Outdoor voltage transformer
Type VOG-24
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General information

Application
The VOG-24 are outdoor single-pole voltage transformers. It is made of resin insulation and is designed for networks up to 24 kV. These transformers can be equipped with two secondary windings, the first one is either for measuring or protection purposes the other connects into an open-delta configuration in a three-phase system. One terminal of each secondary winding and one of the open-delta connected terminals must be earthed during transformer operation.
Standard overvoltage factor is 1.9xU/I/8h. Other values can be supplied on request.

Construction features
The primary and secondary coils are wound using special winding and shielding techniques for improved voltage stress distribution. Each coil is carefully insulated to provide a high dielectric medium between layers. The completed winding structure and core are assembled to a support frame.

For insulation and protection, the assembly is cast in hydrophobic cycloaliphatic epoxy (HCEP). 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.

Terminals
Primary terminal is M10 copper pin with electroplated coating. Clamp-type secondary terminals accommodate 2.5 mm² through 25 mm² wire.
The M8 ground terminal is also provided for grounding the secondary circuit at the transformer.

Junction box
The metal junction box has a PG21 conduit hub on each end. The box is anchored to the body of the transformer with screws and can be easily detached, simplifying installation and change-out procedures. Junction box is equipped with stopper and cable gland. The junction box has IP 54 according to standard EN 60529

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

Mounting
The VOG-24 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.

Standards
This unit meets IEC 61869-3 standard.
Technical data

Unit performance

<table>
<thead>
<tr>
<th>Parameters</th>
<th>[kV]</th>
<th>up to 24</th>
<th>up to 60</th>
<th>up to 150</th>
<th>50, 60</th>
<th>up to 22:√3</th>
<th>1.8xUn/8h</th>
<th>2</th>
<th>up to 230:√3</th>
<th>up to 230:3</th>
<th>25/0,2; 50/0,5; 100/1; 150/3; 150/3P; 200/6P</th>
<th>500</th>
<th>[mm]</th>
<th>39</th>
<th>-40 ÷ +40</th>
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<tbody>
<tr>
<td>Highest voltage for equipment $U_m$ (r.m.s.)</td>
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<td>Rated power-frequency withstand voltage (r.m.s.)</td>
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<td>Rated lightning impulse withstand voltage (peak)</td>
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<td>Rated frequency</td>
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<td>Rated primary voltages $U_n$</td>
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<td>Standard voltage factor</td>
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<td>Max. number of secondary winding</td>
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<td>Rated secondary voltages – measuring winding</td>
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<td>Rated secondary voltages – for open delta connection</td>
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<td>Max. rated output*/classes</td>
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* sum of rated output per voltage transformers

Other value of parameters: rated output, classes, rated frequency, voltage factor, rated secondary voltage, rated primary voltage can also be supplied on request.
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