

# **EUROMOLD®**

INTERFACE F
MEDIUM VOLTAGE SEPARABLE
CONNECTORS AND BUSHINGS

CATALOGUE 2017



**BRINGS ENERGY TO LIFE** 





### NEXANS NETWORK SOLUTIONS DIV. EUROMOLD

## COMPANY PRESENTATION



### **EUROMOLD**

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

#### ISO 9001 Certificate

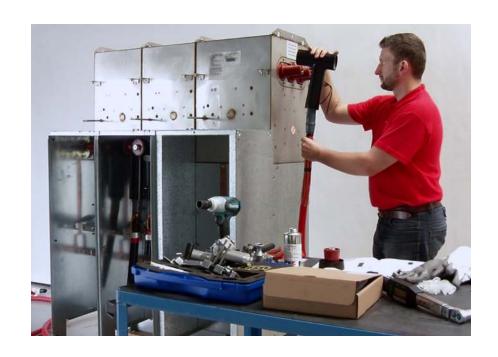
Since 1992, Euromold's commitment to quality is demonstrated by its ISO 9001 certification.

### International standards

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

### Laboratory accreditation

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



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



# SEPARABLE CONNECTORS AND BUSHINGS

### TABLE OF CONTENTS

909TB - tee connector

909PB - coupling connector

944TB - tee connector

900AR-1 - equipment bushing

900AR-2 - equipment bushing

900AR-3 - equipment bushing

900AR-4 - equipment bushing

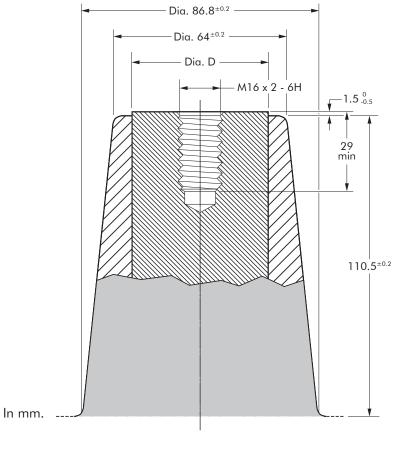
Accessories

Possible arrangements

### INTERFACE F1, F2 & F3

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

Interface type	Voltage Um (kV)	Um Ir In	
F1	36	2500	50
F2	52	630	22 min
F3	52	1250	32



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.



### **DESIGN**

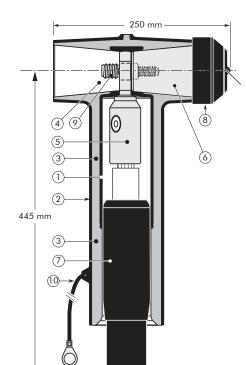
Separable connector comprising:

- 1. Conductive EPDM insert.
- 2. Conductive EPDM jacket.
- Insulating EPDM layer moulded between the insert and the jacket.
- 4. Type F interface, as described by CENELEC EN 50180 and 50181.
- 5. Conductor contact.
- 6. Basic insulating plug.
- 7. Cable reducer.
- 8. Conductive rubber cap.
- 9. Stud+nut+washer.
- 10. Earthing lead.

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

## SPECIFICATIONS AND STANDARDS

The 909TB separable connector meets the requirements of CENELEC HD 629.1.



6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV 18/30 (36) kV 19/33 (36) kV 20.8/36 (42) kV

Up to 42 kV - 2500 A

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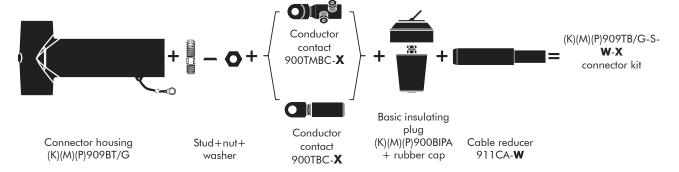
Separable connector	Voltage Um	Current Ir (A)	Conductor sizes (mm²)	
type	(kV)		min	max
909TB/G	12	630 -1250 - 2500	500	1200
K909TB/G	24	630 -1250 - 2500	400	1200
M909TB/G	36	630 -1250 - 2500	240	1200
P909TB/G	42	630 -1250	240	1200



### KIT CONTENTS

The complete (K)(M)(P)909TB/G tee connector kit comprises the following components:

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



### **ORDERING INSTRUCTIONS**

To order the tee connector, select the ordering part number which gives the best centring of the 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, add an 'M' for use up to 36 kV, add a 'P' for use up to 42 kV.

#### **EXAMPLE**:

The copper wire screened cable is 36 kV, 1000 mm<sup>2</sup> stranded aluminium with a diameter over core insulation of 52 mm.

Order M909TB/G-S-43-1000AL1 tee connector kit.

#### **TABLE W**

Ordering	Dia. over core insulation (mm)		
part number	min	max	
909TB/G-S-32- <b>X</b>	35	43	
909TB/G-S-37- <b>X</b>	40	48	
909TB/G-S-43- <b>X</b>	46	54	
909TB/G-S-50- <b>X</b>	53	59	
909TB/G-S-53- <b>X</b>	56	62	
909TB/G-S-56- <b>X</b>	59	65	
909TB/G-S-59- <b>X</b>	62	68	

#### TABLE X

Conduc- tor sizes	Aluminium conductor		Aluminium and copper conductor	Copper conductor
(mm²)	Deep indent	DIN hexagonal	Bolted	DIN hexagonal
240	240AL1	240AL2	240.300UN5	240CU2
300	300AL1	300AL2	240.3000N3	300CU2
400	400AL1	400AL2		400CU2
500	500AL1	500AL2	400.630UN5	500CU2
630	630AL1	630AL2		630CU2
800	800AL1	-	800.1000UN5	800CU2
1000	1000AL1	-	500.10005145	1000CU2
1200	1200AL1	-	On request	-



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



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



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



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: 2500 A in dual cable arrangement

Separable coupling connector (bolted type) for dual cable arrangement. It has been designed to be used with 909TB separable tee connectors.

## TECHNICAL CHARACTERISTICS

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

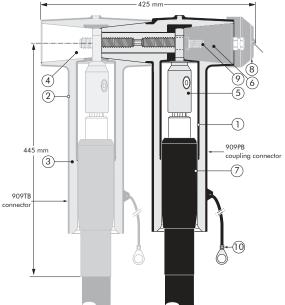


### **DESIGN**

Separable connector comprising:

- 1. Conductive EPDM insert.
- 2. Conductive EPDM jacket.
- Insulating EPDM layer moulded between the insert and the jacket.
- 4. Interface to fit 909TB.
- 5. Conductor contact.
- 6. Basic insulating plug.
- 7. Cable reducer.
- 8. Conductive rubber cap.
- 9. Stud+nut+washer.
- 10. Earthing lead.

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



6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV 18/30 (36) kV 19/33 (36) kV 20.8/36 (42) kV

Up to 42 kV - 2500 A

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## SPECIFICATIONS AND STANDARDS

The 909PB separable connector meets the requirements of CENELEC HD 629.1.

Separable connector	Voltage Um	Current Ir (A)	Conductor sizes (mm²)	
type	(kV)		min	max
909PB/G	12	630 -1250 - 2500	500	1200
K909PB/G	24	630 -1250 - 2500	400	1200
M909PB/G	36	630 -1250 - 2500	240	1200
P909PB/G	42	630 -1250	240	1200



### KIT CONTENTS

The complete (K)(M)(P)909PB/G tee connector kit comprises the following components:

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



Connector housing (K)(M)(P)909PB/G

Stud+rod

Conductor contact 900T(M)BC-**X** 

Cable reducer 911CA-**W** 

### **ORDERING INSTRUCTIONS**

To order the tee connector, select the ordering part number which gives the best centring of the 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, add an 'M' for use up to 36 kV, add a 'P' for use up to 42 kV.

### **EXAMPLE**:

The copper wire screened cable is 36 kV, 1000 mm<sup>2</sup> stranded aluminium with a diameter over core insulation of 52 mm.

Order M909PB/G-S-43-1000AL1 tee connector kit.

#### **TABLE W**

Ordering	Dia. over core insulation (mm)		
part number	min	max	
909PB/G-S-32 <b>-X</b>	35	43	
909PB/G-S-37- <b>X</b>	40	48	
909PB/G-S-43- <b>X</b>	46	54	
909PB/G-S-50- <b>X</b>	53	59	
909PB/G-S-53- <b>X</b>	56	62	
909PB/G-S-56- <b>X</b>	59	65	
909PB/G-S-59- <b>X</b>	62	68	

#### **TABLE X**

Conduc- tor sizes	Aluminium	Aluminium conductor  Aluminium and copper conductor		Copper conductor
(mm²)	Deep indent	DIN hexagonal	Bolted	DIN hexagonal
240	240AL1	240AL2	240.300UN5	240CU2
300	300AL1	300AL2	240.3000N3	300CU2
400	400AL1	400AL2		400CU2
500	500AL1	500AL2	400.630UN5	500CU2
630	630AL1	630AL2		630CU2
800	800AL1	-	800.1000UN5	800CU2
1000	1000AL1	-	000.10000115	1000CU2
1200	1200AL1	-	On request	-



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



For use in potentially explosive atmospheres (for 12 kV max).

Add -/ATEX to part number.



For use with other cable types.
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: 2500 A in dual cable arrangement

Separable tee shape connector 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.



#### **DESIGN**

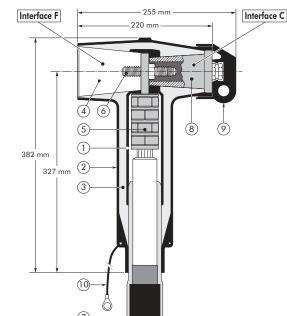
Separable connector comprising:

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

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

## SPECIFICATIONS AND STANDARDS

The 944TB/G separable connector meets the test requirements of CENELEC HD 629.1.



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 20.8/36 (42) kV

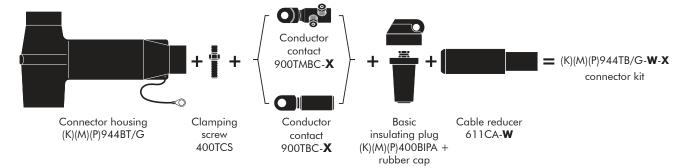
Up to 42 kV - 2500 A

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Separable connector	Voltage Um	Current Ir	Conductor	sizes (mm²)
type	(kV)	(A)	min	max
944TB/G	12	2500	95	800
K944TB/G	24	2500	95	800
M944TB/G	36	2500	95	800
P944TB/G	42	1250	95	800



The complete tee connector kit comprises the following components:



### **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 42 kV.

#### **TABLE W**

Ordering	Dia. over core insulation (mm)		
part number	min	max	
944TB/G-15- <b>X</b>	16.0	22.0	
944TB/G-19- <b>X</b>	20.0	26.5	
944TB/G-22- <b>X</b>	23.5	31.0	
944TB/G-27- <b>X</b>	28.5	37.5	
944TB/G-32- <b>X</b>	34.0	42.5	
944TB/G-37- <b>X</b>	39.0	48.5	
944TB/G-43 <b>-X</b>	45.5	56.0	

#### TABLE X

Conductor sizes (mm²)	Aluminium	Aluminium conductor		Copper conductor	
sizes (mm-)	DIN hexagonal	Deep indent	Bolted	DIN hexagonal	
95	95AL2	95AL1	JNS	95CU2	
120	120AL2	120AL1	95.150UN5 40UN5 IN5	120CU2	
150	150AL2	150AL1	95.150 95.240UN5 800UN5	150CU2	
185	185AL2	185AL1	95.240L 20.300UNS	185CU2	
240	240AL2	240AL1	20.3 20.1	240CU2	
300	300AL2	300AL1	95. 120.300 185.400UN5	300CU2	
400	400AL2	400AL1	18 18 NS	400CU2	
500	500AL2	500AL1	30C	500CU2	
630	630AL2	630AL1	1. 400.630UNS	630CU2	
800	-	-	4	800CU2	

### EXAMPLE:

The copper wire screened cable is 24 kV, 630 mm<sup>2</sup> stranded aluminium with a diameter over core insulation of 44.0 mm.
Order a K944TB/G-37-630AL2 tee connector kit.



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



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



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



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



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



Components can be ordered individually.

## 900AR-1/900AR-2/900AR-3/900AR-4

## **INTERFACE F**EQUIPMENT BUSHING

### **APPLICATION**

For use in equipment, typically for transformers, switchgear, capacitors...

## TECHNICAL CHARACTERISTICS

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



## SPECIFICATIONS AND STANDARDS

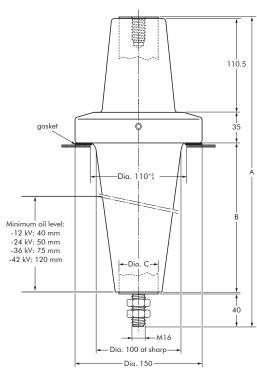
The bolted type equipment bushings 900AR-X are moulded epoxy insulated parts and meet the requirements of CENELEC EN 50180 and IEC 60137.

### **ORDERING INSTRUCTIONS**

To order the equipment bushing, specify the type.

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 42 kV. 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. 900AR-4/GS.



6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV 18/30 (36) kV 19/33 (36) kV 20.8/36 (42) kV

Up to 42 kV - 2500 A

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In mm.

Equipment bushing	Interface	Voltage Current Dimensions (mm		Dimensions (mm		nm)
type	type	(kV)	(A)	Α	В	Dia. C
900AR-1	F3	42	1250	364	175	32
900AR-2	F2	42	630	364	175	25
900AR-3	F1	36	2500	364	175	50
900AR-4	F1	36	2500	259	70	50

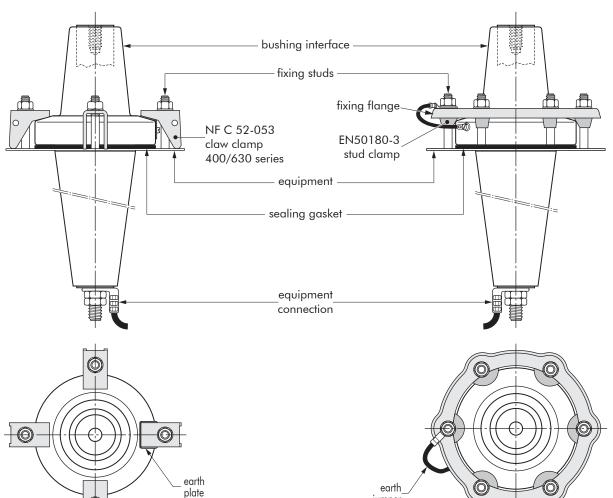


## FIXINGS FOR EQUIPMENT BUSHINGS

jumper

### 900AR-X/GS BUSHING

### 900AR-X/J BUSHING



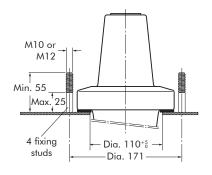
### **BUSHING CLAMPING KIT**

To order the bushing clamping kit, according to NF C 52-053 standards, simply specify KBC-NF-400.

Contents: - 4 x claw clamp NF400 - 1 x sealing gasket.

## FIXING DIMENSIONS STANDARDS NF C 52-053

French standards.



## **BUSHING CLAMPING KIT**

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

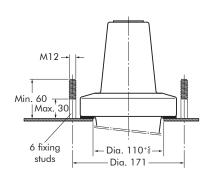
Contents: - 1 x fixing flange DIN style

- 6 x stud clamp

EN50180-3

- 1 x sealing gasket.

### **FIXING DIMENSIONS**



11

For use with connectors and bushings with an interface F 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.

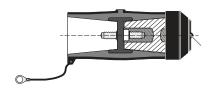
6/10 (12) kV 6.35/11 (12) kV 8.7/15 (17.5) kV 12/20 (24) kV 12.7/22 (24) kV 18/30 (36) kV 19/33 (36) kV 20.8/36 (42) kV

Up to 42 kV

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### 900DR-B/G DEAD-END RECEPTACLE

Fits over a bushing with a type F interface to provide 'dead-end' facility. The dead-end receptacle is supplied with an earth lead.

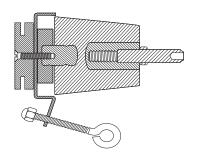


#### **ORDERING INSTRUCTIONS**

Order 900DR-B/G for 12 kV, K900DR-B/G for 24 kV, M900DR-B/G for 36 kV or P900DR-B/G for 42 kV applications.

### 900SOP-B STAND-OFF PLUG

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

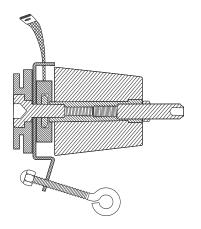


#### ORDERING INSTRUCTIONS

Order 900SOP-B for 12 kV, K900SOP-B for 24 kV, M900SOP-B for 36 kV or P900SOP-B for 42 kV applications.

### 900GP-B EARTHING PLUG

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



### ORDERING INSTRUCTIONS

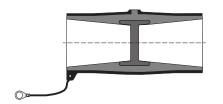
Order 900GP-B for 12, 24, 36 or 42 kV applications.

Order 900GP-SBT for a version with a straight ball terminal.



## 900BE/G BUSHING EXTENDER

Provides an extension piece to allow cables to stand away from equipment. Is used inconjunction with the 400CP, 440CP or 440PB. The bushing extender is supplied with an earth lead.



## **ORDERING INSTRUCTIONS**

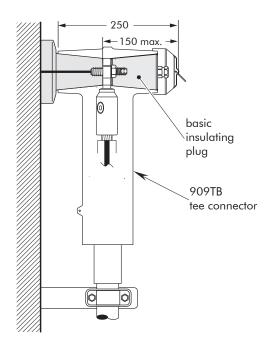
Order 900BE/G for 12 kV, K900BE/G for 24 kV M900BE/G for 36 kV or P900BE/G for 42 kV applications.

Note: Delivered with stud/ nut/washer.

## **POSSIBLE ARRANGEMENTS**

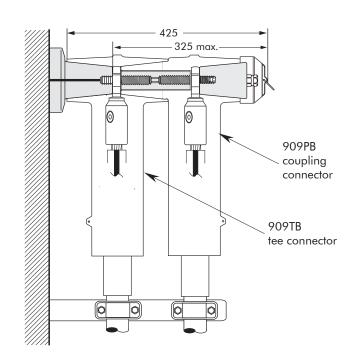
## 909TB/G

Single cable arrangement.

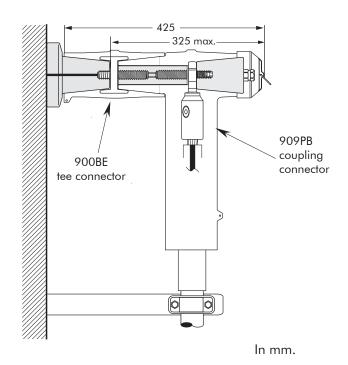


### 909TBM/G-P2

Dual cable arrangement.



## 909TB/G+900BE/G

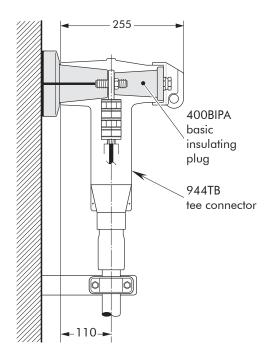


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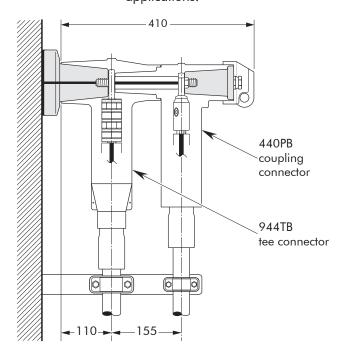
## 944TB/G

Single cable arrangement.
Order 944TB/G for 12 kV,
K944TB/G for 24 kV, M944TB/G
for 36 kV or P944TB/G for 42 kV
applications.



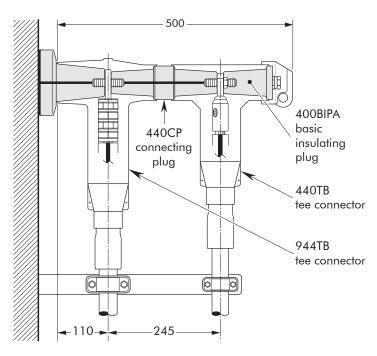
## 944TBM/G-P2

Dual cable arrangement.
Order 944TBM/G-P2 for 12 kV,
K944TBM/G-P2 for 24 kV,
M944TBM/G-P2 for 36 kV or
P944TBM/G-P2 for 42 kV
applications.



### 944TB/G-P2

Dual cable arrangement.
Order 944TB/G-P2 for 12 kV,
K944TB/G-P2 for 24 kV, M944TB/
G-P2 for 36 kV or
P944TB/G-P2 for 42 kV
applications.



In mm.

# **NOTES**



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Find out more about Nexans Power Accessories.