Outdoor current transformers: KON-17 I2C, KON-24, KON-24 I2C

Rated voltages: 12, 17.5 and 24kV
Rated currents: 5 ÷ 1875A

The KON current transformers are cast in hydrophobic epoxy resin (HCEP), capable of withstanding outdoor environmental conditions and designed for insulation voltages up to:
– 17.5 kV for KON-17 I2C,
– 24 kV for KON-24 and KON-24 I2C,

Main features:
• Designed and type tested according to IEC 61869-2,
• High level breaking performance with current up to 63kA,
• Casted with HCEP mixture which gives hydrophobicity performance,
• Designed and tested for harsh conditions.

Description
For insulation and protection, transformers are cast in hydrophobic cycloaliphatic epoxy resin (HCEP), capable of withstanding outdoor environmental conditions. The HCEP material offers superior arc track, ozone, and ultraviolet-resistive properties while maintaining physical strength.
The hydrophobic surface properties of HCEP ensure highly reliable performance in wet or humid environments.
The KON transformers are designed as single – or multiple turn transformers, with one transformer ratio, and, if necessary, with the possibility to be reconnectable on the primary (only KON-24 I2C and KON-17 I2C) or secondary side (all variants).
Number of secondary windings:
– 1 for KON-24
– 2 for KON-17 I2C and KON 24-1 I2C, depending on parameters (such as the accuracy class, short-circuit current, overcurrent factor, burden....).
The secondary windings are used for measurement or protection purposes, or for special use (testing winding, “PX” class).

One terminal of each secondary winding used and one terminal of the unused, short-circuited, windings must be earthed during transformer operation.
The transformer body is fixed by using four screws. The secondary winding is led out into a cast secondary terminal board covered with a sealed cover. The transformers are designed and manufactured to confirm with the requirements and recommendations of IEC 61869-2 standard.

Terminals
Primary terminals are electro-tin copper. Clamp-type secondary terminals accommodate up to 6 mm² wire.

Junction box
The metal junction box is equipped with PG21 cable gland. The box is anchored to the body of the transformer with screws and can be easily attached, simplifying installation and change-out procedures.

Baseplate
The base is constructed of corrosion-resistant aluminium and is secured to the encapsulated base support.

Mounting
The KON can be mounted in either vertical or horizontal positions. Stress relief devices should be used to support cable connections.
Test reports
Test reports are stored electronically and can be e-mailed in various formats at the time of shipment.

Marking of the current transformer outlets

![Diagram of single-core design]
a) Single-core design

![Diagram of double-core design, reconnectable on the secondary side]
d) Double-core design, reconnectable on the secondary side

![Diagram of double-core design, reconnectable on the primary side]
e) Double-core design, reconnectable on the primary side

![Diagram of single-core design, reconnectable on the secondary side]
c) Single-core design, reconnectable on the secondary side

<table>
<thead>
<tr>
<th>Parameters</th>
<th>KON-17 II 2C</th>
<th>KON-24</th>
<th>KON-24 II 2C</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. rated primary currents(^1) [A]</td>
<td>1250 (ext. 150%), 1875 (ext. 100%)</td>
<td>1250 (ext. 120%)</td>
<td>1250 (ext. 150%), 1875 (ext. 100%)</td>
</tr>
<tr>
<td>Rated secondary currents(^2) [A]</td>
<td>5; 1</td>
<td></td>
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<tr>
<td>Rated frequency [Hz]</td>
<td>50; 60</td>
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<tr>
<td>Insulation levels [kV]</td>
<td>12/28/75; 17.5/38/95; 17.5/42/110</td>
<td>12/28/75; 17.5/38/95</td>
<td>12/28/75</td>
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<tr>
<td>Insulating class</td>
<td>E</td>
<td></td>
<td></td>
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<tr>
<td>Ambient temperature [°C]</td>
<td>-60...+55</td>
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<tr>
<td>Reconnectable</td>
<td>primary or secondary</td>
<td>secondary</td>
<td>primary or secondary</td>
</tr>
<tr>
<td>Weight [kg]</td>
<td>30</td>
<td>24</td>
<td>43</td>
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<tr>
<td>Creepage distance [mm]</td>
<td>600</td>
<td>800</td>
<td>800</td>
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</tbody>
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1) Different primary currents can also be provided to special order.
2) It is possible to combine different values in one transformer.
3) Other classes are available on request. Maximum output burden depends on other parameters.
High ratio
Ipn=2xIp
P1 connected to C1 and P2 connected to C2

Low ratio
Ipn=Ip
C1 connected to C2

Primary ampere rating A [mm] B [mm]

<table>
<thead>
<tr>
<th>Current (A)</th>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td>5-20</td>
<td>6.5</td>
<td>38</td>
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<tr>
<td>25-1250</td>
<td>10</td>
<td>50</td>
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