

Catalogue 2009



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: pre-moulded EPDM or silicone rubber connectors, terminations and joints 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

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All our products meet the International standards like CENELEC HD 629.1, CENELEC EN 50180, IEC 60137, IEEE 386 & 404... 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 BELTEST accreditation no.192-T-ISO 17025 conform with the European standards for laboratories ISO 17025 for electrical testing of medium voltage cable accessories according to the International standards 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 INTERFACE A

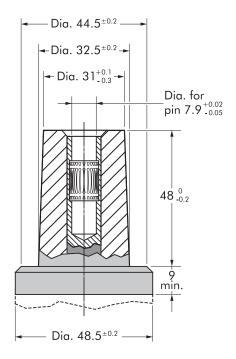
Table of contents

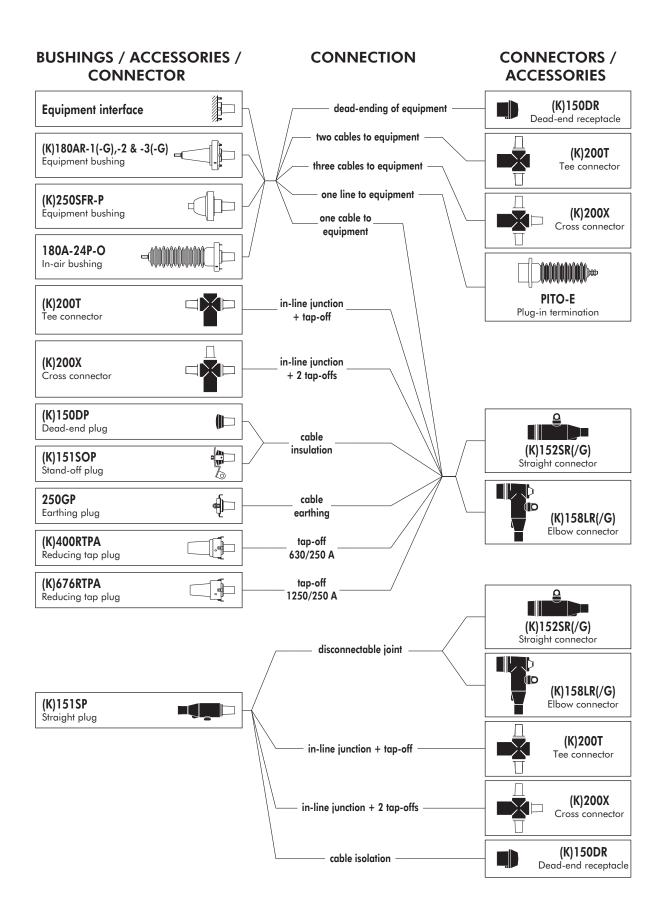
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158LR - elbow connector 152SR - straight connector 151SP - straight plug 156SA - surge arrester 180AR-1 /-2 /-3 and 180AR-1-G /-3-G - equipment bushings 250SFR-P - equipment bushing 180A-24P-O - in-air bushing PITO-E - plug-in termination Accessories Bail restraints

Interface A

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







158LR INTERFACE A ELBOW CONNECTOR

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

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- 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 24 kV - 250 A

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

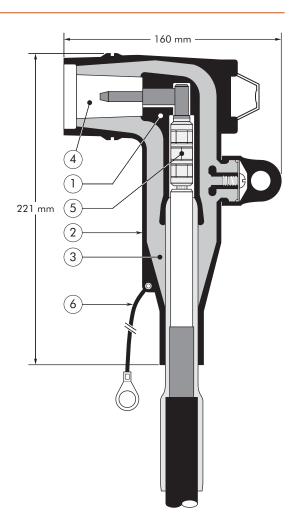
Design

Separable connector comprising:

- 1. Conductive EPDM insert.
- 2. Conductive EPDM jacket.
- Insulating EPDM layer moulded between the insert and the jacket.
- 4. Type A 250 A interface as described by CENELEC EN 50180 and 50181.
- 5. Conductor connector.
- 6. Earthing lead (-/G version only).

Specifications and standards

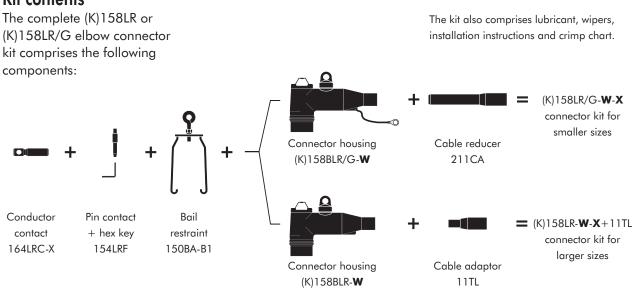
The separable connector 158LR meets the requirements of CENELEC HD 629.1.



	Separable connector	Voltage Um	Current Ir	Conductor	sizes (mm²)
	type	(kV)	(A)	min	max
	158LR/G	12	250	16	70
	158LR	12	250	70	95
600	K158LR/G	24	250	16	25
9/2009	K158LR	24	250	25	95

Kit contents

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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.

Example:

The copper wire screened cable is 24 kV, 50 mm² stranded aluminium with a diameter over core insulation of 20.4 mm. Order a K158LR-FG-50(K) M-12-2+11TL elbow connector kit.

Table W

Ordering	Dia. over core insulation (mm)	
part number	min	max
158LR/G-11- X	12.6	16.1
158LR/G-13- X	14.6	18.7
158LR-FB- X +11TL	17.5	20.2
158LR-FG- X +11TL	18.4	21.2
158LR-GA- X +11TL	19.7	22.5
158LR-GAB- X +11TL	21.0	23.8
158LR-GH- X +11TL	23.2	26.4

Table X

Conductor	Alum	inium	Copper
sizes (mm²)	DIN hexagonal	Deep indent	DIN hexagonal
16	-	-	16(K)M-11-2
25	25(K)M-12-2	25KM-12-1	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

* The 158LR-FB is not compatible with these conductor contacts.



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



For outdoor applications. Order: +MWS.



Components can be ordered individually.

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152SR INTERFACE A STRAIGHT CONNECTOR

Application

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

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

Technical characteristics

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- 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 24 kV - 250 A

Design

Separable connector comprising:

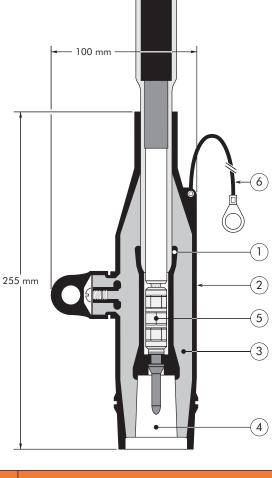
- 1. Conductive EPDM insert.
- 2. Conductive EPDM jacket.
- Insulating EPDM layer moulded between the insert and the jacket.
- 4. Type A 250 A interface as described by CENELEC EN 50180 and 50181.
- 5. Conductor connector.
- 6. Earthing lead (-/G version only).

Specifications and standards

The separable connector 152SR meets the requirements of CENELEC HD 629.1.

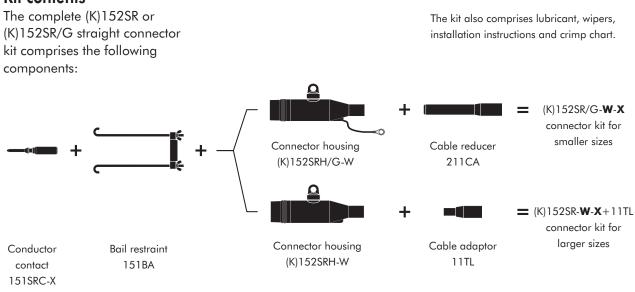
	Separable connector	Voltage Um	Current Ir	Conductor	sizes (mm²)
	type	(kV)	(A)	min	max
	152SR/G	12	250	16	70
	152SR	12	250	70	95
2009	K152SR/G	24	250	16	25
9/2	K152SR	24	250	25	95

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Kit contents

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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.

Ordering	Dia. over core i	nsulation (mm)
part number	min	max
152SR/G-11- X	12.6	16.1
152SR/G-13- X	14.6	18.7
152SR-FB- X +11TL	17.5	20.2
152SR-FG- X +11TL	18.4	21.2
152SR-GA- X +11TL	19.7	22.5
152SR-GAB- X +11TL	21.0	23.8
152SR-GH- X +11TL	23.2	26.4

Table X

Table W

Example:

The copper wire screened cable is 24 kV, 50 mm² stranded aluminium with a diameter over core insulation of 20.4 mm. Order a K152SR-FG-50(K) M-12-2+11TL straight connector kit.

Conductor	Alum	Copper	
sizes (mm²)	DIN hexagonal	Deep indent	DIN hexagonal
16	-	-	16(K)M-11-2
25	25(K)M-12-2	25KM-12-1	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

* The 152SR-FB is not compatible with these conductor contacts.



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



For outdoor applications. Order: +MWS.



Components can be ordered individually.

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151SP INTERFACE A STRAIGHT PLUG

Application

Separable straight plug designed to connect polymeric insulated cable to cable. Mates with the elbow, straight and branch joint connectors.

Technical characteristics

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

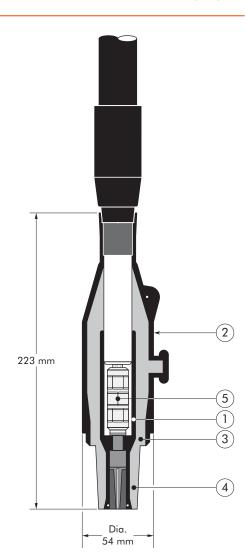
Up to 24 kV - 200 A

6/10 6.35/11 8.7/15 (1 12/20 12.7/22	(12) (12) 7.5 (24)	kV kV kV kV
12.7/22	24	kV

Design

Separable connector comprising:

- 1. Conductive EPDM insert.
- 2. Conductive EPDM jacket.
- Insulating EPDM layer moulded between the insert and the jacket.
- 4. Type A interface as described by CENELEC EN 50180 and 50181.
- 5. Conductor connector.



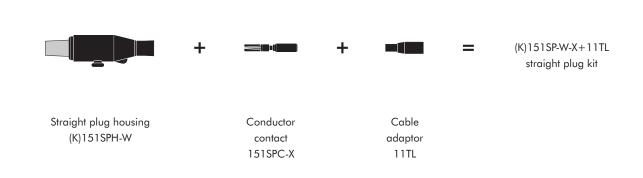
	Separable plug	Voltage Um	Current Ir	Conductor	sizes (mm²)
	type	(kV)	(A)	min	max
2009	151SP	12	200	16	95
09/2C	K151SP	24	200	16	95

Kit contents

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The complete (K)151SP straight plug 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.

Table W

Ordering	Dia. over core i	Dia. over core insulation (mm)		
part number	min	max		
151SP-A- X +11TL-FA/FAB	14.6	18.7		
151SP-B- X +11TL-FB/FG	17.2	21.2		
151SP-B- X +11TL-GA/GAB	19.7	23.0		
151SP-C -X +11TL-GB/GH	22.2	26.4		

Table X

Example:

The copper wire screened cable is 12 kV, 50 mm² stranded aluminium with a diameter over core insulation of 16.9 mm. Order a 151SP-A-50(K)M-12-2+11TL-FA/FAB straight plug kit.

Conductor	Alum	inium	Copper	
sizes (mm²)	DIN hexagonal	Deep indent	DIN hexagonal	
16	-	-	16(K)M-11-2	
25	25(K)M-12-2	25KM-12-1	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	



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



For outdoor applications. Order: +MWS.



Components can be ordered individually.



156SA INTERFACE A SURGE ARRESTER

Application

Surge arrester designed to protect 12 and 24 kV class 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 and partial discharge prior to leaving the factory.

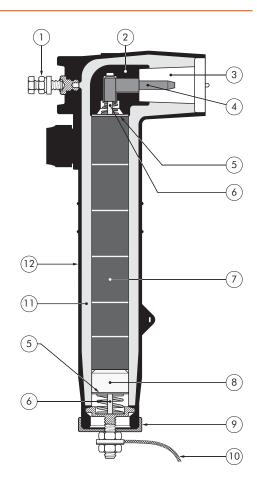
Up to 24 kV

6/10 6.35/11 8.7/15 (1 12/20 12.7/22	(12) (12) 7.5) (24)	kV kV kV kV
12.7/22	(24)	kV

Design

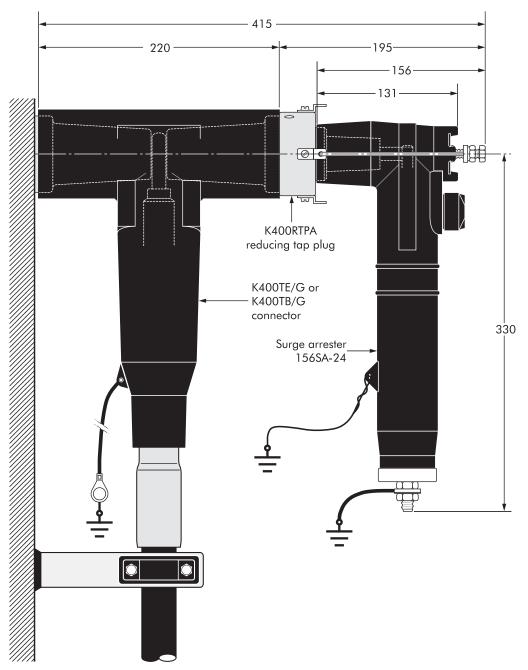
Surge arrester comprising: 1. Bail restraint.

- 1. Ball restraint.
- Conductive EPDM insert.
 Type A 250 A interface
- as described by CENELEC EN 50180 and 50181.
- 4. Pin contact.
- 5. Contact disc.
- 6. Copper shunt.
- 7. Metal oxide valve elements.
- 8. Aluminium spacer.
- 9. Steel cap.
- 10. Earth connection.
- 11. Insulating EPDM layer
- moulded between the insert and the jacket.
- 12. Conductive EPDM jacket.



	Surge arrester type	Nominal discharge current In (kA)	Rated voltage Ur (kV)	Max continuous operating voltage Uc (kV)	Steep current residual voltage @ 5 kA [1/20 µs] (kV)	Lightning current residual voltage @ 5 kA [8/20 µs] (kV)	High current impulse withstand (kA)
	156SA-12	5	15	12.5	62.5	54.5	40
	156SA-15	5	19	15.5	77.0	69.0	40
	156SA-18	5	22	18.0	87.0	79.0	40
60	156SA-21	5	26	21.0	101.5	93.5	40
6002/60	156SA-24	5	30	24.5	116.5	108.5	40

I Typical application and dimensions



In mm.

Ordering instructions

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

Example:

For a maximum continuous operating voltage (rms) of 21 kV. Order a 156SA-21 surge arrester.



180AR-1 /180AR-2 /180AR-3 INTERFACE A 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.

Design

- The equipment bushings are moulded epoxy insulated parts in accordance with CENELEC EN 50180.
 The 180AR-2 bushing has a length B outside this standard.
- The standard bushings, (K)180AR-1 /-2 /-3, are equipped with 6 tabs for the bail restraint.
- The (K)180AR-1-G and (K)180AR-3-G are equipped with 4 tabs and 2 threaded inserts M6 (-G version).

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. K180AR-1/J.

Specifications and standards

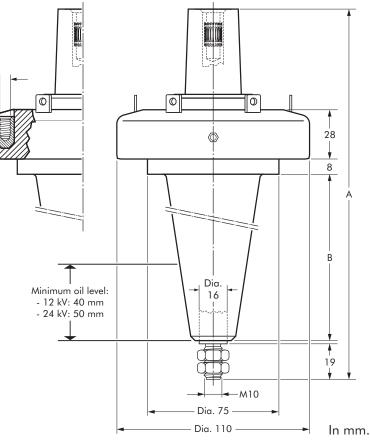
The plug-in type equipment bushings 180AR-... meet the requirements of CENELEC EN 50180 and IEC 60137.

Type 180AR-1-G /-3-G

M6 —

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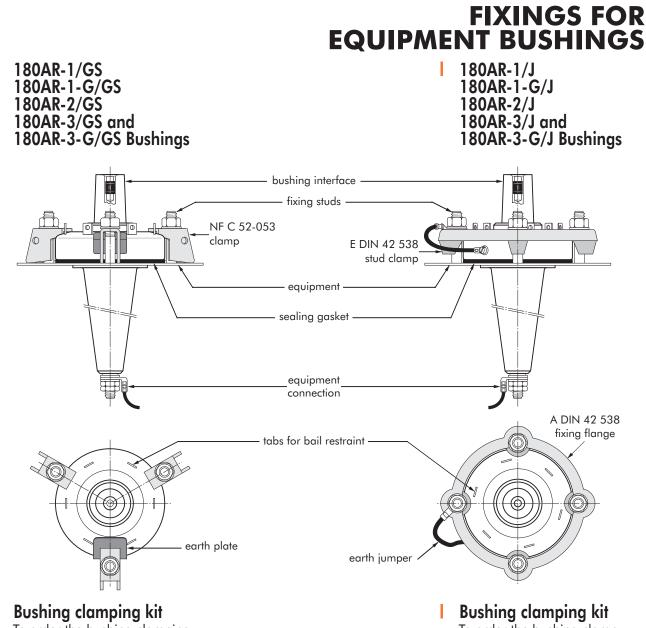
Up to 24 kV - 250 A



Type 180AR-1 /-2 /-3

Equipment bushing	Voltage Ur	Current	Dimensi	ons (mm)
type	(kV)	(A)	А	В
180AR-1	12	250	222	106
K180AR-1	24	250	222	106
180AR-2	12	250	284	168
K180AR-2	24	250	284	168
180AR-3	12	250	171	55
180AR-3 K180AR-3	24	250	171	55

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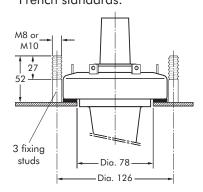


To order the bushing clamping kit, according to NFC 52-053 standards, simply specify KBCNF1-200. Contents: - 3 x claw clamp NF - 1 x sealing gasket.

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Fixing dimensions standards NF C 52-053 French standards.

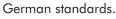


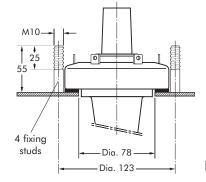
To order the bushing clamp-

ing 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





In mm.





250SFR-P INTERFACE A EQUIPMENT BUSHING

Application

For use in equipment insulated with SF_6 gas.

Technical characteristics Each bushing is tested for

AC withstand and partial discharge prior to leaving the

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factory.

Up to 24 kV - 250 A

6/10	(12)	kV
6/10 6.35/11	(12)	kV
8.7/15 (1 12/20	7.5)	kν
12/20	(24)	kV
12.7/22	(24)	kV

Design

The equipment bushing is a moulded epoxy insulated part with a connector interface in accordance with CENELEC EN 50180. The 250SFR-P bushing has a

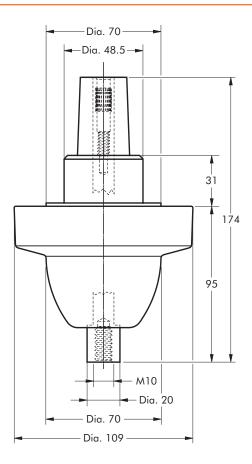
shank outside this standard, adapted to use in SF_6 gas.

Specifications and standards

The plug-in type equipment bushings 250SFR-P meet the requirements of CENELEC EN 50180 and IEC 60137.

Ordering instructions

To order the equipment bushing, simply specify the type.

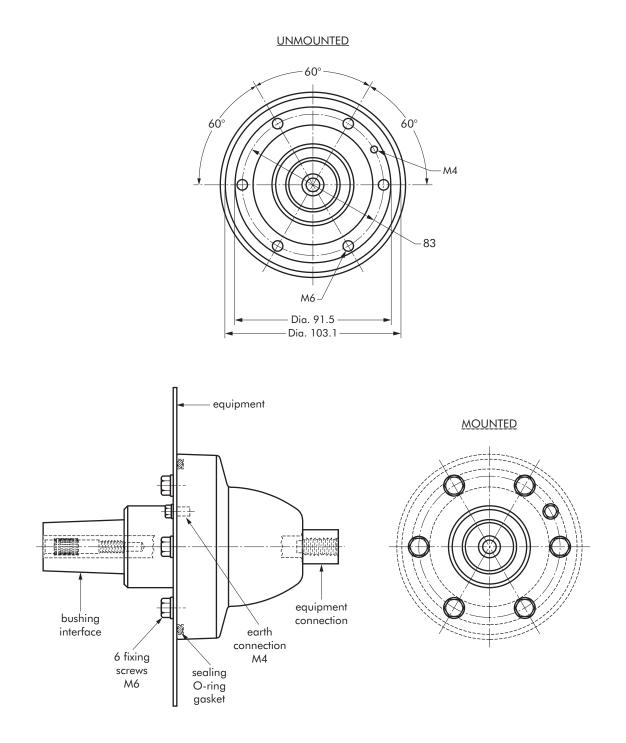


In mm.

	Equipment bushing type	Voltage Ur (kV)	Current Ir (A)
600	250SFR-P	12	250
09/20	K250SFR-P	24	250

FIXINGS FOR EQUIPMENT BUSHINGS

250SFR-P Bushing for gas insulated switchgear





180A-24P-O INTERFACE A IN-AIR BUSHING

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.

Up to 24 kV - 250 A

6/10 ((12)	kV
6.35/11 ((12)	kV
6/10 (6.35/11 (8.7/15 (17 12/20 (12.7/22 (7.5) 24) 24)	kV kV kV

Specifications and standards

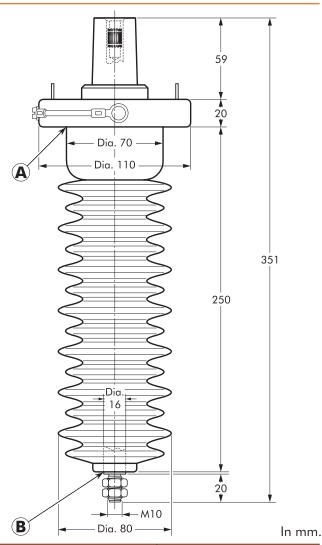
The plug-in type equipment bushings 180A-24P-O are moulded epoxy insulated parts and meet the requirements of CENELEC EN 50181, IEC 60071 and IEC 60137.

Ordering instructions

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

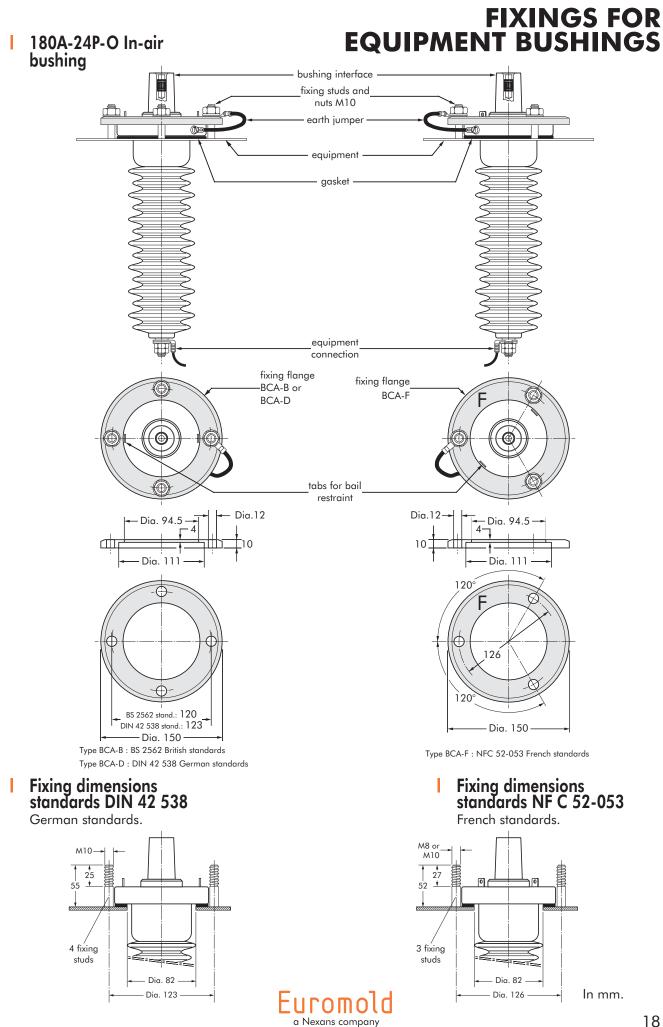
To include the ring clamp, add:

- /B, if per British standards
- /D, if per German standards
- /F, if per French standards.
- E.g. 180A-24P-O/F.



Equipment	Voltage	Current	Creepage distance
bushing	Ur	Ir	A-B
type	(kV)	(A)	(mm)
180A-24P-O	12	250	630
180A-24P-O	24	250	630

09/2009



PITO-E PLUG-IN TERMINATION

Application

Technical characteristics

Up to 24 kV - 250 A

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

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

6/10 (6.35/11 (8.7/15 (17 12/20 (12.7/22 (12) 12) 7.5) 24)	kV kV kV kV
12/20	24) 24)	кv kV

Design

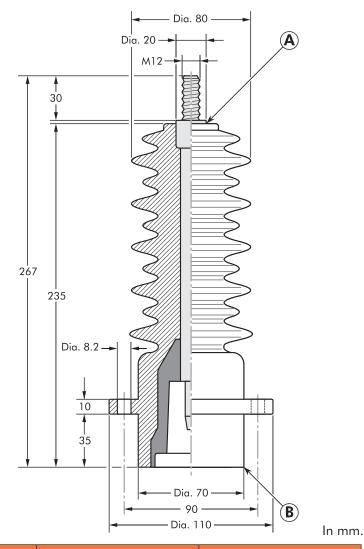
The plug-in termination is a moulded epoxy insulated part. It meets the type A - 250 A interface as described in CENELEC EN 50180 and 50181.

Specifications and standards

The separable termination PITO-E meets the requirements of IEC 60137.

Ordering instructions

To order the plug-in termination for 12 or 24 kV, specify PITO-E. The kit includes the bail restraint and 2 brass nuts.



	Plug-in termination type	Voltage Ur (kV)	Current Ir (A)	Creepage distance A-B (mm)
2009	PITO-E	12	250	510
09/2(PITO-E	24	250	510

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ACCESSORIES INTERFACE A

Application

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

Technical characteristics

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All these products, except the earthing plug, are tested for AC withstand and partial discharge prior to leaving the factory. Up to 24 kV

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

150DR Dead-end receptacle

Fits over a bushing with a type A interface to provide 'deadend' facility. Renders the assembly watertight.



Ordering instructions

Order 150DR for 12 kV or K150DR for 24 kV applications. The dead-end receptacle can be supplied with an earth lead. Order: -/G. E.g. K150DR/G.

150DP Dead-end plug

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Plugs into connectors or receptacles to provide 'deadend' facility. Renders the assembly watertight



Ordering instructions

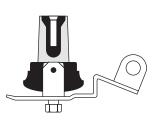
Order 150DP for 12 kV or K150DP for 24 kV applications.

151SOP Stand-off plug

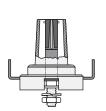
Is designed to support and 'dead-end' connectors with a type A interface when removed from equipment.

250GP Earthing plug

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



Ordering instructions Order 151SOP for 12 kV or K151SOP for 24 kV applications.



Ordering instructions Order 250GP for 12 kV or 24 kV applications.

09/2009

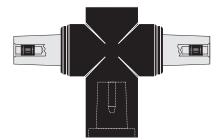
200T

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Separable tee connector

Is designed to connect three cables of the same or varying sizes or two cables to equipment.

For an adapted bail, please refer to the catalogue or contact our representative.



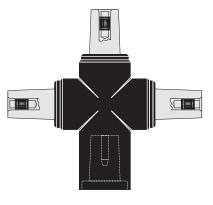
Ordering instructions

200T for 12 kV or K200T for 24 kV applications.

200X

Separable cross connector

Is designed to connect four cables of the same or varying sizes or three cables to equipment. For an adapted bail, please refer to the catalogue or contact our representative.

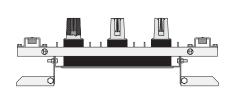


Ordering instructions

Order 200X for 12 kV or K200X for 24 kV applications.

1501J3-U-8 Three-way junction

Provides a flexible means of connecting two or three cables of the same or varying sizes. For an adapted bail, please refer to the catalogue or contact our representative.

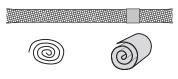


Ordering instructions

Order 1501J3-U-8 for 12 kV or K1501J3-U-8 for 24 kV applications.

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 water sealing mastic.



Ordering instructions Order Kit MT for 12 kV or 24 kV applications.



BAIL RESTRAINTS INTERFACE A

Application

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

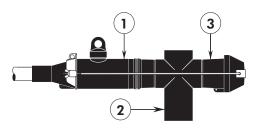
Ordering instructions

The type of bail restraint is defined by its intended use with different types of connector, receptacle and/or bushing. To order the bail restraint, specify the type needed.

147BA

For use with:

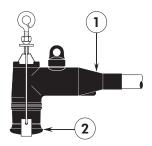
- 1. (K)152SR straight connector,
- 2. (K)200T tee connector and
- 3. (K)150DR dead-end receptacle.



148BA

For use with:

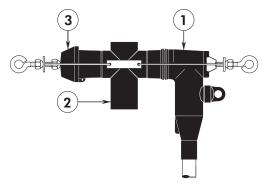
- 1. (K)158LR elbow connector and
- 2. (K)150DP dead-end plug.



149BA

For use with:

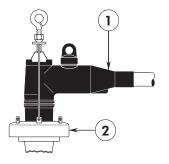
- 1. (K)158LR elbow connector,
- 2. (K)200T tee connector and 3. (K)150DR dead-end
- receptacle.

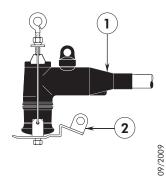


150BA-B1

For use with:

- 1. (K)158LR elbow connector and
- an interface A equipment bushing (shown), 250GP earthing plug, (K)151SOP stand-off plug (shown) or (K)1501J3-U-8 three-way junction.

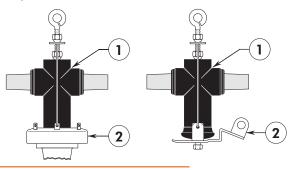




150TB-1

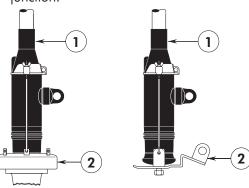
For use with:

- 1. (K)200T tee connector and
- 2. an interface A equipment bushing (shown), 250GP earthing plug, (K)151SOP stand-off plug (shown) or (K)1501J3-U-8 three way junction.



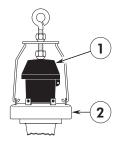
151BA

- For use with:
- 1. (K)152SR straight connector and
- an interface A equipment bushing (shown), 250GP earthing plug, (K)151SOP stand-off plug (shown) or (K)1501J3-U-8 three-way junction.



152BA

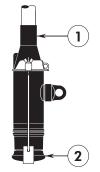
- For use with:
- 1. (K)150DR dead-end receptacle and
- an interface A equipment bushing (shown) or (K)1501J3-U-8 three-way junction.



153BA

For use with:

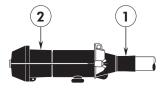
- 1. (K)152SR straight connector and
- 2. (K)150DP dead-end plug.



154BA-CS180

For use with:

- 1. (K)151SP straight plug and
- 2. (K)150DR dead-end receptacle.

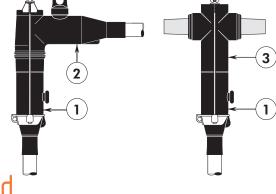


155BA-1 For use with: 1. 2 x (K)152SR straight connector and 2. (K)200T tee connector.

155BA-2 - CS180

For use with:

- 1. (K)151SP straight plug and
- 2. (K)158LR elbow connector or
- 3. (K)200T tee connector.



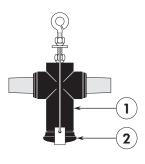
ULOW

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156BA-1

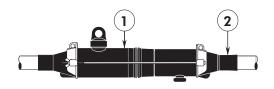
For use with:

- 1. (K)200T tee connector and
- 2. (K)150DP dead-end plug.



157BA - CS181

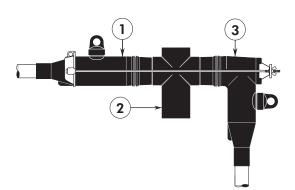
- For use with:
- 1. (K)152SR straight connector and
- 2. (K)151SP straight plug.



158BA

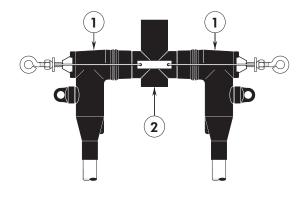
For use with:

- 1. (K)152SR straight connector,
- 2. (K)200T tee connector and
- 3. (K)158LR elbow connector.



159BA

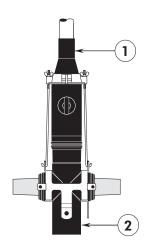
- For use with:
- 1. 2 x (K)158LR elbow
- connector and
- 2. (K)200T tee connector



200BA

For use with:

- 1. (K)152SR straight connector and
- 2. (K)200X cross connector.

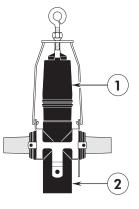


201BA

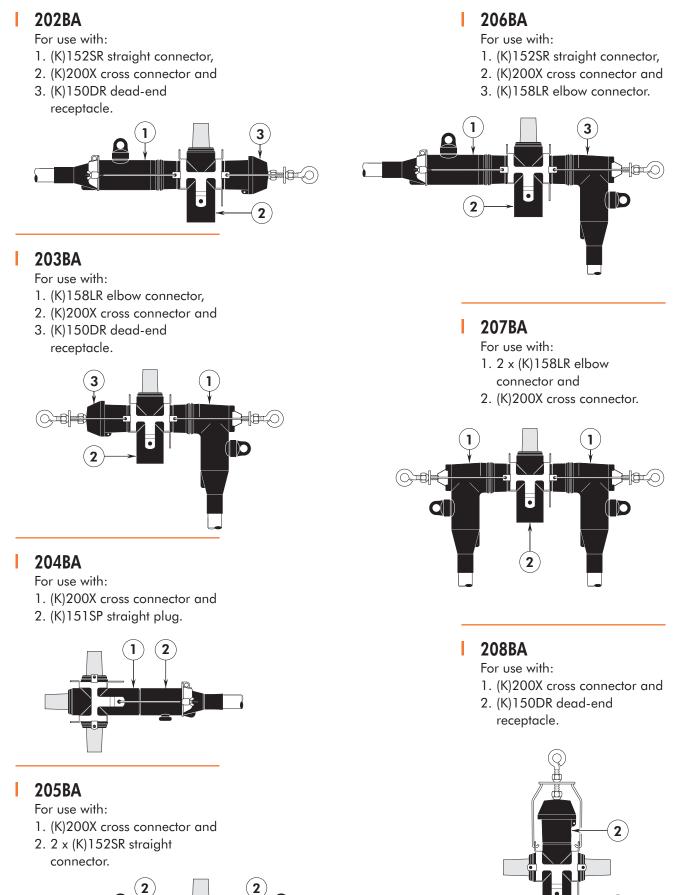
For use with:

1. (K)158LR elbow connector and

2. (K)200X cross connector.

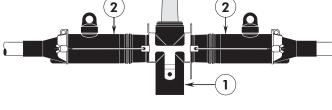






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