General

Eaton’s Cooper Power Systems POSI-BREAK™ insulated protective cap is an accessory device designed to electrically insulate and mechanically seal loadbreak bushing interfaces. When mated to a loadbreak product and the drain wire is attached to ground, the POSI-BREAK insulated protective cap provides a fully shielded, submersible insulating cover for energized bushings. The cap can be used for installations on bushings, junctions or feedthru devices that meet the requirements of IEEE Std 386™-2006 standard.

This cap design uses a state-of-the-art manufacturing process that creates an insulated sleeve around the top of the copper probe. It also provides a layer of insulating peroxide-cured EPDM rubber over the peroxide-cured conductive internal insert of the cap. This added insulation greatly increases the strike distance and improves the dielectrics. This increased performance reduces the potential for partial vacuum flashovers while maintaining the stress relieving Faraday Cage that is critical to long term field performance.

Installation

No special tools are required. A clampstick is used to place the protective cap on an exposed bushing interface. Refer to Service Information S500-21-1, 200 A 15, 25, and 35 kV Class Insulated Protective Cap Installation Instructions for details.
Production tests
Tests conducted in accordance with IEEE Std 386™-2006 standard:
- ac 60 Hz 1 Minute Withstand
  - 40 kV
- Minimum Corona Voltage Level
  - 19 kV
Tests conducted in accordance with Eaton’s Cooper Power Systems requirements:
- Physical Inspection
- Periodic Dissection
- Periodic Fluoroscopic (X-ray) Analysis

Table 1. Voltage Ratings and Characteristics

<table>
<thead>
<tr>
<th>Description</th>
<th>kV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Voltage Class</td>
<td>25</td>
</tr>
<tr>
<td>Maximum Rating Phase-to-Phase</td>
<td>26.3</td>
</tr>
<tr>
<td>Maximum Rating Phase-to-Ground</td>
<td>15.2</td>
</tr>
<tr>
<td>AC 60 Hz 1 Minute Withstand</td>
<td>40</td>
</tr>
<tr>
<td>DC 15 Minute Withstand</td>
<td>78</td>
</tr>
<tr>
<td>BIL and Full Wave Crest</td>
<td>125</td>
</tr>
<tr>
<td>Minimum Corona Voltage Level</td>
<td>19</td>
</tr>
</tbody>
</table>

Voltage ratings and characteristics are in accordance with IEEE Std 386™-2006 standard.

Ordering information
To order the 25 kV Class POSI-BREAK Insulated Protective Cap Kit, refer to Table 2.

Table 2. Insulated Protective Cap Kit

<table>
<thead>
<tr>
<th>Description</th>
<th>Catalog #</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protective Cap, 30 Kit Bulk Pack</td>
<td>PLPC225</td>
</tr>
<tr>
<td>Protective Cap, Individually Boxed Kit</td>
<td>PLPC225X</td>
</tr>
</tbody>
</table>

Each kit contains:
- Protective Cap with stranded copper ground wire
- Silicone Lubricant
- Installation Instruction Sheet
PROBE
Probes ensure a reliable conductive path with mating female contacts. Insulated section provides improved dielectrics and increased creep distance.

SEMI-CONDUCTIVE INSERT
Semi-conductive molded insert is surrounded by a layer of insulated EPDM rubber that relieves electrical stress and provides superior dielectric performance.

PULLING EYE
Stainless steel reinforced pulling eye ensures high strength for clampstick operation.

GROUNDING EYE
(Optional for larger grounding wire)

GROUNDING WIRE AND GROUNDING EYE
48-inch, #14 AWG stranded copper ground wire is tin plated and ensures dead front construction when tied off to ground.

Figure 1. Illustration shows construction of POSI-BREAK insulated protective cap with insulated probe and insert.

Figure 2. POSI-BREAK Insulated Protective Cap profile and stacking dimensions.
200 A 25 kV class POSI-BREAK insulated protective cap