Outdoor cable termination

**Use**
For installations in which the termination is to be used as a fixed connection point.

**Standard**
Meets the requirements of:
- IEC 60840, < 170 kV
- IEC 62067, 245–420 kV
- IEEE 48

**Design**
The cable termination consists of an insulator installed on a box body made of aluminium castings. The base part is to be installed on a bracket.

The electrical stress control component is a premolded rubber stress cone. The insulator has sheds of short-long type and is filled with synthetic insulating oil.

The composite insulator design includes grey silicone rubber sheds and a fiberglass reinforced epoxy resin hollow core. It is light-weight and less sensitive for outer damages.

The porcelain insulators are available in brown on request.

A bolt clamp in the top fitting is used to connect the conductor to the top bolt. Top bolt and bolt clamp are included in the kit.

For the maximum permitted diameter over the cable oversheath and the diameter over prepared insulation, see the table below.

123-170 kV has three post insulators included. In case four are needed, extra can be ordered. For 245–420 kV four post insulators are included. The 420 kV have also a corona shield included.

**Installation**
Installation can be simplified by assembling the termination horizontally on the ground before lifting it into place.

**The following cable data should be stated when ordering**
- Voltage
- Diameter over prepared insulation
- Conductor cross section and diameter
- Screen, sheath design and cross section
- Overall cable diameter
- Optical fibres integrated in screen
- Diameter and material of the top bolt, copper or aluminium
### APECB 123–420 kV

#### Technical specification

<table>
<thead>
<tr>
<th>Voltage (kV)</th>
<th>Insulator Type</th>
<th>Designation*</th>
<th>Dimensions (mm)</th>
<th>Creepage distance (mm)</th>
<th>Net weight (kg/item)</th>
</tr>
</thead>
<tbody>
<tr>
<td>123</td>
<td>Composite</td>
<td>APECB 123 P</td>
<td>A Ø 1330, B Ø 40/50/54/60, C 370, D 230</td>
<td>3150</td>
<td>10</td>
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<tr>
<td>123</td>
<td>Composite</td>
<td>APECB 145 P</td>
<td>A Ø 1630, B Ø 40/50/54/60, C 370, D 230</td>
<td>4350</td>
<td>10</td>
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<tr>
<td>123</td>
<td>Composite</td>
<td>APECB 1703 P</td>
<td>A Ø 2555, B Ø 40/50/54/60, C 370, D 230</td>
<td>8000</td>
<td>10</td>
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<tr>
<td>170</td>
<td>Composite</td>
<td>APECB 1705 P</td>
<td>A Ø 3050, B Ø 40/50/54/60, C 496, D 230</td>
<td>3960</td>
<td>10</td>
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<tr>
<td>245</td>
<td>Composite</td>
<td>APECB 2456 P</td>
<td>A Ø 4600, B Ø 40/50/54/60, C 600, D 395</td>
<td>14900</td>
<td>10</td>
</tr>
</tbody>
</table>

* When the cable diameter is larger than 120 mm, add: Ø 170 at the end of the designation.

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Max. permissible forces acting on the top bolt, horizontally and vertically: 2000 N.

Dimensions in mm

- Ø 22
- Ø 18.5
- A Ø 366
- B Ø 422.6
- C 356 (min 280)
- D 366

Fixing to bracket for 123–170 kV with three post insulators

Fixing to bracket for 123–300 kV with four post insulators

Fixing to bracket for 420 kV

Non-insulated: four 18 mm holes for M16 bolts. Insulated: four 22 mm holes for M20 bolts.
**APECB 123–420 kV**

**Applications and accessories**

![Diagram of APECB 123–420 kV components](image)

Inclination up to 30°

**GAP-APECB**
Rod gap.

**PIU 420 B/G**
Post insulator kit for fixing APECB 420 kV when insulated installation. Included in the kit.

**Accessories, to be ordered separately**

![Diagram of accessories](image)

**OKT**
Optical fiber kit for cables with integrated optical fibers in the earth screen.

**SV140, SV190, SV 215**
Tools for installation of stress cones as follows:
- SV 140 for SKG
- SV 190 for SKGB
- SV 215 for SKGE

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**Designation**

<table>
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<tbody>
<tr>
<td>GAP-APECB</td>
<td>Rod gap for protection against overvoltage 123-170 kV</td>
</tr>
<tr>
<td>PIU-APEC</td>
<td>Post-insulator kit for fixing APECB 420 kV for insulated installation</td>
</tr>
<tr>
<td>OKT</td>
<td>Optical fiber kit for integrated optical fibers in the screen of the cable 123–420 kV</td>
</tr>
<tr>
<td>SV 140</td>
<td>Installation tool for stress cone, SKG for cable termination APECB 123–170</td>
</tr>
<tr>
<td>SV 190</td>
<td>Installation tool for stress cone, SKGB for cable termination APECB 245–300</td>
</tr>
<tr>
<td>SV 215</td>
<td>Installation tool for stress cone, SKGE for cable termination APECB 420</td>
</tr>
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</table>

**Designation**

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<tr>
<td>JSA*</td>
<td>Earthing kit for cable with metallic sheath, e.g. lead. Not needed if cable has only Cu-wire screen.</td>
<td>2/30</td>
</tr>
<tr>
<td>SCK*</td>
<td>Screen connection for Al-foil (APL)radial waterproof cable. Not needed if cable has only Cu-wire screen.</td>
<td>2/30</td>
</tr>
</tbody>
</table>

*NB: if earthing kit is required, this increases the cable outer diameter Ø by 20 mm.