MEDIUM VOLTAGE PRODUCT

KECA 80 C184; KECA 80 C216
Current Sensors
Instructions for installation, use and maintenance
Scope of Contents

1. Operating conditions
2. Technical details
3. Instructions for installation
   - Mounting
   - Secondary connections
   - Connection to the IED
   - Connection to the sensor
4. Instructions for use
   - Routine test report
5. Instructions for maintenance
6. Transport & Storage
7. Recommended procedure for disposal of the sensor
Instructions for installation, use and maintenance for the KECA 80 C184 and KECA 80 C216 current sensors

These instructions for installation, use and maintenance are valid for KECA 80 C184 and KECA 80 C216 type current sensors.

1. Operating conditions

The sensor should be mounted in dry, indoor conditions without excess ingress of dust and corrosive gases. The sensor shall be protected against unusually heavy deposits of dust or similar pollution, as well as against direct sunshine. The sensor is designed for standard ambient temperature between -5°C and +40°C (storage and transportation temperature between -40°C and +80°C). The altitude for mounting should be lower than 1000 m above sea level.

The sensor may also be used at higher altitudes when agreed upon with the manufacturer.

The current sensors type KECA 80 C184 and KECA 80 C216 are intended for use in current measurement in medium voltage switchgear. The sensors are intended to be used in factory installation if there will be requirement for current measurement. The cases of sensors are made from plastic, the internal parts are shielded and this shielding is earthed. The primary conductor shall be insulated for the application voltage. The insulation of primary conductor determines the highest permissible system voltage.

2. Technical details

Technical details for each individual current sensor are mentioned on the rating plate placed on the sensor surface. Values mentioned on the rating plate shall not be exceeded.

<table>
<thead>
<tr>
<th>KECA 80 C184</th>
<th>S/N 1VLT5414910260</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ipr</td>
<td>80 A</td>
</tr>
<tr>
<td>Usr</td>
<td>0.15V/0.180 V</td>
</tr>
<tr>
<td>Kpcr</td>
<td>15.025</td>
</tr>
<tr>
<td>fr</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Ith/Idyn</td>
<td>31.5/45s/100 kA</td>
</tr>
<tr>
<td>Ks</td>
<td>0.05/0.030</td>
</tr>
<tr>
<td>cl</td>
<td>0.0030</td>
</tr>
<tr>
<td>Kpcr</td>
<td>+0.0030</td>
</tr>
<tr>
<td>IEC 60044-8</td>
<td>Made by ABB</td>
</tr>
<tr>
<td>Date</td>
<td>01 OCT 2014</td>
</tr>
</tbody>
</table>

Tab. 1. Labels abbreviation definitions
3. Instructions for installation

Mounting
The sensor placement is around the internal spout inside the SWG’s monoblock and softly pushed onto four isolative screws (see Fig. 4). Fixation glue is applied on the end of the thread and then the sensor is fastened by four plastic closed nuts and tightened by 0.15 – 0.20 Nm (see Fig. 5).

Connection to the IED
The sensor cable is terminated by shielded RJ-45 plug connector (EIA/TIA 568A Standard) that shall be connected to the inputs of the IED. The sensor plug connector pin’s assignment is shown on Fig. 7. (Front view).
4. Instructions for use

The current sensors are used:
- To convert large currents in the primary circuit of the network to the appropriate signal for the secondary equipment (e.g., IEDs)
- To insulate primary and secondary circuits from each other
- To protect secondary equipment from harmful effects or large currents during abnormal situations in the network

The use of a sensor for other purposes than those described above is forbidden.

Routine test report
The routine test report includes following tests:
- Verification of terminal marking
- Power-frequency withstand test on secondary circuits (see Note 1)
- Test for accuracy

Correction factors are measured separately for each sensor during routine testing and are marked on the rating plate. The use of correction factors is required condition in order to achieve the declared accuracy class.

Note 1: The maximum power-frequency test voltage for current sensor secondary terminals (connector) is 0.5 kV. Test voltage can be connected between short-circuits signal wires and the earth.
5. Instructions for maintenance

Excessive dust or other kinds of pollution must be brushed off the sensor. Polluted sensors can be cleaned with spirit, petrol or toluene. Otherwise, during normal use the sensors do not need any additional maintenance.

6. Transport and storage

The permissible transport and storage temperature for sensors is from -40 to +80°C. During transport and storage the sensors must be protected against direct sunshine. The sensors are delivered packed into wooden boxes or transport pallets.

7. Recommended procedure for disposal of the sensor

The sensor does not contain environmentally hazardous materials. For disposal of the product after it has been taken out of use, local regulations, if there are any, should be followed.