Euromold
a Nexans company

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

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

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

Laboratory accreditation
Since June 2000, Euromold’s independent ELAB laboratory obtained the BELAC accreditation no.144-TEST conform with the European standards for laboratories ISO 17025 for electrical testing of low and medium voltage cable accessories according to the international standards EN 50393, IEC 60502-4, IEC 61442 and HD 629.
Table of contents
400LB - elbow connector
400TB - tee connector
440TB - tee connector
440PB - coupling connector
400PB - XSA - surge arrester
400TR and 400TR-LB - test rods
400TK and 400SW installation tools
Accessories
Possible arrangements

Interface C1 & C2
Dimensions according to European CENELEC EN 50180 and 50181 (in mm).

Dia. 22 min for C1
Dia. 32 nominal for C2
Dia. 29 min.
Dia. 90
Dia. 70
Dia. 46
Dia. 56
M16 x 2 - 6H
1.5
1.5

In mm.
Connecting possibilities

For information on our bushings please refer to our bushing catalogue.
Specifications and standards
The 400LB separable connector 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>400LB/G</td>
<td>12</td>
<td>630</td>
<td>min 25 max 300</td>
</tr>
<tr>
<td>K400LB/G</td>
<td>24</td>
<td>630</td>
<td>min 25 max 300</td>
</tr>
</tbody>
</table>
# Kit contents

The complete (K)400LB/G 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 silicone grease, field control mastic and installation instructions.

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## Ordering instructions

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

Add a ‘K’ for use up to 24 kV.

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

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

### Table W

<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/G-11</td>
<td>12.0</td>
</tr>
<tr>
<td>3 x 400LB/G-15</td>
<td>16.0</td>
</tr>
<tr>
<td>3 x 400LB/G-19</td>
<td>20.0</td>
</tr>
<tr>
<td>3 x 400LB/G-22</td>
<td>23.5</td>
</tr>
<tr>
<td>3 x 400LB/G-25</td>
<td>26.5</td>
</tr>
<tr>
<td>3 x 400LB/G-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.

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

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

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

Can be supplied with cable lugs.

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

Components can be ordered individually.

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

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

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

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<table>
<thead>
<tr>
<th>Separable connector type</th>
<th>Voltage Um (kV)</th>
<th>Current Ir (A)</th>
<th>Current Ir (A) when installed on an appropriate equipment bushing and when using a copper (-11-2) or a bolted (-12-5 or -14-5) conductor contact</th>
<th>Conductor sizes (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>min</td>
</tr>
<tr>
<td>400TB/G</td>
<td>12</td>
<td>630</td>
<td>800</td>
<td>35</td>
</tr>
<tr>
<td>K400TB/G</td>
<td>24</td>
<td>630</td>
<td>800</td>
<td>35</td>
</tr>
<tr>
<td>M400TB/G</td>
<td>36</td>
<td>630</td>
<td>800</td>
<td>35</td>
</tr>
<tr>
<td>P400TB/G</td>
<td>42</td>
<td>630</td>
<td>800</td>
<td>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 TMBC\textsuperscript{X}
- Conductor contact TBC\textsuperscript{X}
- Basic insulating plug (K)(M)(P)400BPA + rubber cap
- Cable reducer 411CA\textsuperscript{W}

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

Ordering instructions
To order the tee connector, select the ordering part number which gives you the best centring of your core insulation diameter and substitute \( \text{X} \) using table \( \text{X} \), 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.

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

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

| Table X |
|-----------------|-----------------|-----------------|
| **Conductor sizes (mm\(^2\))** | **Aluminium conductor** | **Aluminium and copper conductor** | **Copper conductor** |
| | **DIN hexagonal** | **Deep indent** | **Bolted** | **DIN hexagonal** |
| 35 | 35(K)M-10-2 | 35KM-10-1 | 35(K)M-11-2 |
| 50 | 50(K)M-10-2 | 50(K)M-10-1 | 50(K)M-11-2 |
| 70 | 70(K)M-10-2 | 70(K)M-10-1 | 70(K)M-11-2 |
| 95 | 95(K)M-10-2 | 95(K)M-10-1 | 95(K)M-11-2 |
| 120 | 120(K)M-10-2 | 120(K)M-10-1 | 120(K)M-11-2 |
| 150 | 150(K)M-10-2 | 150(K)M-10-1 | 150(K)M-11-2 |
| 185 | 185(K)M-10-2 | 185(K)M-10-1 | 185(K)M-11-2 |
| 240 | 240(K)M-10-2 | 240(K)M-10-1 | 240(K)M-11-2 |
| 300 | 300(K)M-10-2 | - | 300(K)M-11-2 |

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

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

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

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

Components can be ordered individually.

When installed on an appropriate equipment bushing: 800 A continuously.
**Application**
Separable tee shape connector (bolted type) designed to connect polymeric insulated cable to equipment (transformers, switchgear, motors, ...). Also connects cable to cable when using the appropriate mating parts.

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

**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 440TB separable connector 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>Current Ir (A) When installed on an appropriate equipment bushing</th>
<th>Conductor sizes (mm²)</th>
</tr>
</thead>
<tbody>
<tr>
<td>440TB/G</td>
<td>12</td>
<td>630</td>
<td>1250</td>
<td>185 - 630</td>
</tr>
<tr>
<td>K440TB/G</td>
<td>24</td>
<td>630</td>
<td>1250</td>
<td>185 - 630</td>
</tr>
<tr>
<td>M440TB/G</td>
<td>36</td>
<td>630</td>
<td>1250</td>
<td>185 - 630</td>
</tr>
<tr>
<td>P440TB/G</td>
<td>42</td>
<td>630</td>
<td>1250</td>
<td>185 - 630</td>
</tr>
</tbody>
</table>
**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.

**Example:**
The copper wire screened cable is 36 kV, 240 mm\(^2\) 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 (mm(^2))</th>
<th>Aluminium conductor</th>
<th>Aluminium and copper conductor</th>
<th>Copper conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DIN hexagonal</td>
<td>Deep indent</td>
<td>Bolted</td>
</tr>
<tr>
<td>185</td>
<td>185(K)M-12-2</td>
<td>185KM-12-1</td>
<td>185(K)M-11-2</td>
</tr>
<tr>
<td>240</td>
<td>240(K)M-12-2</td>
<td>240KM-12-1</td>
<td>240(K)M-11-2</td>
</tr>
<tr>
<td>300</td>
<td>300(K)M-12-2</td>
<td>300KM-12-1</td>
<td>300(K)M-11-2</td>
</tr>
<tr>
<td>400</td>
<td>400(K)M-12-2</td>
<td>400KM-12-1</td>
<td>400(K)M-11-2</td>
</tr>
<tr>
<td>500</td>
<td>500(K)M-12-2</td>
<td>500KM-12-1</td>
<td>500(K)M-11-2</td>
</tr>
<tr>
<td>630</td>
<td>–</td>
<td>630KM-12-1</td>
<td>630(K)M-11-2</td>
</tr>
</tbody>
</table>
Application
Separable coupling connector (bolted type) for dual cable arrangement. It has been designed to be used with 400TB and 440TB separable tee connector.

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

Technical characteristics
- Up to 42 kV
  800 A
  6/10 (12) kV
  6.35/11 (12) kV
  8.7/15 (17.5) kV
  12/20 (24) kV
  12.7/22 (24) kV
  18/30 (36) kV
  19/33 (36) kV
  20.8/36 (42) kV

Design
1. Interface designed to fit 400TB/440TB connector.
2. Bus for 440PB.
3. Conductive EPDM insert.
4. Insulating EPDM layer moulded between the insert and the jacket.
5. Conductive EPDM jacket.
6. Conductive EPDM cap.
7. Basic insulating plug.
8. Conductor connector (hexagonal crimping, deep indent crimping or bolted).
9. Cable reducer.
10. Earthing lead.
11. Threaded M16 stud for the equipment bushing.

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

Specifications and standards
The 440PB coupling connector 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>440PB/G</td>
<td>12</td>
<td>800</td>
<td>min 185 max 630</td>
</tr>
<tr>
<td>K440PB/G</td>
<td>24</td>
<td>800</td>
<td>min 185 max 630</td>
</tr>
<tr>
<td>M440PB/G</td>
<td>36</td>
<td>800</td>
<td>min 185 max 630</td>
</tr>
<tr>
<td>P440PB/G</td>
<td>42</td>
<td>800</td>
<td>min 185 max 630</td>
</tr>
<tr>
<td>Kit contents</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The complete (K)(M)(P)440PB/G coupling connector kit comprises 3 x the following components:

- Connector housing (K)(M)(P)440BP/G
- Contact rod 440PB-CR + M16 stud
- Conductor contact TMBC-X
- Cable reducer 611CA.W

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

| Ordering instructions |
To order the coupling connector, select the ordering part number which gives you the best centring of your core insulation diameter and substitute X using table X, according to your conductor size and type. Add a 'K' for use up to 24 kV, add an 'M' for use up to 36 kV, add a 'P' for use up to 42 kV.

Example:
The copper wire screened cable is 36 kV, 240 mm² stranded aluminium with a diameter over core insulation of 37.0 mm. Order 3 x M440PB/G-32-240(K)M-12-2 coupling connector kit.

<p>| Table W |</p>
<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 440PB/G-22-X</td>
<td>23.5</td>
</tr>
<tr>
<td>3 x 440PB/G-27-X</td>
<td>28.5</td>
</tr>
<tr>
<td>3 x 440PB/G-32-X</td>
<td>34.0</td>
</tr>
<tr>
<td>3 x 440PB/G-37-X</td>
<td>39.0</td>
</tr>
<tr>
<td>3 x 440PB/G-43-X</td>
<td>45.5</td>
</tr>
</tbody>
</table>

<p>| Table X |</p>
<table>
<thead>
<tr>
<th>Conductor sizes (mm²)</th>
<th>Aluminium conductor</th>
<th>Aluminium and copper conductor</th>
<th>Copper conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DIN hexagonal</td>
<td>Deep indent</td>
<td>Bolted</td>
</tr>
<tr>
<td>185</td>
<td>185(K)M-12-2</td>
<td>185KM-12-1</td>
<td>185(K)M-11-2</td>
</tr>
<tr>
<td>240</td>
<td>240(K)M-12-2</td>
<td>240KM-12-1</td>
<td>240(K)M-11-2</td>
</tr>
<tr>
<td>300</td>
<td>300(K)M-12-2</td>
<td>300KM-12-1</td>
<td>300(K)M-11-2</td>
</tr>
<tr>
<td>400</td>
<td>400(K)M-12-2</td>
<td>400KM-12-1</td>
<td>400(K)M-11-2</td>
</tr>
<tr>
<td>500</td>
<td>500(K)M-12-2</td>
<td>500KM-12-1</td>
<td>500(K)M-11-2</td>
</tr>
<tr>
<td>630</td>
<td>–</td>
<td>630KM-12-1</td>
<td>630(K)M-11-2</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
Surge arrester designed to protect medium voltage components, including transformers, equipment, cable and accessories from high voltage surges resulting from lightning or switching.

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

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

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

<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>400PB-5SA-15L</td>
<td>5</td>
<td>15</td>
<td>12.0</td>
<td>260</td>
</tr>
<tr>
<td>400PB-5SA-18L</td>
<td>5</td>
<td>18</td>
<td>14.4</td>
<td>260</td>
</tr>
<tr>
<td>400PB-5SA-22L</td>
<td>5</td>
<td>22</td>
<td>17.6</td>
<td>360</td>
</tr>
<tr>
<td>400PB-5SA-24L</td>
<td>5</td>
<td>24</td>
<td>19.2</td>
<td>360</td>
</tr>
<tr>
<td>400PB-5SA-30L</td>
<td>5</td>
<td>30</td>
<td>24.0</td>
<td>360</td>
</tr>
<tr>
<td>400PB-10SA-6N</td>
<td>10</td>
<td>6</td>
<td>4.8</td>
<td>260</td>
</tr>
<tr>
<td>400PB-10SA-9N</td>
<td>10</td>
<td>9</td>
<td>7.2</td>
<td>260</td>
</tr>
<tr>
<td>400PB-10SA-12N</td>
<td>10</td>
<td>12</td>
<td>9.6</td>
<td>260</td>
</tr>
<tr>
<td>400PB-10SA-15N</td>
<td>10</td>
<td>15</td>
<td>12.0</td>
<td>260</td>
</tr>
<tr>
<td>400PB-10SA-18N</td>
<td>10</td>
<td>18</td>
<td>14.4</td>
<td>260</td>
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<tr>
<td>400PB-10SA-22N</td>
<td>10</td>
<td>22</td>
<td>17.6</td>
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<td>400PB-10SA-24N</td>
<td>10</td>
<td>24</td>
<td>19.2</td>
<td>360</td>
</tr>
<tr>
<td>400PB-10SA-30N</td>
<td>10</td>
<td>30</td>
<td>24.0</td>
<td>360</td>
</tr>
<tr>
<td>400PB-10SA-33N</td>
<td>10</td>
<td>33</td>
<td>26.4</td>
<td>360</td>
</tr>
<tr>
<td>400PB-10SA-36N</td>
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<td>36</td>
<td>28.8</td>
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</tr>
<tr>
<td>400PB-10SA-45N</td>
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<td>45</td>
<td>36.0</td>
<td>460</td>
</tr>
<tr>
<td>400PB-10SA-51N</td>
<td>10</td>
<td>51</td>
<td>40.8</td>
<td>460</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 (r.m.s.) of 24 kV and a nominal discharge current of 10 kA.
Order a 400PB-10SA-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>400PB-5SA-15L</td>
<td>47.1</td>
<td>38.9</td>
<td>42.3</td>
<td>47.4</td>
</tr>
<tr>
<td>400PB-5SA-18L</td>
<td>56.5</td>
<td>46.7</td>
<td>50.8</td>
<td>56.9</td>
</tr>
<tr>
<td>400PB-5SA-22L</td>
<td>69.2</td>
<td>57.1</td>
<td>62.2</td>
<td>69.7</td>
</tr>
<tr>
<td>400PB-5SA-24L</td>
<td>75.2</td>
<td>62.1</td>
<td>67.6</td>
<td>75.8</td>
</tr>
<tr>
<td>400PB-5SA-30L</td>
<td>94.0</td>
<td>77.6</td>
<td>84.5</td>
<td>94.7</td>
</tr>
<tr>
<td>400PB-10SA-6N</td>
<td>20.4</td>
<td>16.8</td>
<td>18.3</td>
<td>20.5</td>
</tr>
<tr>
<td>400PB-10SA-9N</td>
<td>28.5</td>
<td>23.5</td>
<td>25.6</td>
<td>28.7</td>
</tr>
<tr>
<td>400PB-10SA-12N</td>
<td>38.0</td>
<td>31.4</td>
<td>34.2</td>
<td>38.3</td>
</tr>
<tr>
<td>400PB-10SA-15N</td>
<td>48.1</td>
<td>39.7</td>
<td>43.2</td>
<td>48.4</td>
</tr>
<tr>
<td>400PB-10SA-18N</td>
<td>58.1</td>
<td>48.0</td>
<td>52.2</td>
<td>58.5</td>
</tr>
<tr>
<td>400PB-10SA-22N</td>
<td>70.1</td>
<td>57.9</td>
<td>63.0</td>
<td>70.6</td>
</tr>
<tr>
<td>400PB-10SA-24N</td>
<td>77.0</td>
<td>63.6</td>
<td>69.2</td>
<td>77.6</td>
</tr>
<tr>
<td>400PB-10SA-30N</td>
<td>97.0</td>
<td>80.1</td>
<td>87.2</td>
<td>97.7</td>
</tr>
<tr>
<td>400PB-10SA-33N</td>
<td>103.4</td>
<td>85.4</td>
<td>93.0</td>
<td>104.2</td>
</tr>
<tr>
<td>400PB-10SA-36N</td>
<td>115.9</td>
<td>95.7</td>
<td>104.2</td>
<td>116.8</td>
</tr>
<tr>
<td>400PB-10SA-45N</td>
<td>144.1</td>
<td>119.0</td>
<td>129.5</td>
<td>145.1</td>
</tr>
<tr>
<td>400PB-10SA-51N</td>
<td>166.0</td>
<td>137.1</td>
<td>149.2</td>
<td>167.2</td>
</tr>
</tbody>
</table>

Note: the surge arrester body needs to be positioned vertically after installation.
**400TR and 400TR-LB**  
**INTERFACE C TEST RODS**

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

### Technical characteristics
- The 400TR test rod can be used with 400TE, 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 ( U_0 ) - 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
- 19/33 (36) kV
- 20.8/36 (42) kV

**400DR-B/G**
**Dead-end receptacle**
Fits over a bushing with a type C interface to provide ‘dead-end’ facility. The dead-end receptacle is supplied with an earth lead.

**Ordering instructions**
Order 400DR-B/G for 12 kV, K400DR-B/G for 24 kV or M400DR-B/G for 36 kV applications.

**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, 36 or 42 kV applications.
**400BIPA**  
**Basic insulating plug**  
Acts as a tightening nut for the 400TB and 440TB tee connector kits.  
The plug contains a voltage detection point.  
The conductive rubber protection cap is included.

**Ordering instructions**  
Order 400BIPA for 12 kV, K400BIPA for 24 kV  
M400BIPA for 36 kV or P400BIPA for 42 kV applications.

---

**400CP-SC**  
**Connecting plug**  
For connecting two or more connectors with a type C interface together, thus creating a separable cable joint or a multiple cable connection to equipment.

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

---

**440CP**  
**Connecting plug**  
For connecting two or more 440TB connectors, thus creating a separable cable joint or a multiple cable connection to equipment.  
For use up to 1250 A.  
Only for use with 440TB.

**Ordering instructions**  
Order 440CP for 12 kV, K440CP for 24 kV or M440CP for 36 kV applications.  
Order (K)(M)440CP + 676SA for connection to an already installed 440TB connector.

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**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 42 kV applications.

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**400BE/G**  
**Bushing extender**  
Provides an extension piece to allow cables to stand away from equipment.  
Is used in conjunction with the 400CP, 440CP or 440PB. The bushing extender is supplied with an earth lead.

**Ordering instructions**  
Order 400BE/G for 12 kV, K400BE/G for 24 kV  
M400BE/G for 36 kV or P400BE/G for 42 kV applications.
**POSSIBLE ARRANGEMENTS**

**INTERFACE C**

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**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 42 kV applications.

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**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.

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**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.

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**400BE+440PB**

Connector standing away from equipment.
Order 400BE+440PB for 12 kV,
K400BE+440PB for 24 kV,
M400BE+440PB for 36 kV or
P400BE+440PB for 42 kV applications.
**400TB/G-L3**
3-way connection.
Order 400TB/G-L3 for 12 kV, K400TB/G-L3 for 24 kV or M400TB/G-L3 for 36 kV applications.

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

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

*In mm.*
**440TB+440PB-P2**
Dual cable arrangement. Order 440TB/G+440PB/G-P2 for 12 kV, K400TB/G+K440PB/G-P2 for 24 kV, M400TB/G+M440PB/G-P2 for 36 kV, P400TB/G+P440PB/G-P2 for 41.5 kV.

**Connector on stand-off plug**
Order 400SOP-B for 12 kV, K400SOP-B for 24 kV or M400SOP-B for 36 kV applications.

**Connector on earthing plug**
Order 400GP-B for 12 kV, 24 kV and 36 kV applications.

**Cable and equipment testing**

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