Euromold
a Nexans company

Medium voltage separable connectors and bushings
- Interface C -

Catalogue 2008
EUROMOLD

Company Presentation

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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 switch gear, 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, 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.
**Table of contents**
- 400LB - elbow connector
- 430TB-630A - tee connector
- 400TB - tee connector
- 440TB - tee connector
- 300PB-630A - coupling connector
- 400AR-3 - equipment bushing
- 400A-24B - in-air bushing
- Fixings for equipment bushings
- 400PB-XSA - surge arrester
- 300SA - 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

BUSHINGS / ACCESSORIES

- Equipment interface
- Equipment bushing
- In-air bushing
- Stand-off plug
- Earthing plug
- Reducing tap plug
- Connecting plug
- Connecting plug

CONNECTION

- dead-ending of equipment
- one cable to equipment
- cable isolation
- cable earthing
- tap-off 630/250A
- in-line junction
- in-line junction

CONNECTORS / ACCESSORIES

- (K)(M)400DR-B
  Dead-end receptacle
- (K)(M)400LB
  Elbow connector
- (K)430TB-630A
  Tee connector
- (K)(M)400TB/G
  Tee connector
- (K)(M)440TB/G
  Tee connector
- (K)(M)400RTPA
  Reducing tap plug
- (K)(M)400SOP-B
  Stand-off plug
- (K)(M)440CP
  Connecting plug
- (K)(M)400AR-3
  Equipment bushing
- 400A-24B
  In-air bushing
- 400GP-B
  Earthing plug
- 400CP-SC
  Connecting plug
- 400A-24B
  In-air bushing
- 400GP-B
  Earthing plug
- 400CP-SC
  Connecting plug
- 400A-24B
  In-air bushing
- 400GP-B
  Earthing plug
- 400CP-SC
  Connecting plug

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

<table>
<thead>
<tr>
<th>Separable connector type</th>
<th>Voltage $U_{m}$ (kV)</th>
<th>Current $I_{r}$ (A)</th>
<th>Conductor sizes (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>400LB</td>
<td>12</td>
<td>630</td>
<td>min. 25</td>
</tr>
<tr>
<td>K400LB</td>
<td>24</td>
<td>630</td>
<td>max. 300</td>
</tr>
</tbody>
</table>

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. Earth lead.
9. Transition contact M10/M16.

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

Application
Separable elbow connector designed to connect polymeric insulated cable to equipment (transformers, switch gear, 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.

400LB INTERFACE C
ELBOW CONNECTOR
Up to 24 kV - 630 A

<table>
<thead>
<tr>
<th>Voltage (kV)</th>
<th>Current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/10 (12)</td>
<td>630</td>
</tr>
<tr>
<td>6.35/11 (12)</td>
<td>630</td>
</tr>
<tr>
<td>8.7/15 (17.5)</td>
<td>630</td>
</tr>
<tr>
<td>12/20 (24)</td>
<td>630</td>
</tr>
<tr>
<td>12.7/22 (24)</td>
<td>630</td>
</tr>
</tbody>
</table>
**Kit contents**
The complete (K)400LB elbow connector kit comprises 3 x the following components:

- Connector housing (K)400BLB
- Transition contact + screw assembly 400LTS
- Insulating plug 400LBP
- Cable reducer 411CA-W

The kit also comprises lubricant, wipers, 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-27 elbow connector kit.

**Table W**

<table>
<thead>
<tr>
<th>Order part number</th>
<th>Dia. over core insulation (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>min.</td>
</tr>
<tr>
<td>3 x 400LB-11</td>
<td>12.0</td>
</tr>
<tr>
<td>3 x 400LB-15</td>
<td>16.0</td>
</tr>
<tr>
<td>3 x 400LB-19</td>
<td>20.0</td>
</tr>
<tr>
<td>3 x 400LB-22</td>
<td>23.5</td>
</tr>
<tr>
<td>3 x 400LB-25</td>
<td>26.5</td>
</tr>
<tr>
<td>3 x 400LB-27</td>
<td>28.5</td>
</tr>
</tbody>
</table>

**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.
Application
Separable tee shape connector (bolted type) designed to connect polymeric insulated cable to equipment (transformers, switch gear, 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.

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.

Design
1. Type C - 630 A interface as described by CENELEC EN 50180 and 50181.
2. Clamping screw.
3. Conductive EPDM insert.
4. Insulating EPDM layer moulded between the insert and the jacket.
5. Conductive EPDM jacket.
6. Conductive rubber cap.
7. Basic insulating plug (standard version without voltage detection 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 separable connector 430TB-630A meets the requirements of CENELEC HD 629.1.

<table>
<thead>
<tr>
<th>Separable connector type</th>
<th>Voltage Um (kV)</th>
<th>Current Ir (A)</th>
<th>Conductor sizes (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>430TB-630A</td>
<td>12</td>
<td>630</td>
<td>35 300</td>
</tr>
<tr>
<td>K430TB-630A</td>
<td>24</td>
<td>630</td>
<td>35 300</td>
</tr>
</tbody>
</table>
Kit contents

The complete (K)430TB-630A tee connector kit comprises 3 x the following components:

- Clamping screw 430TCS
- Basic insulating plug + rubber cap 300BPR
- Connector housing 430BT-630A
- Cable reducer 430CA-W1
- Conductor contact TMBC-X
- Cable reducer 411CA-W2
- Conductor contact TBC-X

The kit also comprises lubricant, wipers, water sealing mastic, installation rod, installation instructions and crimp chart.

Ordering instructions

To order the tee connector, use the tables beside to substitute for W1/W2 and X in the formulas.

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

1. **From table W1 or W2:** 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.

**Example:**
The cable is 24 kV, 150 mm\(^2\) compact stranded copper with a diameter over core insulation of 27.5 mm.

Order 3 x K430TB-18-95.240-14-5 for a non-size sensitive application or 3 x K430TB-22-150(K)M-11-2 for a size sensitive application.

### Table W1

<table>
<thead>
<tr>
<th>Dia. over core insulation (mm)</th>
<th>W1</th>
</tr>
</thead>
<tbody>
<tr>
<td>min.</td>
<td>max.</td>
</tr>
<tr>
<td>12.0</td>
<td>17.5</td>
</tr>
<tr>
<td>17.0</td>
<td>23.5</td>
</tr>
<tr>
<td>19.0</td>
<td>32.6</td>
</tr>
</tbody>
</table>

### Table W2

<table>
<thead>
<tr>
<th>Dia. over core insulation (mm)</th>
<th>W2</th>
</tr>
</thead>
<tbody>
<tr>
<td>min.</td>
<td>max.</td>
</tr>
<tr>
<td>12.0</td>
<td>17.5</td>
</tr>
<tr>
<td>16.0</td>
<td>22.0</td>
</tr>
<tr>
<td>20.0</td>
<td>26.5</td>
</tr>
<tr>
<td>23.5</td>
<td>31.0</td>
</tr>
<tr>
<td>26.5</td>
<td>32.5</td>
</tr>
<tr>
<td>28.5</td>
<td>37.5</td>
</tr>
</tbody>
</table>

### Table X

<table>
<thead>
<tr>
<th>Conductor sizes (mm(^2))</th>
<th>Aluminium conductor</th>
<th>Copper conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DIN hexagonal</td>
<td>Deep indent</td>
</tr>
<tr>
<td>35</td>
<td>35(K)M-10-2</td>
<td>35KM-10-1</td>
</tr>
<tr>
<td>50</td>
<td>50(K)M-10-2</td>
<td>50KM-10-1</td>
</tr>
<tr>
<td>70</td>
<td>70(K)M-10-2</td>
<td>70KM-10-1</td>
</tr>
<tr>
<td>95</td>
<td>95(K)M-10-2</td>
<td>95KM-10-1</td>
</tr>
<tr>
<td>120</td>
<td>120(K)M-10-2</td>
<td>120KM-10-1</td>
</tr>
<tr>
<td>150</td>
<td>150(K)M-10-2</td>
<td>150KM-10-1</td>
</tr>
<tr>
<td>185</td>
<td>185(K)M-10-2</td>
<td>185KM-10-1</td>
</tr>
<tr>
<td>240</td>
<td>240(K)M-10-2</td>
<td>240KM-10-1</td>
</tr>
<tr>
<td>300</td>
<td>300(K)M-10-2</td>
<td>–</td>
</tr>
</tbody>
</table>

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

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

For outdoor applications. Order: +MWS.

Basic insulating plug also available with a voltage detection point. Order: -/VD.
**Application**
Separable tee shape connector (bolted type) designed to connect polymeric insulated cable to equipment (transformers, switch gear, 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.

### Separable connector type

<table>
<thead>
<tr>
<th>Voltage Um (kV)</th>
<th>Current Ir (A)</th>
<th>Conductor size (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>min.</td>
<td>max.</td>
</tr>
<tr>
<td>400TB/G</td>
<td>12</td>
<td>35</td>
</tr>
<tr>
<td>K400TB/G</td>
<td>24</td>
<td>35</td>
</tr>
<tr>
<td>M400TB/G</td>
<td>36</td>
<td>240</td>
</tr>
<tr>
<td>P400TB/G</td>
<td>41.5</td>
<td>240</td>
</tr>
<tr>
<td>6/10 (12) kV</td>
<td>630</td>
<td>300</td>
</tr>
<tr>
<td>6.35/11 (12) kV</td>
<td>630</td>
<td>300</td>
</tr>
<tr>
<td>8.7/15 (17.5) kV</td>
<td>630</td>
<td>240</td>
</tr>
<tr>
<td>12/20 (24) kV</td>
<td>630</td>
<td>240</td>
</tr>
<tr>
<td>12.7/22 (24) kV</td>
<td>630</td>
<td>240</td>
</tr>
<tr>
<td>18/30 (36) kV</td>
<td>630</td>
<td>240</td>
</tr>
<tr>
<td>19/33 (36) kV</td>
<td>630</td>
<td>240</td>
</tr>
<tr>
<td>20.8/36 (41.5) kV</td>
<td>630</td>
<td>240</td>
</tr>
</tbody>
</table>

**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.
10. Earthing lead.

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

**Specifications and standards**
The separable connector 400TB meets the requirements of CENELEC HD 629.1 S1.
Kit contents
The complete (K)(M)(P)400TB/G tee connector kit comprises the following components:

![Connector housing](K)(M)(P)400BT/G + Clamping screw 400TCS + Conductor contact TBC-X + Basic insulating plug + rubber cap (K)(M)(P)400BIPA = (K)(M)(P)400TB/G-W-X connector kit

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, an ‘M’ for use up to 36 kV or add a ‘P’ for use up to 41.5 kV.

<table>
<thead>
<tr>
<th>Ordering part number</th>
<th>Dia. over core insulation (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>min.</td>
</tr>
<tr>
<td>400TB/G-11-X</td>
<td>12.0</td>
</tr>
<tr>
<td>400TB/G-15-X</td>
<td>16.0</td>
</tr>
<tr>
<td>400TB/G-19-X</td>
<td>20.0</td>
</tr>
<tr>
<td>400TB/G-22-X</td>
<td>23.5</td>
</tr>
<tr>
<td>400TB/G-25-X</td>
<td>26.5</td>
</tr>
<tr>
<td>400TB/G-27-X</td>
<td>28.5</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Conductor size (mm²)</th>
<th>Aluminium conductor</th>
<th>Copper conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DIN hexagonal</td>
<td>Deep indent</td>
</tr>
<tr>
<td>35</td>
<td>35(K)M-12-2</td>
<td>35KM-12-1</td>
</tr>
<tr>
<td>50</td>
<td>50(K)M-12-2</td>
<td>50KM-12-1</td>
</tr>
<tr>
<td>70</td>
<td>70(K)M-12-2</td>
<td>70KM-12-1</td>
</tr>
<tr>
<td>95</td>
<td>95(K)M-12-2</td>
<td>95KM-12-1</td>
</tr>
<tr>
<td>120</td>
<td>120(K)M-12-2</td>
<td>120KM-12-1</td>
</tr>
<tr>
<td>150</td>
<td>150(K)M-12-2</td>
<td>150KM-12-1</td>
</tr>
<tr>
<td>185</td>
<td>185(K)M-12-2</td>
<td>185KM-12-1</td>
</tr>
<tr>
<td>240</td>
<td>240(K)M-12-2</td>
<td>240KM-12-1</td>
</tr>
<tr>
<td>300</td>
<td>300(K)M-12-2</td>
<td>300KM-12-1</td>
</tr>
</tbody>
</table>

Components can be ordered individually.

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 in potentially explosive atmospheres (for 12 kV max.). Order: -/ATEX.
For use with other cable types. Please contact our representative.
For outdoor applications. Order: +MWS.

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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.

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

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.
10. Earthing lead.

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

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

<table>
<thead>
<tr>
<th>Separable connector type</th>
<th>Voltage Um (kV)</th>
<th>Current Ir (A)</th>
<th>Conductor sizes (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>440TB/G</td>
<td>12</td>
<td>630</td>
<td>185 630</td>
</tr>
<tr>
<td>K440TB/G</td>
<td>24</td>
<td>630</td>
<td>185 630</td>
</tr>
<tr>
<td>M440TB/G</td>
<td>36</td>
<td>630</td>
<td>185 630</td>
</tr>
</tbody>
</table>
Kit contents
The complete (K)(M)440TB/G tee connector kit comprises the following components:

- Connector housing (K)(M)440BT/G
- Clamping screw 400TCS
- Conductor contact TBC-X
- Basic insulating plug + rubber cap (K)(M)400BIPA
- Cable reducer 611CA-W

The kit also comprises lubricant, wipers, 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 and 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 M440TB/G-32-240(K)M-12-2 tee connector kit.

### Table W

<table>
<thead>
<tr>
<th>Ordering part number</th>
<th>Dia. over core insulation (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>min.</td>
</tr>
<tr>
<td>440TB/G-22-X</td>
<td>23.5</td>
</tr>
<tr>
<td>440TB/G-27-X</td>
<td>28.5</td>
</tr>
<tr>
<td>440TB/G-32-X</td>
<td>34.0</td>
</tr>
<tr>
<td>440TB/G-37-X</td>
<td>39.0</td>
</tr>
<tr>
<td>440TB/G-43-X</td>
<td>45.5</td>
</tr>
</tbody>
</table>

### Table X

<table>
<thead>
<tr>
<th>Conductor sizes (mm²)</th>
<th>Aluminium conductor</th>
<th>Copper conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DIN hexagonal</td>
<td>Deep indent</td>
</tr>
<tr>
<td>185</td>
<td>185(K)M-12-2</td>
<td>185KM-12-1</td>
</tr>
<tr>
<td>240</td>
<td>240(K)M-12-2</td>
<td>240KM-12-1</td>
</tr>
<tr>
<td>300</td>
<td>300(K)M-12-2</td>
<td>300KM-12-1</td>
</tr>
<tr>
<td>400</td>
<td>400(K)M-12-2</td>
<td>400KM-12-1</td>
</tr>
<tr>
<td>500</td>
<td>500(K)M-12-2</td>
<td>500KM-12-1</td>
</tr>
<tr>
<td>630</td>
<td>–</td>
<td>630KM-12-1</td>
</tr>
</tbody>
</table>

For use with copper tape screened cables. Order: Kit MT.
For use in potentially explosive atmospheres (for 12 kV max.). Order: -/ATEX.
For use with other cable types. Please contact our representative.
For outdoor applications. Order: +MWS.
Components can be ordered individually.
When installed on an appropriate equipment bushing: 1250 A continuously
Application
Separable coupling connector (bolted type) for dual cable arrangement. It has been designed to be used with separable Tee connector 430TB-630A.
Total maximum current is 630 A.

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.

Design
1. Interface designed to fit 430TB-630A connector.
2. Bus for 300PB.
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.
11. Earth lead.

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

Specifications and standards
The 300PB-630A coupling connector meets the requirements of CENELEC HD 629.1 for 10 and 20 kV levels.

<table>
<thead>
<tr>
<th>Separable connector type</th>
<th>Voltage Um (kV)</th>
<th>Current Ir (A)</th>
<th>Conductor sizes (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>300PB-630A</td>
<td>12</td>
<td>630</td>
<td>35 - 300</td>
</tr>
<tr>
<td>K300PB-630A</td>
<td>24</td>
<td>630</td>
<td>35 - 300</td>
</tr>
</tbody>
</table>
## Kit contents
The complete (K)300PB-630A coupling connector kit comprises 3 x the following components:

- **Clamping screw 300PB-CS**
- **Connector housing 300BPB-630A**

The kit also comprises silicone grease, water sealing mastic, installation rod, installation instructions and crimp chart.

## Ordering instructions
To order the Tee connector, use the tables beside to substitute for **W1** / **W2** and **X** in the formulas.

Add a ‘K’ for use up to 24 kV.

1. **From table W1 or W2:** 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.

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

Order 3 x K300PB-18-95.240-14-5 for a non-size sensitive application or 3 x K300PB-22-150(K)M-11-2 for a size sensitive application.

### Voltage Um (kV)

<table>
<thead>
<tr>
<th></th>
<th>Non-size sensitive</th>
<th>Size sensitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>3 x 300PB-W1-X</td>
<td>3 x 300PB-W1-X</td>
</tr>
<tr>
<td>24</td>
<td>3 x K300PB-W1-X</td>
<td>3 x K300PB-W2-X</td>
</tr>
</tbody>
</table>

### Table W1

<table>
<thead>
<tr>
<th>Dia. over core insulation (mm)</th>
<th>W1</th>
</tr>
</thead>
<tbody>
<tr>
<td>min.</td>
<td>max.</td>
</tr>
<tr>
<td>12.0</td>
<td>17.5</td>
</tr>
<tr>
<td>17.0</td>
<td>23.5</td>
</tr>
<tr>
<td>19.0</td>
<td>32.6</td>
</tr>
</tbody>
</table>

### Table W2

<table>
<thead>
<tr>
<th>Dia. over core insulation (mm)</th>
<th>W2</th>
</tr>
</thead>
<tbody>
<tr>
<td>min.</td>
<td>max.</td>
</tr>
<tr>
<td>12.0</td>
<td>17.5</td>
</tr>
<tr>
<td>16.0</td>
<td>22.0</td>
</tr>
<tr>
<td>20.0</td>
<td>26.5</td>
</tr>
<tr>
<td>23.5</td>
<td>31.0</td>
</tr>
<tr>
<td>26.5</td>
<td>35.0</td>
</tr>
<tr>
<td>28.5</td>
<td>37.5</td>
</tr>
</tbody>
</table>

### Table X

<table>
<thead>
<tr>
<th>Conductor sizes (mm²)</th>
<th>Aluminium conductor</th>
<th>Copper conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DIN hexagonal</td>
<td>Deep indent</td>
</tr>
<tr>
<td>35</td>
<td>35(K)M-10-2</td>
<td>35KM-10-1</td>
</tr>
<tr>
<td>50</td>
<td>50(K)M-10-2</td>
<td>50KM-10-1</td>
</tr>
<tr>
<td>70</td>
<td>70(K)M-10-2</td>
<td>70KM-10-1</td>
</tr>
<tr>
<td>95</td>
<td>95(K)M-10-2</td>
<td>95KM-10-1</td>
</tr>
<tr>
<td>120</td>
<td>120(K)M-10-2</td>
<td>120KM-10-1</td>
</tr>
<tr>
<td>150</td>
<td>150(K)M-10-2</td>
<td>150KM-10-1</td>
</tr>
<tr>
<td>185</td>
<td>185(K)M-10-2</td>
<td>185KM-10-1</td>
</tr>
<tr>
<td>240</td>
<td>240(K)M-10-2</td>
<td>240KM-10-1</td>
</tr>
<tr>
<td>300</td>
<td>300(K)M-10-2</td>
<td>–</td>
</tr>
</tbody>
</table>

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.
**Application**
For use in equipment insulated with oil fluid, typically for transformers, switch gear, capacitors...

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

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

**Specifications and standards**
The bolted type equipment bushings 400AR-3 meet the requirements of CENELEC EN 50180 and IEC 60137.

**Ordering instructions**
To order the equipment bushing, specify the type. The bushings are supplied with an earth lead (/J) or an earth plate (/GS). This earth connection must be specified when ordering.
E.g. M400AR-3/GS.
For use in potentially explosive atmospheres (for 12 kV max.). Order: -/ATEX.

<table>
<thead>
<tr>
<th>Equipment bushing type</th>
<th>Voltage Ur (kV)</th>
<th>Current Ir (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>400AR-3</td>
<td>12</td>
<td>630</td>
</tr>
<tr>
<td>K400AR-3</td>
<td>24</td>
<td>630</td>
</tr>
<tr>
<td>M400AR-3</td>
<td>36</td>
<td>630</td>
</tr>
</tbody>
</table>
Application
For use in equipment insulated with air, typically for transformers, switch gear, capacitors...

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

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

Specifications and standards
The bolted type equipment bushings 400A-24B meet the requirements of CENELEC EN 50180 and IEC 60137.

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

<table>
<thead>
<tr>
<th>Equipment bushing type</th>
<th>Voltage Ur (kV)</th>
<th>Current Ir (A)</th>
<th>Creepage distance A-B (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>400A-24B</td>
<td>12</td>
<td>630</td>
<td>500</td>
</tr>
<tr>
<td>400A-24B</td>
<td>24</td>
<td>630</td>
<td>500</td>
</tr>
</tbody>
</table>
FIXINGS FOR EQUIPMENT BUSHINGS
INTERFACE C

400AR-3/J bushing
DIN 42 538
German standards.

In mm
400A-24B In-air bushing

- **Bushing Interface**
- **Fixing Studs and Nuts M10**
- **Earth Jumper**
- **Equipment Connection**
- **Equipment Gasket**

**Type BCA-F**: NFC 52-053 French standards

- Dia. 12
- Dia. 94.5
- Dia. 111
- Dia. 150

**Type BCA-B** or **BCA-D**: BS 2562 British standards

- Dia. 12
- Dia. 94.5
- Dia. 111

**Type BCA-D**: DIN 42 538 German standards

- Dia. 12
- Dia. 150

**Fixing Flange**

- **Fixing Studs and Nuts M10**

**Euromold**

*In mm*
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 and partial discharge prior to leaving the factory.

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. Earth 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.

### 400PB-XSA INTERFACE C SURGE ARRESTER

**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

### Surge arrester type

<table>
<thead>
<tr>
<th>Surge arrester type</th>
<th>Nominal discharge current In (kA)</th>
<th>Rated voltage Ur (kV)</th>
<th>Max. continuous operating voltage Uc (kV)</th>
<th>Steep current residual voltage @ 5 kA [1/20 µs] (kV)</th>
<th>Lightning current residual voltage @ 5 kA [8/20 µs] (kV)</th>
<th>High current impulse withstand (kA)</th>
<th>Dimensions (mm)</th>
<th>L1</th>
<th>L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>400PB-5SA-15L</td>
<td>5</td>
<td>15</td>
<td>12.0</td>
<td>42.4</td>
<td>40.0</td>
<td>65</td>
<td>250</td>
<td>290</td>
<td></td>
</tr>
<tr>
<td>400PB-5SA-18L</td>
<td>5</td>
<td>18</td>
<td>14.4</td>
<td>52.7</td>
<td>48.0</td>
<td>65</td>
<td>250</td>
<td>290</td>
<td></td>
</tr>
<tr>
<td>400PB-5SA-22L</td>
<td>5</td>
<td>22</td>
<td>17.6</td>
<td>65.7</td>
<td>59.0</td>
<td>65</td>
<td>350</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>400PB-5SA-24L</td>
<td>5</td>
<td>24</td>
<td>19.2</td>
<td>70.0</td>
<td>64.0</td>
<td>65</td>
<td>350</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>400PB-5SA-30L</td>
<td>5</td>
<td>30</td>
<td>24.0</td>
<td>87.3</td>
<td>80.0</td>
<td>65</td>
<td>350</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>400PB-10SA-15N</td>
<td>10</td>
<td>15</td>
<td>12.0</td>
<td>46.2</td>
<td>40.2</td>
<td>100</td>
<td>250</td>
<td>290</td>
<td></td>
</tr>
<tr>
<td>400PB-10SA-18N</td>
<td>10</td>
<td>18</td>
<td>14.0</td>
<td>56.0</td>
<td>48.6</td>
<td>100</td>
<td>350</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>400PB-10SA-22N</td>
<td>10</td>
<td>22</td>
<td>17.6</td>
<td>68.9</td>
<td>59.8</td>
<td>100</td>
<td>350</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>400PB-10SA-24N</td>
<td>10</td>
<td>24</td>
<td>19.2</td>
<td>74.4</td>
<td>64.5</td>
<td>100</td>
<td>350</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>400PB-10SA-30N</td>
<td>10</td>
<td>30</td>
<td>24.0</td>
<td>92.7</td>
<td>80.4</td>
<td>100</td>
<td>350</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>400PB-10SA-36N</td>
<td>10</td>
<td>36</td>
<td>28.8</td>
<td>111.1</td>
<td>96.4</td>
<td>100</td>
<td>350</td>
<td>390</td>
<td></td>
</tr>
<tr>
<td>400PB-10SA-45N</td>
<td>10</td>
<td>45</td>
<td>36.0</td>
<td>138.2</td>
<td>120.0</td>
<td>100</td>
<td>450</td>
<td>490</td>
<td></td>
</tr>
</tbody>
</table>
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 (rms) of 24 kV and a nominal discharge current of 10 kA.
Order a 400PB-10SA-24N 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.
It has been designed to be used with the separable tee connector 430TB-630A.

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.

Up to 24 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

Design
Surge arrester comprising:
1. Interface designed to fit the tee connector 430TB-630A.
2. Conductive EPDM insert.
3. Conductive EPDM jacket.
4. Insulating EPDM layer moulded between the insert and the jacket.
5. Receptacle for contact rod.
7. Steel cap.
8. Earth connection.
9. Earth lead.

---

<table>
<thead>
<tr>
<th>Surge arrester type</th>
<th>Nominal discharge current In (kA)</th>
<th>Rated voltage Ur (kV)</th>
<th>Max. continuous operating voltage Uc (kV)</th>
<th>Dimensions (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>L1</td>
</tr>
<tr>
<td>300SA-10-15N</td>
<td>10</td>
<td>15</td>
<td>12.0</td>
<td>260</td>
</tr>
<tr>
<td>300SA-10-18N</td>
<td>10</td>
<td>18</td>
<td>14.4</td>
<td>260</td>
</tr>
<tr>
<td>300SA-10-22N</td>
<td>10</td>
<td>22</td>
<td>17.6</td>
<td>350</td>
</tr>
<tr>
<td>300SA-10-24N</td>
<td>10</td>
<td>24</td>
<td>19.2</td>
<td>350</td>
</tr>
<tr>
<td>300SA-10-30N</td>
<td>10</td>
<td>30</td>
<td>24.0</td>
<td>350</td>
</tr>
</tbody>
</table>
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 (rms) of 24 kV and a nominal discharge current of 10 kA.
Order a 300SA-10-30N surge arrester.

Technical data

<table>
<thead>
<tr>
<th>Surge arrester type</th>
<th>Steep current residual voltage @ 10 kA [1/20 µs] (kV)</th>
<th>Lightning current residual voltage [8/20 µs] (kV)</th>
<th>Switching impulse residual voltage [36/90 µs] (kV)</th>
<th>High current impulse withstand (kA)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>@ 5 kA</td>
<td>@ 10 kA</td>
<td>@ 20 kA</td>
<td>@ 125 A</td>
</tr>
<tr>
<td>300SA-10-15N</td>
<td>49.6</td>
<td>40.8</td>
<td>44.5</td>
<td>49.8</td>
</tr>
<tr>
<td>300SA-10-18N</td>
<td>59.6</td>
<td>49.0</td>
<td>53.4</td>
<td>59.8</td>
</tr>
<tr>
<td>300SA-10-22N</td>
<td>69.5</td>
<td>57.1</td>
<td>62.3</td>
<td>69.7</td>
</tr>
<tr>
<td>300SA-10-24N</td>
<td>79.4</td>
<td>65.3</td>
<td>71.2</td>
<td>79.7</td>
</tr>
<tr>
<td>300SA-10-30N</td>
<td>99.3</td>
<td>81.6</td>
<td>89.0</td>
<td>99.6</td>
</tr>
</tbody>
</table>
---

**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.

---

<table>
<thead>
<tr>
<th>Test rod type</th>
<th>Maximum A.C. test voltage (50 Hz - 1 min.)</th>
<th>Maximum D.C. test voltage (8 x U₀ - 30 min.)</th>
<th>Impulse voltage (1.2 x 50 µs) min.</th>
</tr>
</thead>
<tbody>
<tr>
<td>400TR</td>
<td>36 kV</td>
<td>96 kV</td>
<td>95 kV</td>
</tr>
<tr>
<td>400TR-LB</td>
<td>36 kV</td>
<td>96 kV</td>
<td>95 kV</td>
</tr>
</tbody>
</table>
**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
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

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: -/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 or M400SOP-B for 36 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 or 36 kV applications.

300GP-B
Earthing plug
Is designed to earth the 430TB-630A connectors when it is fixed-mounted to the equipment (maintenance earthing).

Ordering instructions
Order 300GP-B for 12 or 24 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 or M400BIPA for 36 kV applications.

**430CP**
**Connecting plug**
For connecting two or more 430TB-630A 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: -/ATEX for use in potentially explosive atmospheres (for 12 kV max.).

**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 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 or K430TB for 24 kV applications.

430TB+300PB
Dual cable arrangement.
Order 430TB+300PB for 12 kV or K430TB+K300PB for 24 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.

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