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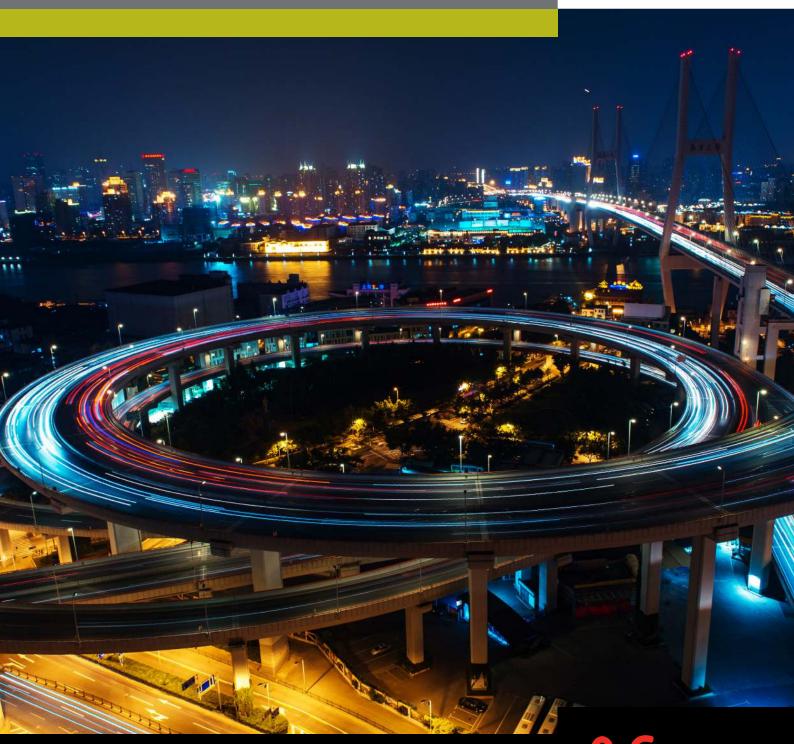
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# **EUROMOLD®**

INTERFACE B MEDIUM VOLTAGE COMPACT SEPARABLE CONNECTORS

CATALOGUE 2017







#### NEXANS NETWORK SOLUTIONS DIV. EUROMOLD

# COMPANY PRESENTATION



#### **EUROMOLD**

Euromold is the leading European specialised designer, manufacturer and distributor of prefabricated cable accessories for medium voltage energy distribution. Euromold provides a complete range of accessories for underground cables: premoulded EPDM rubber connectors for cables and epoxy bushings for transformers and switchgear, as well as a large range of coldshrinkable terminations and joints from 12 to 42 kV. Euromold is also the manufacturer of electrical components for the high voltage accessories of the Nexans group.

#### ISO 9001 Certificate

Since 1992, Euromold's commitment to quality is demonstrated by its ISO 9001 certification.

#### International standards

All our products meet the International standards like CENELEC HD 629.1, CENELEC EN 50180, IEC 60137, IEC 60502-4... or country specifications. Official certificates, CESI, KEMA, ATEX... prove the conformity of our products. Long duration tests of existing or new products are continuously performed in our test fields.

#### Laboratory accreditation

Since June 2000, Euromold's independent ELAB laboratory obtained the BELAC accreditation no.144-TEST conform with the European standards for laboratories ISO 17025 for electrical testing of low and medium voltage cable accessories according to the international standards EN 50393, IEC 60502-4, IEC 61442 and HD 629.



While every care is taken to ensure that the information contained in this publication is correct, no legal responsibility can be accepted for any inaccuracy. Nexans Network Solutions N.V. - Div. Euromold reserves the right to alter or modify the characteristics of its products described in this catalogue as standards and technology evolve.

# SEPARABLE CONNECTORS AND BUSHINGS

#### TABLE OF CONTENTS

400LR - elbow connector

400TE - tee connector

400T1 - equipment bushing

400AR-1 - equipment bushing

400AR-2 - equipment bushing

400AR-8 - equipment bushing

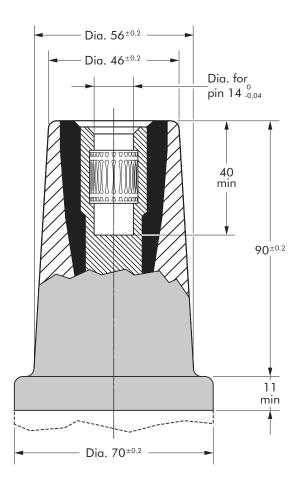
400SFR-P - equipment bushing

Accessories

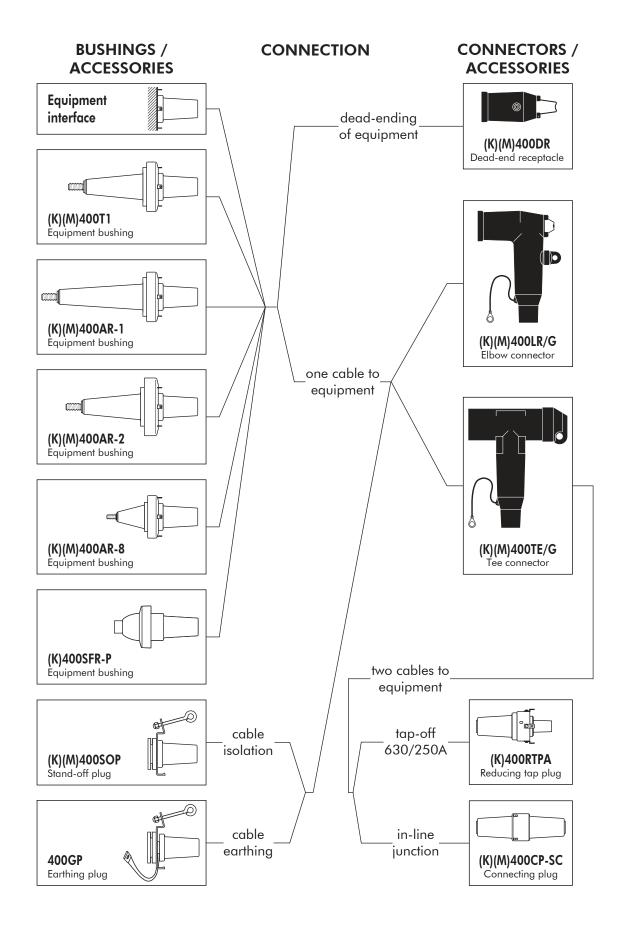
Possible arrangements

#### **INTERFACE B**

Dimensions according to European CENELEC EN 50180 and 50181 (in mm).



#### **CONNECTING POSSIBILITIES**



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

# TECHNICAL CHARACTERISTICS

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



#### **DESIGN**

Separable connector comprising:

- 1. Conductive EPDM insert.
- 2. Conductive EPDM jacket.
- 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. Conductor connector.
- 6. Cable reducer.
- 7. Earthing lead.

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

# 210 mm 4 5 1 2 7

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

Up to 36 kV - 400 A

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# SPECIFICATIONS AND STANDARDS

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

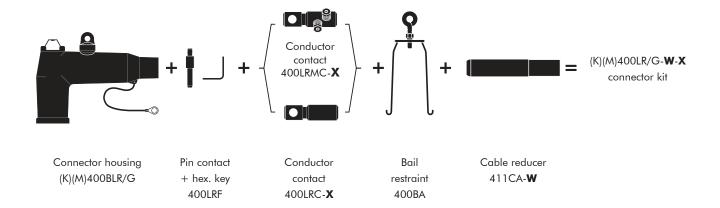
Separable connector	Voltage Um	Current Ir	Conductor	sizes (mm²)
type	(kV)	(A)	min	max
400LR/G	12	400	50	240
K400LR/G	24	400	25	240
M400LR/G	36	400	35	185



#### KIT CONTENTS

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

The kit also comprises lubricant, wipers, installation instructions and crimp chart.



#### ORDERING INSTRUCTIONS

Select the part number which gives the best centring to the cable core insulation diameter and substitute **X** using table X, according to the conductor size and type.

Add a 'K' for use up to 24 kV and add an 'M' for use up to 36 kV.

#### EXAMPLE:

The copper wire screened cable is 12 kV, 150 mm<sup>2</sup> stranded copper with a diameter over core insulation of 23.5 mm.

Order a 400LR/G-19-150(K)M-11-2 elbow connector kit.

#### TABLE W

Ordering	Dia. over core insulation (mm)				
part number	min	max			
400LR/G-11- <b>X</b>	12.0	17.5			
400LR/G-15- <b>X</b>	16.0	22.0			
400LR/G-19- <b>X</b>	20.0	26.5			
400LR/G-22- <b>X</b>	23.5	31.0			
400LR/G-25- <b>X</b>	26.5	32.5			
400LR/G-27- <b>X</b>	28.5	37.5			

#### TABLE X

Conductor	Aluminium	Aluminium		Copper conductor	
(mm²)	DIN hexagonal	Deep indent	ndent and coppe		DIN hexagonal
25	-	-	10		25(K)M-11-2
35	35(K)M-12-2	35KM-12-1	25.95-14-5		35(K)M-11-2
50	50(K)M-12-2	50(K)M-12-1	95-		50(K)M-11-2
70	70(K)M-12-2	70(K)M-12-1	25.		70(K)M-11-2
95	95(K)M-12-2	95(K)M-12-1			95(K)M-11-2
120	120(K)M-12-2	120(K)M-12-1		4-5	120(K)M-11-2
150	150(K)M-12-2	150(K)M-12-1		L-0	150(K)M-11-2
185	185(K)M-12-2	185(K)M-12-1		95.240-14-5	185(K)M-11-2
240	240(K)M-12-2	240(K)M-12-1		6	240(K)M-11-2



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



For use with Alupe or C 33-226 cables. Please contact our representative.



For use with fabric tape (graphite) screened cables. Order additional semi-conductive tape (type TSC).



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



For applications outdoors and in humid climate.
Order: +MWS.



Components can be ordered individually.

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

# TECHNICAL CHARACTERISTICS

(9)

2

(3)

390 mm

- 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.

—— 255 mm - 220 mm —

(10) (6)



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

Up to 36 kV - 400 A



#### **DESIGN**

Separable connector comprising:

- 1. Conductive EPDM insert.
- 2. Conductive EPDM jacket.
- 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. Conductor connector.
- Basic insulating plug (with VD point).
- 7. Cable reducer.
- 8. Conductive rubber cap.
- 9. Clamping pin contact.
- 10. Bail restraint.
- 11. Earthing lead.

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

# SPECIFICATIONS AND STANDARDS

The separable connector 400TE meets the requirements of CENELEC HD 629.1.

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7	)		
	)		

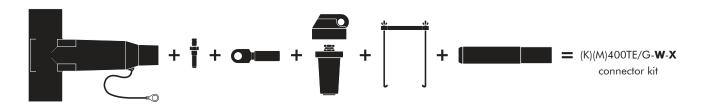
Separable connector	Voltage Um	Current Ir	Conductor :	sizes (mm²)
type	(kV)	(A)	min	max
400TE/G	12	400	70	240
K400TE/G	24	400	25	240
M400TE/G	36	400	35	185



#### KIT CONTENTS

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

The kit also comprises lubricant, wipers, installation instructions and crimp chart.



Connector housing (K)(M)400BT/G

Clamping pin contact 400TEF Conductor contact 400TEC-**X**  Basic insulating plug + rubber cap (K)(M)400BIPA Bail restraint 400T-BA Cable reducer 411CA-**W** 

#### ORDERING INSTRUCTIONS

Select the part number which gives the best centring to the cable core insulation diameter and substitute **X** using table X, according to the conductor size and type.

Add a 'K' for use up to 24 kV and add an 'M' for use up to 36 kV.

#### TABLE W

Ordering	Dia. over core insulation (mm)				
part number	min	max			
400TE/G-11- <b>X</b>	12.0	17.5			
400TE/G-15- <b>X</b>	16.0	22.0			
400TE/G-19- <b>X</b>	20.0	26.5			
400TE/G-22- <b>X</b>	23.5	31.0			
400TE/G-25- <b>X</b>	26.5	32.5			
400TE/G-27- <b>X</b>	28.5	37.5			

#### **EXAMPLE:**

The copper wire screened cable is 24 kV, 240 mm<sup>2</sup> stranded aluminium with a diameter over core insulation of 32.1 mm.

Order 3 x K400TE/G-27-240(K)
M-12-2 tee connector kit.

#### **TABLE X**

Conductor sizes	Alum	inium	Copper		
(mm²)	DIN hexagonal	Deep indent	DIN hexagonal		
25	-	-	25(K)M-11-2		
35	35(K)M-12-2	35KM-12-1	35(K)M-11-2		
50	50(K)M-12-2	50(K)M-12-1	50(K)M-11-2		
70	70(K)M-12-2	70(K)M-12-1	70(K)M-11-2		
95	95(K)M-12-2	95(K)M-12-1	95(K)M-11-2		
120	120(K)M-12-2	120(K)M-12-1	120(K)M-11-2		
150	150(K)M-12-2	150(K)M-12-1	150(K)M-11-2		
185	185(K)M-12-2	185(K)M-12-1	185(K)M-11-2		
240	240(K)M-12-2	240(K)M-12-1	240(K)M-11-2		



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



For use with Alupe or C 33-226 cables. Please contact our representative.



For use with fabric tape (graphite) screened cables. Order additional semi-conductive tape (type TSC).



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



For applications outdoors and in humid climate.
Order: +MWS.



Components can be ordered individually.

# 400T1/400AR-1 /400AR-2

#### **INTERFACE B EQUIPMENT BUSHINGS**

#### **APPLICATION**

For use in equipment insulated with oil fluid, typically for transformers, switchgear, capacitors...

#### **TECHNICAL CHARACTERISTICS**

Each bushing is tested for AC withstand and partial discharge prior to leaving the factory.



#### SPECIFICATIONS AND **STANDARDS**

The plug-in type equipment bushings are moulded epoxy insulated parts and meet the requirements of IEC 60137. The (K)(M)400T1 also meets CENELEC EN 50180.

# 103 Minimum oil level: - 12 kV: 40 mm - 24 kV: 50 mm Н - 36 kV: 75 mm

Dia. F

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

Up to 36 kV - 400 A

**EUROMOLD®** 

#### ORDERING INSTRUCTIONS

To order the equipment bushing, specify the type.

The bushings are supplied with an earth jumper (/J) or an earth plate (/GS). This earth connection must be specified when ordering.

E.g. K400AR-1/J.

Equip- ment		_				Dime	nsions	(mm)		
bushing type	Um (kV)	Ir (A)	A	В	C	D	E	Dia. F	Dia. G	Dia. H
400T1	12	400	310	144	30	M12	22	88	128	16
K400T1	24	400	310	144	30	M12	22	88	128	16
M400T1	36	400	310	144	30	M12	22	88	128	16
400AR-1	12	400	380	213	30	M12	22	74	128	16
K400AR-1	24	400	380	213	30	M12	22	74	128	16
M400AR-1	36	400	380	213	30	M12	22	74	128	16
		l				l <u>-</u> .	l	l	l	

In mm.

Equip- ment	Voltage	Current				Dime	nsions	(mm)		
bushing type	Um (kV)	Ir (A)	A	В	С	D	E	Dia. F	Dia. G	Dia. H
400T1	12	400	310	144	30	M12	22	88	128	16
K400T1	24	400	310	144	30	M12	22	88	128	16
M400T1	36	400	310	144	30	M12	22	88	128	16
400AR-1	12	400	380	213	30	M12	22	74	128	16
K400AR-1	24	400	380	213	30	M12	22	74	128	16
M400AR-1	36	400	380	213	30	M12	22	74	128	16
400AR-2	12	400	329	138	36	M16	40	100	150	30
K400AR-2	24	400	329	138	36	M16	40	100	150	30
M400AR-2	36	400	329	138	36	M16	40	100	150	30

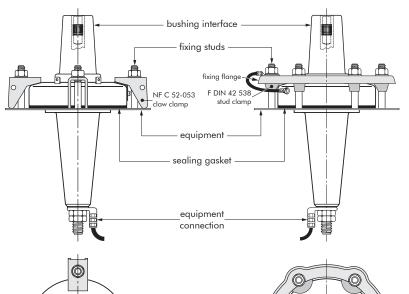


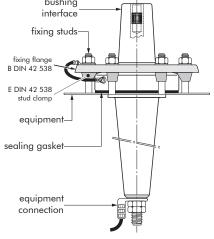
#### FIXINGS FOR EQUIPMENT BUSHINGS

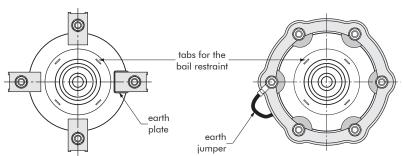
#### 400AR-2/GS BUSHING

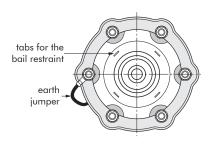
#### 400AR-2/J BUSHING

# 400AR-1/J AND 400T1/J BUSHINGS









#### **BUSHING CLAMPING KIT**

To order the bushing clamping kit, according to NF C 52-053 standards, simply specify KBCNF-400 (for bushing type 400AR-2).

Contents: - 4 x claw clamp NF

- 1 x sealing gasket.

#### **BUSHING CLAMPING KIT**

To order the bushing clamping kit, simply specify: KBCDS-400B.

Contents: - 1 x fixing flange

- 6 x stud clamp F

- 1 x sealing gasket.

#### **BUSHING CLAMPING KIT**

To order the bushing clamping kit, according to DIN 42 538 standards, simply specify KBCD-400B.

Contents: - 1 x fixing flange B

- 6 x stud clamp E

- 1 x sealing gasket.

#### FIXING DIMENSIONS STANDARDS NF C 52-053

French standards.

M10 or M12

4 fixing

studs

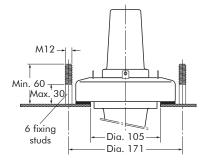
Max. 25

Dia. 105

Dia. 171

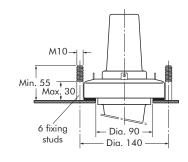
Min.

#### FIXING DIMENSIONS



# FIXING DIMENSIONS STANDARDS DIN 42 538

German standards.



9

For use in equipment insulated with oil fluid, typically for transformers, switchgear, capacitors...

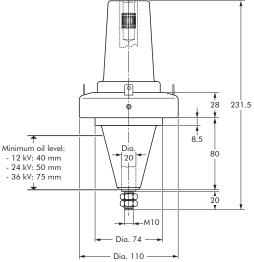
# TECHNICAL CHARACTERISTICS

Each bushing is tested for AC withstand and partial discharge prior to leaving the factory.



# SPECIFICATIONS AND STANDARDS

The plug-in type equipment bushings 400AR-8 are moulded epoxy insulated parts and meet the requirements of CENELEC EN 50180 and IEC 60137.



6/10 (12) kV 6,35/11 (12) kV 8,7/15 (17,5) kV 12/20 (24) kV 12,7/22 (24) kV

Up to 36 kV - 250 A

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#### ORDERING INSTRUCTIONS

To order the equipment bushing, specify the type.

The bushings can be supplied with an earth jumper (/J). E.g. M400AR-8/J.

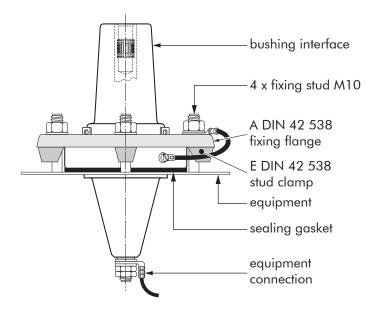
In mm.

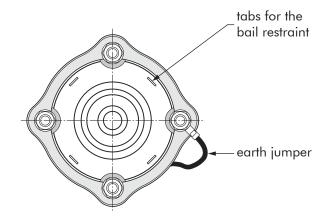
Equipment bushing type	Voltage Um (kV)	Current Ir (A)
400AR-8	12	250
K400AR-8	24	250
M400AR-8	36	250



### FIXINGS FOR EQUIPMENT BUSHINGS

#### 400AR-8/J BUSHING





#### **BUSHING CLAMPING KIT**

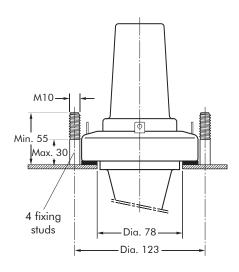
To order the bushing clamping kit, according to DIN 42 538 standards, simply specify: KBCD-200.

Contents: - 1 x fixing flange A

- 4 x stud clamp E
- 1 x sealing gasket.

#### FIXING DIMENSIONS STANDARDS DIN 42 538

German standards.



In mm.

For use in equipment insulated with SF<sub>6</sub> gas.

# TECHNICAL CHARACTERISTICS

Each bushing is tested for AC withstand and partial discharge prior to leaving the factory.

Dia. 70



#### **DESIGN**

The equipment bushing is a moulded epoxy insulated part with a connector interface in accordance with CENELEC EN 50181.

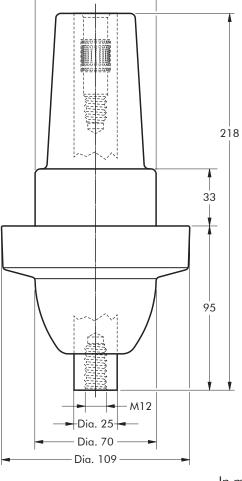
The 400SFR-P bushing has a shank outside this standard, adapted for use in SF<sub>6</sub> gas.

# SPECIFICATIONS AND STANDARDS

The plug-in type equipment bushing 400SFR-P meets the requirements of CENELEC EN 50180 and IEC 60137.

#### **ORDERING INSTRUCTIONS**

To order the equipment bushing, simply specify the type.



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

Up to 24 kV - 400 A

**EUROMOLD®** 

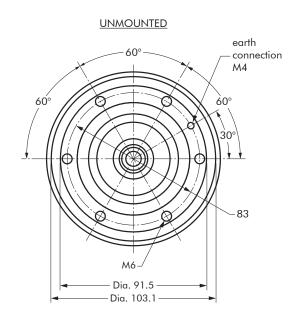
In	mm.

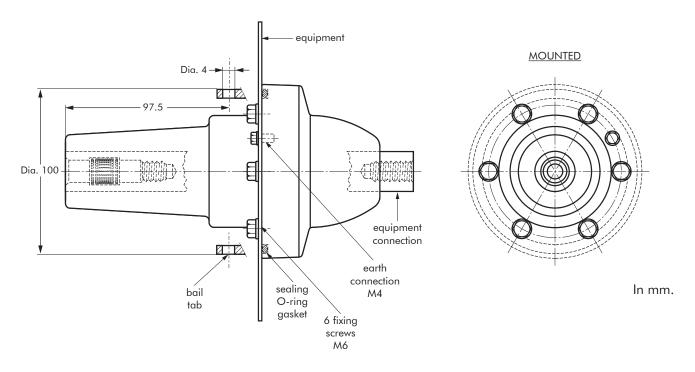
Equipment bushing type	Voltage Um (kV)	Current Ir (A)
400SFR-P	12	400
K400SFR-P	24	400



## **FIXINGS FOR EQUIPMENT BUSHINGS**

# 400SFR-P BUSHING FOR GAS INSULATED SWITCHGEAR





## **ACCESSORIES**

#### **APPLICATION**

For use with connectors and bushings with an interface B as described by CENELEC EN 50180 and 50181.

# TECHNICAL CHARACTERISTICS

All these products, except the earthing plug, are tested for AC withstand and partial discharge prior to leaving the factory.

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

Up to 36 kV

#### 400DR DEAD-END RECEPTACLE

Fits over a bushing with a type B interface to provide 'dead-end' facility.

Is used with a 400BA restraint bail.



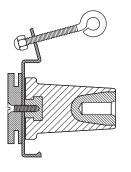
#### **ORDERING INSTRUCTIONS**

Order 400DR for 12 kV, K400DR for 24 kV or M400DR for 36 kV applications.

Can be supplied with integral earth lead: add -/G.

#### 400SOP STAND-OFF PLUG

Is designed to support and 'deadend' connectors with a type B interface when removed from equipment.

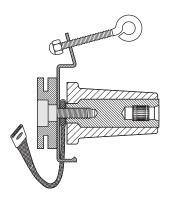


#### **ORDERING INSTRUCTIONS**

Order 400SOP for 12 kV, K400SOP for 24 kV or M400SOP for 36 kV applications.

#### 400GP EARTHING PLUG

Is designed to support and earth connectors with a type B interface when removed from equipment.



#### ORDERING INSTRUCTIONS

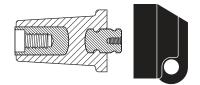
Order 400GP for 12 kV, 24 or 36 kV applications.



#### 400BIPA BASIC INSULATING PLUG

Acts as a tightening nut for the 400TE tee connector kit.
The plug contains a voltage detection point.
The conductive rubber protection

The conductive rubber protection cap is included.

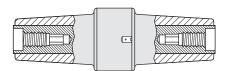


#### **ORDERING INSTRUCTIONS**

Order 400BIPA for 12 kV, K400BIPA for 24 kV or M400BIPA for 36 kV applications.

# 400CP-SC CONNECTING PLUG

For connecting a 400TE and one or more 430TB, 400TB or 440TB connectors, thus creating a multiple cable connection to equipment.



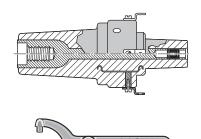
#### **ORDERING INSTRUCTIONS**

Order 400CP-SC for 12 kV, K400CP-SC for 24 kV or M400CP-SC for 36 kV applications.

#### 400RTPA REDUCING TAP PLUG

Provides a type A interface to a 400TE connector.

A 'C' spanner, 600SW, is used to tighten the reducing tap plug on to its mating part.

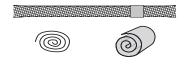


#### **ORDERING INSTRUCTIONS**

Order 400RTPA for 12 kV or K400RTPA for 24 kV applications. Order 600SW for the 'C' spanner.

#### KIT MT EARTHING KIT FOR COPPER TAPE SCREENED CABLES

Contains a tinned copper braid (25 mm<sup>2</sup> - L=500 mm), a tinned copper wire for cleating and water sealing mastic.



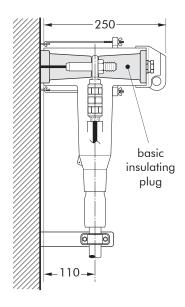
#### **ORDERING INSTRUCTIONS**

Order Kit MT for 12 kV, 24 kV or 36 kV applications.

# **POSSIBLE ARRANGEMENTS**

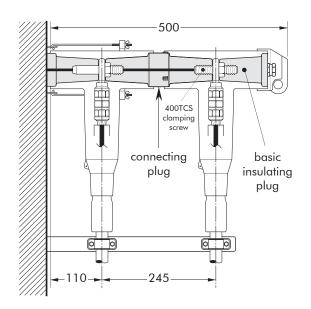
#### 400TE/G

Single cable arrangement. Order 400TE/G for 12 kV, K400TE/G for 24 kV or M400TE/G for 36 kV applications.



#### 400TE/G-P2

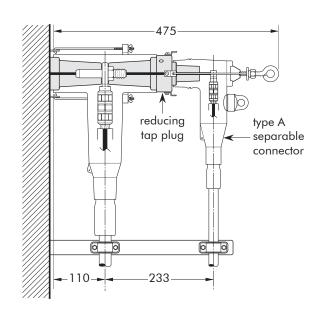
Dual cable arrangement.
Order 400TE/G-P2 for 12 kV,
K400TE/G-P2 for 24 kV or
M400TE/G-P2 for 36 kV
applications.



#### 400TE/G-P4

Single cable arrangement with tap-off.

Order 400TE/G-P4 for 12 kV or K400TE/G-P4 for 24 kV applications.

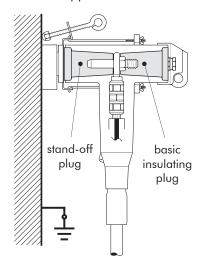


In mm.



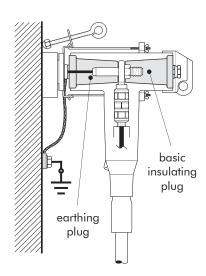
#### CONNECTOR ON STAND-OFF PLUG

Order 400SOP for 12 kV, K400SOP for 24 kV or M400SOP for 36 kV applications.

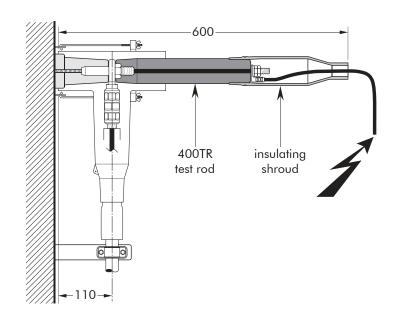


# CONNECTOR ON EARTHING PLUG

Order 400GP for 12 kV, 24 kV and 36 kV applications.



# CABLE AND EQUIPMENT TESTING



In mm.

# **NOTES**







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