Euromold
a Nexans company

Medium voltage separable connectors and bushings
- Interface C -

Catalogue 2006
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 137, 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. EUROMOLD NV reserves the right to alter or modify the characteristics of its products described in this catalogue as standards and technology evolve.
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
400PB-XSA - surge arrester
400TR & 400TR-LB - test rod
Accessories
Possible arrangements
Fixings for equipment bushings
400TK-400SW installation tools

Interface C
Dimensions according to European CENELEC EN 501810 and 501811 (in mm).
Connecting possibilities

**BUSHINGS / ACCESSORIES**

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

**Equipment interface**

- 400GP-B Earthing plug
- (K)400RTPA Reducing tap plug
- (K)(M)400CP-SC Connecting plug
- (K)(M)440CP Connecting plug
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 Um (kV)</th>
<th>Current Ir (A)</th>
<th>Conductor size (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>400LB</td>
<td>12</td>
<td>630</td>
<td>min. 25, max. 300</td>
</tr>
<tr>
<td>K400LB</td>
<td>24</td>
<td>630</td>
<td>25</td>
</tr>
</tbody>
</table>

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.

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.
Kit contents
The complete (K)400LB elbow connector kit comprises 3 x the following components:

- Connector housing (K)400LB
- Transition contact + screw assembly 400LTS
- Compression lug (optional) 400LBC-X
- Insulating plug 400LBP
- Cable reducer 411CA-W

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. Add a ‘K’ for use up to 24 kV.

For conductors 240 and 300 mm²:
We automatically supply the conductor compression lugs for 240 and 300 mm² aluminium conductors and 300 mm² copper conductors.

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-27-240(K)M-12-2 elbow 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>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(X)</td>
<td>26.5</td>
</tr>
<tr>
<td>3 x 400LB-27(X)</td>
<td>28.5</td>
</tr>
</tbody>
</table>

Table X

<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>DIN hexagonal</td>
</tr>
<tr>
<td>240</td>
<td>240(K)M-12-2</td>
<td>-</td>
</tr>
<tr>
<td>300</td>
<td>300(K)M-12-2</td>
<td>300(K)M-11-2</td>
</tr>
</tbody>
</table>

Notes for conductors from 25 up to 185 mm²:
We do not supply the compression lugs for cables from 25 up to 185 mm². All types of cable lugs can be used. The lugs must be within the dimensions specified.

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 outdoor applications. Order: +MWS.
Components can be ordered individually.
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.

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 size (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>430TB-630A</td>
<td>12</td>
<td>630</td>
<td>35</td>
</tr>
<tr>
<td>K430TB-630A</td>
<td>24</td>
<td>630</td>
<td>35</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 300BIPR
- Connector housing 430BT-630A
- Cable reducer 430CA-W1
- Conductor contact TMBC-X
- Cable reducer 411CA-W2
- Conductor contact TBC-X
- 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.

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 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>
<thead>
<tr>
<th>Voltage Um (kV)</th>
<th>Non-size sensitive</th>
<th>Size sensitive</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>3 x 430TB-W1-X</td>
<td>3 x 430TB-W2-X</td>
</tr>
<tr>
<td>24</td>
<td>3 x K430TB-W1-X</td>
<td>3 x K430TB-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>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 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-10-2</td>
<td>35(K)M-10-1</td>
</tr>
<tr>
<td>50</td>
<td>50(K)M-10-2</td>
<td>50(K)M-10-1</td>
</tr>
<tr>
<td>70</td>
<td>70(K)M-10-2</td>
<td>70(K)M-10-1</td>
</tr>
<tr>
<td>95</td>
<td>95(K)M-10-2</td>
<td>95(K)M-10-1</td>
</tr>
<tr>
<td>120</td>
<td>120(K)M-10-2</td>
<td>120(K)M-10-1</td>
</tr>
<tr>
<td>150</td>
<td>150(K)M-10-2</td>
<td>150(K)M-10-1</td>
</tr>
<tr>
<td>185</td>
<td>185(K)M-10-2</td>
<td>185(K)M-10-1</td>
</tr>
<tr>
<td>240</td>
<td>240(K)M-10-2</td>
<td>240(K)M-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.

**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.

<table>
<thead>
<tr>
<th>Separable connector type</th>
<th>Voltage Um (kV)</th>
<th>Current Ir (A)</th>
<th>Conductor size (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>400TB/G</td>
<td>12</td>
<td>630</td>
<td>min. 35</td>
</tr>
<tr>
<td>K400TB/G</td>
<td>24</td>
<td>630</td>
<td>min. 35</td>
</tr>
<tr>
<td>M400TB/G</td>
<td>36</td>
<td>630</td>
<td>min. 35</td>
</tr>
<tr>
<td>P400TB/G</td>
<td>41.5</td>
<td>630</td>
<td>min. 35</td>
</tr>
</tbody>
</table>
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
- Cable reducer 411CA-W

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.

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>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>

Table X

<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>

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.
Components can be ordered individually.
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.

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 $U_m$ (kV)</th>
<th>Current $I_r$ (A)</th>
<th>Conductor size (mm$^2$)</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>M400TB/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-22-22</td>
<td>23.5</td>
</tr>
<tr>
<td>440TB/G-27-27</td>
<td>28.5</td>
</tr>
<tr>
<td>440TB/G-32-32</td>
<td>34.0</td>
</tr>
<tr>
<td>440TB/G-37-37</td>
<td>39.0</td>
</tr>
<tr>
<td>440TB/G-43-43</td>
<td>45.5</td>
</tr>
</tbody>
</table>

Table X

<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>185</td>
<td>185(K)M-12-2</td>
<td>185(K)M-11-2</td>
</tr>
<tr>
<td>240</td>
<td>240(K)M-12-2</td>
<td>240(K)M-11-2</td>
</tr>
<tr>
<td>300</td>
<td>300(K)M-12-2</td>
<td>300(K)M-11-2</td>
</tr>
<tr>
<td>400</td>
<td>400(K)M-12-2</td>
<td>400(K)M-11-2</td>
</tr>
<tr>
<td>500</td>
<td>500(K)M-12-2</td>
<td>500(K)M-11-2</td>
</tr>
<tr>
<td>630</td>
<td>–</td>
<td>630(K)M-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.

For use in potentially explosive atmospheres (for 2 kV max.). Order: -/ATEX.

Components can be ordered individually.

When installed on an appropriate equipment bushing: 1250 A continuously

Euromold
a Nexans company
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 size (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 300PB-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.

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 300PB-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.

**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>19.0</td>
<td>32.6</td>
</tr>
<tr>
<td>18</td>
<td></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 size (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>35(K)M-10-1</td>
</tr>
<tr>
<td>50</td>
<td>50(K)M-10-2</td>
<td>50(K)M-10-1</td>
</tr>
<tr>
<td>70</td>
<td>70(K)M-10-2</td>
<td>70(K)M-10-1</td>
</tr>
<tr>
<td>95</td>
<td>95(K)M-10-2</td>
<td>95(K)M-10-1</td>
</tr>
<tr>
<td>120</td>
<td>120(K)M-10-2</td>
<td>120(K)M-10-1</td>
</tr>
<tr>
<td>150</td>
<td>150(K)M-10-2</td>
<td>150(K)M-10-1</td>
</tr>
<tr>
<td>185</td>
<td>185(K)M-10-2</td>
<td>185(K)M-10-1</td>
</tr>
<tr>
<td>240</td>
<td>240(K)M-10-2</td>
<td>240(K)M-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 137.

**Ordering instructions**
To order the equipment bushing, specify the type. The bushing 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>

Minimum oil level:
-12 kV: 40 mm
-24 kV: 50 mm
-36 kV: 70 mm

In mm.
**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 137.

**Ordering instructions**
To order the equipment bushing, specify the type. The bushing 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 flange BCA-B or BCA-D
- Fixing flange BCA-F
- Equipment connection
- Fixing studs and nuts M10
- Earth jumper
- Gasket

Type BCA-B: BS 2562 British standards
Type BCA-D: DIN 42 538 German standards
Type BCA-F: NFC 52-053 French standards

In mm

Euromold
**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.

**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.

---

**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>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<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>
</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>
</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>
</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>
</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>
</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>
</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>250</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>
</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>
</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>
</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>
</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>
</tr>
</tbody>
</table>

**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
**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 400PB-10SA-24N surge arrester.
<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
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

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.
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.

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.

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.

Euromold
a Nexans company
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.
**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.
Order 400TB/G-L4 for 12 kV, K400TB/G-L4 for 24 kV or M400TB/G-L4 for 36 kV applications.
1. **Connector on stand-off plug**
   Order 400SOP-B for 12 kV, K400SOP-B for 24 kV or M400SOP-B for 36 kV applications.

2. **Earthing plug on connector**
   Order 300GP-B for 12 kV and 24 kV applications.

3. **Connector on earthing plug**
   Order 400GP-B for 12 kV, 24 kV and 36 kV applications.
Cable and equipment testing.
Additional catalogue information on power cable accessories is available by contacting us at the address below:

EUROMOLD N.V. headquarters • Zuid III, Industrielaan 2, B-9320 Erembodegem
Tel.: +32 (0)53 85 02 1 • Fax: +32 (0)53 83 10 13 • www.nexans.com • info.euromold@nexans.com

Catalogue also available on CD-ROM