	<b>J</b> )
6/10	(12)	kV
6.35/11		
8.7/15 (1	<b>7.5</b> )	k٧
12/2Ò	(24)	k٧
12.7/22	(24)	k٧
18/30	(36)	k٧
19/33	(36)	k٧
20.8/36	(42)	kV





Termination	Nominal voltage	Conductor cross-section (mm²) <sup>1)</sup>			
type	U <sub>o</sub> /U (kV)	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)		

<sup>1)</sup> Other cross-sections are available on request.

### Kit contents

- 3 termination housings
- 3 mechanical or compression cable lugs for the conductor

### Installation instructions

• 3 mechanical or compression screen wire cable lugs

- 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.

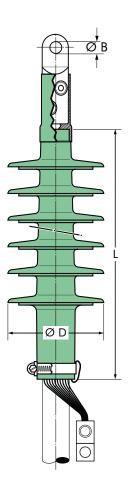


Table 1 - Classification	and dimensions
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Nominal voltage U <sub>0</sub> /U (kV)	cross-sec- tion (mm²)		(mm)		Number of sheds	L (mm)	Dia. D (mm)	Creep- age distance (mm)	Ordering part number
. ,	min.	max.	min.	max.					
	25	95	12.7	20.8	3	210	90	369	3 x AFN 10 Gr.1
	120	240	19.2	28.4	3	210	96	365	3 x AFN 10 Gr.2
6/10	300	500	27.4	36.4	3	210	105	360	3 x AFN 10 Gr.3
0/10	630	800	34.0	45.0	4	240	118	462	3 x AFN 20 Gr.4
	10	00	39.0	50.0	7	330	127	680	3 x AFN 30 Gr.4
	12	00	46.0	58.0	7	405	127	755	3 x AFN 36 Gr.6
	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
10/00	300	500	31.0	41.0	4	240	118	462	3 x AFN 20 Gr.3
12/20	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
	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
18/30	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
	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
20.8/362)	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

<sup>2)</sup> 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.

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



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

	Dia. over co	ore insulation		Ordering part number (1 Kit = 3 Items)				
Conductor cross-sec-	(mm)		with mechanic	al connector	with cor	nector	Termination	
tion (mm <sup>2</sup> )	min.	max.	Ordering part number	Dia. B	Al - rm(V)	Cu - rm(V)	Dia. B	type (Kit)
			Nominal v	oltage U <sub>0</sub> /U	6/10 kV			
25					52196	52197	13	
35 50	12.7	20.8	52190	13	52198 52199	48330 49750	13 13	AFN 10 Gr. 1
70	12.7	20.0	52190	15	52200	49750	13	AFIN TO Gr. T
95					52201	48939	13	
120					52202	47989	13	
150	19.2	28.4	52191	13	45599	45730	13	AFN 10 Gr. 2
185 240					52203 45384	52204 45090	17 17	
300					52205	47969	17	
400	27.4	36.4	52194	17	52206	45733	17	AFN 10 Gr. 3
500					48084	44691	17	
630	34.0	45.0	54863	21	54879	54864	21 21	AFN 20 Gr. 4
800 1000	39.0	50.0	57242	21	57576 57243	54865 57244	21	AFN 30 Gr. 4
	39.0	50.0	37242			57244	21	AFN 30 Gr. 4
1200			Nominal vo	On rec Itage U <sub>0</sub> /U 1				
0.5						45.403	10	
35 50	18.3	23.5	51355	13	49628 45315	45481 45365	13 13	AFN 20 Gr. 1
70	10.0	20.5	51055	10	49624	45521	13	
95					44564	45109	13	
120			10700		49625	45749	13	
150	22.5	33.0	48793	13	44189	44668	13	AFN 20 Gr. 2
185 240					49626 44340	44643 44487	17 17	
300					45477	45403	17	
400	31.0	41.0	59080	17	45598	45164	17	AFN 20 Gr. 3
500					49630	44563	17	
400					54966	59081	17	
500	34.0	45.0	54965	17	54866	59082	17	AFN 20 Gr. 4
<u>630</u> 630					59084 57246	59083 57248	21 21	
800	39.0	50.0	57245	21	57247	57249	21	AFN 30 Gr. 4
1000	46.0	58.0	59758	21	57567	57568	21	AFN 36 Gr. 6
1200			Nominal va	On rec Itage U <sub>o</sub> /U 1	uest			
50		1			2	45140	10	l I
50 70	23.8	28.4	51367	13	49635 49637	45140 49636	13 13	AFN 30 Gr. 1
95					48677	49638	13	
120					49640	49639	13	
150	27.1	37.6	51369	13	49641	48085	13	AFN 30 Gr. 2
185 240					48002 44670	45396 44669	17 17	
240					52220	52219	17	
300	31.5	42.8	52213	17	49642	44791	17	AFN 30 Gr. 3
400					45235	48108	17	
400	39.0	50.0	57070	17	57274	57275	17	AFN 30 Gr. 4
500 630	39.0	50.0	57273	17	48577 48578	48580 48581	17 21	AFN 30 Gr. 4
630					54917	54875	21	
800	46.0	58.0	54857	21	54873	54876	21	AFN 36 Gr. 6
1000					54874	54877	21	
1200			Nominal vol	On rec tage U <sub>o</sub> /U 20	Uest			
50						570/0	10	1
50 70	23.8	28.4	57250	13	57253 57254	57263 57264	13 13	AFN 30 Gr. 1
95		1			57255	57265	13	
120					57256	57266	13	
150	27.1	37.6	57251	13	57257	57267	13	AFN 30 Gr. 2
185					57258	57268	17	
240 240					57259 57260	57269 57270	17 17	
300	31.5	42.8	57252	17	57261	57271	17	AFN 30 Gr. 3
400					57262	57272	17	
400					57277	57280	17	
500	39.0	50.0	57276	17	57278	57281	17	AFN 30 Gr. 4
630					57279	57282	21	
630 800	46.0	58.0	54860	21	54886 54887	54897 54898	21 21	AFN 36 Gr. 6
1000	-0.0			<u> </u>	54888	54899	21	
1200				On rec				

**Nexans Power Accessories** 



# **READY-TO-INSTALL, PRE-ASSEMBLED CABLES** up to 42 kV



# **READY-TO-INSTALL, PRE-ASSEMBLED CABLES**

Interface A to F connectors and terminations up to 42 kV

Application		$\mathbf{U}_{o}$ / $\mathbf{U}$ ( $\mathbf{U}_{m}$ )
Pre-assembled cables are	of accessories. The cables	6/10 (12) kV
polymeric insulated medium	and flexible cables, primarily	6.35/11 (12) kV
voltage cables, equipped with	checked by us, are assembled with	8.7/15 (17.5) kV
connectors and terminations.	different conductor cross-sections	12/20 (24) kV
They can be used for	and accessories, depending on	12.7/22 (24) kV
connecting transformers and	customer's application.	18/30 (36) kV
switchgears. We manufacture		19/33 (36) kV
the pre-assembled cables specifically customized in		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.

terms of cable length and type

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 currentcarrying capacity in service and in the case of short-circuit current, EPR-insulated cables are almost equivalent to XLPEinsulated cables.

### Cables

I

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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

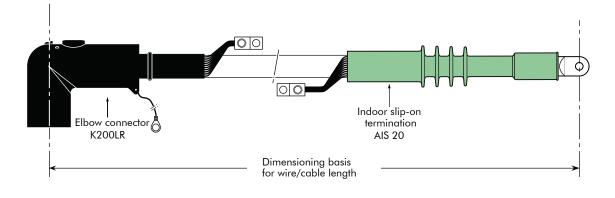
When dimensioning the preassembled cable length, we take the center points of both cable accessories as the basis. When indicating the length of the shield wire, please also specify whether the shield wire should be lead out on one or both sides.

#### Accessory A

See table for accessory selection.

#### **Accessory B**

See table for accessory selection.



### 

**Example request** Please fill in what is applicable.

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

 $^{\scriptscriptstyle 1)}$  lf not indicated, we assume a shield wire length of 500 mm for both cable ends.

# 

Accessory selection We also assemble accessories not listed here.

Туре	Design	Interface	Material	Assembly technique
(K)200LR/G	Elbow connector	A	EPDM	Slip-on technology
(K)200SR/G	Straight connector	A	EPDM	Slip-on technology
(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	В	EPDM	Slip-on technology
(K)(M)430TB/G	Compact tee connector	С	EPDM	Slip-on technology
(K)(M)(P)480TB/G	Compact tee connector	с	EPDM	Slip-on technology
(K)(M)(P)800PB/G	Coupling connector	С	EPDM	Slip-on technology
(K)(M)(P)484TB/G	Compact tee connector	с	EPDM	Slip-on technology
(K)(M)(P)804PB/G	Coupling connector	С	EPDM	Slip-on technology
(K)(M)(P)489TB/G	Compact tee connector	С	EPDM	Slip-on technology
(K)(M)(P)809PB/G	Coupling connector	С	EPDM	Slip-on technology
(K)676LRA/G	Separable tee connector	D	EPDM	Slip-on technology
784TB/G	Separable tee connector	E	EPDM	Slip-on technology
(K)(M)(P)944TB/G	Compact tee connector	F	EPDM	Slip-on technology
AIS 20	Indoor termination	-	Silikon	Slip-on technology
AIP 20	Indoor termination	-	Silikon	Slip-on technology
AIN 10	Indoor termination	-	Silikon	Slip-on technology
AIN 20	Indoor termination	-	Silikon	Slip-on technology
AIN 30	Indoor termination	-	Silikon	Slip-on technology
AIN 36	Indoor termination	-	Silikon	Slip-on technology
AFS 20	Outdoor termination	-	Silikon	Slip-on technology
AFN 10	Outdoor termination	-	Silikon	Slip-on technology
AFN 20	Outdoor termination	-	Silikon	Slip-on technology
AFN 30	Outdoor termination	-	Silikon	Slip-on technology
AFN 36	Outdoor termination	-	Silikon	Slip-on technology

**Nexans Power Accessories** 



# **STRAIGHT JOINTS TRANSITION JOINTS** up to 42 kV

# GTS1 Single-core straight joint

Heat-shrink technology up to 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.

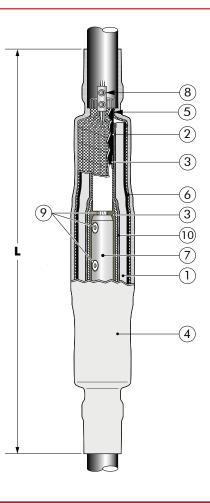
<b>U</b> <sub>0</sub> /	U (I	<b>U</b> )
6/10	(12)	kV
6.35/11		kV
8.7/15 (1	Ż.5)	k٧
12/20	(24)	k٧
12.7/22	(24)	k٧
18/30	(36)	k٧
19/33	(36)	k٧
20.8/36	(42)	k٧

# **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
- Insulation sleeve (only for cross-sections >630 mm<sup>2</sup>, 36GT\$1 and 42GT\$1)

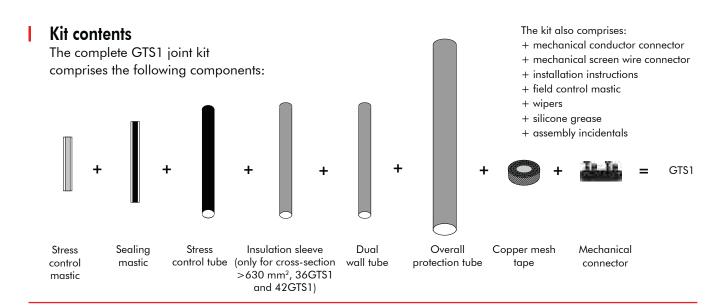
# Specifications and standards

The heat-shinkable straight joint GTS1 meets the requirements of CENELEC HD 629.1.



Joint	Nominal voltage	Conductor cross	Length		
type	U <sub>o</sub> /U (kV)	min.	max.	L (mm)	
17GTS1	6/10	25	1000	750 - 1000	
24GTS1	12/20	35	1000 (1200)	750 - 1000	
36GTS1	18/30	50	1000 (1200)	1000	
42GTS1	20.8/36	50	1000	1000 - 1200	

<sup>1)</sup> Other cross-sections on request.

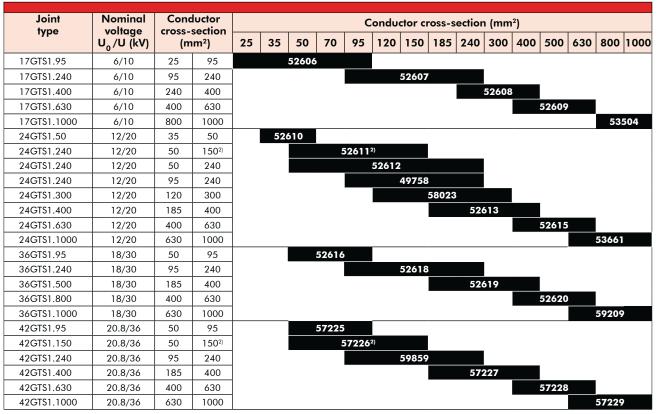


# Ordering instructions

Select the straight joint type corresponding to both system voltage and conductor crosssection.

#### **Order example:**

Heat-shrinkable straight joint type 24GTS1.240 for XLPE cable 12/20 kV 50-240 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.



<sup>2)</sup> Applicable for aluminum conductors up to 150 mm<sup>2</sup> and copper conductors up to 120 mm<sup>2</sup>.







For use with other

cables types

please contact our

representative

For use with three-core

cables see GTS3.





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)

Nexans Power Accessories

Jointing cables of different sizes possible.

Can be used with all common types of conductor connectors.

# CSJ Single-core straight joint

Cold-shrink technology up to 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.

<b>U</b> <sub>0</sub> /	<b>U (</b>	U)
6/10	(12)	kV
6.35/11	(12)	k٧
8.7/15 (1)		
12/20		
18/30		
19/33	(36)	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 braid
- 7. Self-adhesive copper tape
- 8. Traceability tag
- 9. Mechanical conductor connector

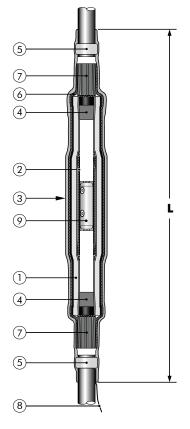
# Specifications and standards

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

# **Technical characteristics**

I

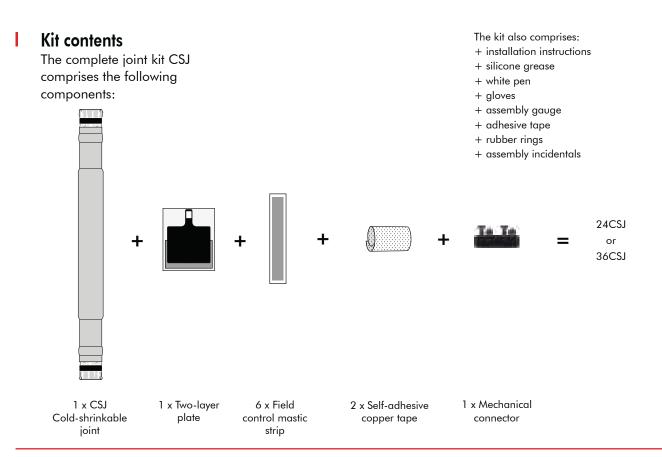
All joint bodies are tested for AC withstand prior to leaving the factory.



Joint Nominal voltage			ctor cross- on (mm²)		over core tion (mm)	Max. dia. over outer sheath (mm)	L (mm)	
iype	U <sub>o</sub> /U (kV)	min.	max.	min.	max.	ooler shealn (mm)	()	
24CSJ-2 Gr. 1	6/10	18	23	95	150	46	ca. 750	
24CSJ-2 Gr. 2	6/10	23	33	150	240/(300) <sup>1)</sup>	46	ca. 750	
24CSJ-2 Gr. 1	12/20	18	23	35	70	46	ca. 750	
24CSJ-2 Gr. 2	12/20	23	33	95	240/(300) <sup>1)</sup>	46	ca. 750	
24CSJ - 3	12/20	30	45	240	630	57	ca. 850	
36CSJ-2	18/30	23	36	50	240	48	ca. 750	
36CSJ-3	18/30	30	50	185	630	57	ca. 850	

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<sup>1)</sup> Conductor sizes in brackets available with compression joint.



#### **Ordering instructions** I

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

#### **Order example:**

Single-core 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

Joint type	Nominal voltage U <sub>o</sub> /U		Conductor cross-section (mm²)												Dia. over core insulation	Max. dia. over outer sheath	
	(kV)	35	50	70	95	120	150	185	240	300	400	500	630	800	1000	(mm)	(mm)
24CSJ-2 Gr. 1	6/10				5	3752	2)									18-23	46
24CSJ-2 Gr. 2	6/10						5	5908	8							23-33	46
24CSJ-2 Gr. 1	12/20	5	5908	7												18-23	46
24CSJ-2 Gr. 2	12/20					48	8136	3)								23-33	46
24CSJ-3	12/20									5	2650	3)				30-54	57
24CSJ-3	12/20										5	1800	3)			30-54	57
36CSJ-2 Gr. 2	18/30			5	53738	<b>3</b> <sup>2)</sup>										23-36	48
36CSJ-2 Gr. 2	18/30					5	3737	7								23-36	48
36CSJ-3	18/30								57	216						30-50	57
36CSJ-3	18/30										5	7217	/3)			30-50	57

<sup>2)</sup> Applicable for aluminum conductors up to 150 mm<sup>2</sup> and copper conductors up to 120 mm<sup>2</sup>.

<sup>3)</sup> Please consider the maximum outer cable diameter.



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For use with Alupe cables please contact our representative

For use with other cable types please contact our representative

For use with

three-core cables see TT-24CSJ.





Can be supplied as stop joint. Please contact our representative

For use with fabric tape (graphite) screened cables order additional semiconductive tape.



**Nexans Power Accessories** 

# 24CSJA-S Compact single-core straight joint

Cold-shrink technology up to 24 kV

# **Application**

The cold-shrinkable straight joint 24CSJA-S is used for jointing medium voltage cables with a copper wire screen and extruded conductive screen. **This product can be installed** 

where installation space is limited. With regards to the mechanical conductor connector, jointing of cables with different conductor sizes or conductor materials becomes fast and easy. U<sub>o</sub> / U (U<sub>m</sub>) 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

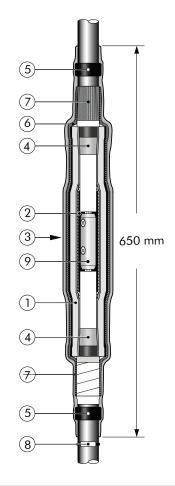
- 1. Extruded triple layer EPDM rubber body
- 2. Two layer plate with a semi-conductive and a field control mastic layer
- 3. Overall protective EPDM cover
- 4. Field control mastic
- 5. Water sealing mastic
- 6. Copper braid
- 7. Self-adhesive copper tape
- 8. Traceability tag
- 9. Mechanical conductor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

# Specifications and standards

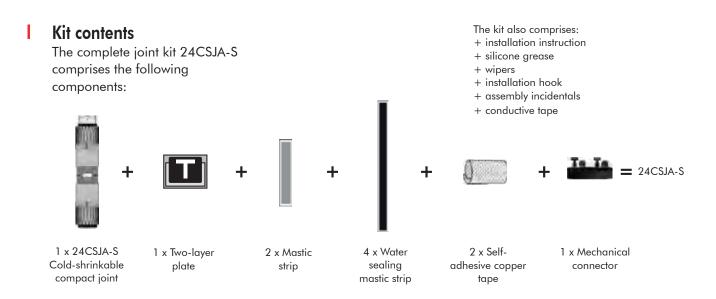
The cold-shrinkable 24CSJA-S joint meets the requirements of CENELEC HD 629.1.

# **Technical characteristics**

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



Joint type	Nominal voltage U <sub>o</sub> /U (kV)		cross-section m²)		rer core on (mm)	Max. dia. over outer sheath (mm)	
	-0, - ()		max.	min.	max.		
24CSJA-S/M95-300	6/10	95	300	18	38	52	
24CSJA-S/M16-95 24CSJA-S/M95-300	12/20 12/20	35 95	95 300	18 23	38 38	52 52	



# Highlights

- Compact dimensions allow the easy and space-saving installation.
- Low number of components due to pre-assembled extruded triple layer EPDM joint body on support tube.
- Fast and easy installation by pulling out the support tube in a single movement.
- All joint bodies are electrically tested prior to leaving the factory.
- Cold-shrinkable joints 24CSJA-S exceed international performance standards including CENELEC HD 629.1 and IEC 60502-4.
- Mechanical connectors and cable lugs supplied in the joint kit are tested and certified acc. to IEC 61238-1-A.
- No special tools or flame required.
- Advanced screen connection system.
- Cold-shrinkable joints can be energized immediately after installation.

(P)	
The	

Joint type	Nominal voltage	Condu			Conductor cross-section (mm²)						Dia. over core insulation	Max. dia. over outer sheath	
	U <sub>o</sub> /U (kV)	35	50	70	95	120	150	185	240	300	(mm)	(mm)	
24CSJA-S/M95-300	6/10						502	2450			18-38	52	
24CSJA-S/M16-95	12/20		502	449							18-38	52	
24CSJA-S/M95-300	12/20	]					50	451			23-38	52	

#### **Ordering instructions**

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

#### Order example

Compact single-core straight joint, Nominal voltage 12/20 kV, Conductor cross-section 95-300 mm<sup>2</sup> Dia. over core insulation 23-38 mm Order number: 501451 **Note:** The classification does only apply for polymeric insulated XLPE cables (dimensions acc. to DIN VDE 0276 620) with extruded conductive screen and stranded conductors. Please contact our representative, when using other cable types.



screened cables no further

earthing device is necessary.



to the part number.

For use with copper tape screened cables, endorse "A"



For use with Alupe cables please contact our representative

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different sizes possible



For use with other cable types please contact our representative

# GTM3.1 Three-core transition joint

Heat-shrink technology up to 42 kV

# Application

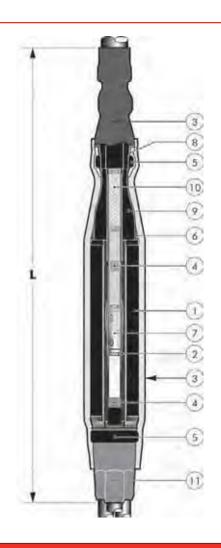
Heat-shinkable transition joint for jointing three-core paper cables to three single-core polymeric cables. For use with belted or screened cables with a common or individual lead sheath. This transition joint is fully screened, submersible and suitable to be directly buried.

# Design

- 1. Dual wall tube
- 2. Stress control tube
- 3. Protection tube
- 4. Field control mastic
- 5. Sealing mastic
- 6. Screen wire connector
- 7. Mechanical conductor connector
- Semi-conductive heatshinkable breakout (17GTM3.1)
- 9. Semi-conductive tube (17GTM3.1)
- 10. Barrier tube
- 11. Heat-shrinkable breakout

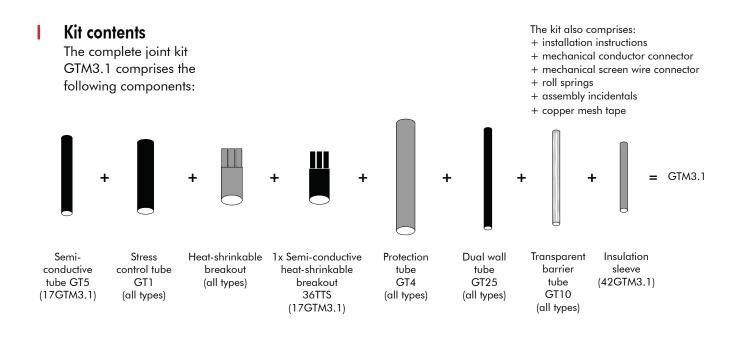
# Specifications and standards

The heat-shrinkable transition joint GTM3.1 meets the requirements of CENELEC HD 629.2. U<sub>o</sub> / U (U<sub>m</sub>) 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



Joint	Nominal voltage	Conductor cros	s-section (mm²)	L
type	U <sub>o</sub> /U (kV)	min.	max.	(mm)
17GTM3.1	6/10	25	400	~1200
24GTM3.1	12/20	35	400	~1200
42GTM3.11)	18/30 + 20.8/36	50	400	~1800

<sup>1)</sup> 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.



#### Ordering instructions

I

Please indicate the part number when ordering (see table). Select the order designation of the transition joint according to the cable type used and the diameter over core insulation. Joint types for connecting different conductor cross-sections available on request. Transition joints for 12/20 (24) kV and 18/30 (36) kV H-cables to XLPE-insulated single-core cables available on request.

#### **Order example:**

For paper-insulated belted cable with 6/10 kV, 3 x 150 mm<sup>2</sup> to 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.

			•		
Joint	Nominal voltage	Conduct section	or cross- (mm²)	Ordering part	
type	U <sub>o</sub> /U (kV)	min.	max.	nomber	
17GTM3.1.95	6/10	25	95	57288 <sup>2)</sup>	
17GTM3.1.240	6/10	95	240	59854 <sup>2)</sup>	
17GTM3.1.300	6/10	120	300	58844 <sup>2)</sup>	
17GTM3.1.400	6/10	240	400	57289 <sup>2)</sup>	
24GTM3.1.50	12/20	35	50	57290 <sup>3)</sup>	
24GTM3.1.240	12/20	70	240	57291 <sup>3)</sup>	
24GTM3.1.300	12/20	120	300	58209 <sup>3)</sup>	
24GTM3.1.400	12/20	185	400	57292 <sup>3)</sup>	
42GTM3.1.951)	18/30 + 20,8/36	50	95	57293 <sup>3)</sup>	
42GTM3.1.1501)	18/30 + 20,8/36	95	150	57294 <sup>3)</sup>	
42GTM3.1.2401)	18/30 + 20,8/36	150	240	57295 <sup>3)</sup>	
42GTM3.1.3001)	18/30 + 20,8/36	120	300	58845 <sup>3)</sup>	
42GTM3.1.4001)	18/30 + 20,8/36	240	400	57296 <sup>3)</sup>	

<sup>1)</sup> 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.

<sup>2)</sup> Transition joints for paper-insulated belted cables to XLPE-insulated single-core cables.

<sup>3)</sup>Transition joints for three-core single lead sheath cable to XLPE-insulated single-core cables.



When jointing cables of different sizes please contact our representative.



For use with other cable types please contact our representative

**Nexans Power Accessories** 

# SVMS/SVMS-P In-line joint including mechanical connectors

without/with parking position, design acc. to DIN V 47640 Heat-shrink technology

I

# Application

The heat-shrinkable in-line joint SVMS/SVMS-P is used for jointing four- and five-core polymeric insulated cables with concentric conductor and PVC or XLPE insulation as well as PVC or PE outer sheaths. The joints are designed for use of mechanical connectors accommodating copper or aluminum conductors. This heat-shrinkable joints offer a sealed indoor or outdoor application.

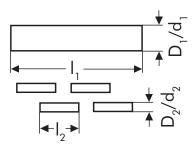
# **U**<sub>o</sub> / **U** (**U**<sub>m</sub>) 0.6/1 (1.2) kV

### Design

The inner and outer heatshrinkable tubing is thickwalled and co-extruded with adhesive quality. The joint design and tube dimensions are according to DIN V 47640.

#### Technical characteristics

For application SVMS-P including a parking position of mechanical contacts on conductors, a connector without oil stop is mandatory.





# Specifications and standards

Heat-shrinkable tubes meet the requirements of IEC 60684-247. The dimensions of the mechanical connectors, that have been tested according to IEC 61238-1-A or VDE 0220 part 100 respectively, correspond to DIN V 47640. The complete heat-shrinkable SVMS/SVMS-P joint meets the requirements of CENELEC EN 50393.

### Kit contents

The heat-shrinkable in-line joints comprise the 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 connectors on the conductors

Jo	int	Dir	nensions outer	tubes		Ordering		
type		I,	<b>D</b> <sub>1</sub> / <b>d</b> <sub>1</sub>	Qty. / KIT	I <sub>2</sub>	$D_2/d_2$	Qty. / KIT	number
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 <sup>1)</sup> -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 <sup>1)</sup> -240	950	130/36	1	260	43/12	4	53188

WOnly 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 connectors on the conductors

Joint		Dir	nensions outer	tubes		Ordering			
type		I,	<b>D</b> <sub>1</sub> / <b>d</b> <sub>1</sub>	Qty. / KIT	I <sub>2</sub>	$D_2/d_2$	Qty. / KIT	part number	
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 <sup>1)</sup> -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 <sup>1)</sup> -240	1100	130/36	1	330	43/12	4	53195	

 $^{\scriptscriptstyle 1)}$  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 four-core polymeric insulated cable without parking position, nominal voltage 0.6/1 kV, conductor cross-section 35-150 mm<sup>2</sup> Part number: 53186

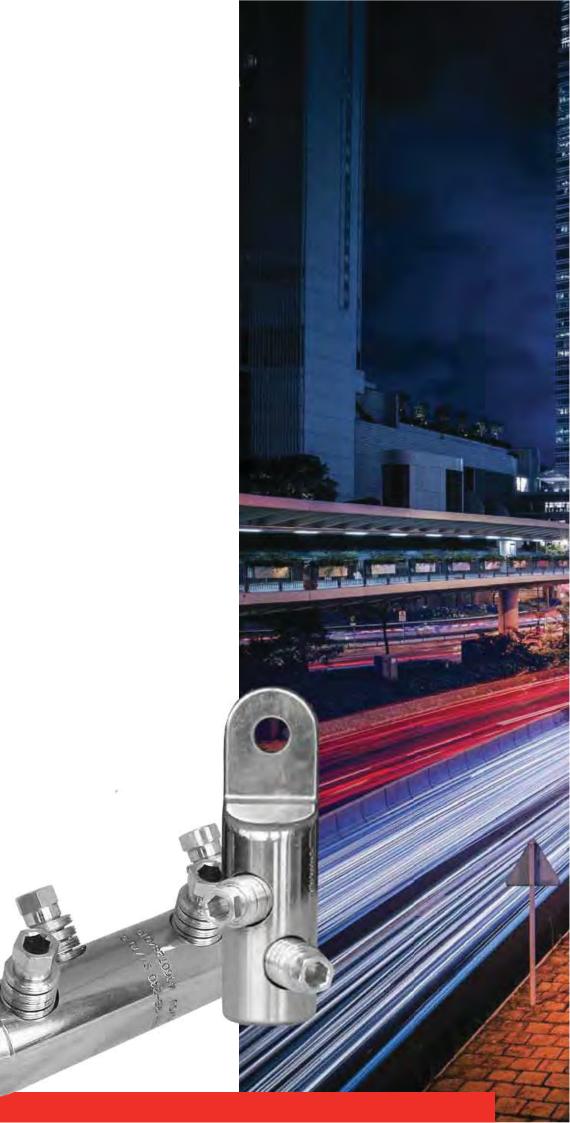


For use with other crosssections please contact our representative.



For use with other cables please contact our representative.

**Nexans Power Accessories** 



# **GPH® CONNECTION TECHNOLOGY** up to 52 kV

# **GPH® D-SERIES**

Mechanical Connectors up to 0.6/1 kV with sector channel, hexagon socket bolts or shear-off-head bolts

#### Application L

Design

**Material:** Connector

body:

Bolts:

Surface:

D ...-V:

L

Using GPH® D-Series low voltage mechanical connectors allows the connection of both identical and different conductor cross-sections, irrespective of the conductor material, shape and design.

brass or high strength

aluminum alloy

brass or high strength aluminum alloy, tin-plated, with inner and outer

hexagon

tin-plated

#### **Advantages**

• Simple, quick installation: With common commercially available inner and outer hexagon tools or an approved impact wrench.

• Minimum storage costs: The cross-section range from 1.5 mm<sup>2</sup> to 300 mm<sup>2</sup> is covered by just 3 types of connectors.

#### D25-185 SV-T-V-K



**Bolts:** 

D ...:

D ...-K:

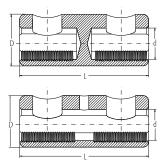
#### D1,5-16 SV-S-V-K

#### with hex. socket bolts with shear-off-head bolts

# Universal applicability:

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

 Proven quality: GPH® D-Series mechanical connectors allow long-lasting contact quality of the application.



#### **Connector body:**

D <b>-S</b> :	with inspection hole
D <b>T</b> :	with oil stop

Mechanical connector type	AL acc. to EN 60228 (mm²)				CU acc. to EN 60228 (mm²)			CU Class 5 acc. to EN 60228 (mm²)		Dimensions (mm)			Tool outer and inner hexagon	
	rm	sm	re	se	rm	sm	re	without contact sleeve	with contact sleeve	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		1.0-16		1.0-16	1.0-16		30	12	6.1	SW8	
D1,5-16 SV(-T/-S)-V <sup>1), 3)</sup>					1.0-16		1.0-16	1.0-16		30	12	6.1		SW34)
D1,5-35 SV(-T/-S)-V-K <sup>3)</sup>	10-35	35	10-35	35	1.5-35	35	1.5-35	1.5-35		36	16	9.0	SW5 <sup>2)</sup>	
D10-35 SV(-T/-S)-V(-K)3)	10-35	35	10-35	35	10-35	35	10-35	10-35		36	16	9.0	SW8	SW5
D25-50 SV(-T/-S)-V(-K)	25-50	35-50	25-50	35-50	25-50	35-50	25-35	50	25-35 <sup>7)</sup>	36	18	10.0	SW8	SW5
D4-50 SV(-T/-S)-V-K	10-50	35-50	10-50	35-50	4-50	35-50	4-35	50	4-357)	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	95	16-70 <sup>7)</sup>	55	25	14.0	SW10	SW6
D25-150 SV(-T/-S)-V-K	25-150	35-150	25-150	35-150	25-150	35-150	16-35	120-150	25-95 <sup>7)</sup>	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	120-150	35-95 <sup>7)</sup>	70	28	17.0	SW135)	SW65)
D25-185 SV(-T/-S)-V-K <sup>6)</sup>	25-185	35-185	25-185	35-185	25-185	35-185	25-35	150	25-120 <sup>7)</sup>	80	32	19.0	SW6 <sup>2)</sup>	
D70-185 SV(-T/-S)-V(-K)6)	70-185	70-185	70-185	70-185	70-185	70-185		150-185	70-120 <sup>7)</sup>	80	32	19.0	SW13	SW6
D50-240 SV(-T/-S)-V-K <sup>6)</sup>	50-240	50-240	50-240	50-240	50-240	50-240		240	50-185 <sup>7)</sup>	120	35	22.0	SW62)	
D120-240 SV(-T/-S)-V(-K)6)	120-240	120-240	120-240	120-240	120-240	120-240		240	120-1857)	120	35	22.0	SW13	SW6
D50-300 SV(-T/-S)-V(-K)6)	50-300	50-300	50-300	50-300	50-240	50-240		240	95-185	128	38	23.0	SW82)	
D150-300 SV(-T/-S)-V(-K)6)	150-300	150-300	150-300	150-300	150-240	150-240		240	150-185	128	38	23.0	SW13	SW8

<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) <sup>6)</sup> With four shear-off head bolts

# 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-offareas of the bolt and 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 for

Mechanical connector type

the respective conductor types. Grub screws are tightened with the prescribed torque.

Ordering part number

### Ordering instructions

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

#### Order example

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

# Specifications and standards

Mechanical connectors have been electrically tested according to IEC 61238-1-A or VDE 0220 part 100 respectively.

#### Product range

Please find the entire overview of our products for conductor connections in our catalogue GPH® Connection technology.

	Mechanical connector type	Ordering part number					
	D1,5-16 SV-T-V-K	G6603 01 01					
	D1,5-16 SV-S-V-K	G6603 01 02					
	D1,5-16 SV-T-V	G6603 01 03					
	D1,5-16 SV-S-V	G6603 01 04					
	D10-35 SV-T-V-K	G6602 17 01					
	D10-35 SV-S-V-K	G6602 17 02					
	D10-35 SV-T-V	G6602 17 03					
	D10-35 SV-S-V	G6602 17 04					
	D4-50 SV-T-V-K	G6602 17 05					
	D4-50 SV-S-V-K	G6602 17 06					
	D25-50 SV-T-V-K	G6602 17 07					
	D25-50 SV-S-V-K	G6602 17 08					
	D25-50 SV-T-V	G6602 17 09					
	D25-50 SV-S-V	G6602 17 10					
_	D16-95 SV-T-V-K	G6602 17 11					
	D16-95 SV-S-V-K	G6602 17 12					
	D16-95 SV-T-V	G6602 17 13					
	D16-95 SV-S-V	G6602 17 14					
	D25-150 SV-T-V-K	G6602 17 15					
	D25-150 SV-S-V-K	G6602 17 16 (4ER-SET)					
	D35-150 SV-T-V-K	G6602 17 17					
	D35-150 SV-S-V-K	G6602 17 18					
	D35-150 SV-T-V	G6602 17 19					
	D35-150 SV-S-V	G6602 17 20					
	D25-185 SV-T-V-K	G6602 17 21					
	D25-185 SV-S-V-K	G6602 17 22					
-	D70-185 SV-T-V-K	G6602 17 23					
	D70-185 SV-S-V-K	G6602 17 24					
	D70-185 SV-T-V	G6602 17 25					
	D70-185 SV-S-V	G6602 17 26					
	D50-240 SV-T-V-K	G6602 17 27 (4ER-SET)					
	D50-240 SV-S-V-K	G6602 17 28 (4ER-SET)					
	D50-300 SV-T-V-K	G6602 17 44					
	D50-300 SV-S-V-K	G6602 17 43					
	D150-300 SV-T-V-K	G6602 17 41					
	D150-300 SV-S-V-K	G6602 17 42					





materials.



It is possible to connect

different conductor cross-

sections.

Dif



Different designs available.



Can be used for all conductor shapes.

# **GPH® D-SERIES**

Mechanical Cable Lugs up to 0.6/1 kV with sector channel, hexagon socket bolts or shear-off-head bolts

#### Application

Using GPH® D-Series mechanical cable lugs allows larger conductor cross-section ranges even for low voltage applications, irrespective of the conductor material, shape and design. Mechanical cable lugs are standard tin-plated and offered with different palm hole diameters.

#### **Advantages**

• Simple, quick installation: With common commercially available inner and outer hexagon tools or an approved impact wrench.

• Minimum storage costs: The cross-section range from 1.5 mm<sup>2</sup> to 300 mm<sup>2</sup> is covered by just 3 types of cable lugs.

#### D120-240 x 12 SK-V-K

#### Universal applicability:

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

#### Proven quality:

GPH<sup>®</sup> D-Series mechanical cable lugs allow long-lasting contact quality of the application.



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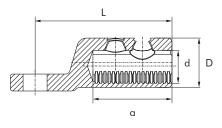
#### **Material**:

Connector body:	high strength aluminum alloy
Bolts:	high strength aluminum alloy, uncoated, with inner or outer hexagon
Surface: DV:	tin-plated



Bolts: D ...:

with hex. socket bolts



D ...-**K**:

with shear-off-head bolts

Mechanical cable lug type	AL acc. to EN 60228 (mm²)			CU acc. to EN 60228 (mm²)			CU CI acc. to E (m	Dimensions (mm)				Tool outer and inner		
	rm	sm	re	se	rm	sm	re	without contact sleeve	with contact sleeve	L	D	d	a	hexagon
D1,5-35 x 8(10) SK-V-K <sup>2)</sup>	10-35	35	10-35	35	1.5-35	35	1.5-35	1.5-35		40	16	9.0	16	SW51)
D25-50 x 10(12) SK-V-K	25-50	35-50	25-50	35-50	25-50	35-50	25-35	50	25-35 <sup>5)</sup>	40	18	10.0	16	SW8
D16-95 x 10(12) SK-V-K	16-95	35-95	16-95	35-95	16-95	35-95	16-35	95	16-70 <sup>5)</sup>	52	25	14.0	24	SW10
D35-150 x 12(16) SK-V-K	35-150	35-150	50-150	50-150	35-150	35-150	35	120-150	35-95 <sup>5)</sup>	60	28	17.0	31	SW133)
D25-185 x 10(12/16) SK-V-K <sup>4)</sup>	25-185	35-185	25-185	35-185	25-185	35-185	25-35	150	25-120 <sup>5)</sup>	77	32	19.0	37	SW6 <sup>1)</sup>
D70-185 x 10(12/16) SK-V-K <sup>4)</sup>	70-185	70-185	70-185	70-185	70-185	70-185		150-185	70-120 <sup>5)</sup>	77	32	19.0	37	SW13
D120-240 x 12(16) SK-V-K <sup>4)</sup>	120-240	120-240	120-240	120-240	120-240	120-240		240	120-1855)	97	35	22.0	56	SW13
D50-300 x 12(16) SK-V-K <sup>4)</sup>	50-300	50-300	50-300	50-300	50-240	50-240		240	95-185	105	38	23.0	60	SW81)
D150-300 x 12(16) SK-V-K <sup>4)</sup>	150-300	150-300	150-300	150-300	150-240	150-240		240	150-185	105	38	23.0	60	SW13

<sup>1)</sup> Double shear-off-head bolt

<sup>2)</sup> Without sector channel

<sup>3)</sup> Bolt, brass (tin-plated)

<sup>4)</sup> With two shear-off-head bolts

<sup>5)</sup> Contact sleeves available on request Other palm holes on request.

#### 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-offareas of the bolt and different torque moments.

The torque moments follow the rule that large conductor cross-sections need higher torque moments and smaller cross-sections need lower torquemoments. The installation instructiondescribes the use of both hexagons 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 cable lug for 120-240 mm<sup>2</sup>, palm hole 12 mm. Order according to the table: 1 mechanical cable lug D120-240 x 12 SK-V-K with part number G6702 54 12.

# Specifications and standards

Mechanical connectors have been electrically tested according to IEC 61238-1-A or VDE 0220 part 100 respectively.

#### Mecanical cable lug Ordering part number D1,5-35 x 8 SK-V-K G6702 54 17 D1,5-35 x 10 SK-V-K G6702 54 18 D25-50 x 10 SK-V-K G6702 54 21 D25-50 x 12 SK-V-K G6702 54 14 D25-185 x 12 SK-V-K G6702 54 31 D16-95 x 10 SK-V-K G6702 54 16 D16-95 x 12 SK-V-K G6702 54 09 D35-150 x 12 SK-V-K G6702 54 13 D35-150 x 16 SK-V-K G6702 54 23 G6702 54 32 D70-185 x 12 SK-V-K D120-240 x 12 SK-V-K G6702 54 12 D120-240 x 16 SK-V-K G6702 54 25 D50-300 x 12 SK-V-K G6702 54 33 D50-300 x 16 SK-V-K G6702 54 34 D150-300 x 12 SK-V-K G6702 54 29 D150-300 x 16 SK-V-K G6702 54 30

#### Product range

Please find the entire overview of our products for conductor connections in our catalogue GPH® Connection technology.

> Al Cu





It is possible to connect different conductor crosssections.



Different designs available.



Can be used for all conductor shapes.

02-09-2019

**Nexans Power Accessories** 

## **GPH® M-SERIES**

Mechanical Connectors up to 52 kV with shear-off-head bolts and transverse grooving

#### Application

Our GPH<sup>®</sup> M-Series mechanical connectors are assembled with multiple shear-off-head bolts and are therefore a reliable and efficient way of connecting identical or different conductor cross-sections and conductor materials.

#### Design

I

#### **Material**

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

#### Surface

Connector body: tin-plated

#### Advantages

• Simple, quick installation: With common commercially available inner and outer hexagon tools or an approved impact wrench.

• Minimum storage costs: The cross-section range from 16 mm<sup>2</sup> to 1200 mm<sup>2</sup> is covered by just 4 types of connectors.

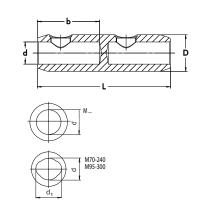


Centric conductor channel, with shear-off-head bolts and transverse grooving

#### Universal applicability:

Can be used for copper and aluminum 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-A, in failure-free operation for more than 20 years.



Mechanica typ	l connector e <sup>4)</sup>	Conduc	ctor cross-s AL (mm²)	ection		ctor cross- CU (mm²)	Number of bolts		Dimer (m		;	Tool outer and inner	
		rm(v)	re	sm	rm(v)	sm		L	d	D	b	hexagon	
M16-95		16-95	16-95	25-70	16-95	25-70	2	70	12.5	24	32	SW10 & SW6	
M25-150		25-150	25-150	35-120	25-120	35-120	2	85	15.5	30	35	SW10 & SW6	
M25-150/	1 <sup>st</sup> side	25-150	25-150	35-120	25-120	35-120		0.5	15.5		0.5	01410 0 0144	
16-95	2 <sup>nd</sup> side	16-95	10-95	25-70 <sup>3)</sup>	16-95	25-70 <sup>3)</sup>	2	85	12.5	30	35	SW10 & SW6	
M70-240	-	70-240	70-240	70-240	70-240	70-240	4	120	<b>22</b> <sup>1)</sup>	35	56	SW13 & SW6	
M95-240		95-240	95-240	95-185	95-240	95-185	4	120	20	33	56	SW13 & SW6	
M95-240/	1 <sup>st</sup> side	95-240	95-240	95-185	95-240	95-185			20			SW13 & SW6	
16-95	2 <sup>nd</sup> side	16-95	10-95	25-70 <sup>3)</sup>	16-95	25-70 <sup>3)</sup>	- 4	120	12.5	33	56	SW6	
M95-300		95-300	95-300	95-240	70-300	70-240	4	142	23 <sup>1)</sup>	36	67	SW13 & SW8	
M95-300/	1 <sup>st</sup> side	95-300	95-300	95-240	70-300	70-240			23 <sup>1)</sup>		67	SW13 & SW8	
16-95	2 <sup>nd</sup> side	16-95	10-95	25-70 <sup>3)</sup>	10-70	25-70 <sup>3)</sup>	4	142	12.5	36	67	SW6	
M185-400		185-400	185-400	185-300	185-400	185-300	6	170	26	42	82	SW19 & SW6	
M185-400/	1 <sup>st</sup> side	185-400	185-400	185-300	185-400	185-300			26	10	82	0.000	
95-240	2 <sup>nd</sup> side	95-240	95-240	95-185	95-240	95-185	6	170	20	42	56	SW19 & SW6	
M300-500		300-500	300-500	300-400	300-500	300-400	6	200	34	52	94	SW19 & SW8	
M400-630		400-630	400-630	400-500	400-630	400-500	6	200	34	52	94	SW19 & SW8	
M400-630/	1 <sup>st</sup> side	400-630	400-630	400-500	400-630	400-500	_		34		94	SW19 & SW8	
120-300	2 <sup>nd</sup> side	120-300	120-300	120-240	120-300	120-240	5	5 20	200	25	52	67	SW19 & SW6
M630-1000 <sup>2)</sup>		630-1000	630-1000		630-1000		8	220	41	65	105	SW19 & SW8	

<sup>1)</sup> Dimension  $d_1 = 26 \text{ mm}$ 

<sup>4)</sup> Other dimensions on request

<sup>3)</sup> Round pressed

	1 et : 1 2)	(20.1000	(20.1000		(20.1000				41		105	C)4/10 8 C)4/0
M630-1000/	1 <sup>st</sup> side <sup>2)</sup>	630-1000	630-1000		630-1000		7	220	41	45	105	SW19 & SW8
185-400	2 <sup>nd</sup> side	185-400	185-400	185-300	185-400	185-300	/	220	26	65	105	SW19

#### Technical details

Shear-off-head bolts are equipped with an inner and outer hexagon. Both are related to the various shear-off-areas of the bolt and different torque moments. The torque moments follow the rule that large conductor crosssections need higher torque moments and smaller crosssections 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 positioning of smaller conductor crosssections in the conductor channel, we use center rings that must be fully pressed into the channel of the connector before mounting the corresponding conductor cross-section. The center rings differ in colour and are assigned to the respective type of conductor. Appropriate installation instructions describe for which

type of conductor the center rings are to be used. For using conductors of the largest cross-section range, center inserts are enclosed for centric conductor positioning.

#### Ordering instructions

Please indicate the part number when ordering (see table). The center rings or inserts are included in the set.

#### **Order example**

1 mechanical connector for 95-300 mm<sup>2</sup>. Order according to the table: 1 mechanical connector M95-300 with part number G6402 51 47.

#### Specifications and standards

Mechanical connectors have been electrically tested according to IEC 61238-1-A or VDE 0220 part 100 respectively.

Mechanical connector type	Ordering part number
M16-95	G6402 50 31
M25-150	G6402 50 15
M25-150/16-95	G6402 50 37
M70-240	G6402 50 60
M95-240	G6402 50 16
M95-240/16-95	G6402 50 36
M95-300	G6402 51 47
M95-300/16-95	G6402 51 77
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
M630-1000/185-400	G6402 51 11



It is possible to connect different conductor materials.



We use center rings for the centric positioning of small conductor cross-sections.



It is possible to connect

different conductor cross-

sections

THE O



Different designs available.

Can be used for all conductor shapes.

02-09-2019

I

## **GPH® C-SERIES**

Mechanical Cable Lugs up to 52 kV with shear-off-head bolts and transverse grooving

I

#### **Application**

Using GPH® C-Series mechanical cable lugs allows a larger, multirange conductor cross-section even for terminations. Mechanical cable lugs are standard tin-plated and offered with different palm hole diameters.

#### Design

#### Material

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

#### Surface

Connector body: tin-plated

#### Advantages

• Simple, quick installation: With common commercially available inner and outer hexagon tools or an approved impact wrench.

• Minimum storage costs: The cross-section range from 16 mm<sup>2</sup> to 1200 mm<sup>2</sup> is covered by just 4 types of cable lugs.

Centric conductor channel,

transverse grooving

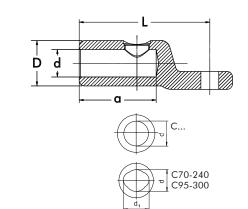
with shear-off-head bolts and

C95-300

#### Universal applicability:

Can be used for copper and aluminum conductors according to EN 60228 classes 1 & 2. For use of our mechanical cable lugs with class 5 flexible copper conductors, please contact us. • **Proven quality:** 

Tested for class 2 conductors according to IEC 61238-1-A, in failure-free operation for more than 20 years.



Mechanical cable lug	Condu	octor cross-se AL (mm²)	Conductor cross-section AL (mm <sup>2</sup> )			Number of bolts	[	Dimen: (mn		S	Palm hole dia.	Tool outer and inner hexagon
type	rm(v)	re	sm	rm(v)	sm		L	d	D	a	(mm)	nexagon
C16-95 x 12	1/ 05	14.05	05 70	1/ 05	05 70	1	(0	10.5	0.4	20	13	C)4/10 8 C)4//
C16-95 x 16	16-95	16-95	25-70	16-95	25-70	1	60	12.5	24	32	17	SW10 & SW6
C25-150 x 12	05.150	05.150	05 100	05 100	05 100		70	15.5		0.5	13	0)1/20 0 0)1//
C25-150 x 16	25-150	25-150	35-120	25-120	35-120	1	79	15.5	30	35	17	SW10 & SW6
C70-240 x 12	70.040	70.040	70.040	70.040	70.040	0	00.5	0.01)	0.5	<b>F</b> (	13	0)1/10 0 0)1//
C70-240 x 16	70-240	70-240	70-240	70-240	70-240	2	93,5	22 <sup>1)</sup>	35	56	17	SW13 & SW6
C95-240 x 12	05.040	05.040	05 105	05.040	05 105		0.5	0.0		<b>F</b> (	13	0)1/20 0 0)1//
C95-240 x 16	95-240	95-240	95-185	95-240	95-185	2	95	20	33	56	17	SW13 & SW6
C95-300 x 12	05.000	05.000	05.040	70.000	70.040	0	105	0.01)			13	0)1/20 0 0)1/0
C95-300 x 16	95-300	95-300	95-240	70-300	70-240	2	105	23 <sup>1)</sup>	36	67	17	SW13 & SW8
C120-300 x 12	100.000	100.000	100.040	100.000	100.040		105	0.5	38		13	0)1/20 0 0)1//
C120-300 x 16	120-300	120-300	120-240	120-300	120-240	2	105	25	38	67	17	SW19 & SW6
C185-400 x 12	105 400	105 400	185-300	105 400	105 000	2	100	0/	40		13	C)4/10 8 C)4//
C185-400 x 16	185-400	185-400	185-300	185-400	185-300	3	120	26	42	82	17	SW19 & SW6
C300-500 x 12											13	
C300-500 x 16	300-500	300-500	300-400	300-500	300-400	3	130	34	52	94	17	SW19 & SW8
C300-500 x 20											21	
C400-630 x 12											13	
C400-630 x 16	400-630	400-630	400-500	400-630	400-500	3	130	34	52	94	17	SW19 & SW8
C400-630 x 20	1										21	1
C630-1000 x 20 <sup>2)</sup>	630-1000	630-1000		630-1000		4	165	41	65	105	21	SW19 & SW8
C800-1200 x 20 <sup>2)</sup>	800-1200	630-1200		630-1000		4	170	45	72	105	21	SW22 & SW8

02-09-2019

<sup>1)</sup> Dimension  $d_1 = 26 \text{ mm}$ 

<sup>2)</sup> Centric conductor positioning by center inserts

#### Technical details

Shear-off-head bolts are equipped with an inner and outer hexagon. Both are related to the various shear-off-areas of the bolt and different torque moments corresponding.

#### Centring of the conductor

For the centric positioning of smaller conductor crosssections in the conductor channel, we use center rings that must be fully pressed into the channel of the cable lug before mounting the corremoments. sponding conductor crosssection. The center rings differ in colour and are assigned to the respective type of conductor. Appropriate installation

instructions describe for which

type of conductor the center

Mechanical cable lug type

The torque moments follow the

rule that large conductor cross-

sections need higher torque

moments and smaller cross-

sections need lower torque

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

rings are to be used. For using conductors of the largest cross-section range, a center insert is enclosed for centric conductor positioning.

Ordering part number

#### Ordering instructions

Please indicate the part number when ordering (see table). The center rings or inserts are included in the set.

#### **Order example:**

I

1 mechanical cable lug for 95-300 mm<sup>2</sup>, palm hole dia. 17 mm. Order according to the table: 1 mechanical cable lug C95-300 x 16 with part number G6502 40 92.

#### Specifications and standards

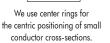
Mechanical connectors have been electrically tested according to IEC 61238-1-A or VDE 0220 part 100 respectively.

#### Product range

Please find the entire overview of our products for conductor connections in our catalogue GPH® connection technology.









It is possible to connect different conductor crosssections.

**Nexans Power Accessories** 



Different designs available.



Can be used for all conductor shapes.

C16-95 x 12 G6502 40 20 C16-95 x 16 G6502 40 33 C25-150 x 12 G6502 40 09 G6502 40 84 C25-150 x 16 C70-240 x 12 G6502 40 36 C70-240 x 16 G6502 40 40 C95-240 x 12 G6502 40 10 C95-240 x 16 G6502 40 17 C95-300 x 12 G6502 40 88 C95-300 x 16 G6502 40 92 C120-300 x 12 G6502 40 23 C120-300 x 16 G6502 40 26 C185-400 x 12 G6502 40 30 C185-400 x 16 G6502 40 19 C300-500 x 12 G6502 40 34 C300-500 x 16 G6502 40 37 C300-500 x 20 G6502 40 41 C400-630 x 12 G6502 40 28 C400-630 x 16 G6502 40 31 C400-630 x 20 G6502 40 29 C630-1000 x 20 G6502 51 10 C800-1200 x 20 G6502 51 12



# **GPH®** Compression cable lugs, Cu Standard type, with and without inspection hole

Technical note

Sector shaped conductors must be rounded with special dies.

#### **Application**

For isolated, non-compacted copper conductors acc. to DIN EN 60228.

#### Product range

Please find the entire overview of our products for conductor connections in our catalogues GPH<sup>®</sup> Connection technology.

### Design

#### **Material**

Connector body: Copper, tin-plated plan stamped Palm:

#### Туре

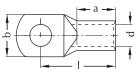
KU-L: without inspection hole KU-L-S: with inspection hole

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



KU-L

**KU-L-S** 



Cable	e lug type	Conductor cross-section, stranded			ensions nm)		Palm hole dia.	Weight 100 pcs. (approx. kg)
KU-L	KU-L-S	(mm²)	d	a	I	b	(mm)	
6 x 5 KU-L 6 x 6 KU-L 6 x 8 KU-L 6 x 10 KU-L	6 x 5 KU-L-S 6 x 6 KU-L-S 6 x 8 KU-L-S 6 x 10 KU-L-S	6	3.5	9	21 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
10 x 5 KU-L 10 x 6 KU-L 10 x 8 KU-L 10 x 10 KU-L	10 x 5 KU-L-S 10 x 6 KU-L-S 10 x 8 KU-L-S 10 x 10 KU-L-S	10	4.5	9	21 21 23 25.5	12.0 12.0 14.5 17.0	5.5 6.5 8.5 10.5	0.4 0.4 0.4 0.5
16 x 5 KU-L 16 x 6 KU-L 16 x 8 KU-L 16 x 10 KU-L 16 x 12 KU-L	16 x 5 KU-L-S 16 x 6 KU-L-S 16 x 8 KU-L-S 16 x 10 KU-L-S 16 x 12 KU-L-S	16	5.5	12	26 26 28 30 32	12.0 12.0 13.5 17.0 20.0	5.5 6.5 8.5 10.5 13.0	0.5 0.7 0.8 0.8 0.8
25 x 6 KU-L 25 x 8 KU-L 25 x 10 KU-L 25 x 12 KU-L	25 x 6 KU-L-S 25 x 8 KU-L-S 25 x 10 KU-L-S 25 x 12 KU-L-S	25	7.0	13	27 29 33 34	14.0 16.0 17.5 20.0	6.5 8.5 10.5 13.0	1.0 1.0 1.1 1.0
35 x 6 KU-L 35 x 8 KU-L 35 x 10 KU-L 35 x 12 KU-L	35 x 6 KU-L-S 35 x 8 KU-L-S 35 x 10 KU-L-S 35 x 12 KU-L-S	35	8.5	15	31 32 34 37	18.0 18.0 18.0 22.0	6.5 8.5 10.5 13.0	1.0 1.0 1.1 1.0

02-09-2019

# **GPH®** Compression cable lugs, Cu Standard type, with and without inspection hole

#### Table on page 76 continued

Cab	le lug type	Conductor cross-section, stranded			ensions nm)		Palm hole dia.	Weight 100 pcs. (approx. kg)
KU-L	KU-L-S	— (mm²)	d	a	I	b	(mm)	
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 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

**Nexans Power Accessories** 

# **GPH® Compression cable lugs, Cu** Acc. to DIN 46235

I

#### **Application**

For isolated, non-compacted copper conductors.

#### **Technical note**

Sector shaped conductors must be rounded with special dies.

#### Product range I

Please find the entire overview of our products for conductor connections in our catalogue GPH<sup>®</sup> Connection technology.

#### Design

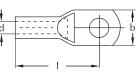
**Material** Connector body: Copper

#### Surface

KU: KU-V:







uncoated tin-plated

KU

KU-V

Cable	lug type	Conductor cross-section, stranded	Dir	nensi (mm)		Palm hole dia.	Die code no.		ber of essions	Weight 100 pcs. (approx. kg)
KU	KU-V	(mm²)		d I b		(mm)		mech.	hydr.	(approx. kg)
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
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 <sup>1</sup> )	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 16 x 12 KU <sup>2)</sup>	16 x 6 KU-V 16 x 8 KU-V 16 x 10 KU-V 16 x12 KU-V <sup>2)</sup>	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
25 x 6 KU <sup>2)</sup> 25 x 8 KU 25 x 10 KU 25 x 12 KU 25 x 16 KU	25 x 6 KU-V <sup>2)</sup> 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 2.2 2.4
35 x 6 KU <sup>2)</sup> 35 x 8 KU 35 x 10 KU 35 x 12 KU 35 x 16 KU <sup>2)</sup>	35 x 6 KU-V <sup>2)</sup> 35 x 8 KU-V 35 x 10 KU-V 35 x 12 KU-V 35 x 16 KU-V <sup>2)</sup>	35	8.2	42	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 compression 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.

# **GPH® Compression cable lugs, Cu** Acc. to DIN 46235

#### Table on page 78 continued

Cable	lug type	Conductor cross-section,	Dimensions			Palm hole	Die code			Weight	
	5 //	stranded		(mm)		dia.	no.	compre		100 pcs.	
КU	KU-V	(mm²)	d	Т	b	(mm)		mech.	hydr.	(approx. kg)	
50 x 8 KU	50 x 8 KU-V				20.0	8.5				4.4	
50 x 10 KU	50 x 10 KU-V	50	10.0	52	22.0	10.5	14	3	1	4.5	
50 x 12 KU	50 x 12 KU-V	50	10.0	52	24.0	13.0	14			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				24.0	8.5				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	70	11.5	55	24.0	13.0	16	3	1	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				28.0	10.5				9.2	
95 x 12 KU	95 x 12 KU-V	95	13.5	65	28.0	13.0	18	4	2	9.2	
95 x 16 KU	95 x 16 KU-V	,3	10.5	00	32.0	17.0	10	-	2	9.1	
95 x 20 KU <sup>2)</sup>	95 x 20 KU-V <sup>2)</sup>				34.0	21.0				10.4	
120 x 10 KU	120 x 10 KU-V				32.0	10.5				11.4	
120 x 12 KU	120 x 12 KU-V	120	15.5	70	32.0	13.0	20	4	2	11.6	
120 x 16 KU	120 x 16 KU-V	120	15.5	/0	32.0	17.0	20	4	Z	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				34.0	10.5				16.9	
150 x 12 KU	150 x 12 KU-V	150	17.0	78	34.0	13.0	22	4	2	16.4	
150 x 16 KU	150 x 16 KU-V	150	17.0	/0	34.0	17.0	22	4	Z	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				37.0	10.5				19.3	
185 x 12 KU	185 x 12 KU-V	185	19.0	82	37.0	13.0	25	5	2	19.4	
185 x 16 KU	185 x 16 KU-V	105	17.0	02	37.0	17.0	25		2	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				42.0	13.0				28.5	
240 x 16 KU	240 x 16 KU-V	240	21.5	92	42.0	17.0	28	5	2	28.9	
240 x 20 KU	240 x 20 KU-V				45.0	21.0				28.0	
300 x 12 KU <sup>2)</sup>	300 x 12 KU-V <sup>2)</sup>					13.0				38.1	
300 x 16 KU	300 x 16 KU-V	300	24.5	100	48.0	17.0	32		2	37.5	
300 x 20 KU	300 x 20 KU-V					21.0				38.5	
400 x 16 KU <sup>3)</sup>	400 x 16 KU-V <sup>3)</sup>	400	26.0	115	55.0	17.0	38		3	79.8	
400 x 20 KU <sup>3)</sup>	400 x 20 KU-V <sup>3)</sup>					21.0				76.6	
500 x 16 KU <sup>3)</sup>	500 x 16 KU-V <sup>3)</sup>	500	29.0	125	60.0	17.0	42		3	97.8	
500 x 20 KU <sup>3)</sup>	500 x 20 KU-V <sup>3)</sup>					21.0				96.0	
400 x 16 KU-S	400 x 16 KU-S-V	400	27.5	115	55.0	17.0	38		3	68.8	
400 x 20 KU-S	400 x 20 KU-S-V		27.5			21.0				66.0	
500 x 16 KU-S	500 x 16 KU-S-V	E00	21.0	105	40.0	17.0	40			85.0	
500 x 20 KU-S	500 x 20 KU-S-V	500	31.0	125	60.0	21.0	42		3	83.5	
625 x 16 KU	625 x 16 KU-V		o / -			17.0			-	79.4	
625 x 20 KU	625 x 20 KU-V	625	34,5	135	60.0	21.0	44		3	77.9	
800 x 20 KU	800 x 20 KU-V	800	40.0	165	75.0	21.0	52		3	146.9	
					85.0	21.0	58		3	191.1	

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

 $^{\scriptscriptstyle 2)}\mbox{These}$  cable lugs are manufactured as a special model, different from DIN 46235.

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

# **GPH® Compression cable lugs, Al** Longitudinally sealed, acc. to DIN 46329

#### 

Application For aluminum conductors and aluminum cable conductors

#### Technical note

Sector shaped conductors must be rounded with special dies.

#### Design

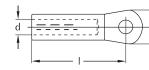
#### **Material**

Connector body: Aluminum Palm: plan stamped

#### Surface

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





ALU-F

ALU-F-V

Cable lugs filled with compound and sealed in plastic.

Cable lug type		Conductor cross-section (mm <sup>2</sup> )			nensi (mm)		Palm hole dia. (mm)	Die code no.	Numb		Weight 100 pcs. (approx. kg)
ALU-F	ALU-F-V	rm/sm	se	d	I	b			mech.	hydr.	
16 x 8 ALU-F <sup>1)</sup> 16 x 10 ALU-F <sup>1)</sup>	16 x 8 ALU-F-V <sup>1)</sup> 16 x 10 ALU-F-V <sup>1)</sup>	16	25	5.4	50	20 25	8.5 10.5	12	4	2	1.4 1.3
25 x 8 ALU-F <sup>1)</sup> 25 x 10 ALU-F <sup>1)</sup> 25 x 12 ALU-F <sup>1)</sup>	25 x 8 ALU-F-V <sup>1</sup> ) 25 x 10 ALU-F-V <sup>1</sup> ) 25 x 12 ALU-F-V <sup>1</sup> )	25	35	6.8	50	20 25 25	8.5 10.5 13.0	12	4	2	1.5 1.4 1.4
35 x 8 ALU-F 35 x 10 ALU-F 35 x 12 ALU-F	35 x 8 ALU-F-V 35 x 10 ALU-F-V 35 x 12 ALU-F-V	35	50	8.0	62	25	8.5 10.5 13.0	14	5	2	2.6 2.4 2.3
50 x 8 ALU-F 50 x 10 ALU-F 50 x 12 ALU-F	50 x 8 ALU-F-V 50 x 10 ALU-F-V 50 x 12 ALU-F-V	50	70	9.8	62	25	8.5 10.5 13.0	16	5	2	2.5 2.4 2.3
70 x 8 ALU-F 70 x 10 ALU-F 70 x 12 ALU-F	70 x 8 ALU-F-V 70 x 10 ALU-F-V 70 x 12 ALU-F-V	70	95	11.2	72	25	8.5 10.5 13.0	18	6	3	3.5 3.3
95 x 8 ALU-F 95 x 10 ALU-F 95 x 12 ALU-F 95 x 16 ALU-F	95 x 8 ALU-F-V 95 x 10 ALU-F-V 95 x 12 ALU-F-V 95 x 16 ALU-F-V	95	120	13.2	78 78 78 80	25 25 25 30	8.5 10.5 13.0 17.0	22	6	3	7.4 7.0 6.7
120 x 10 ALU-F 120 x 12 ALU-F 120 x 16 ALU-F	120 x 10 ALU-F-V 120 x 12 ALU-F-V 120 x 16 ALU-F-V	120	150	14.7	84	30	10.5 13.0 17.0	22	6	3	6.8 6.5
150 x 10 ALU-F 150 x 12 ALU-F 150 x 16 ALU-F	150 x 10 ALU-F-V 150 x 12 ALU-F-V 150 x 16 ALU-F-V	150	185	16.3	90	30	10.5 13.0 17.0	25	6	3	8.8 8.4 9.3

<sup>1)</sup> Palm width and height do not comply with DIN 46329.

# **GPH® Compression cable lugs, Al** Longitudinally sealed, acc. to DIN 46329

#### L

**Product range** Please find the entire overview of our products for conductor connections in our catalogue GPH<sup>®</sup> Connection technology.

#### Table on page 80 continued

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



# **TOOLS** for the installation of power accessories

6A



# **CABLE PREPARATION TOOLS**

for accessories installation in medium voltage applications

I	Peeling tool with stop ring, size 1	Order 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: 10 kV 25 mm <sup>2</sup> up to 30 kV 500 mm <sup>2</sup> cables, diameter over core insulation between 10 mm up to 52 mm. The cutting depth is preset for semi-con screens acc. to VDE 0276 part 620. In case of thicker screens	than described, the cutting depth of the blade can be adjusted up to a maximum of 1.2 mm. By using the tool with length control the semi- con layer can be removed between 25 mm up to 100 mm measured from cut-off edge of outer cable sheath. Stop rings included in the kit.					
I	2-in-1 Cable sheath and	Order numbers: cable sheath 59117 / spare	e cutter 51488					
	cable insulation cutter, size 1	The tool is engineered for profes- sional and safe stripping of the ou- ter cable sheath of medium voltage cables. Field of application: 10 kV 25 mm <sup>2</sup> up to 30 kV 500 mm <sup>2</sup> single-core cables, diameter over outer sheath between 15 mm up to 57 mm. The tool is also suitable for removing polymeric insulation of medium voltage cables in the afore mentioned range. It has been	designed to provide spiral cutting (longitudinal) as well as circumfer- ential cutting. The blade is specially formed with a guiding system lifting the material while cutting it to avoid any damages to the layers under- neath. Cutting depth is adjustable.					
I	Chamfering tool, size 1	Order numbers: chamfering tool 43523 / sp	pare cutter 44129					
		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. Field of application: 10 kV 25 mm <sup>2</sup> up to 30 kV 500 mm <sup>2</sup> cables acc. to VDE 0276 part 620, diameter over core insulation between 12 mm up to 45 mm after peeling the outer	sheath. Due to its specially formed blade a radius is produced at the cut-off edge. This reduces the force required to install non-size sensitive slip-on accessories enormously.					
I	Insulation stripping tool	Order numbers: 40001 for 10 kV; 40002 fo Order numbers: spare cutter 41083 for 10 k						
	3	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,	conductor cross-section is necessary. The simple exchange of blades with preset cutting depth prevents dam- aging the cable conductor.					

no adjustment of voltage level or

02-09-2019

# **CABLE PREPARATION TOOLS**

for accessories installation in medium voltage applications and cables with conductor cross-sections  $> 500 \text{ mm}^2$ 

#### Order numbers: peeling tool 55152 / spare cutter 51495 Peeling tool with stop ring, size 2 The peeling tool is suitable for adjusted up to a maximum of 1.2 removing the extruded outer semimm. By using the tool with length conductive cable screen of medium control the semi-con layer can be voltage cables with diameters over removed between 25 mm up to 100 core insulation between 10 mm mm measured from cut-off edge of outer cable sheath. Stop rings up to 60 mm. The cutting depth is preset for semi-con screens acc. included in the kit. to VDE 0276 part 620. In case of thicker screens than described, the cutting depth of the blade can be 2-in-1 Cable sheath Order numbers: cable sheath 59118 / spare cutter 55541 and cable insulation The tool is engineered for profesas well as circumferential cutting. cutter, size 2 sional and safe stripping of the The blade is specially formed with outer cable sheath of medium a guiding system lifting the material while cutting it to avoid any voltage single-core cables with diameters over outer sheath between damages to the layers underneath. 32 mm up to 70 mm. The tool is Cutting depth is adjustable. also suitable for removing polymeric insulation of medium voltage cables in the afore mentioned range. It has been designed to provide spiral cutting (longitudinal)

## Chamfering tool, size 2



#### Order numbers: chamfering tool 55154 / spare cutter 44129

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. It can be used for diameters over core insulation between 15 mm up to 60 mm after peeling the outer sheath. Due to its specially formed blade a radius is produced at the cut-off edge. This reduces the force required to install non-size sensitive slip-on accessories enormously.

L

# **CABLE PREPARATION TOOLS**

for accessories installation in medium voltage applications

- Tool case complete, size 1 (for cross-sections up to 500 mm<sup>2</sup>)
   Order number: Tool case complete 51426
- I Tool case complete, size 2 (for cross-sections > 500 mm<sup>2</sup>) Order number: Tool case complete 55155



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

#### Kit contents

Rigid case with foam pads, two-in-one cable sheath and cable insulation cutter, chamfering tool, devices (stop rings, silicone grease and Allen key for tooling adjustments).

Torque amplifier with tool case

#### Application

The torque amplifier DMV65 is appropriate for a gentle removal of shear-off-head bolts in 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.

#### Kit contents

- Tool case with foam pads
- Outer hexagon tools SW10, 13, 14, 17, 19, 22, 24
- Inner hexagon tools
   SW5, 6, 8, 10
- Hexagon socket key SW5
- Instruction manual

#### **Technical characteristics**

• Triangle

Т

- 1/2" Square inserting the socket wrench
- Rods length 80.5 mm
- Transmission ratio 1:24
- Max. engine torque 65 Nm
- Min. driving torque 3.5 Nm
- Weight 941 g



#### Design

L

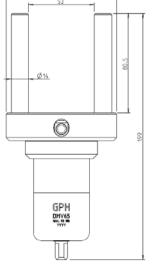
- Rods, assembled, length 80.5 mm
- Rod socket
- Inner tapped hole for Ø < 40 mm</li>
- Outer tapped hole for Ø < 53 mm</li>
- 1/2" Square with ball coupling
- Release hole
- Gearbox
- Triangle
- Hexagon socket key SW5

#### Material

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

#### Important notice

- The torque amplifier is not approved for live working installation.
- The tool is not allowed to be used in combination with an impact wrench.



• Consider the installation instruction of the respective mechanical connector or cable lug.

#### Ordering instructions

Туре	Max. engine torque (Nm)	Package	Dimensions (mm)	Weight (g)
DREHMOMENTVERSTÄRKER DMV65 IM KOFFER	65	Tool case	375 x 240 x 120	2600

Torque amplifier, isolated, with tool case

#### Application

The isolated torque amplifier DMV65 is appropriate for a gentle removal of shear-off-head bolts in mechanical connectors using standard cordless screwdrivers. According to manufacturer self-test referring to EN 60900, the electrical isolation between installer and connector is given by the tool. Nevertheless, wearing of personal protective equipment (PPE) is mandatory.

#### **Technical characteristics**

• Triangle

Т

- 1/2" Square inserting the socket wrench
- Rods length 81 mm
- Transmission ratio 1:24
- Max. engine torque 65 Nm
- Min. driving torque 3.5 Nm
- Weight 1380 g



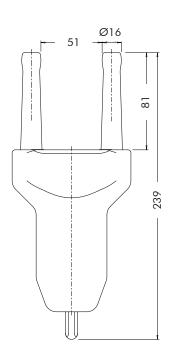
#### Kit contents

- Tool case with foam pads
- Outer hexagon tools SW10, 13, 14, 17, 19, 22, 24
- Inner hexagon tools SW5, 6, 8, 10
- Hexagon socket key SW5
- Instruction manual

#### Design

L

- Installed rods, insulated, length 81 mm
- Cover plate
- Inner tapped hole for  $\emptyset < 36 \text{ mm}$
- Outer tapped hole for  $\emptyset < 48 \text{ mm}$
- Gearbox, insulated
- Triangle
- Hexagon socket key SW5



#### Material

- Operating parts and rods manufactured of high strength quality steel with plastic-covered surfaces (Polyamide PA)
- Engine body made of aluminum with plastic cover (Polyoxymethylene POM)

#### Important notice

- The contact with other connectors nearby must be avoided.
- The tool is not allowed to be used with an impact wrench.
- Consider the installation instruction of the respective mechanical connector or cable lug.

## Ordering instructions

Туре	Max. engine torque (Nm)	Package	Dimensions (mm)	Weight (g)
DREHMOMENTVERSTÄRKER POTENTIALGETRENNT DMV65	65	Tool case	375 x 240 x 120	3000

02-09-2019

## iDMV65

Torque amplifier iDMV65 with integrated drive and tool case

#### Application

The integrated torque amplifier DMV65 is the appropriate all-inone tool for a gentle removal of shear-off-head bolts in mechanical connectors. It enables an optimum clamping force using mechanical GPH<sup>®</sup> connectors with conductor cross-sections up to 630 mm<sup>2</sup>. For the comfortable handling during the installation, the power unit is integrated into the gearbox.

#### Technical characteristics

- <sup>1</sup>/<sub>2</sub>" Square inserting the socket wrench
- Rods length 80.5 mm
- Max. engine torque 65 Nm
- Li-Ion battery (12V/2.0 Ah)
- Charging time approx.
   30 min
- Weight 2100 g



218

336

#### Kit contents

- Tool case with foam pads
- Outer hexagon tools SW10, 13, 14, 17, 19, 22, 24
- Inner hexagon tools
   SW5, 6, 8, 10
- Hexagon socket key SW5
- Instruction manual

#### Design

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- Integrated cordless screw driver
- Installed rods, length 80.5 mm
- Rod socket
- Inner tapped hole for  $\emptyset < 40 \text{ mm}$
- Outer tapped hole for Ø < 53 mm</li>
- 1/2" Square with ball coupling and release function
- Release hole
- Gearbox
- Hexagon socket key SW5

#### Material

- Cordless quality screw driver with battery charger
- Operating parts and rods manufactured of high strength quality steel
- Engine body made of aluminum with anodised surface

#### Important notice

- The torque amplifier is not approved for live working installation.
- Consider the installation instruction of the respective mechanical connector or cable lug.

## Ordering instructions

Туре	Max. engine torque (Nm)	Package	Dimensions (mm)	Weight (g)
DREHMOMENTVERSTÄRKER MIT INTEGRIERTEM ANTRIEB iDMV65 IM KOFFER	65	Tool case	340 x 230 x 70	4200

## **CATALOGUE SELECTION**

Here you can find all available catalogues of our GPH<sup>®</sup>, EUROMOLD<sup>®</sup> and Nexans products. You can order these catalogues directly by phone or download from our web page.

#### www.nexans-power-accessories.com

#### **Nexans Power Accessories**

- GPH<sup>®</sup> Connection technology and tools
- Heat-shrinkable joints and accessories up to 0.6/1 (1.2) kV
- Heat-shrinkable power accessories up to 20.8/36 (42) kV)
- Cold-shrinkable joints
- EUROMOLD<sup>®</sup> Medium voltage equipment bushings
- EUROMOLD<sup>®</sup> Medium voltage terminations, cold-shrink and slip-on
- Medium voltage terminations, heat-shrink
- High voltage accessories up to 72.5 kV
- High voltage accessories up to 170 kV
- EUROMOLD® Separable connectors for interface A
- EUROMOLD<sup>®</sup> Separable connectors for interface B
- EUROMOLD<sup>®</sup> Separable connectors for interface C
- EUROMOLD<sup>®</sup> Separable connectors for interface D
- EUROMOLD<sup>®</sup> Separable connectors for interface E
- EUROMOLD® Separable connectors for interface F

# Nexans

# CABLE DATA SHEET INQUIRY FORM

#### Nexans Power Accessories /

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

Phone: +49(0)9281 / 8306 - 0 Fax: +49(0)9281 / 8306 - 480 E-Mail: info.power-accessories@nexans.com Company: Customer ID:

Address:

Phone: Fax: E-Mail:

## Cable designation

Cable dataSingle-coreThre-coreOther	Single-core flexible rubber insulated cable Three-core flexible rubber insulated cable Standard
Conductor material Aluminum Copper	cross-section mm <sup>2</sup>
<b>Conductor shape</b> Round stranded (compacted) conductor Round solid conductor Sector stranded conductor Sector solid 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:	Cable type $ \begin{array}{c} 1 & 2 & 3 & 4 & 5 & 6 & 7 \\ \hline 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 1 & 2 & 3 & 4 & 5 & 5 & 6 & 7 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ \hline 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 \\ 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 & 1 &$
2. Ø over core insulation         3. Ø over semi-conductive screen	mm XLPE PVC EPR mm Conded graphite coated easy strip Cu wire screen tape screen cross-section

# NOTES



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Find out more about Nexans Power Accessories.

