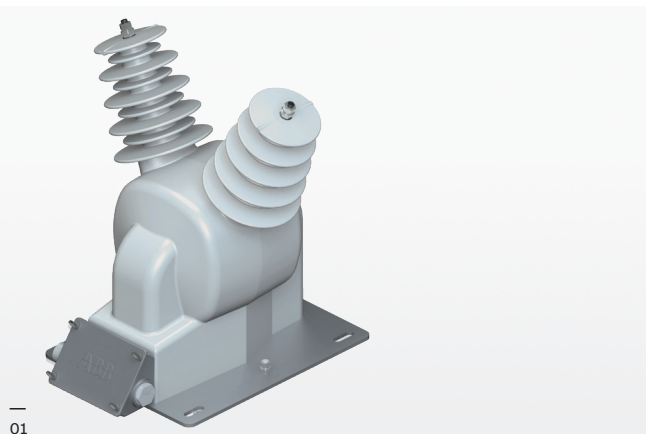


MEDIUM VOLTAGE PRODUCT

VOL-24

Outdoor voltage transformer



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01
Outdoor voltage
transformer
Type VOL-24

Application

The VOL-24 outdoor double-pole insulated voltage transformer is used for metering line-to-line circuits on networks with voltages up to 24 kV. The transformer primary terminals are connected across the respective lines, at the phase-to-phase voltage, usually in the 'V' type of connection. The majority of the transformers are equipped with a single secondary winding for measurement purposes, but a dual secondary winding is also available. One of the terminals of each secondary winding must be earthed during transformer operation.

Construction features

The primary and secondary coils are wound using special winding and shielding techniques for optimal 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) which 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.

VOL-24 double pole voltage transformers are cast in cycloaliphatic epoxy resin (HCEP), capable of withstanding challenging outdoor environmental conditions and are designed for voltage classes up to 24 kV

Terminals

The primary terminals are M10 copper studs with an electroplated coating ensuring positive electrical connection and corrosion resistance. Clamp-type secondary terminals accommodate 2.5 mm² through 6 mm² wire. The transformer is equipped with an M8 earthing terminal located on the base plate which is galvanically connected with an additional M6 grounding terminal in the terminal box.

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 changeout procedures. The junction box is equipped with a stopper and cable gland. The junction box is rated to IP 54 according to standard EN 60529: 1993/IEC 60529: 1989+A1:1999.

Baseplate and mounting

The base plate is attached to the bottom of the instrument transformer and is made of sturdy corrosion resistant aluminum. The VOL-24 can be mounted in vertical or horizontal positions.

Test reports

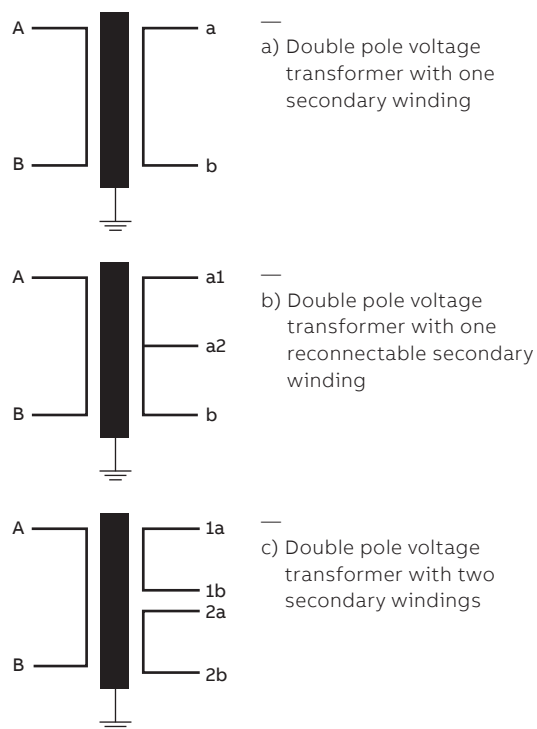
Test reports are stored electronically for each transformer and can be emailed in various formats at the time of shipment.

Standards

The VOL-24 meets the IEC 61869-3 standard.

Other rated outputs, accuracy classes, rated frequencies, rated voltage factors, and rated primary and secondary voltages can also be provided upon request.

Wiring diagram



Technical data

| Parameters | | VOL-24 |
|--|--------|------------------------------|
| Highest voltage for equipment U_m (r.m.s.) | [kV] | up to 24 |
| Rated power-frequency withstand voltage (r.m.s.) | [kV] | up to 50 |
| Rated lightning impulse withstand voltage (peak) | [kV] | up to 170 |
| Rated frequency | [Hz] | 50, 60 |
| Rated primary voltages U_n | [kV] | up to 22 |
| Voltage factor | [-] | 1,2/- or 1,5/30s |
| Max. number of secondary windings | [-] | 2 |
| Rated secondary voltages | [V] | up to 230 |
| Max. rated output*/classes | [VA/-] | 30/0,2; 50/0,5; 100/1; 500/3 |
| Thermal limiting output | [VA] | 500 |
| Creepage distance | [mm] | 800 |
| Approximate weight | [kg] | 43 |
| Ambient temperature | [°C] | -40 to +40 |

* Sum of rated output per voltage transformers.

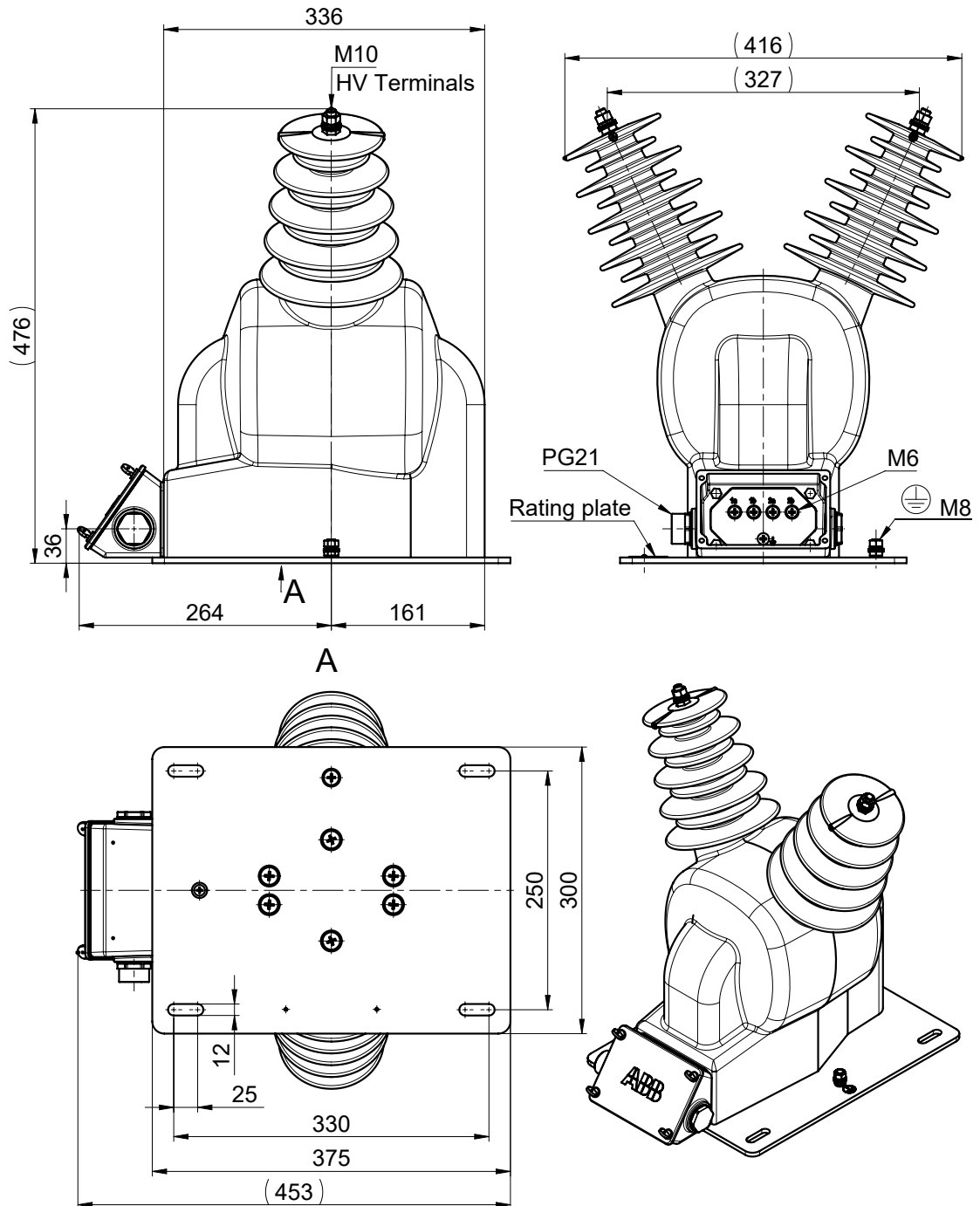
Dimensional drawing

VOL-24

WEIGHT: 43kg

CREEPAGE DISTANCE: 980 mm

CREEPAGE DISTANCE A-B: 1520 mm



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