

Euromold

a Nexans company



Medium voltage separable
connectors and bushings
- Interface C -

Catalogue 2011

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 cold-shrinkable 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 HD 623 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.

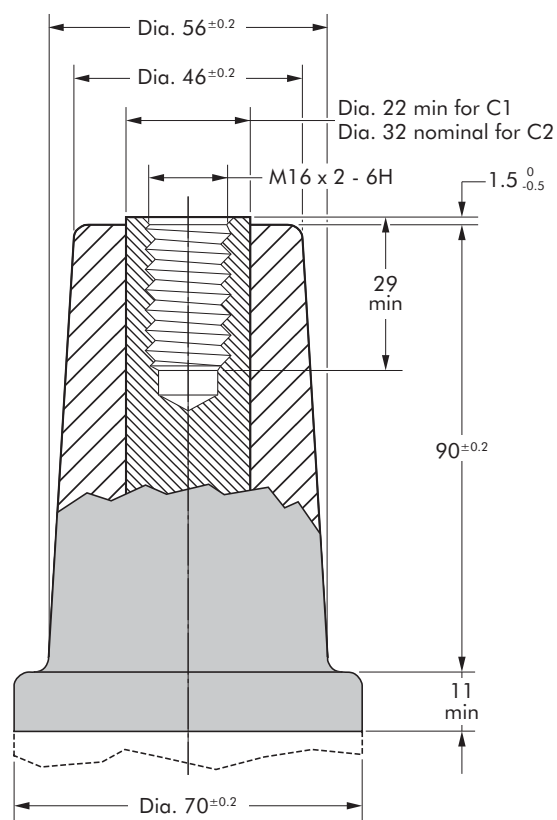
SEPARABLE CONNECTORS AND BUSHINGS INTERFACE C

Table of contents

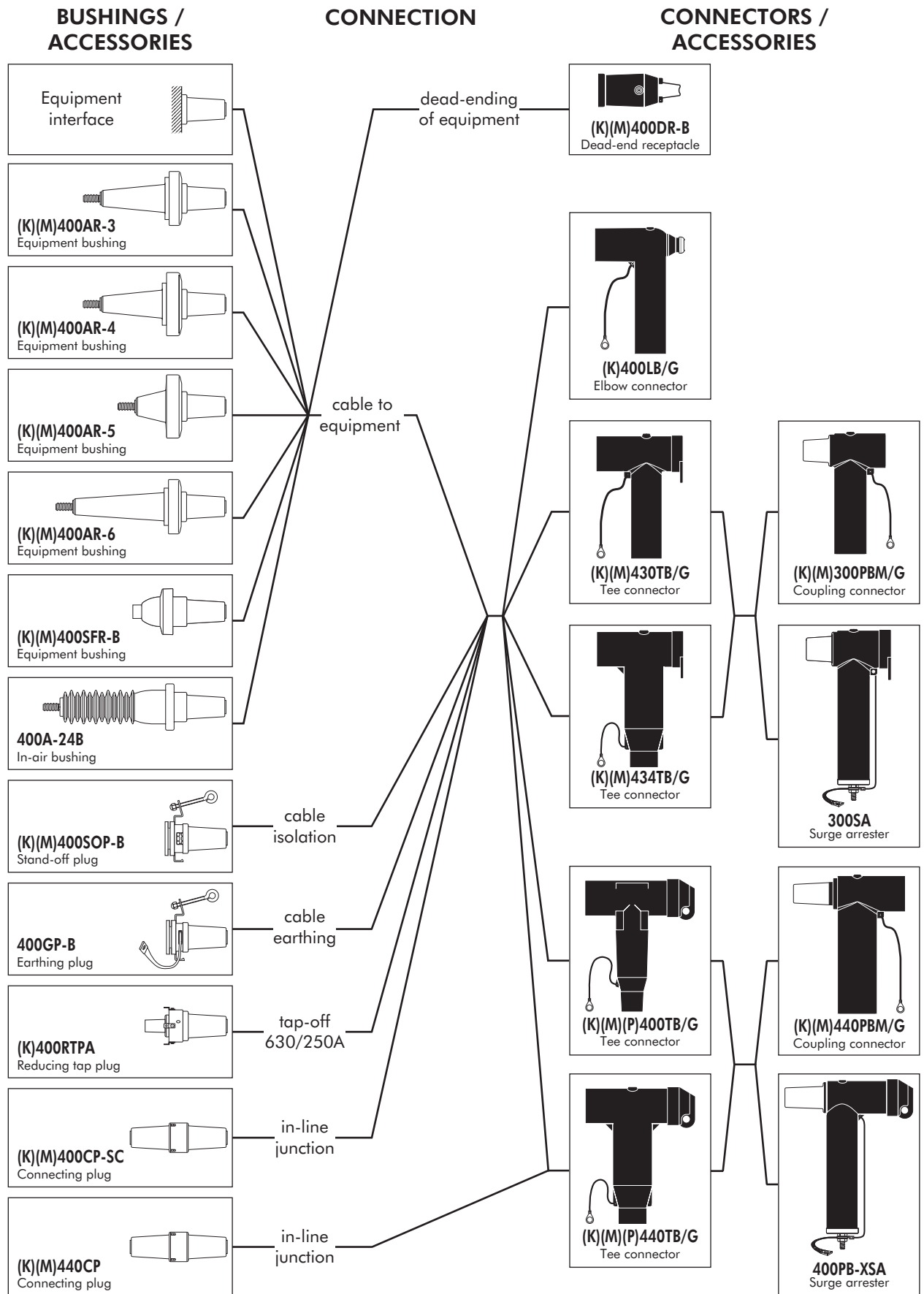
- 400LB - elbow connector
- 430TB - tee connector
- 400TB - tee connector
- 434TB - tee connector
- 440TB - tee connector
- 300PBM - coupling connector
- 430TBM-P2/P3 - dual/triple cable arrangement
- 440PBM - coupling connector
- 434TBM-P2 - dual cable arrangement
- 400AR-3 - equipment bushing
- 400AR-4 - equipment bushing
- 400AR-5 - equipment bushing
- 400AR-6 - equipment bushing
- 400SFR-B - equipment bushing
- 400A-24B - in-air bushing
- 300SA - surge arrester
- 400PB-XSA - surge arrester
- 400TR & 400TR-LB - test rod
- 400TK-400SW installation tools
- Accessories
- Possible arrangements

Interface C

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



Connecting possibilities



400LB INTERFACE C ELBOW CONNECTOR

Up to 24 kV - 630 A

Application

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

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

Technical characteristics

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

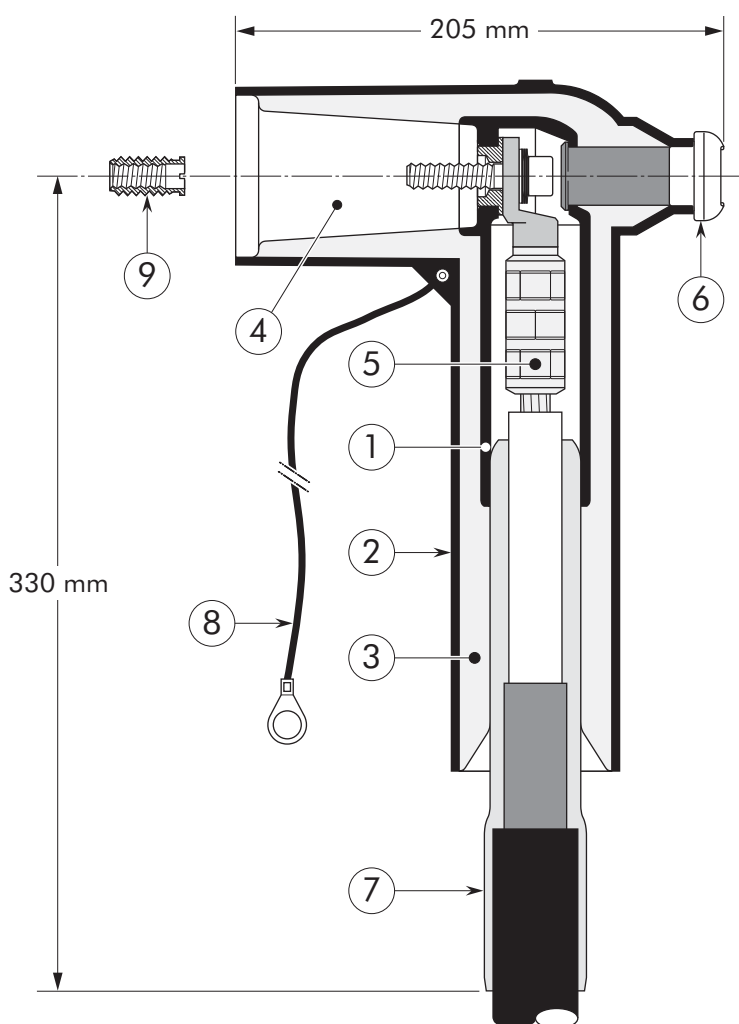
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
12.7/22 (24) kV

Design

Separable connector comprising:

1. Conductive EPDM insert.
2. Conductive EPDM jacket.
3. Insulating EPDM layer moulded between the insert and the jacket.
4. Type C - 630 A interface as described by CENELEC EN 50180 and 50181.
5. Conductor connector (not included in the standard kit).
6. Insulating plug.
7. Cable reducer.
8. Earthing lead.
9. Transition contact M10/M16.

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



Specifications and standards

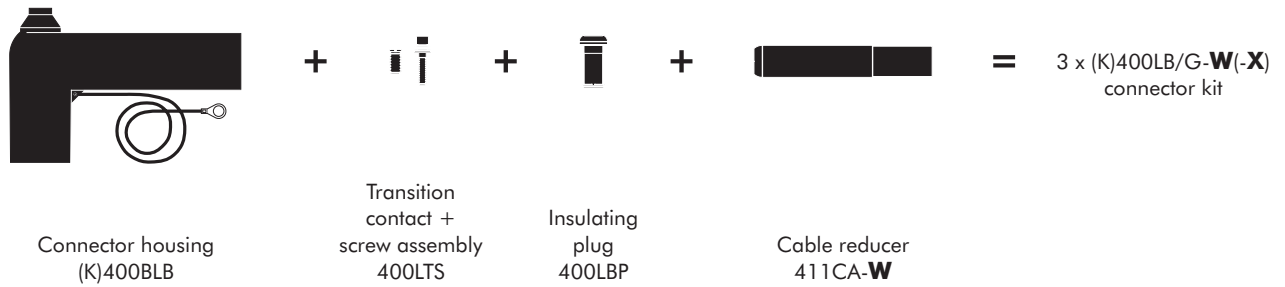
The 400LB separable connector meets the requirements of CENELEC HD 629.1.

Separable connector type	Voltage U_m (kV)	Current I_r (A)	Conductor sizes (mm ²)	
			min	max
400LB/G	12	630	25	300
K400LB/G	24	630	25	300

Kit contents

The complete (K)400LB/G elbow connector kit comprises 3 x the following components:

The kit also comprises silicone grease, field control mastic and installation instructions.



Ordering instructions

Select the part number which gives the best centring to the cable core insulation diameter.

Add a 'K' for use up to 24 kV.

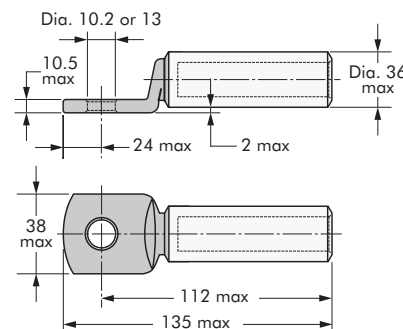
Example:

The copper wire screened cables are 24 kV, 240 mm² stranded aluminium with a diameter over core insulation of 32.2 mm.

Order 3 x K400LB/G-27 elbow connector kit.

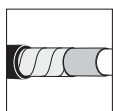
Table W

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

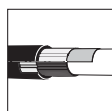


Notes:

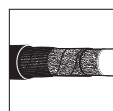
We do not supply the compression lugs in the standard kit. All types of cable lugs can be used. The lugs must be within the dimensions specified and the palm of the lug must be copper or any equivalent alloy.



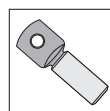
For use with copper tape screened cables.
Order: Kit MT.



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).



Can be supplied with cable lugs.



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



Components can be ordered individually.

430TB INTERFACE C TEE CONNECTOR

Application

Separable tee shape connector (bolted type) designed to connect polymeric insulated cable to equipment (transformers, switchgear, motors, ...). Also connects cable to cable when using the appropriate mating parts.

Technical characteristics

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

**Up to 36 kV
630 A (800 A)**

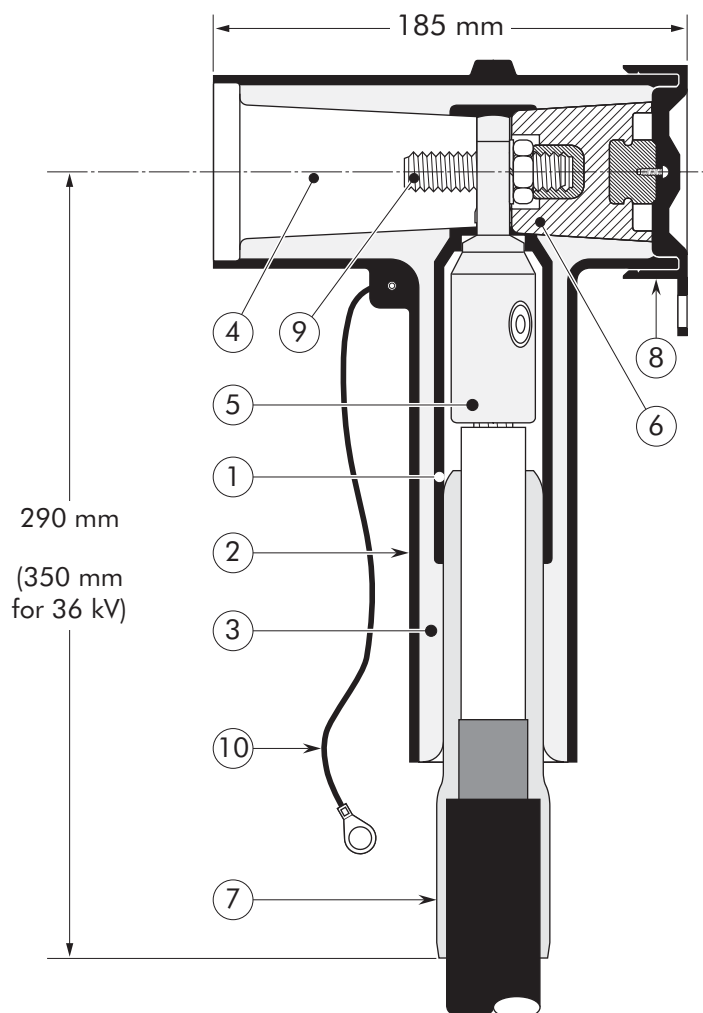
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
12.7/22 (24) kV
18/30 (36) kV
19/33 (36) kV

Design

Separable connector comprising:

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. Conductor connector.
6. Basic insulating plug (with VD point).
7. Cable reducer.
8. Conductive rubber cap.
9. Clamping screw.
10. Earthing lead.

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



Specifications and standards

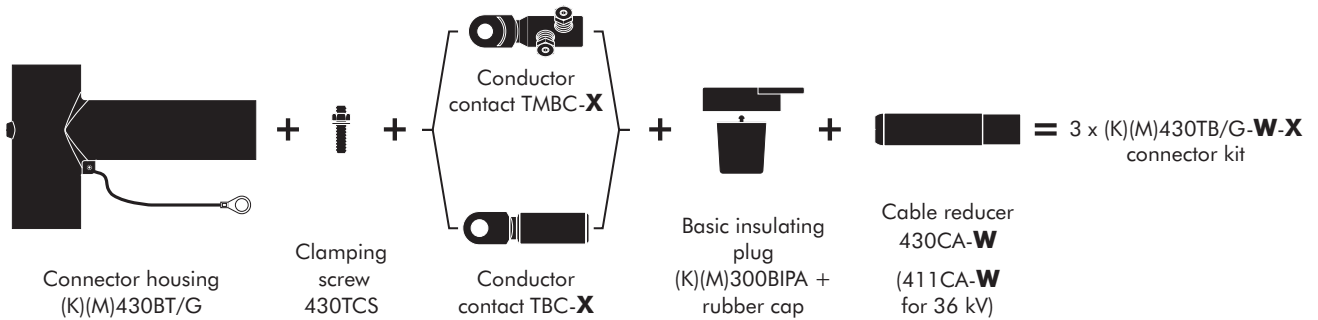
The 430TB separable connector meets the requirements of CENELEC HD 629.1.

Separable connector type	Voltage U_m (kV)	Current I_r (A)	Current I_r (A) When installed on an appropriate equipment bushing and when using a copper (-11-2) or a bolted (-12-5 or -14-5) conductor contact	Conductor sizes (mm ²)	
				min	max
430TB/G	12	630	800	35	300
K430TB/G	24	630	800	35	300
M430TB/G	36	630	800	50	240

Kit contents

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

The kit also comprises silicone grease, field control mastic, installation rod, installation instructions and crimp chart.



Ordering instructions

To order the tee connector, select the ordering part number which gives you the best centring of your core insulation diameter and substitute **X** using table X, according to your conductor size and type.

Example:

The cable is 24 kV, 150 mm² compact stranded copper with a diameter over core insulation of 27.5 mm.

Order

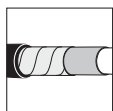
3 x K430TB/G-18-95.240-14-5 tee connector kit.

Table W

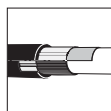
Ordering part number	Voltage (Um) (kV)	Dia. over core insulation (mm)	
		min	max
3 x 430TB/G-11-X	12	12.0	17.5
3 x 430TB/G-16-X	12	17.0	23.5
3 x 430TB/G-18-X	12	19.0	32.6
3 x K430TB/G-11-X	24	12.0	17.5
3 x K430TB/G-16-X	24	17.0	23.5
3 x K430TB/G-18-X	24	19.0	32.6
3 x M430TB/G-11-X	36	12.0	17.5
3 x M430TB/G-15-X	36	16.0	22.0
3 x M430TB/G-19-X	36	20.0	26.5
3 x M430TB/G-22-X	36	23.5	31.0
3 x M430TB/G-25-X	36	26.5	32.5
3 x M430TB/G-27-X	36	28.5	37.5

Table X

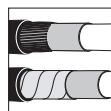
Conductor sizes (mm ²)	Aluminium conductor			Copper conductor	
	DIN hexagonal	Deep indent	Bolted	DIN hexagonal	Bolted
35	35(K)M-10-2	35KM-10-1	16.95-14-5	35(K)M-11-2	16.95-14-5
50	50(K)M-10-2	50(K)M-10-1	50.150-14-5	50(K)M-11-2	50.150-14-5
70	70(K)M-10-2	70(K)M-10-1	95.240-14-5	70(K)M-11-2	95.240-14-5
95	95(K)M-10-2	95(K)M-10-1	120.300-12-5	95(K)M-11-2	120.300-12-5
120	120(K)M-10-2	120(K)M-10-1		120(K)M-11-2	
150	150(K)M-10-2	150(K)M-10-1		150(K)M-11-2	
185	185(K)M-10-2	185(K)M-10-1		185(K)M-11-2	
240	240(K)M-10-2	240(K)M-10-1		240(K)M-11-2	
300	300(K)M-10-2	—		300(K)M-11-2	



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



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



For use with easy strip semi-conductive screened cables. Order: Field control mastic (type MFC).



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



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



When installed on an appropriate equipment bushing:
800 A continuously

400TB INTERFACE C TEE CONNECTOR

Application

Separable tee shape connector (bolted type) designed to connect polymeric insulated cable to equipment (transformers, switchgear, motors, ...). Also connects cable to cable when using the appropriate mating parts.

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.

**Up to 41.5 kV
630 A (800 A)**

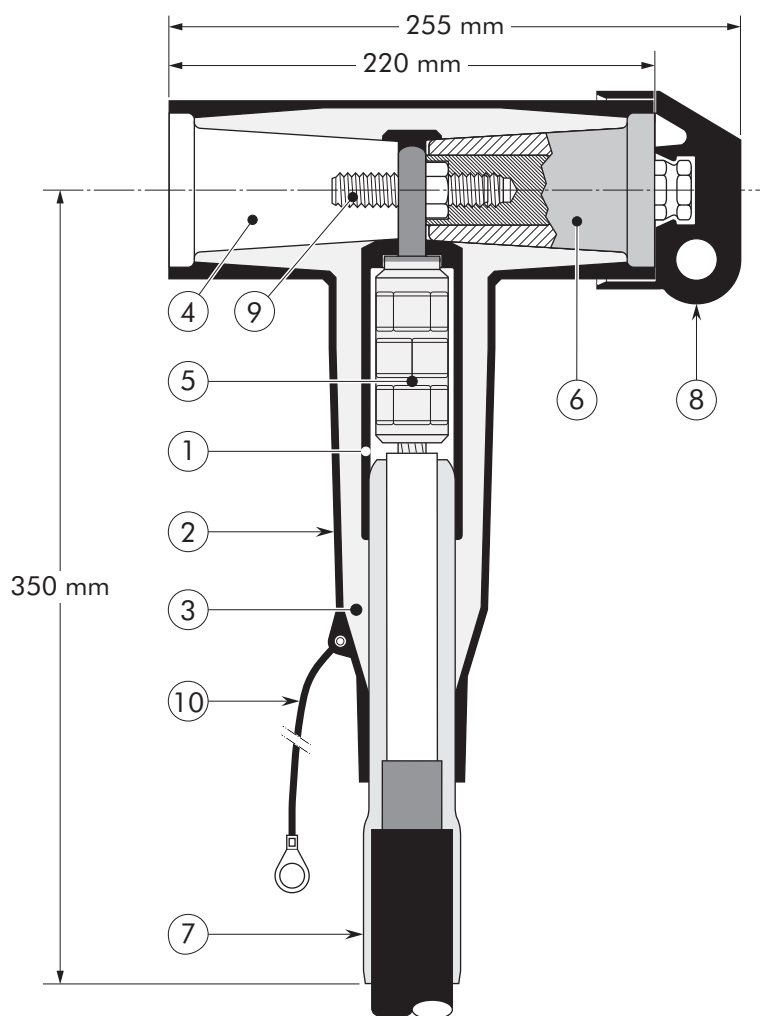
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
12.7/22 (24) kV
18/30 (36) kV
19/33 (36) kV
20.8/36 (41.5) kV

Design

Separable connector comprising:

1. Conductive EPDM insert.
2. Conductive EPDM jacket.
3. Insulating EPDM layer.
4. Type C - 630 A interface as described by CENELEC EN 50180 and 50181.
5. Conductor connector.
6. Basic insulating plug (with VD point).
7. Cable reducer.
8. Conductive rubber cap.
9. Clamping screw.
10. Earthing lead.

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



Specifications and standards

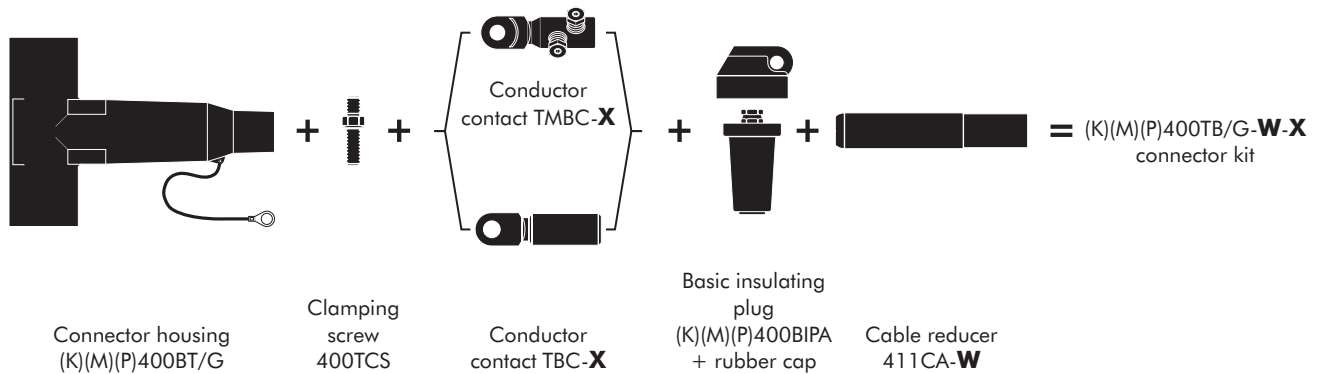
The 400TB separable connector meets the requirements of CENELEC HD 629.1 S1.

Separable connector type	Voltage U_m (kV)	Current I_r (A)	Current I_r (A) <small>When installed on an appropriate equipment bushing and when using a copper (-11-2) or a bolted (-12-5 or -14-5) conductor contact</small>	Conductor sizes (mm ²)	
				min	max
400TB/G	12	630	800	35	300
K400TB/G	24	630	800	35	300
M400TB/G	36	630	800	35	240
P400TB/G	41.5	630	800	35	240

Kit contents

The complete (K)(M)(P)400TB/G tee connector kit comprises the following components:

The kit also comprises silicone grease, field control mastic, installation instructions and crimp chart.



Ordering instructions

To order the tee connector, select the ordering part number which gives you the best centring of your core insulation diameter and substitute **X** using table X, according to your conductor size and type. Add a 'K' for use up to 24 kV, add an 'M' for use up to 36 kV, add a 'P' for use up to 41.5 kV.

Example:

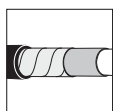
The copper wire screened cable is 36 kV, 150 mm² stranded copper with a diameter over core insulation of 32.5 mm. Order a M400TB/G-27-150(K) M-11-2 tee connector kit.

Table W

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

Table X

Conductor sizes (mm ²)	Aluminium conductor			Copper conductor	
	DIN hexagonal	Deep indent	Bolted	DIN hexagonal	Bolted
35	35(K)M-10-2	35KM-10-1	16.95-14-5	35(K)M-11-2	16.95-14-5
50	50(K)M-10-2	50(K)M-10-1		50(K)M-11-2	
70	70(K)M-10-2	70(K)M-10-1	50.150-14-5	70(K)M-11-2	50.150-14-5
95	95(K)M-10-2	95(K)M-10-1		95(K)M-11-2	
120	120(K)M-10-2	120(K)M-10-1	95.240-14-5	120(K)M-11-2	95.240-14-5
150	150(K)M-10-2	150(K)M-10-1		150(K)M-11-2	
185	185(K)M-10-2	185(K)M-10-1	120.300-12-5	185(K)M-11-2	120.300-12-5
240	240(K)M-10-2	240(K)M-10-1		240(K)M-11-2	
300	300(K)M-10-2	—		300(K)M-11-2	



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



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



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



For use in potentially explosive atmospheres (for 12 kV max).
Add -/ATEX to part number.



Components can be ordered individually.



When installed on an appropriate equipment bushing:
800 A continuously

434TB INTERFACE C TEE CONNECTOR

Application

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

Also connects cable to cable when using the appropriate mating parts.

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.

Up to 36 kV
Up to 1250 A

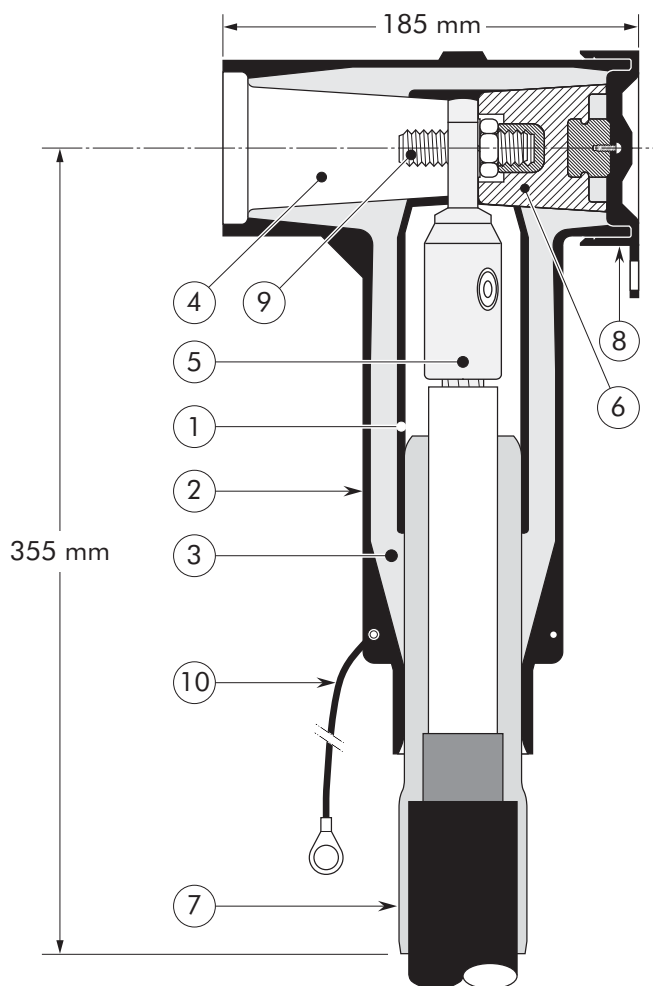
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
12.7/22 (24) kV
18/30 (36) kV
19/33 (36) kV

Design

Separable connector comprising:

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. Conductor connector.
6. Basic insulating plug (with VD point).
7. Cable reducer.
8. Conductive rubber cap.
9. Clamping screw.
10. Earthing lead.

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



Specifications and standards

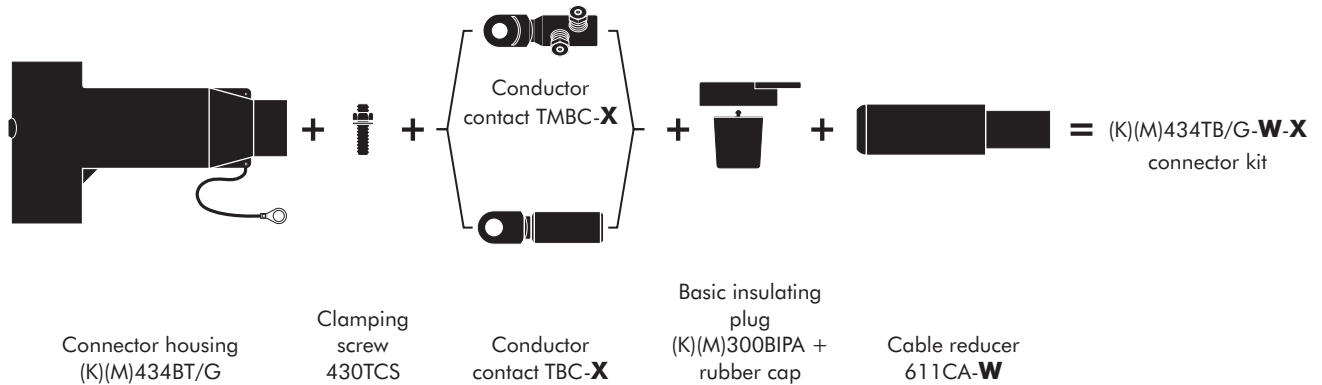
The 434TB separable connector meets the test requirements of CENELEC HD 629.1.

Separable connector type	Voltage U_m (kV)	Current I_r (A) When installed on an appropriate equipment bushing	Conductor sizes (mm ²)			
			Cable with reduced core insulation thickness		Cable with unreduced core insulation thickness	
			min	max	min	max
434TB/G	12	up to 1250	185	800	185	800
K434TB/G	24	up to 1250	185	800	185	800
M434TB/G	36	up to 1250	185	800	185	630

Kit contents

The complete (K)(M)434TB/G tee connector kit comprises the following components:

The kit also comprises silicone grease, field control mastic, installation instructions and crimp chart.



Ordering instructions

To order the tee connector, select the ordering part number which gives you the best centring of your core insulation diameter and substitute **X** using table X, according to your conductor size and type. Add a 'K' for use up to 24 kV, add an 'M' for use up to 36 kV.

Example:

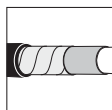
The copper wire screened cable is 36 kV, 240 mm² stranded aluminium with a diameter over core insulation of 37.0 mm. Order a M434TB/G-32-240(K)M-12-2 tee connector kit.

Table W

Ordering part number	Dia. over core insulation (mm)	
	min	max
434TB/G-22-X	23.5	31.0
434TB/G-27-X	28.5	37.5
434TB/G-32-X	34.0	42.5
434TB/G-37-X	39.0	48.5
434TB/G-43-X	45.5	56.0

Table X

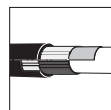
Conductor sizes (mm ²)	Aluminium conductor			Copper conductor	
	DIN hexagonal	Deep indent	Bolted	DIN hexagonal	Bolted
185	185(K)M-12-2	185(K)M-12-1	185.400-14-5	185(K)M-11-2	185.400-14-5
240	240(K)M-12-2	240(K)M-12-1		240(K)M-11-2	
300	300(K)M-12-2	300(K)M-12-1		300(K)M-11-2	
400	400(K)M-12-2	400(K)M-12-1	400.630-14-5	400(K)M-11-2	400.630-14-5
500	500(K)M-12-2	500(K)M-12-1		500(K)M-11-2	
630	630(K)M-12-2	630(K)M-12-1	-	630(K)M-11-2	-
800	800(K)M-12-2	800(K)M-12-1		800(K)M-11-2	-



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



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



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



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



Components can be ordered individually.



When installed on an appropriate equipment bushing: 1250 A continuously

440TB INTERFACE C TEE CONNECTOR

Application

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

Also connects cable to cable when using the appropriate mating parts.

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.

**Up to 41.5 kV
630 A (1250 A)**

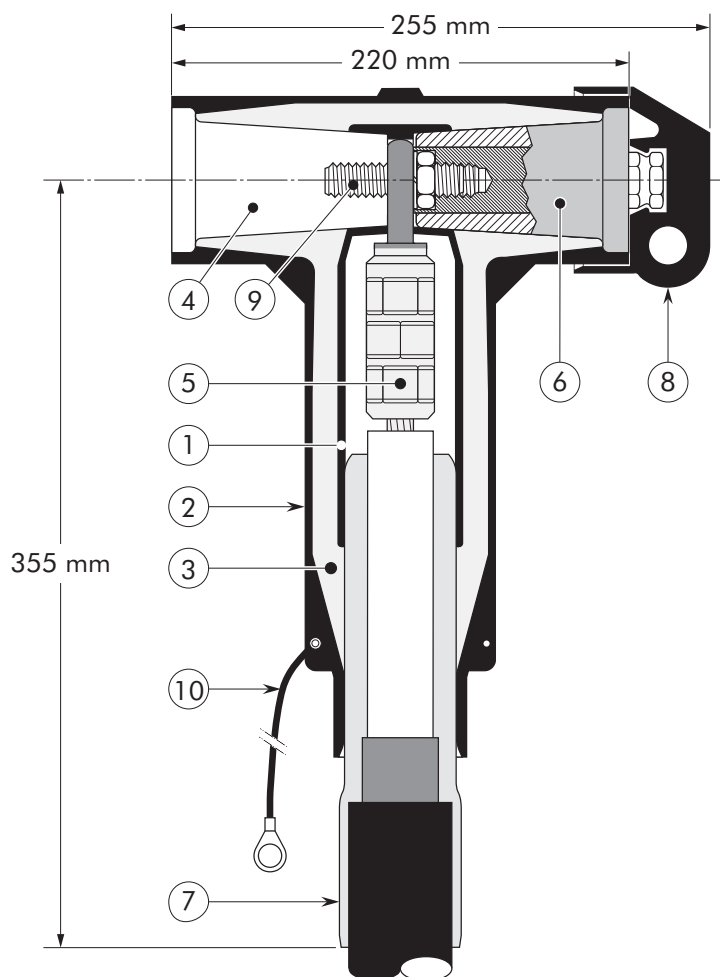
6/10	(12)	kV
6.35/11	(12)	kV
8.7/15	(17.5)	kV
12/20	(24)	kV
12.7/22	(24)	kV
18/30	(36)	kV
19/33	(36)	kV
20.8/36	(41.5)	kV

Design

Separable connector comprising:

1. Conductive EPDM insert.
2. Conductive EPDM jacket.
3. Insulating EPDM layer moulded between the insert and the jacket.
4. Type C - 630 A interface as described by CENELEC EN 50180 and 50181.
5. Conductor connector.
6. Basic insulating plug (with VD point).
7. Cable reducer.
8. Conductive rubber cap.
9. Clamping screw.
10. Earthing lead.

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



Specifications and standards

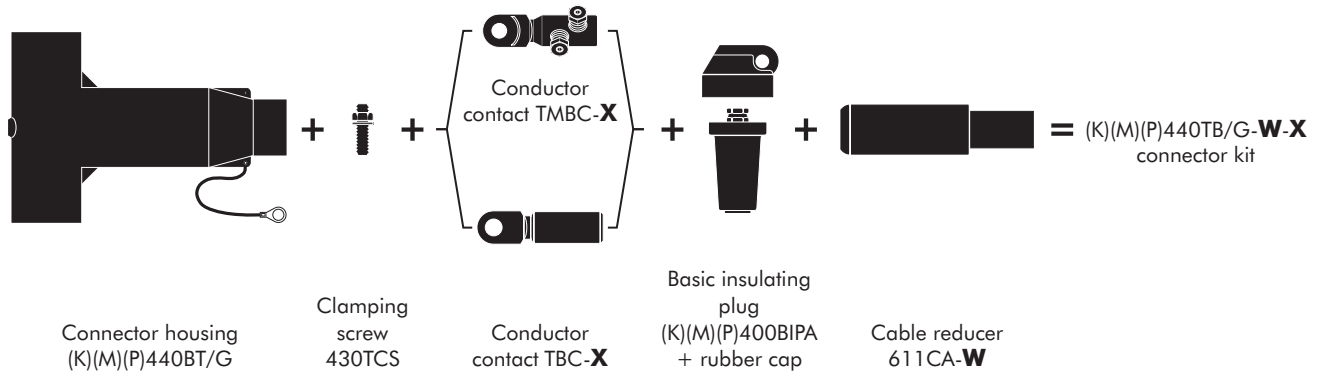
The 440TB separable connector meets the requirements of CENELEC HD 629.1.

Separable connector type	Voltage U_m (kV)	Current I_r (A)	Current I_r (A) When installed on an appropriate equipment bushing	Conductor sizes (mm ²)	
				min	max
440TB/G	12	630	1250	185	630
K440TB/G	24	630	1250	185	630
M440TB/G	36	630	1250	185	630
P440TB/G	41.5	630	1250	185	630

Kit contents

The complete (K)(M)(P)440TB/G tee connector kit comprises the following components:

The kit also comprises silicone grease, field control mastic, installation instructions and crimp chart.



Ordering instructions

To order the tee connector, select the ordering part number which gives you the best centring of your core insulation diameter and substitute **X** using table X, according to your conductor size and type. Add a 'K' for use up to 24 kV, add an 'M' for use up to 36 kV, add a 'P' for use up to 41.5 kV.

Example:

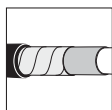
The copper wire screened cable is 36 kV, 240 mm² stranded aluminium with a diameter over core insulation of 37.0 mm. Order a M440TB/G-32-240(K)M-12-2 tee connector kit.

Table W

Ordering part number	Dia. over core insulation (mm)	
	min	max
440TB/G-22-X	23.5	31.0
440TB/G-27-X	28.5	37.5
440TB/G-32-X	34.0	42.5
440TB/G-37-X	39.0	48.5
440TB/G-43-X	45.5	56.0

Table X

Conductor sizes (mm ²)	Aluminium conductor			Copper conductor	
	DIN hexagonal	Deep indent	Bolted	DIN hexagonal	Bolted
185	185(K)M-12-2	185KM-12-1	185.400-14-5	185(K)M-11-2	185.400-14-5
240	240(K)M-12-2	240KM-12-1		240(K)M-11-2	
300	300(K)M-12-2	300KM-12-1		300(K)M-11-2	
400	400(K)M-12-2	400KM-12-1	400.630-14-5	400(K)M-11-2	400.630-14-5
500	500(K)M-12-2	500KM-12-1		500(K)M-11-2	
630	—	630KM-12-1		630(K)M-11-2	



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



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



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



For use in potentially explosive atmospheres (for 12 kV max).
Add -/ATEX to part number.



Components can be ordered individually.



When installed on an appropriate equipment bushing:
1250 A continuously

300PBM COUPLING CONNECTOR FOR 430TB/G

Application

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

Technical characteristics

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

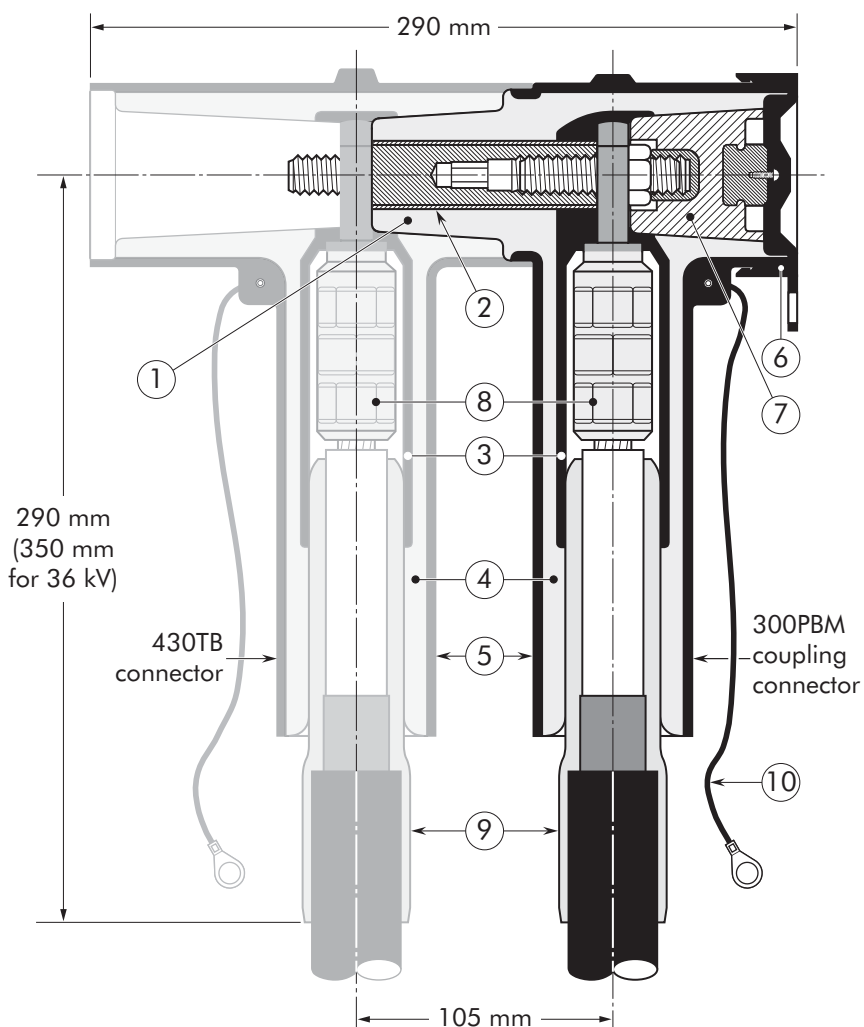
**Up to 36 kV
630 A (1250 A)**

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

Design

1. Interface designed to fit 430TB connector.
2. Bus for 300PBM.
3. Conductive EPDM insert.
4. Insulating EPDM layer moulded between the insert and the jacket.
5. Conductive EPDM jacket.
6. Conductive EPDM cap.
7. Basic insulating plug (with VD point).
8. Conductor connector (hexagonal crimping, deep indent crimping or bolted).
9. Cable reducer.
10. Earthing lead.

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



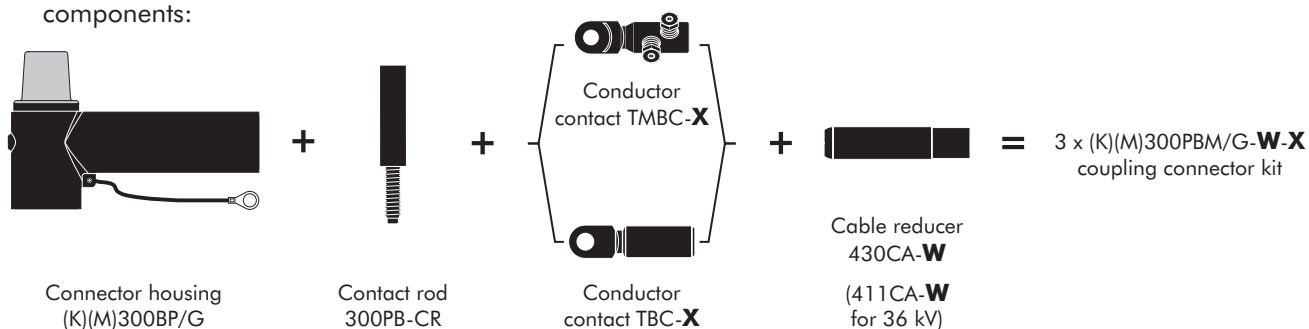
Specifications and standards

The 300PBM coupling connector meets the requirements of CENELEC HD 629.1.

Separable connector type	Voltage U_m (kV)	Current I_r (A)	Current I_r (A) When installed on an appropriate equipment bushing and when using a copper (-11-2) or a bolted (-12-5 or -14-5) conductor contact	Conductor sizes (mm ²)	
				min	max
300PBM/G	12	630	1250	35	300
K300PBM/G	24	630	1250	35	300
M300PBM/G	36	630	1250	50	240

Kit contents

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



The kit also comprises silicone grease, field control mastic, installation rod, installation instructions and crimp chart.

Ordering instructions

To order the coupling connector, select the ordering part number which gives you the best centring of your core insulation diameter and substitute **X** using table X, according to your conductor size and type.

Example:

The cable is 24 kV, 150 mm² compact stranded copper with a diameter over core insulation of 27.5 mm.

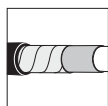
Order 3 x K300PBM/G-18-95.240-14-5 coupling connector kit.

Table W

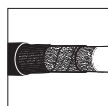
Ordering part number	Voltage (Um) (kV)	Dia. over core insulation (mm)	
		min	max
3 x 300PBM/G-11-X	12	12.0	17.5
3 x 300PBM/G-16-X	12	17.0	23.5
3 x 300PBM/G-18-X	12	19.0	32.6
3 x K300PBM/G-11-X	24	12.0	17.5
3 x K300PBM/G-16-X	24	17.0	23.5
3 x K300PBM/G-18-X	24	19.0	32.6
3 x M300PBM/G-11-X	36	12.0	17.5
3 x M300PBM/G-15-X	36	16.0	22.0
3 x M300PBM/G-19-X	36	20.0	26.5
3 x M300PBM/G-22-X	36	23.5	31.0
3 x M300PBM/G-25-X	36	26.5	32.5
3 x M300PBM/G-27-X	36	28.5	37.5

Table X

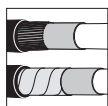
Conductor sizes (mm ²)	Aluminium conductor			Copper conductor	
	DIN hexagonal	Deep indent	Bolted	DIN hexagonal	Bolted
35	35(K)M-10-2	35KM-10-1	16.95-14-5	35(K)M-11-2	16.95-14-5
50	50(K)M-10-2	50(K)M-10-1		50(K)M-11-2	
70	70(K)M-10-2	70(K)M-10-1	50.150-14-5	70(K)M-11-2	50.150-14-5
95	95(K)M-10-2	95(K)M-10-1		95(K)M-11-2	
120	120(K)M-10-2	120(K)M-10-1	95.240-14-5	120(K)M-11-2	95.240-14-5
150	150(K)M-10-2	150(K)M-10-1		150(K)M-11-2	
185	185(K)M-10-2	185(K)M-10-1	120.300-12-5	185(K)M-11-2	120.300-12-5
240	240(K)M-10-2	240(K)M-10-1		240(K)M-11-2	
300	300(K)M-10-2	—		300(K)M-11-2	



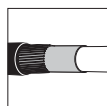
For use with copper tape screened cables. Order: Kit MT.



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



For use with easy strip semi-conductive screened cables. Order: Field control mastic (type MFC).



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



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



For outdoor applications. Order: +MWS.

430TBM-P2/P3 DUAL/TRIPLE CABLE ARRANGEMENT FOR 430TB CONNECTOR

Application

Separable connectors (bolted type) for dual (P2) and triple (P3) cable arrangements.

Technical characteristics

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

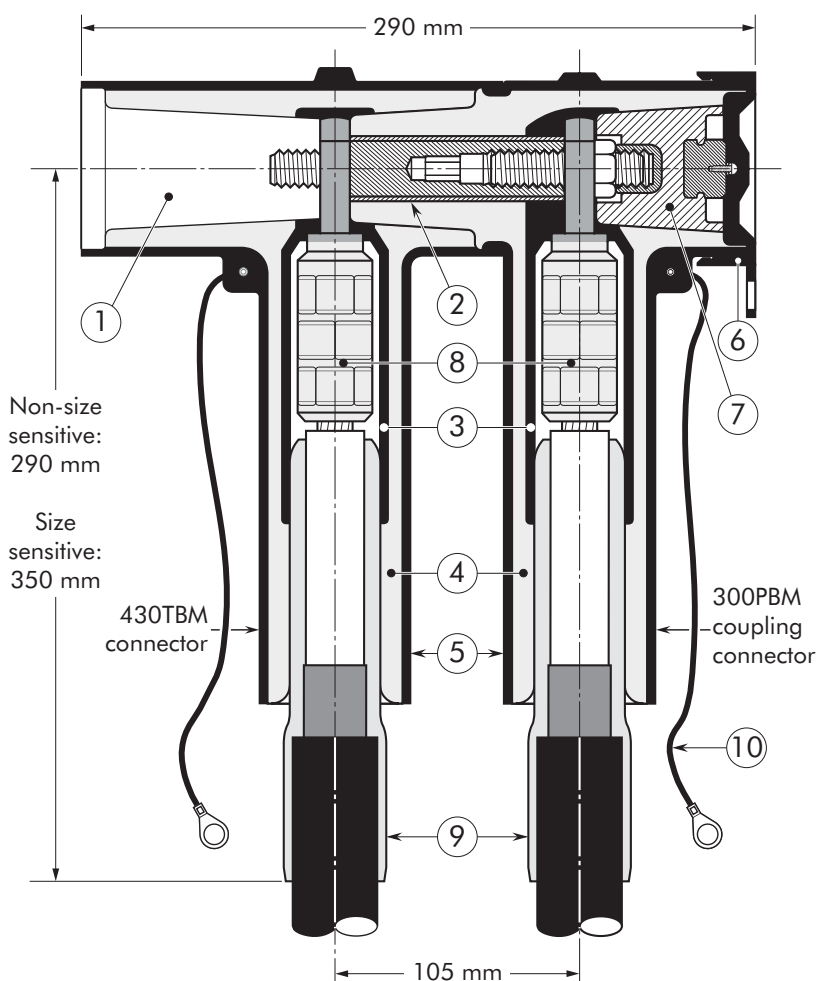
**Up to 36 kV
630 A (1250 A)**

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

Design

1. Type C interface as described by CENELEC EN 50180 and 50181.
2. Bus for 300PBM.
3. Conductive EPDM insert.
4. Insulating EPDM layer moulded between the insert and the jacket.
5. Conductive EPDM jacket.
6. Conductive EPDM cap.
7. Basic insulating plug (with VD point).
8. Conductor connector.
9. Cable reducer.
10. Earthing lead.

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



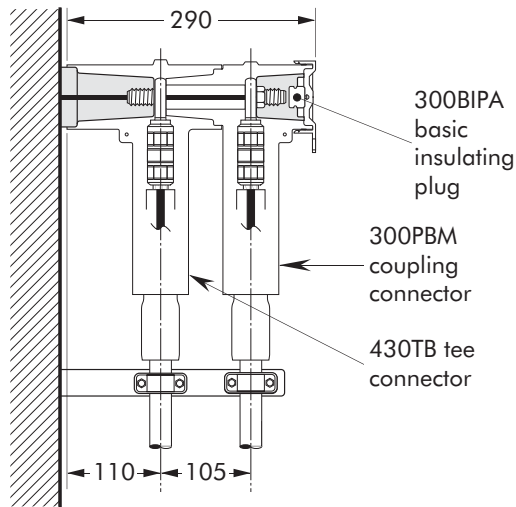
Specifications and standards

The 430TBM-P2/P3 connectors meet the requirements of CENELEC HD 629.1.

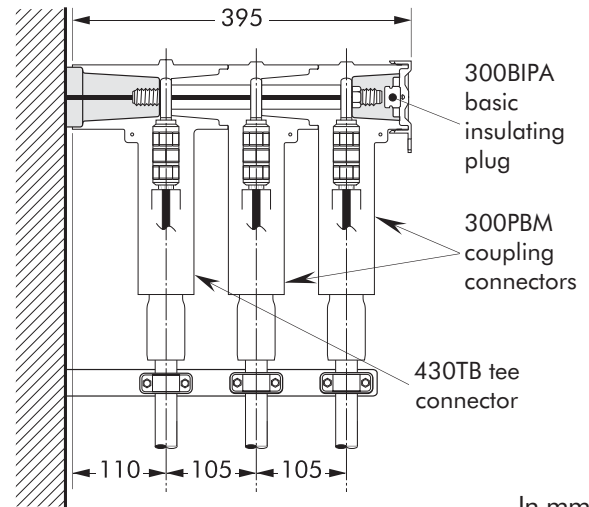
Separable connector type	Voltage U_m (kV)	Current I_r (A)	Current I_r (A) When installed on an appropriate equipment bushing and when using a copper (-11-2) or a bolted (-12-5 or -14-5) conductor contact	Conductor sizes (mm ²)	
				min	max
430TBM-P2/P3	12	630	1250	35	300
K430TBM-P2/P3	24	630	1250	35	300
M430TBM-P2/P3	36	630	1250	50	240

Kit contents

The complete (K)(M)430TBM-P2 connector kit comprises 3 x the following components:



The complete (K)(M)430TBM-P3 connector kit comprises 3 x the following components:



In mm.

Ordering instructions

To order the separable connectors for dual cable arrangement, use the tables beside to substitute for **W** and **X** in the formula:

3 x 430TBM-P2-**W-X**,

for use up to 12 kV.

Add a 'K' for use up to 24 kV:

3 x K430TBM-P2-**W-X**.

Add an 'M' for use up to 36 kV:

3 x M430TBM-P2-**W-X**.

For triple cable arrangement:

3 x 430TBM-P3-**W-X**,

for use up to 12 kV.

Add a 'K' for use up to 24 kV:

3 x K430TBM-P3-**W-X**.

Add an 'M' for use up to 36 kV:

3 x M430TBM-P3-**W-X**.

Example:

The two cables are 24 kV, 150 mm² stranded aluminium with a diameter over core insulation of 27.5 mm. Order 3 x K430TBM-P2-22-150(K)M-10-2.

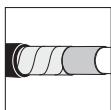
1. **From table W:** select the symbol which gives the best centring of your core insulation diameter.
2. **From table X:** according to your conductor size and type, select the designation which completes the part number.

Table W

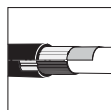
Dia. over core insulation (mm)		W
min	max	
12.0	17.5	11
16.0	22.0	15
20.0	26.5	19
23.5	31.0	22
26.5	32.5	25
28.5	37.5	27

Table X

Conductor sizes (mm ²)	Aluminium conductor			Copper conductor	
	DIN hexagonal	Deep indent	Bolted	DIN hexagonal	Bolted
35	35(K)M-10-2	35KM-10-1	16.95-14-5	35(K)M-11-2	16.95-14-5
50	50(K)M-10-2	50(K)M-10-1		50(K)M-11-2	
70	70(K)M-10-2	70(K)M-10-1		70(K)M-11-2	
95	95(K)M-10-2	95(K)M-10-1		95(K)M-11-2	
120	120(K)M-10-2	120(K)M-10-1	50.150-14-5	120(K)M-11-2	50.150-14-5
150	150(K)M-10-2	150(K)M-10-1		150(K)M-11-2	
185	185(K)M-10-2	185(K)M-10-1	95.240-14-5	185(K)M-11-2	
240	240(K)M-10-2	240(K)M-10-1		240(K)M-11-2	
300	300(K)M-10-2	—	120.300-12-5	300(K)M-11-2	120.300-12-5



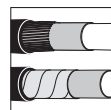
For use with copper tape screened cables. Order: Kit MT.



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



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



For use with easy strip semi-conductive screened cables. Order: Field control mastic (type MFC).



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



When installed on an appropriate equipment bushing: 1250 A continuously

440PBM COUPLING CONNECTOR FOR 440TB

Application

Separable coupling connector (bolted type) for dual cable arrangement. It has been designed to be used with 440TB separable Tee connector.

Technical characteristics

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

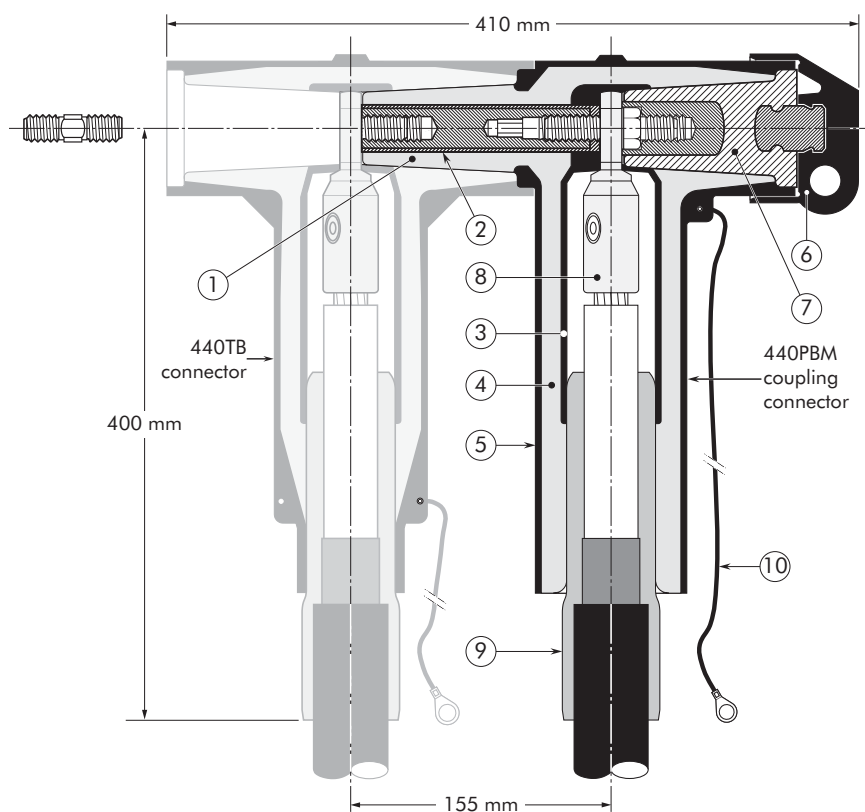
**Up to 36 kV
630 A (1250 A)**

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

Design

1. Interface designed to fit 440TB connector.
2. Bus for 440PBM.
3. Conductive EPDM insert.
4. Insulating EPDM layer moulded between the insert and the jacket.
5. Conductive EPDM jacket.
6. Conductive EPDM cap.
7. Basic insulating plug.
8. Conductor connector (hexagonal crimping, deep indent crimping or bolted).
9. Cable reducer.
10. Earthing lead.

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



Specifications and standards

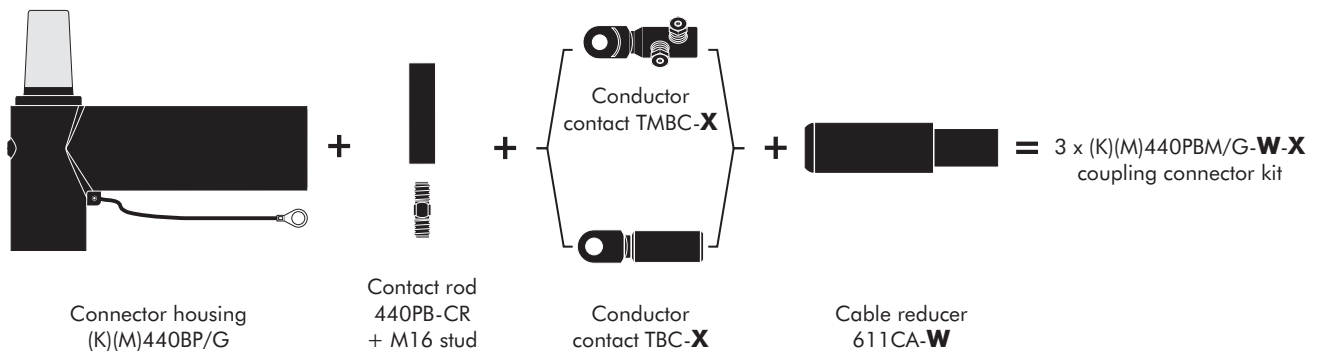
The 440PBM coupling connector meets the requirements of CENELEC HD 629.1.

Separable connector type	Voltage U_m (kV)	Current I_r (A)	Current I_r (A) When installed on an appropriate equipment bushing	Conductor sizes (mm ²)	
				min	max
440PBM/G	12	630	1250	185	630
K440PBM/G	24	630	1250	185	630
M440PBM/G	36	630	1250	185	630

Kit contents

The complete (K)(M)440PBM/G coupling connector kit comprises 3 x the following components:

The kit also comprises silicone grease, field control mastic, installation rod, installation instructions and crimp chart.



Ordering instructions

To order the coupling connector, select the ordering part number which gives you the best centring of your core insulation diameter and substitute **X** using table X, according to your conductor size and type. Add a 'K' for use up to 24 kV, add an 'M' for use up to 36 kV.

Example:

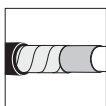
The copper wire screened cable is 36 kV, 240 mm² stranded aluminium with a diameter over core insulation of 37.0 mm. Order 3 x M440PBM/G-32-240(K)M-12-2 coupling connector kit.

Table W

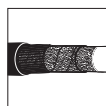
Ordering part number	Dia. over core insulation (mm)	
	min	max
3 x 440PBM/G-22-X	23.5	31.0
3 x 440PBM/G-27-X	28.5	37.5
3 x 440PBM/G-32-X	34.0	42.5
3 x 440PBM/G-37-X	39.0	48.5
3 x 440PBM/G-43-X	45.5	56.0

Table X

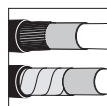
Conductor sizes (mm ²)	Aluminium conductor			Copper conductor	
	DIN hexagonal	Deep indent	Bolted	DIN hexagonal	Bolted
185	185(K)M-12-2	185KM-12-1	185.400-14-5	185(K)M-11-2	185.400-14-5
240	240(K)M-12-2	240KM-12-1		240(K)M-11-2	
300	300(K)M-12-2	300KM-12-1		300(K)M-11-2	
400	400(K)M-12-2	400KM-12-1	400.630-14-5	400(K)M-11-2	400.630-14-5
500	500(K)M-12-2	500KM-12-1		500(K)M-11-2	
630	—	630KM-12-1		630(K)M-11-2	



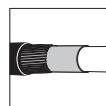
For use with copper tape screened cables. Order: Kit MT.



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



For use with easy strip semi-conductive screened cables. Order: Field control mastic (type MFC).



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



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



For outdoor applications. Order: +MWS.

434TBM-P2 DUAL CABLE ARRANGEMENT FOR 434TB CONNECTOR

Application

Separable connectors (bolted type) for dual cable arrangements.

Technical characteristics

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

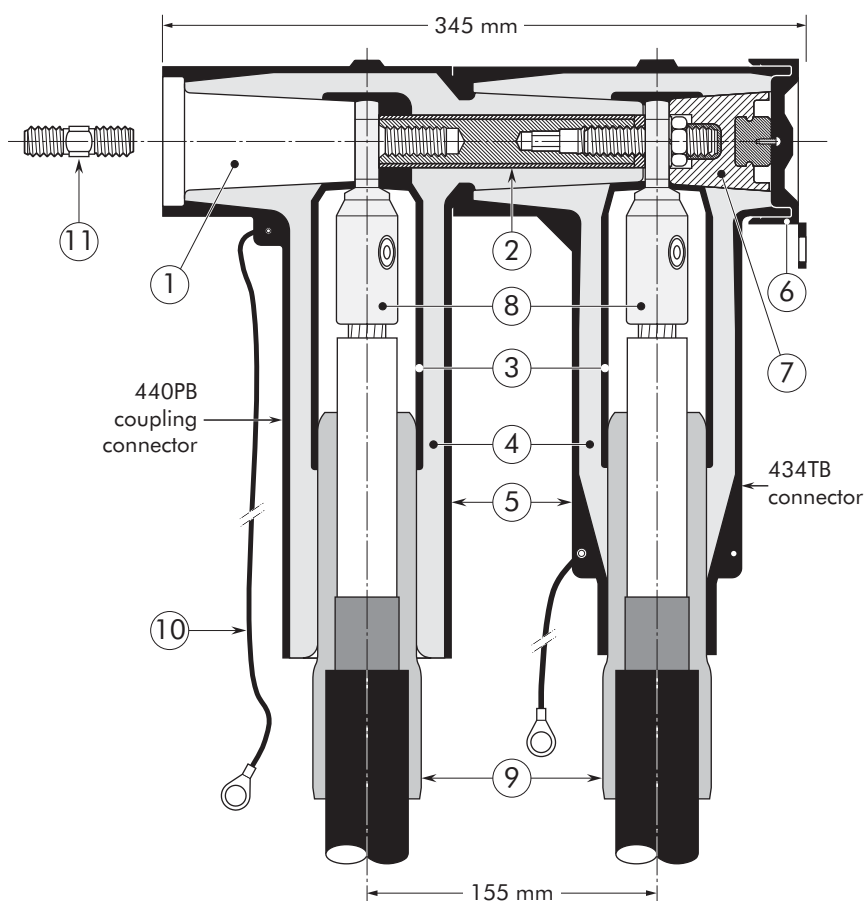
**Up to 36 kV
630 A (1250 A)**

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

Design

1. Type C interface as described by CENELEC EN 50180 and 50181.
2. Bus for 440PB.
3. Conductive EPDM insert.
4. Insulating EPDM layer moulded between the insert and the jacket.
5. Conductive EPDM jacket.
6. Conductive EPDM cap.
7. Basic insulating plug (with VD point).
8. Conductor connector.
9. Cable reducer.
10. Earthing lead.
11. Threaded M16 stud for the equipment bushing.

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



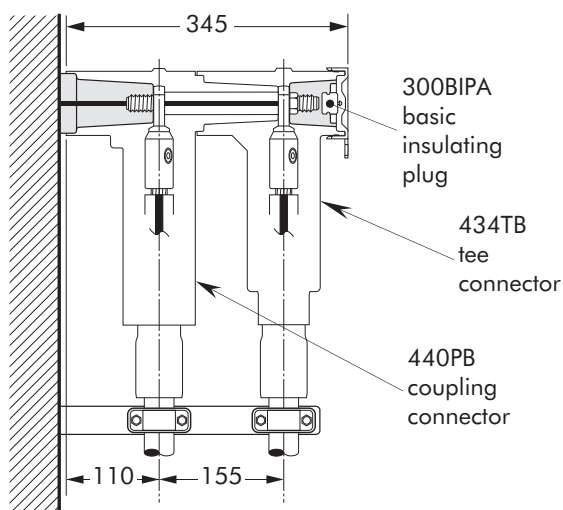
Specifications and standards

The 434TBM-P2 connectors meet the requirements of CENELEC HD 629.1.

Separable connector type	Voltage U_m (kV)	Current I_r (A)	Current I_r (A) When installed on an appropriate equipment bushing and when using a copper (-11-2) or a bolted (-12-5 or -14-5) conductor contact	Conductor sizes (mm ²)	
				min	max
434TBM-P2	12	630	1250	185	630
K434TBM-P2	24	630	1250	185	630
M434TBM-P2	36	630	1250	185	630

Kit contents

The complete (K)(M)434TBM-P2 connector kit comprises 3 x the following components:



In mm.

Ordering instructions

To order the coupling connector, select the ordering part number which gives you the best centring of your core insulation diameter and substitute **X** using table X, according to your conductor size and type. Add a 'K' for use up to 24 kV, add an 'M' for use up to 36 kV.

Example:

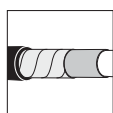
The copper wire screened cable is 36 kV, 240 mm² stranded aluminium with a diameter over core insulation of 37.0 mm. Order 3 x M434TBM-P2-32-240(K)M-12-2 coupling connector kit.

Table W

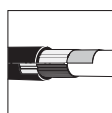
Ordering part number	Dia. over core insulation (mm)	
	min	max
3 x 434TBM-P2-22-X	23.5	31.0
3 x 434TBM-P2-27-X	28.5	37.5
3 x 434TBM-P2-32-X	34.0	42.5
3 x 434TBM-P2-37-X	39.0	48.5
3 x 434TBM-P2-43-X	45.5	56.0

Table X

Conductor sizes (mm ²)	Aluminium conductor			Copper conductor	
	DIN hexagonal	Deep indent	Bolted	DIN hexagonal	Bolted
185	185(K)M-12-2	185KM-12-1	185.400-14-5	185(K)M-11-2	185.400-14-5
240	240(K)M-12-2	240KM-12-1		240(K)M-11-2	
300	300(K)M-12-2	300KM-12-1		300(K)M-11-2	
400	400(K)M-12-2	400KM-12-1	400.630-14-5	400(K)M-11-2	400.630-14-5
500	500(K)M-12-2	500KM-12-1		500(K)M-11-2	
630	—	630KM-12-1		630(K)M-11-2	—



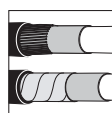
For use with copper tape screened cables. Order: Kit MT.



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



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



For use with easy strip semi-conductive screened cables. Order: Field control mastic (type MFC).



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



When installed on an appropriate equipment bushing: 1250 A continuously

400AR-3 INTERFACE C EQUIPMENT BUSHING

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.

Up to 36 kV - 630 A

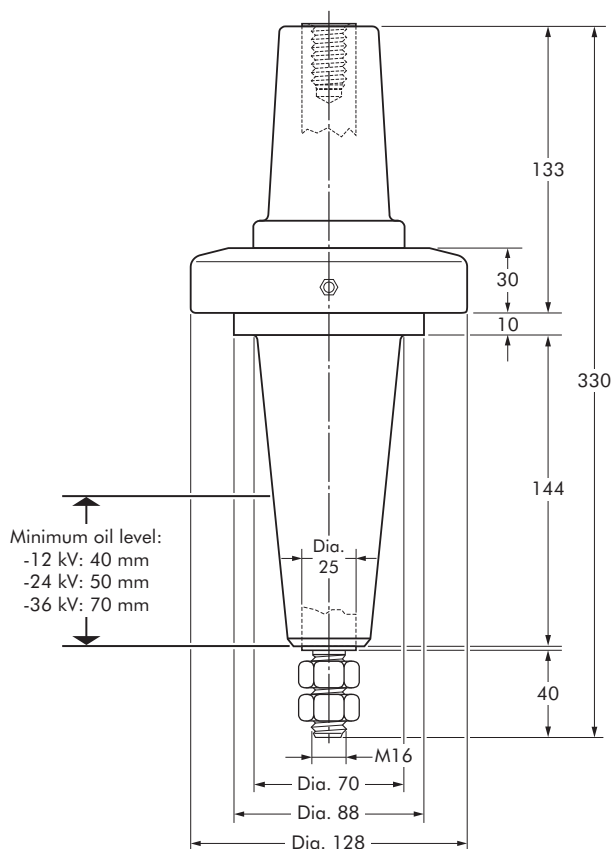
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
12.7/22 (24) kV
18/30 (36) kV
19/33 (36) kV

Specifications and standards

The bolted type equipment bushings 400AR-3 are moulded epoxy insulated parts and meet the requirements of CENELEC EN 50180 and IEC 60137.

Ordering instructions

To order the equipment bushing, specify the type. The bushings can be supplied with an earth jumper (/J). E.g. M400AR-3/J. For use in potentially explosive atmospheres (for 12 kV max), order: 400AR-3/ATEX.

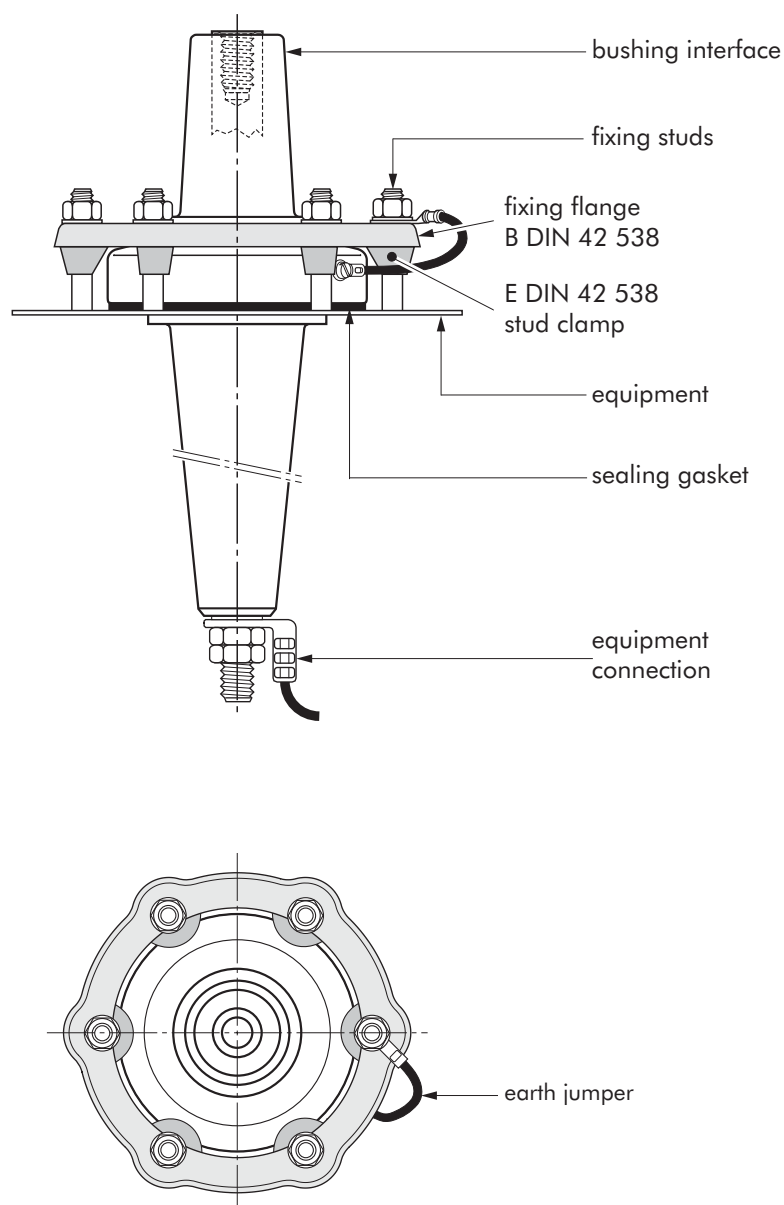


In mm.

Equipment bushing type	Voltage U_r (kV)	Current I_r (A)
400AR-3	12	630
K400AR-3	24	630
M400AR-3	36	630

FIXINGS FOR EQUIPMENT BUSHINGS

400AR-3/J Bushing



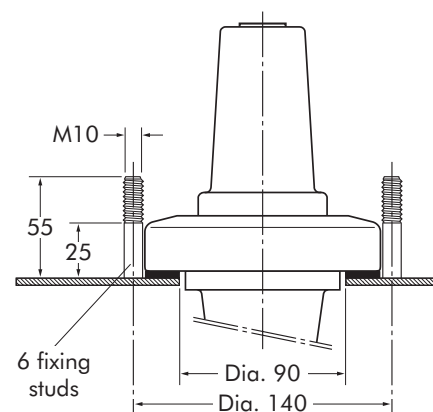
Bushing clamping kit

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 DIN 42 538

German standards.



In mm.

400AR-4 INTERFACE C EQUIPMENT BUSHING

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.

Up to 36 kV - 1250 A

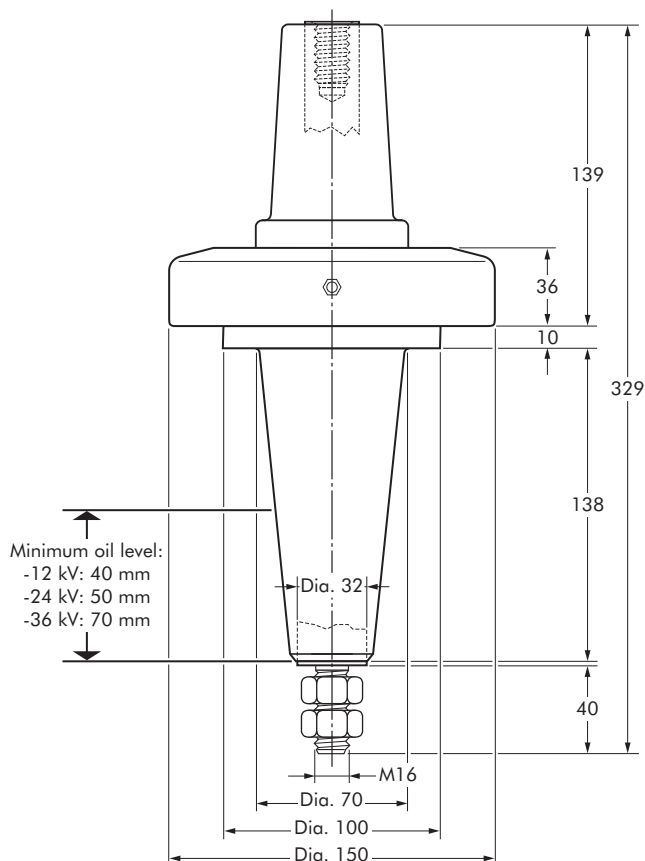
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
12.7/22 (24) kV
18/30 (36) kV

Specifications and standards

The bolted type equipment bushings 400AR-4 are moulded epoxy insulated parts and meet the requirements of CENELEC EN 50180 and IEC 60137.

Ordering instructions

To order the equipment bushing, specify the type. The bushings can be supplied with an earth jumper (/J) or an earth plate (/GS). This earth connection must be specified when ordering.
E.g. M400AR-4/GS.

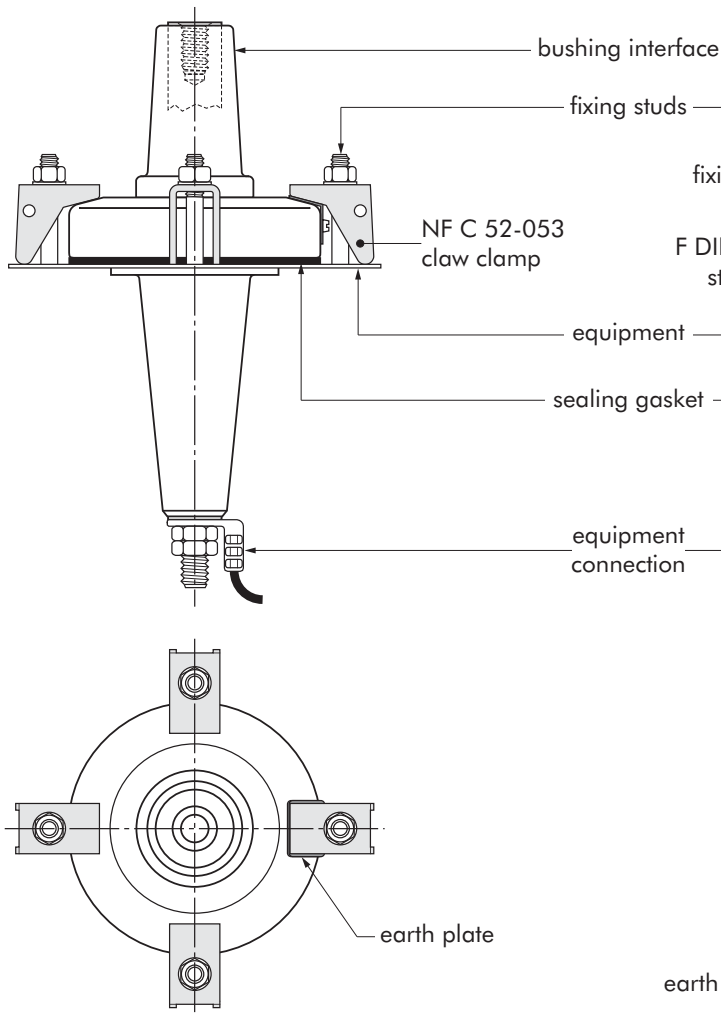


In mm.

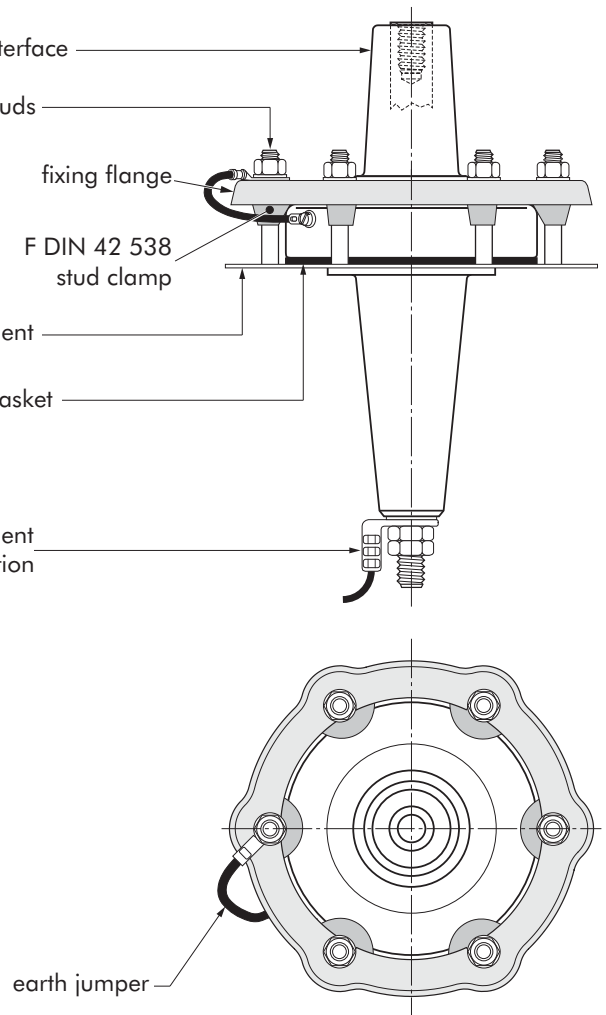
Equipment bushing type	Voltage U_r (kV)	Current I_r (A)
400AR-4	12	1250
K400AR-4	24	1250
M400AR-4	36	1250

FIXINGS FOR EQUIPMENT BUSHINGS

400AR-4/GS Bushing



400AR-4/J Bushing



Bushing clamping kit

To order the bushing clamping kit, according to NFC 52-053 standards, simply specify KBCNF-400.

Contents: - 4 x claw clamp NF
- 1 x sealing gasket.

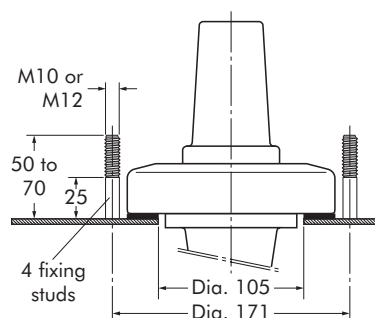
Bushing clamping kit

To order the bushing clamping kit with DIN style fixing flange, simply specify KBCDS-400.

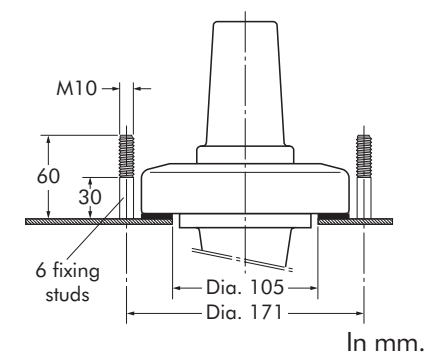
Contents: - 1 x fixing flange
DIN style
- 6 x stud clamp
F DIN 42 538
- 1 x sealing gasket.

Fixing dimensions standards NF C 52-053

French standards.



Fixing dimensions



In mm.

400AR-5 INTERFACE C EQUIPMENT BUSHING

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.

Up to 36 kV - 1250 A

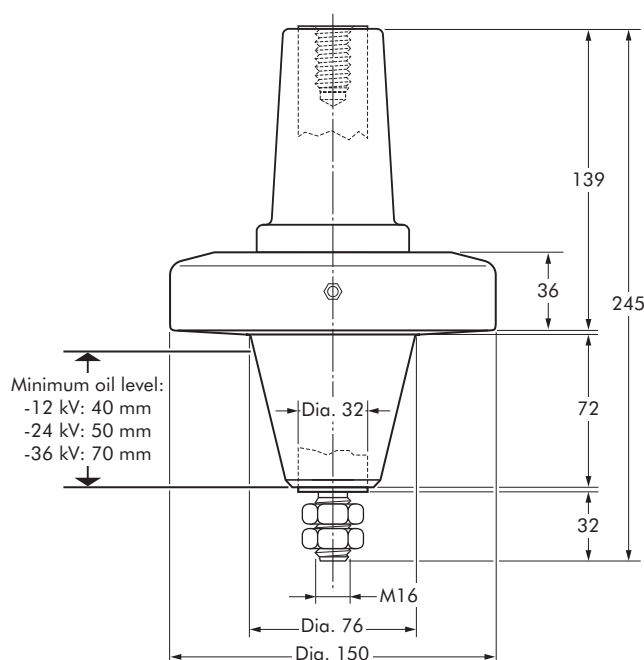
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
12.7/22 (24) kV
18/30 (36) kV

Specifications and standards

The bolted type equipment bushings 400AR-5 are moulded epoxy insulated parts and meet the requirements of CENELEC EN 50180 and IEC 60137.

Ordering instructions

To order the equipment bushing, specify the type. The bushings can be supplied with an earth jumper (/J) or an earth plate (/GS). This earth connection must be specified when ordering.
E.g. M400AR-5/GS.

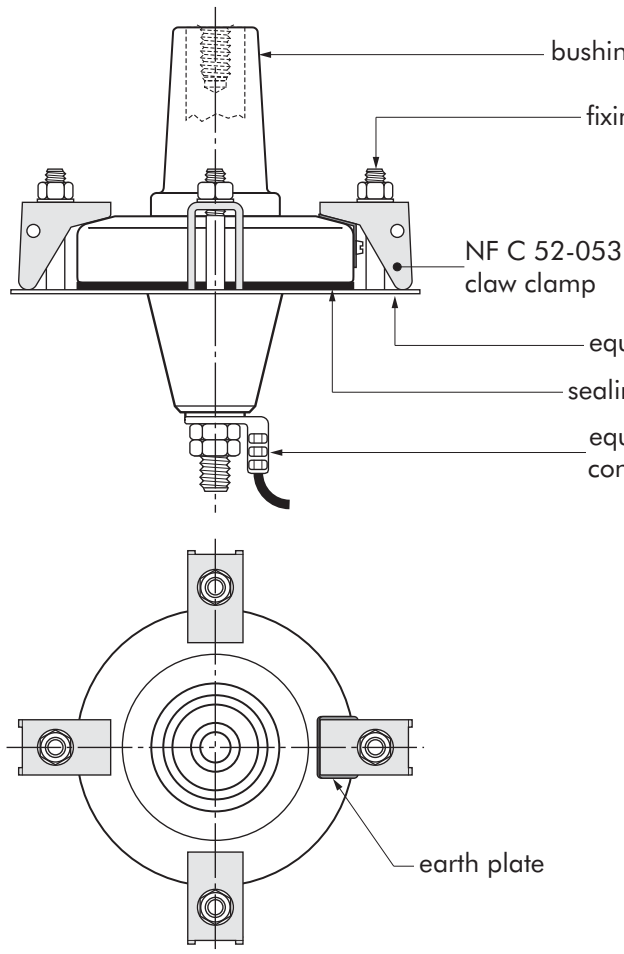


In mm.

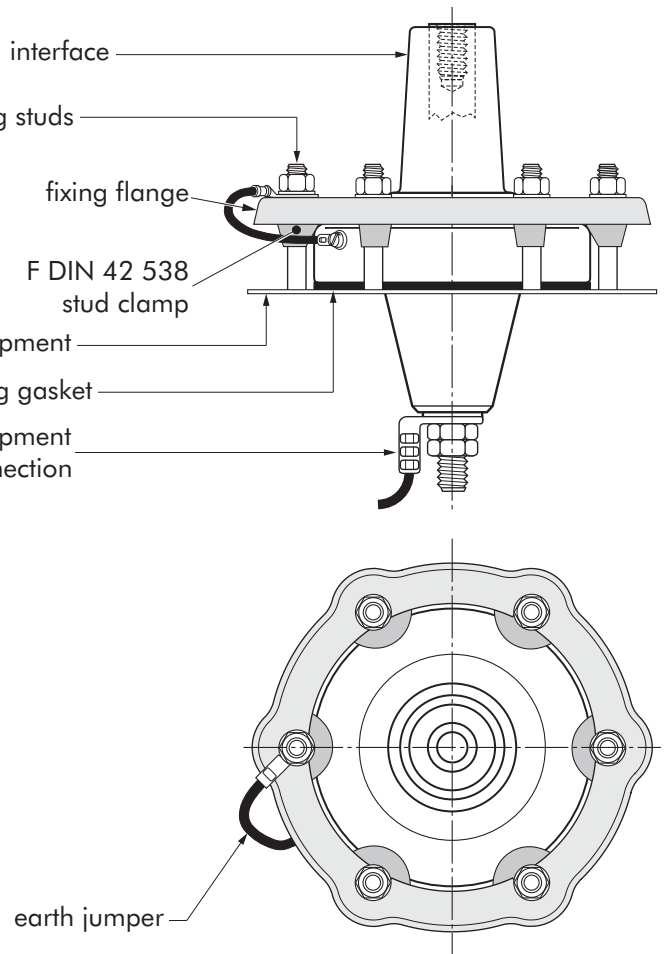
Equipment bushing type	Voltage Ur (kV)	Current Ir (A)
400AR-5	12	1250
K400AR-5	24	1250
M400AR-5	36	1250

FIXINGS FOR EQUIPMENT BUSHINGS

400AR-5/GS Bushing



400AR-5/J Bushing



Bushing clamping kit

To order the bushing clamping kit, according to NFC 52-053 standards, simply specify KBCNF-400.

Contents: - 4 x claw clamp NF
- 1 x sealing gasket.

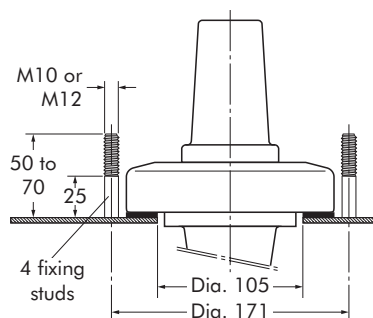
Bushing clamping kit

To order the bushing clamping kit with DIN style fixing flange, simply specify KBCDS-400.

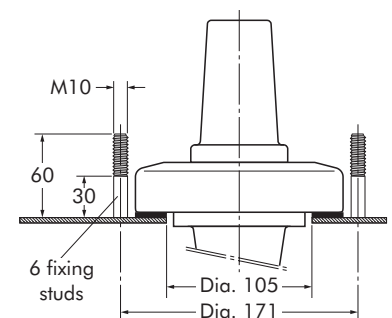
Contents: - 1 x fixing flange
DIN style
- 6 x stud clamp
F DIN 42 538
- 1 x sealing gasket.

Fixing dimensions standards NF C 52-053

French standards.



Fixing dimensions



In mm.

400AR-6 INTERFACE C EQUIPMENT BUSHING

Up to 36 kV - 630 A

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.

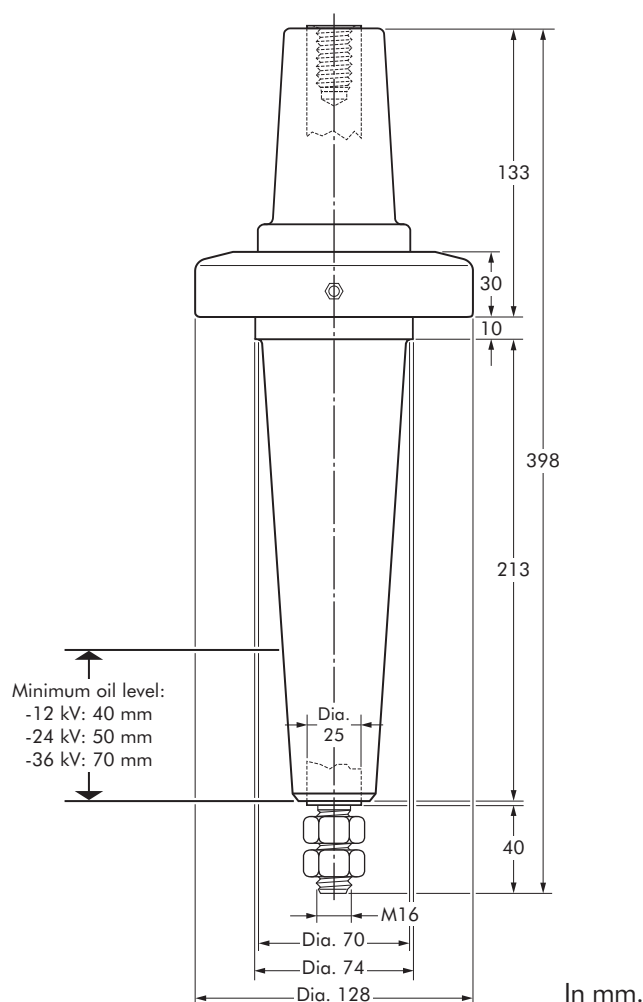
6/10 (12) kV
6.35/11 (12) kV
8.7/15 (17.5) kV
12/20 (24) kV
12.7/22 (24) kV
18/30 (36) kV

Specifications and standards

The bolted type equipment bushings 400AR-6 are moulded epoxy insulated parts and meet the requirements of CENELEC EN 50180 and IEC 60137.

Ordering instructions

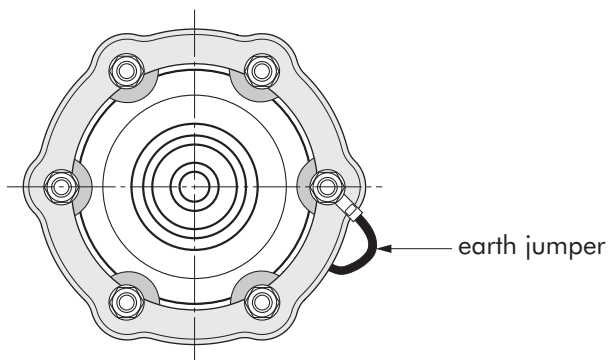
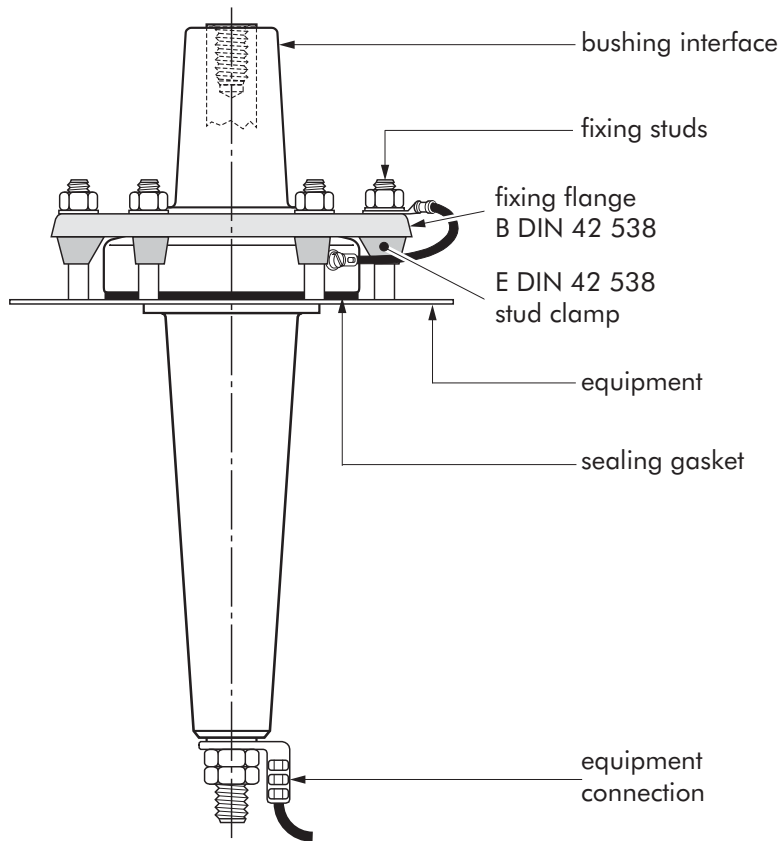
To order the equipment bushing, specify the type. The bushings can be supplied with an earth jumper (/J). This earth connection must be specified when ordering. E.g. M400AR-6/J.



Equipment bushing type	Voltage U_r (kV)	Current I_r (A)
400AR-6	12	630
K400AR-6	24	630
M400AR-6	36	630

FIXINGS FOR EQUIPMENT BUSHINGS

400AR-6/J Bushing



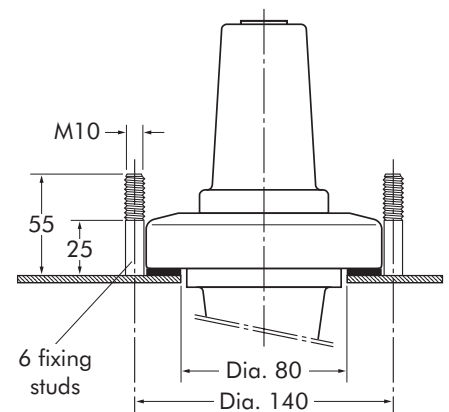
Bushing clamping kit

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 DIN 42 538

German standards.



In mm.

400SFR-B INTERFACE C EQUIPMENT BUSHING

Application

For use in equipment insulated with SF₆ gas.

Technical characteristics

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

**Up to 36 kV
630 A & 1250 A**

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

Design

The equipment bushing is a moulded epoxy insulated part with a connector interface in accordance with CENELEC EN 50180.

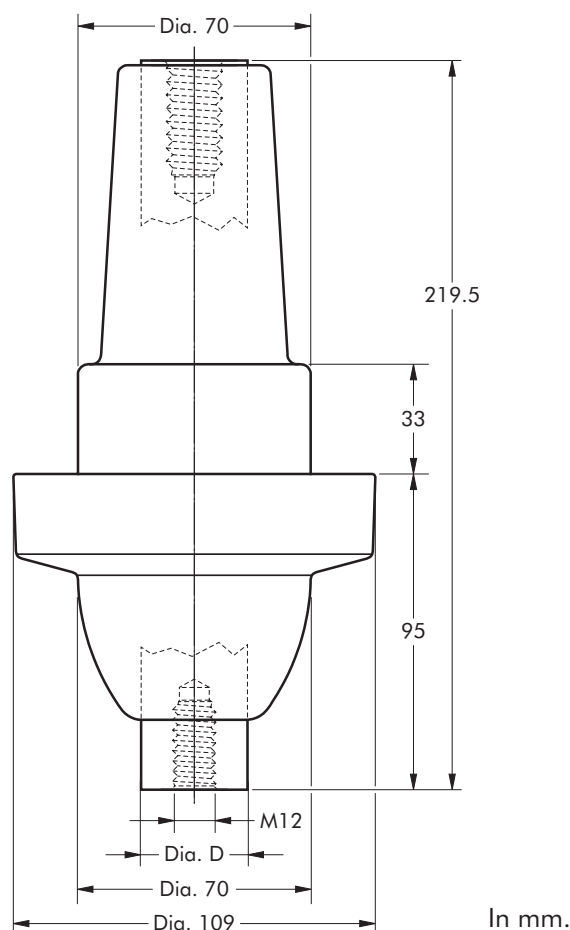
The 400SFR-B bushing has a shank outside this standard, adapted to use in SF₆ gas.

Specifications and standards

The bolted type equipment bushing 400SFR-B meets the requirements of CENELEC EN 50180 and IEC 60137.

Ordering instructions

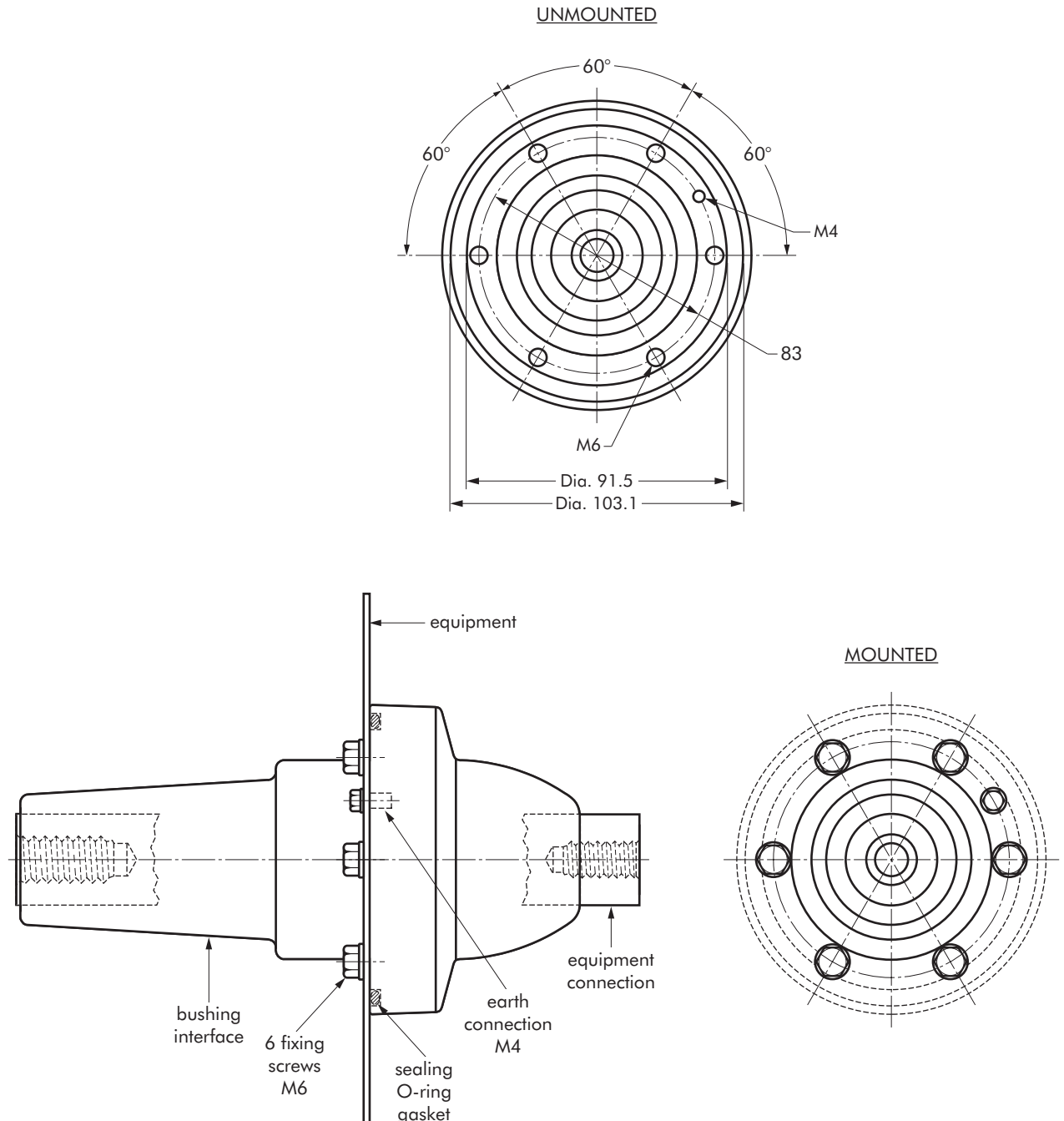
To order the equipment bushing, simply specify the type.



Equipment bushing type	Voltage U _r (kV)	Current I _r (A)	Dia. D (mm)
400SFR-B	12	630	25
K400SFR-B	24	630	25
M400SFR-B	36	630	25
400SFR-B 1250 A	12	1250	32
K400SFR-B 1250 A	24	1250	32
M400SFR-B 1250 A	36	1250	32

FIXINGS FOR EQUIPMENT BUSHINGS

I 400SFR-B Bushing for gas insulated switchgear



In mm.

400A-24B INTERFACE C IN-AIR BUSHING

Up to 24 kV - 630 A

Application

For use in equipment insulated with air, typically for dry type transformers, motors, switchgear, capacitors...

Technical characteristics

Each bushing is 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

Specifications and standards

The bolted type equipment bushings 400A-24B are moulded epoxy insulated parts and meet the requirements of CENELEC EN 50180, IEC 60071 and IEC 60137.

Ordering instructions

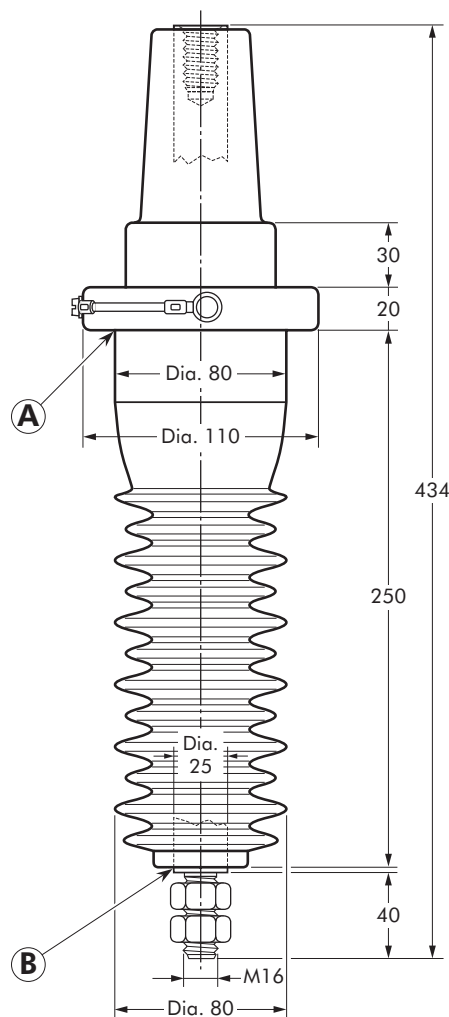
To order the equipment bushing, specify the type. The bushings are supplied with an earth jumper.

To include the ring clamp, add:

- /B, if per British standards
- /D, if per German standards
- /F, if per French standards.

E.g. 400A-24B/D.

For use in potentially explosive atmospheres (for 12 kV max), order: -/ATEX.

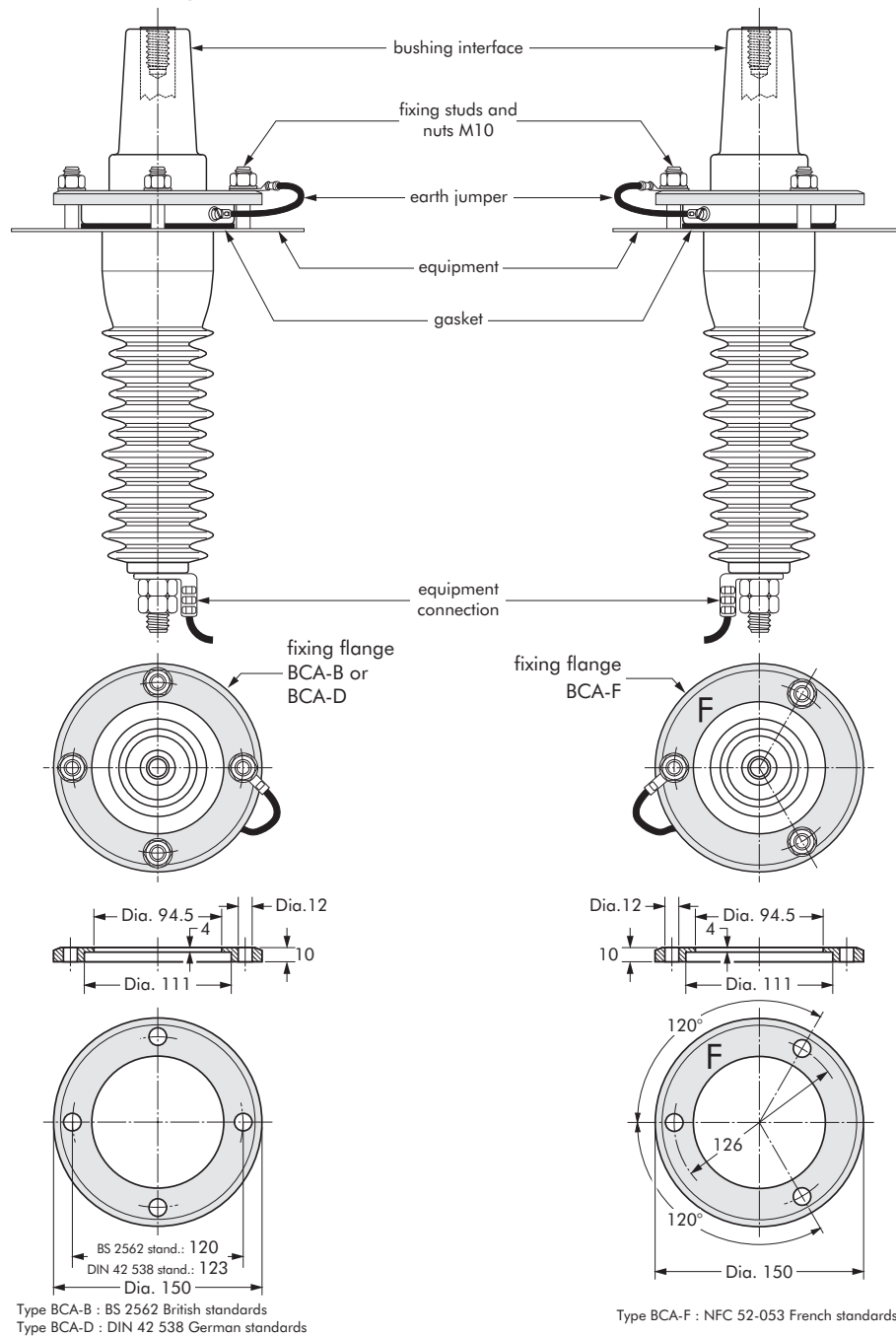


In mm.

Equipment bushing type	Voltage Ur (kV)	Current Ir (A)	Creepage distance A-B (mm)
400A-24B	12	630	520
400A-24B	24	630	520

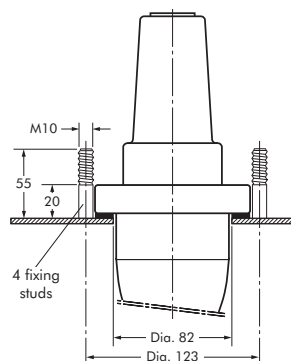
FIXINGS FOR EQUIPMENT BUSHINGS

400A-24B In-air bushing



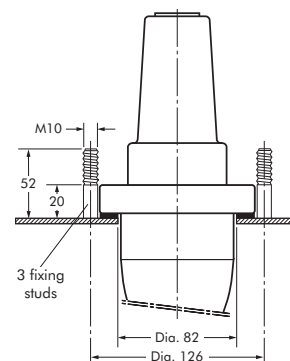
Fixing dimensions standards DIN 42 538

German standards.



Fixing dimensions standards NF C 52-053

French standards.



300SA SURGE ARRESTER FOR 430TB AND 434TB CONNECTOR

Up to 36 kV

Application

Surge arrester designed to protect 12, 24 and 36 kV class components, including transformers, equipment, cable and accessories from high voltage surges resulting from lightning or switching. It has been designed to be used with the 430TB or 434TB separable tee connector.

Technical characteristics

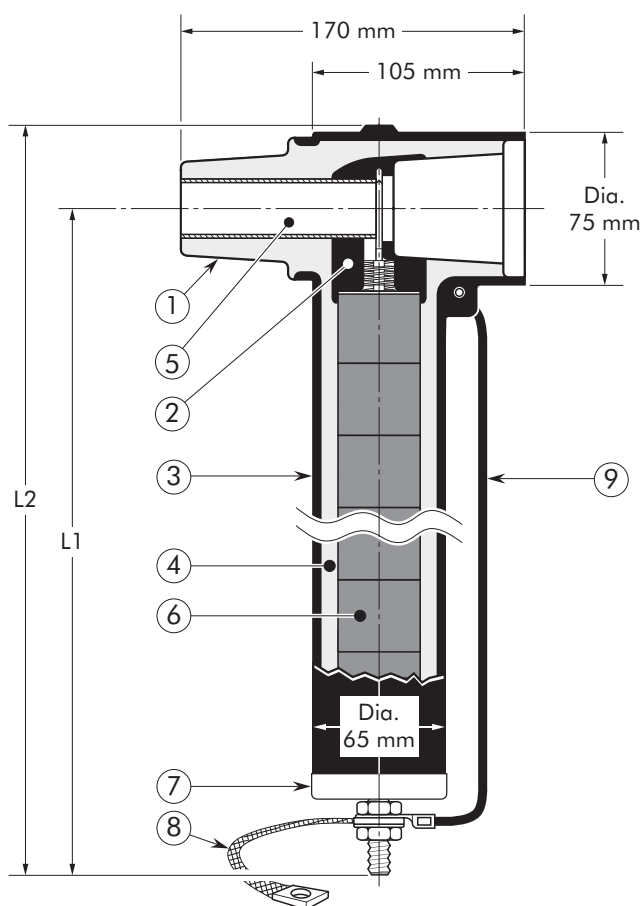
- This surge arrester is a metal oxide varistor surge arrester in an elbow configuration.
- Each arrester is tested for AC withstand, partial discharge and critical voltage prior to leaving the factory.

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

Design

Surge arrester comprising:

1. Interface designed to fit the 430TB/G or 434TB/G tee connector.
2. Conductive EPDM insert.
3. Conductive EPDM jacket.
4. Insulating EPDM layer moulded between the insert and the jacket.
5. Receptacle for contact rod.
6. Metal oxide valve elements.
7. Steel cap.
8. Earth connection.
9. Earth lead.

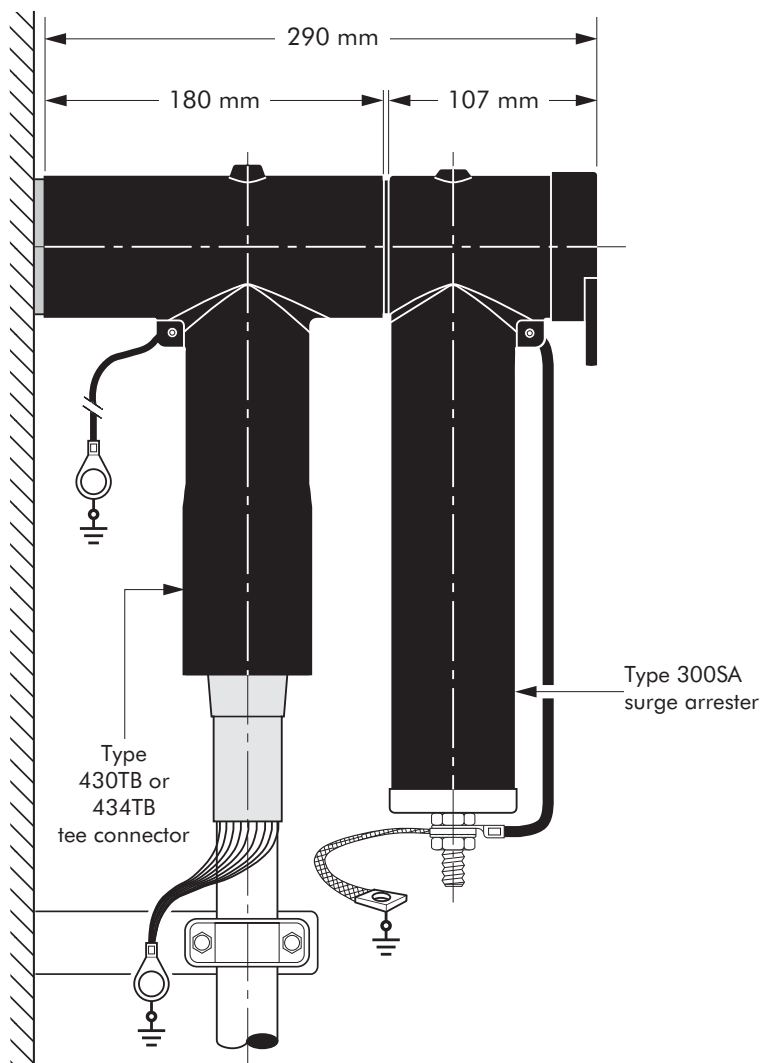


Specifications and standards

The 300SA surge arresters meet the test requirements of IEC 60099-4.

Surge arrester type	Nominal discharge current In (kA)	Rated voltage Ur (kV)	Max. continuous operating voltage Uc (kV)	Dimensions (mm)	
				L1	L2
300SA-10-15N	10	15	12.0	230	270
300SA-10-18N	10	18	14.4	230	270
300SA-10-22N	10	22	17.6	230	270
300SA-10-24N	10	24	19.2	320	360
300SA-10-30N	10	30	24.0	320	360
300SA-10-36N	10	36	28.8	320	360
300SA-10-45N	10	45	36.0	430	470

Typical application and dimensions



Ordering instructions

To order the surge arrester, specify the surge arrester type, as described on previous page.

Example:

For a maximum continuous operating voltage (r.m.s.) of 24 kV and a nominal discharge current of 10 kA. Order a 300SA-10-30N surge arrester.

Technical data

Surge arrester type	Steep current residual voltage @ 10 kA [1/20 μ s] (kV)	Lightning current residual voltage [8/20 μ s] (kV)			Switching impulse residual voltage [36/90 μ s] (kV)		High current impulse withstand (kA)
		@ 5 kA	@ 10 kA	@ 20 kA	@ 125 A	@ 500 A	
300SA-10-15N	48.1	39.7	43.2	48.4	30.5	32.5	100
300SA-10-18N	58.1	48.0	52.2	58.5	36.8	39.2	100
300SA-10-22N	70.1	57.9	63.0	70.6	44.4	47.3	100
300SA-10-24N	77.0	63.6	69.2	77.6	48.8	52.0	100
300SA-10-30N	97.0	80.1	87.2	97.7	61.5	65.5	100
300SA-10-36N	115.9	95.7	104.2	116.8	73.5	78.3	100
300SA-10-45N	144.1	119.0	129.5	145.1	91.3	97.3	100

400PB-XSA INTERFACE C SURGE ARRESTER

Up to 36 kV

Application

Surge arrester designed to protect medium voltage components, including transformers, equipment, cable and accessories from high voltage surges resulting from lightning or switching.

Technical characteristics

- This surge arrester is a metal oxide varistor surge arrester in an elbow configuration.
- Each arrester is tested for AC withstand, partial discharge and critical voltage 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

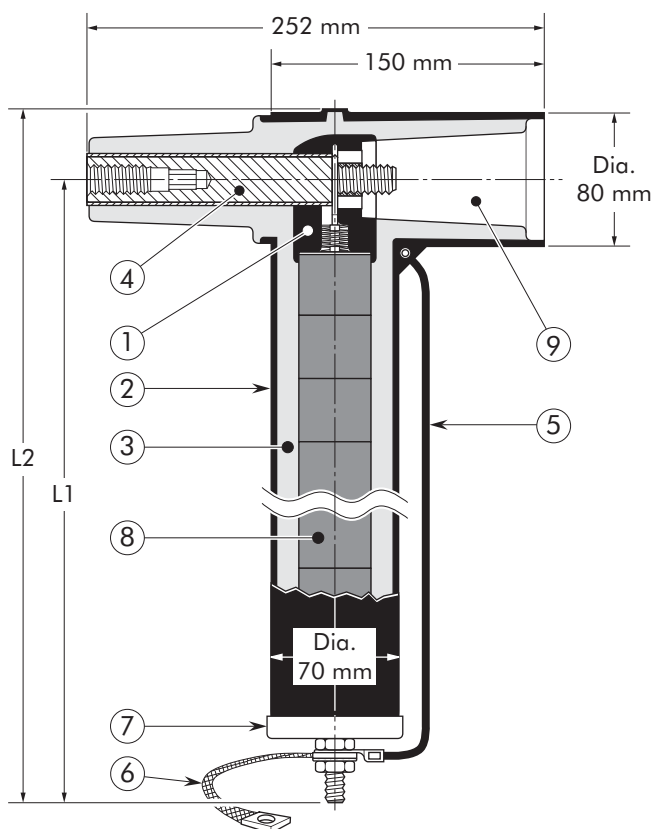
Design

Surge arrester comprising:

1. Conductive EPDM insert.
2. Conductive EPDM jacket.
3. Insulating EPDM layer moulded between the insert and the jacket.
4. Contact rod.
5. Earthing lead.
6. Earth connection.
7. Steel cap.
8. Metal oxide valve elements.
9. Type C - 630 A interface as described by CENELEC EN 50180 and 50181.

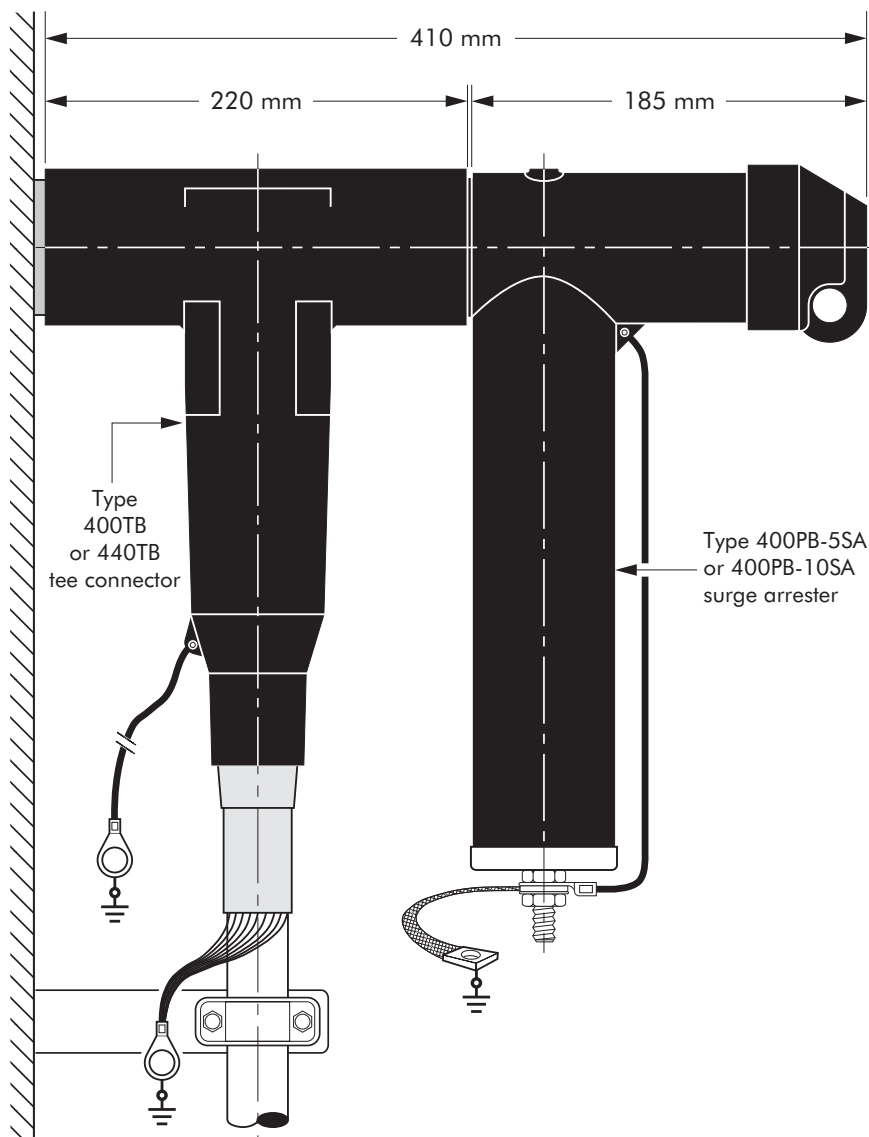
Specifications and standards

The 400PB-XSA surge arresters meet the test requirements of IEC 60099-4.



Surge arrester type	Nominal discharge current In (kA)	Rated voltage Ur (kV)	Max. continuous operating voltage Uc (kV)	Dimensions (mm)	
				L1	L2
400PB-5SA-15L	5	15	12.0	250	290
400PB-5SA-18L	5	18	14.4	250	290
400PB-5SA-22L	5	22	17.6	350	390
400PB-5SA-24L	5	24	19.2	350	390
400PB-5SA-30L	5	30	24.0	350	390
400PB-10SA-15N	10	15	12.0	250	290
400PB-10SA-18N	10	18	14.0	250	290
400PB-10SA-22N	10	22	17.6	350	390
400PB-10SA-24N	10	24	19.2	350	390
400PB-10SA-30N	10	30	24.0	350	390
400PB-10SA-36N	10	36	28.8	350	390
400PB-10SA-45N	10	45	36.0	450	490

Typical applications and dimensions



Ordering instructions

To order the surge arrester, specify the surge arrester type, as described on previous page.

Example:

For a maximum continuous operating voltage (r.m.s.) of 24 kV and a nominal discharge current of 10 kA. Order a 400PB-10SA-30N surge arrester.

Technical data

Surge arrester type	Steep current residual voltage @ 10 kA [1/20 μ s] (kV)	Lightning current residual voltage [8/20 μ s] (kV)			Switching impulse residual voltage [36/90 μ s] (kV)		High current impulse withstand (kA)
		@ 5 kA	@ 10 kA	@ 20 kA	@ 125 A	@ 500 A	
400PB-5SA-15L	47.1	38.9	42.3	47.4	29.8	31.8	65
400PB-5SA-18L	56.5	46.7	50.8	56.9	35.8	38.2	65
400PB-5SA-22L	69.2	57.1	62.2	69.7	43.8	46.7	65
400PB-5SA-24L	75.2	62.1	67.6	75.8	47.7	50.8	65
400PB-5SA-30L	94.0	77.6	84.5	94.7	59.6	63.5	65
400PB-10SA-15N	48.1	39.7	43.2	48.4	30.5	32.5	100
400PB-10SA-18N	58.1	48.0	52.2	58.5	36.8	39.2	100
400PB-10SA-22N	70.1	57.9	63.0	70.6	44.4	47.3	100
400PB-10SA-24N	77.0	63.6	69.2	77.6	48.8	52.0	100
400PB-10SA-30N	97.0	80.1	87.2	97.7	61.5	65.5	100
400PB-10SA-36N	115.9	95.7	104.2	116.8	73.5	78.3	100
400PB-10SA-45N	144.1	119.0	129.5	145.1	91.3	97.3	100

400TR and 400TR-LB INTERFACE C TEST RODS

Application

- The test rod can be used for:
 - cable fault location
 - cable testing
 - phasing checks, etc.
- Connections may be made with a cable lug, a 4 mm plug or spring clips.

Technical characteristics

- The 400TR test rod can be used with 400TE, 430TB, 400TB and 440TB connectors.
- The 400TR-LB is for use with the 400LB connector.

Design

1. Insulating shroud.
2. Threaded rod for test connection.
3. Two nuts M12.
4. Insulation.
5. Copper test rod stem.
6. Wing nut.

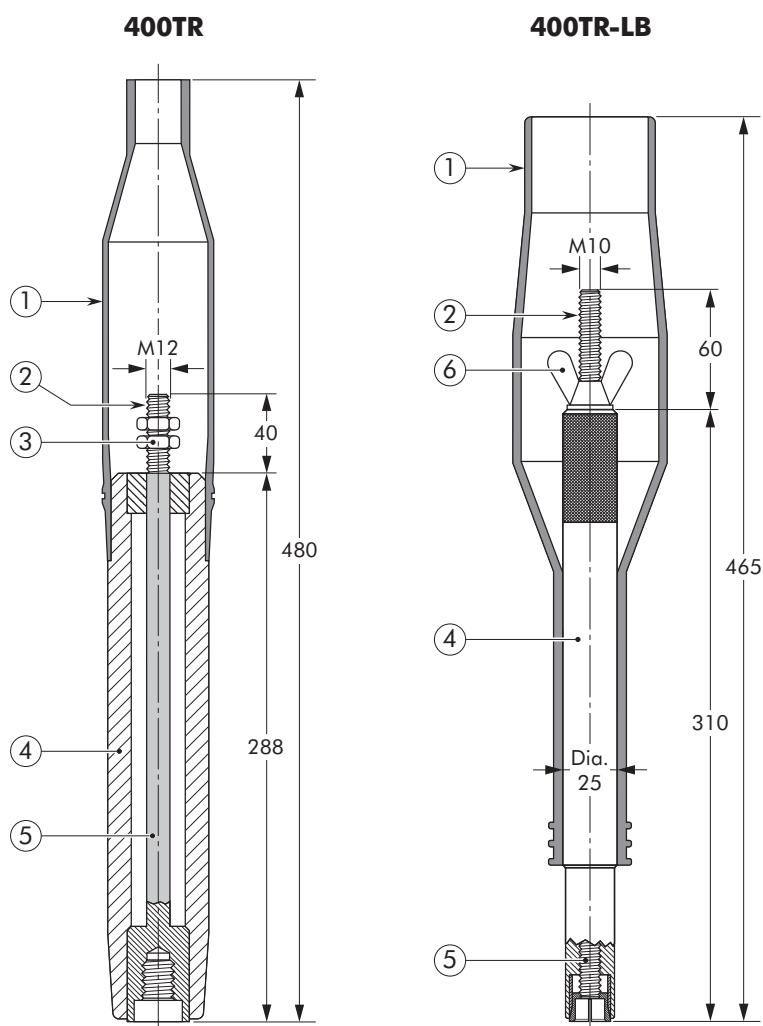
An insulating shroud is provided to allow the application of test voltages when bushings are closely spaced.

Installation

The test rod is mounted on to the clamping screw in the type C interface tee and coupling connectors. The test cable is connected to the threaded stem and the insulating shroud moved to its final position over the end of the test rod.

Ordering instructions

Simply specify:
400TR or 400TR-LB test rod.



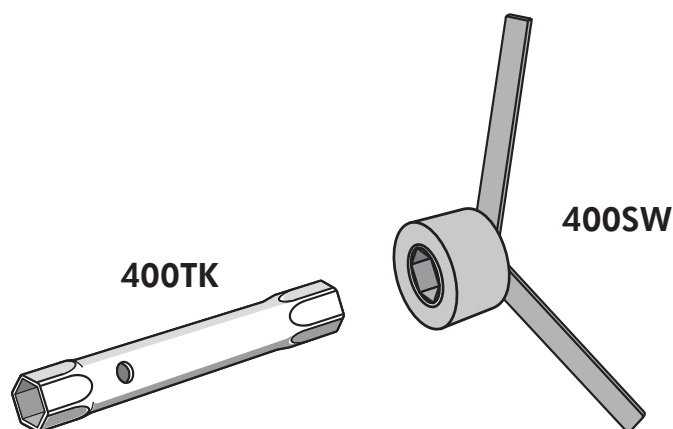
In mm.

Test rod type	Maximum A.C. test voltage (50 Hz - 1 min)	Maximum D.C. test voltage (8 x U ₀ - 30 min)	Impulse voltage (1.2 x 50 μs) min
400TR	36 kV	96 kV	95 kV
400TR-LB	36 kV	96 kV	95 kV

400TK & 400SW INSTALLATION TOOL

Application

- The box spanner and box spanner key are designed to facilitate assembly of 400TE, 400TB and 440TB connectors.
- The 400TK box spanner is used to install the 400TEF clamping pin contact or 400TCS clamping screw.
- The 400SW box spanner key fits on the hex nut of the 400BIPA basic insulating plug.



Ordering instructions

Simply specify:

- 400TK box spanner
- 400SW box spanner key

ACCESSORIES INTERFACE C

Application

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

Technical characteristics

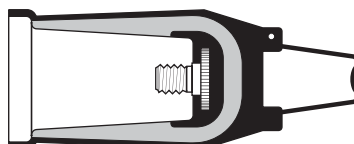
All these products, except the earthing plugs, are tested for AC withstand and partial discharge prior to leaving the factory.

Up to 36 kV

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

400DR-B Dead-end receptacle

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

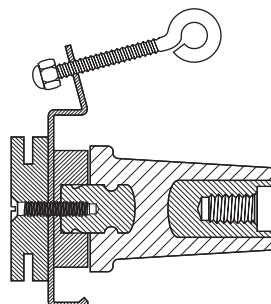


Ordering instructions

Order
400DR-B for 12 kV,
K400DR-B for 24 kV or
M400DR-B for 36 kV
applications.
The dead-end receptacle can
be supplied with an earth lead.
Order with suffix -/G.
E.g. K400DR-B/G.

400SOP-B Stand-off plug

Is designed to support and 'dead-end' connectors with a type C interface when removed from equipment.

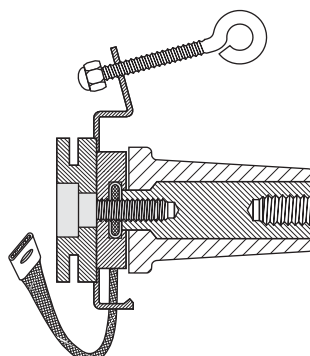


Ordering instructions

Order
400SOP-B for 12 kV,
K400SOP-B for 24 kV,
M400SOP-B for 36 kV or
P400SOP-B for 41.5 kV
applications.

400GP-B Earthing plug

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

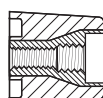


Ordering instructions

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

300GP-B Earthing plug

Is designed to earth the 430TB and 434TB connectors when it is fixed-mounted to the equipment (maintenance earthing).



Ordering instructions

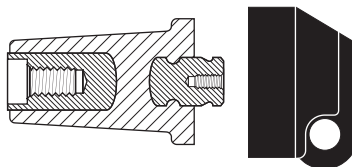
Order
300GP-B for 12, 24, 36 or
41.5 kV applications.

400BIPA **Basic insulating plug**

Acts as a tightening nut for the 400TB and 440TB tee connector kits.

The plug contains a voltage detection point.

The conductive rubber protection cap is included.

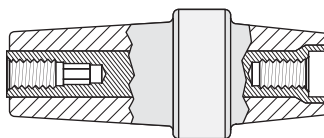


Ordering instructions

Order
400BIPA for 12 kV,
K400BIPA for 24 kV
M400BIPA for 36 kV or
P400BIPA for 41.5 kV
applications.

430CP **Connecting plug**

For connecting two or more 430TB connectors, thus creating a separable cable joint or a multiple cable connection to equipment.

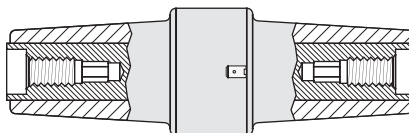


Ordering instructions

Order
430CP for 12 kV or
K430CP for 24 kV applications.

400CP-SC **Connecting plug**

For connecting two or more connectors with a type C interface together, thus creating a separable cable joint or a multiple cable connection to equipment.



Ordering instructions

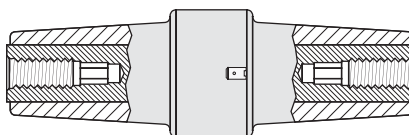
Order
400CP-SC for 12 kV,
K400CP-SC for 24 kV or
M400CP-SC for 36 kV
applications.

440CP **Connecting plug**

For connecting two or more 440TB connectors, thus creating a separable cable joint or a multiple cable connection to equipment.

For use up to 1250 A.

Only for use with 440TB.



Ordering instructions

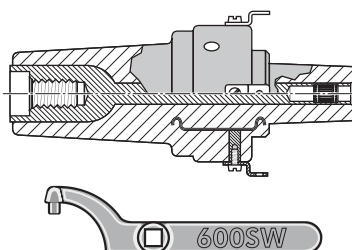
Order
440CP for 12 kV,
K440CP for 24 kV or
M440CP for 36 kV
applications.

Order (K)(M)440CP + 676SA
for connection to an already
installed 440TB connector.

400RTPA **Reducing tap plug**

Provides a type A interface to connectors with a type C interface.

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



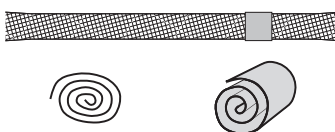
Ordering instructions

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 mm² - L = 500 mm), a tinned copper wire for cleating and some water sealing mastic.



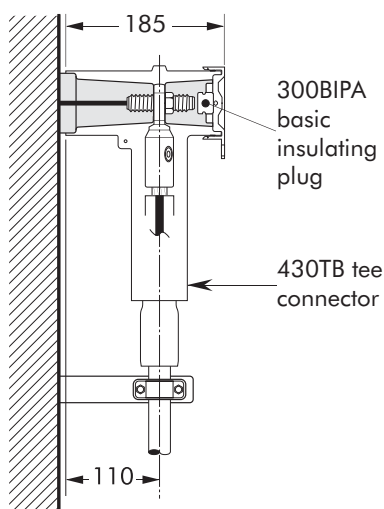
Ordering instructions

Order
Kit MT for 12 kV, 24 kV
36 kV or 41.5 kV applications.

POSSIBLE ARRANGEMENTS INTERFACE C

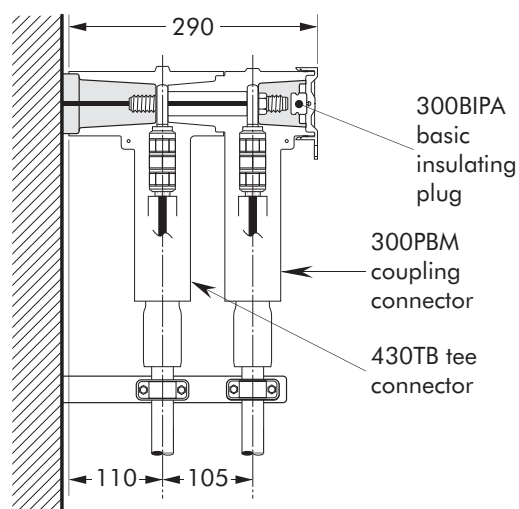
430TB

Single cable arrangement.
Order 430TB for 12 kV,
K430TB for 24 kV or M430TB
for 36 kV applications.



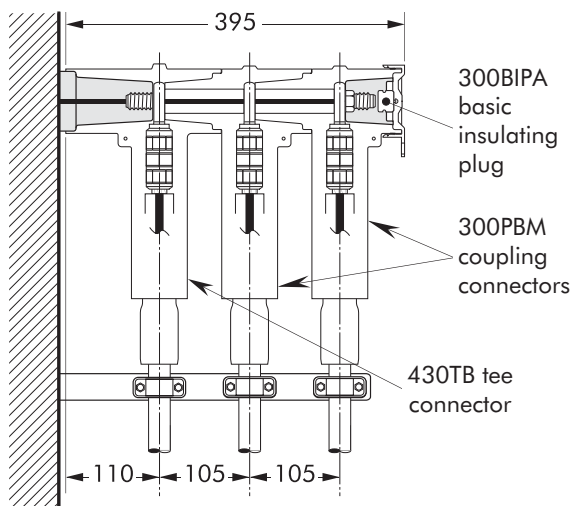
430TBM-P2

Dual cable arrangement.
Order 430TBM-P2 for 12 kV,
K430TBM-P2 for 24 kV or
M430TBM-P2 for 36 kV
applications.



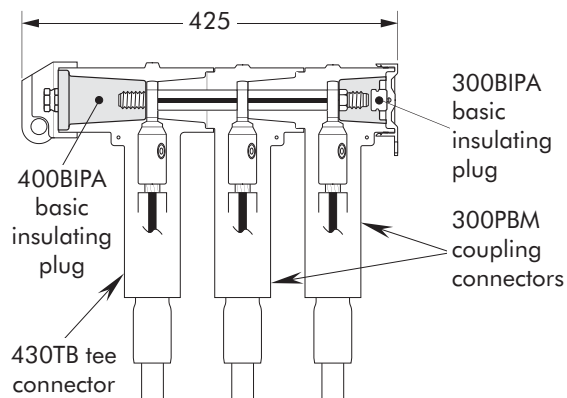
430TBM-P3

Triple cable arrangement.
Order 430TBM-P3 for 12 kV,
K430TBM-P3 for 24 kV or
M430TBM-P3 for 36 kV
applications.



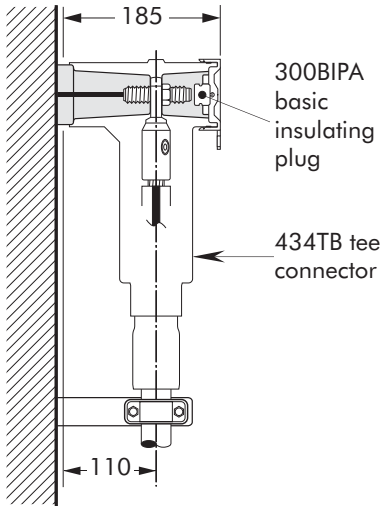
430TBM-L3

3-way connection.
Order 430TBM-L3 for 12 kV,
K430TBM-L3 for 24 kV or
M430TBM-L3 for 36 kV
applications.



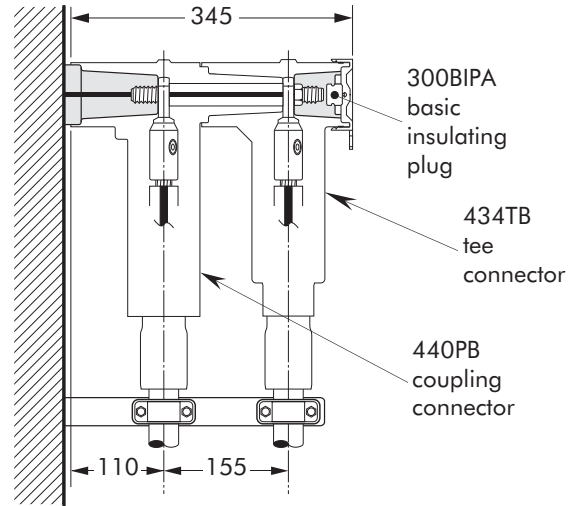
434TB

Single cable arrangement.
Order 434TB for 12 kV,
K434TB for 24 kV or M434TB
for 36 kV applications.



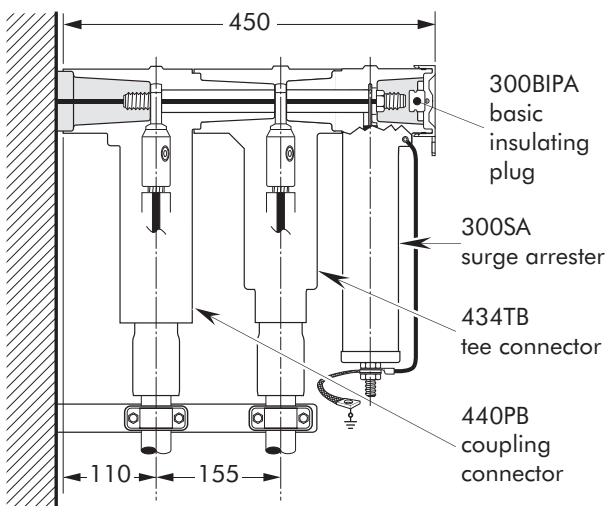
434TBM-P2

Dual cable arrangement.
Order 434TBM-P2 for 12 kV,
K434TBM-P2 for 24 kV or
M434TBM-P2 for 36 kV
applications.



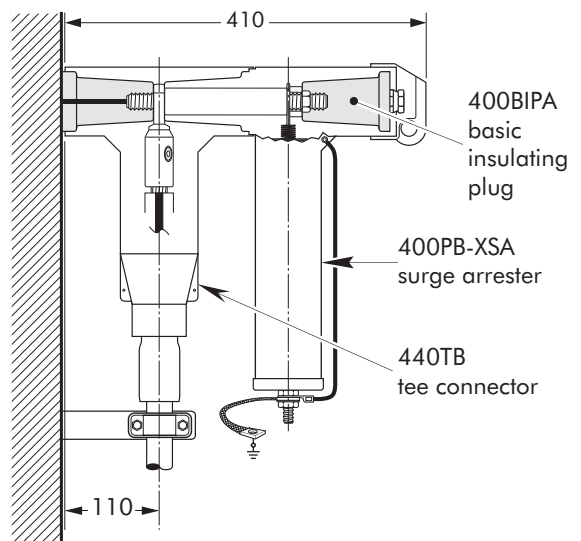
434TBM-P2 + 300SA

Dual cable arrangement with
surge arrester.
Order 434TBM-P2+300SA for
12 kV, K434TBM-P2+300SA for
24 kV or M434TBM-P2+300SA
for 36 kV applications.



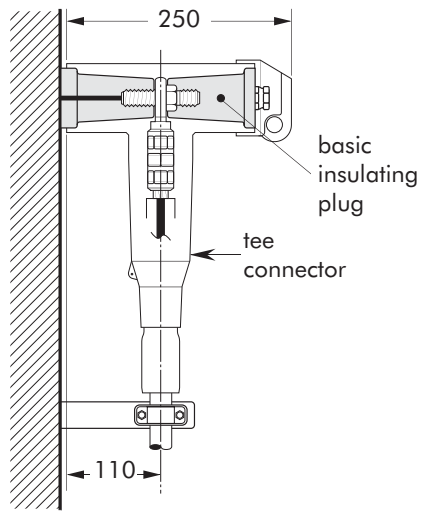
440TB + 400PB-XSA

Cable arrangement with surge
arrester.
Order 440TB+400PB-XSA for
12 kV, K440TB+400PB-XSA for
24 kV or M440TB+400PB-XSA
for 36 kV applications.



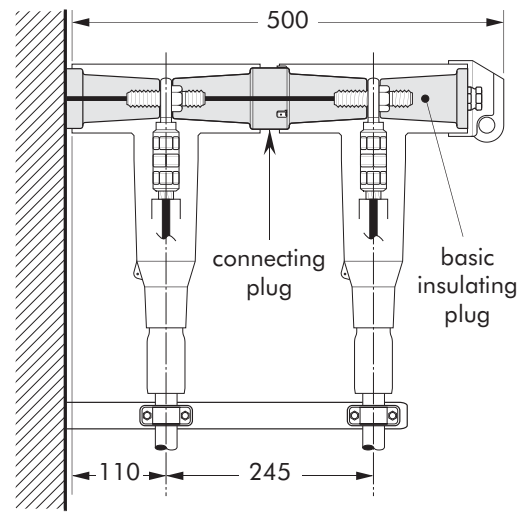
400TB/G

Single cable arrangement.
Order 400TB/G for 12 kV,
K400TB/G for 24 kV,
M400TB/G for 36 kV or
P400TB/G for 41.5 kV
applications.



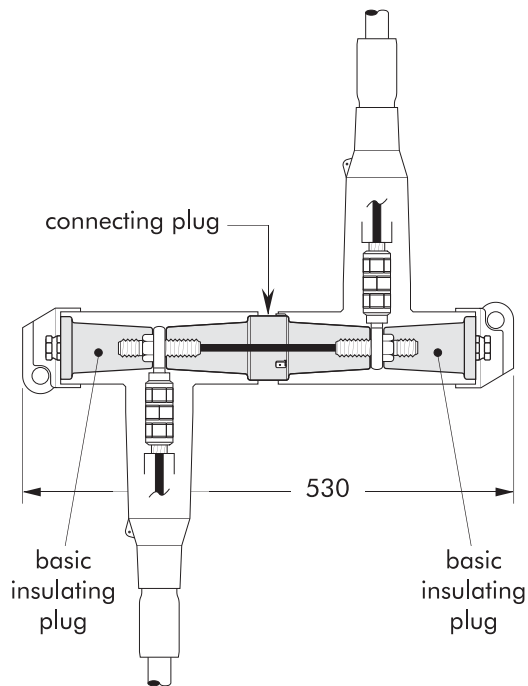
400TB/G-P2

Dual cable arrangement.
Order 400TB/G-P2 for 12 kV,
K400TB/G-P2 for 24 kV or
M400TB/G-P2 for 36 kV
applications.



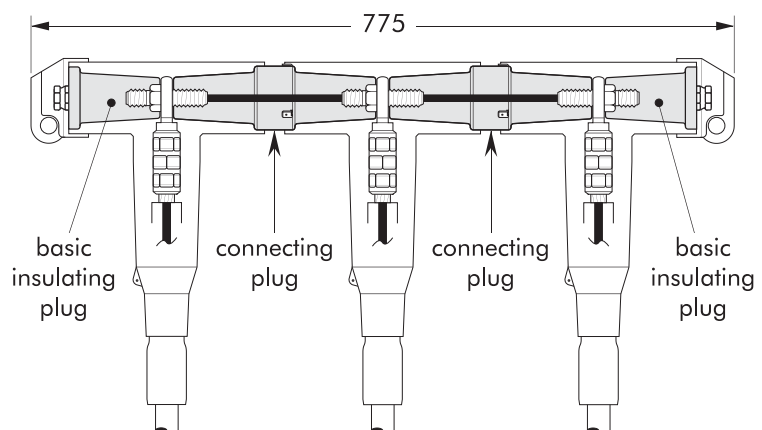
400TB/G-L2

2-way connection.
Order 400TB/G-L2 for 12 kV,
K400TB/G-L2 for 24 kV or
M400TB/G-L2 for 36 kV
applications.



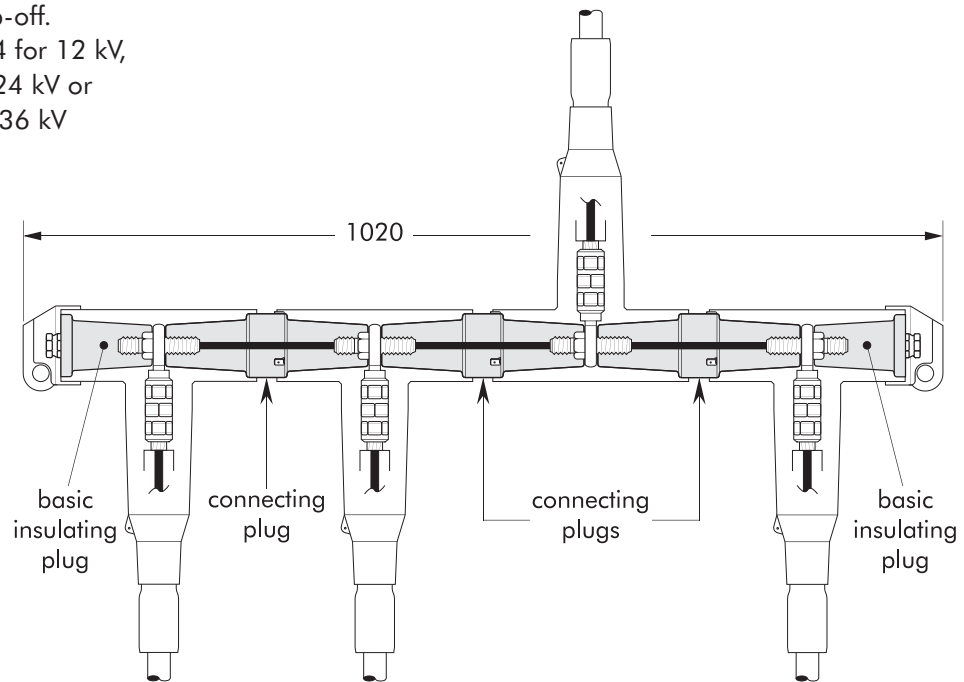
400TB/G-L3

3-way connection.
Order 400TB/G-L3 for 12 kV,
K400TB/G-L3 for 24 kV or
M400TB/G-L3 for 36 kV
applications.



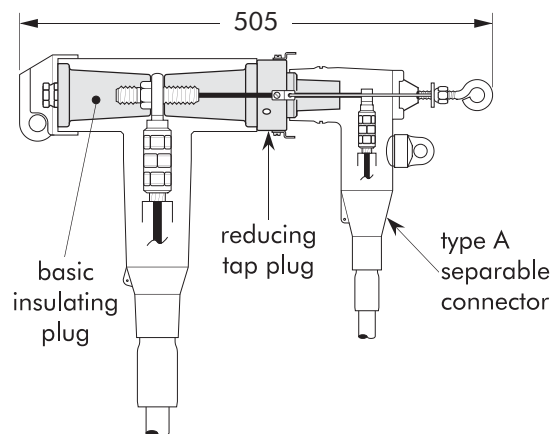
400TB/G-L4

Disconnectable tap-off.
Order 400TB/G-L4 for 12 kV,
K400TB/G-L4 for 24 kV or
M400TB/G-L4 for 36 kV
applications.



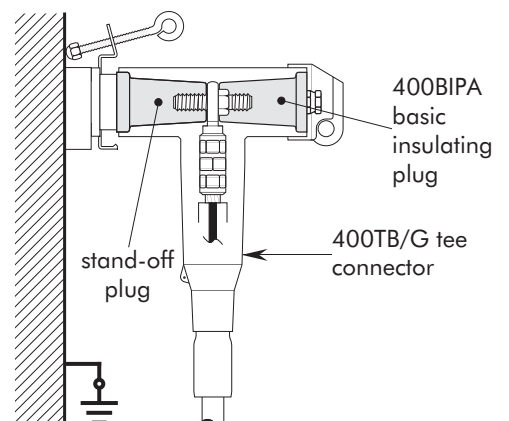
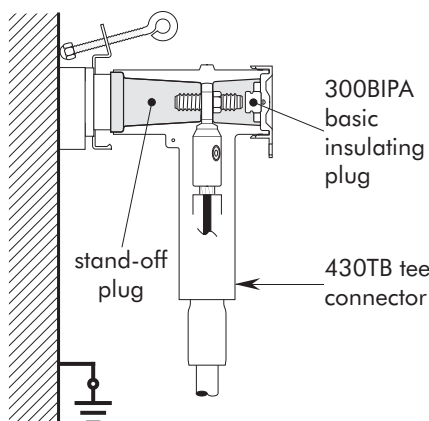
400TB/G-L5

2-way connection with tap-off.
Order 400TB/G-L5 for 12 kV
or K400TB/G-L5 for 24 kV
applications.



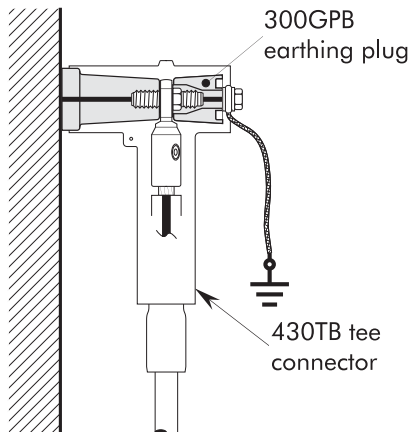
Connector on stand-off plug

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



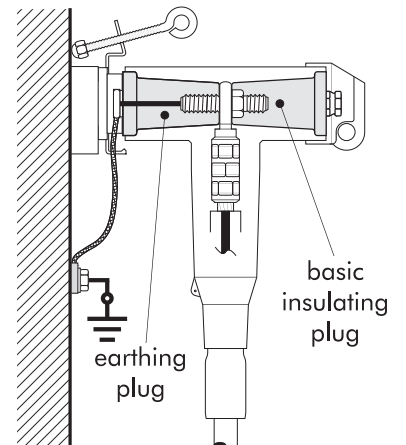
Earthling plug on connector

Order 300GP-B for 12 kV,
24 kV and 36 kV applications.

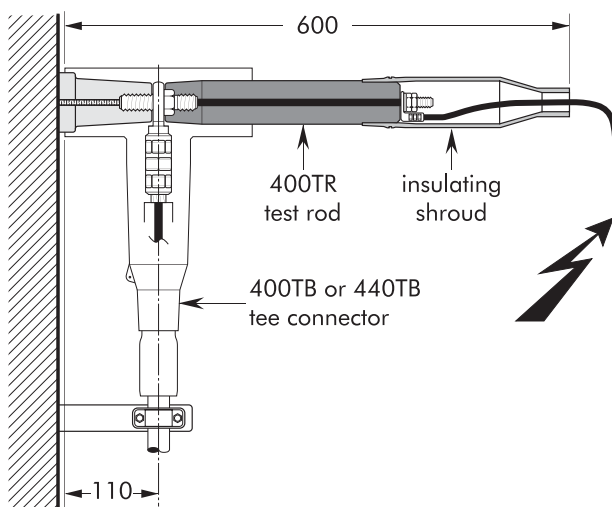
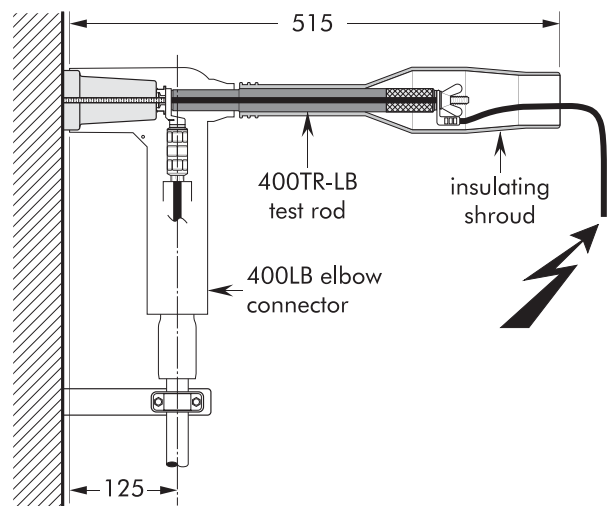
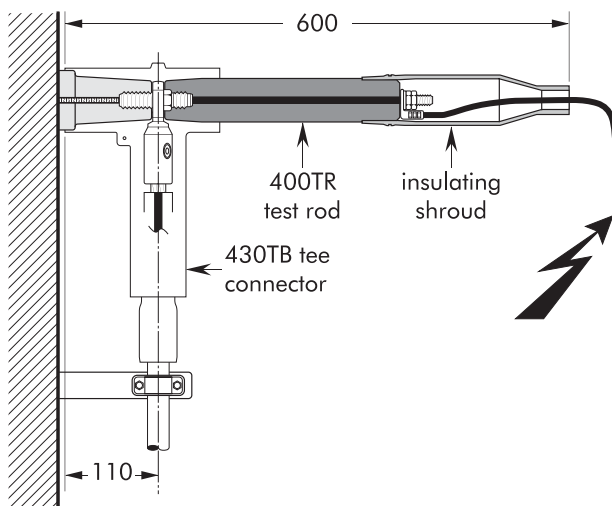


Connector on earthing plug

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



Cable and equipment testing



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