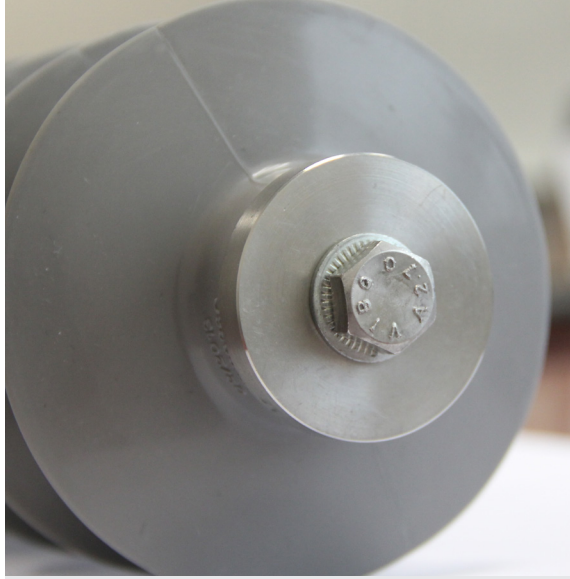


INGEPAC

SR AR

Voltage sensor
for air and pole-mounted switchgear



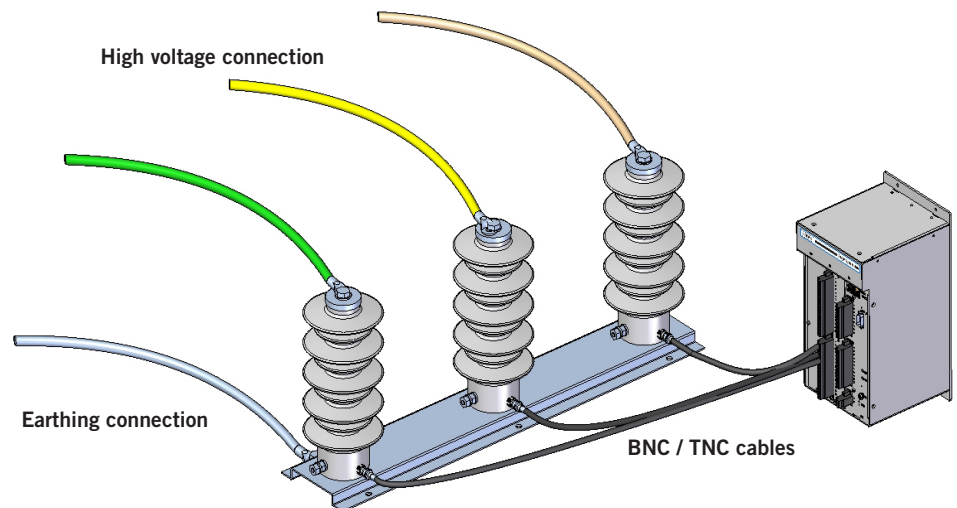
INGEPAC™ SR AR is a voltage sensor based on resistive dividers for medium-voltage application in **air-isolated and pole-mounted switchgear** up to 24 kV. Connection to the metering equipment is made using a **BNC or TNC** connector and grounding.

The sensor has a **10,000:1** transformation ratio and complies with the requirements defined in the **IEC 61869-1:2009** and **IEC 61869-3:2011** standards. Every unit is individually tested to ensure its accuracy.

Voltage metering for air switchgear

Applications:

- Protection
- Medium-voltage line supervision
- Metering and power quality



Type tests

· Precision in module and argument	$\pm 1\%$ / $\pm 1^\circ$ at -10°C , $+20^\circ\text{C}$ and $+60^\circ\text{C}$
· Industrial frequency withstand voltage	50 KV
· Lightning impulse withstand voltage	125 KV
· Partial discharges (UNE-EN 61869-1)	<50 pC for 1,2 • 24 kV <20 pC for 1,2 • 24 kV / $\sqrt{3}$
· Secondary side overvoltage protection tests	15 A @ 1 S withstand current test

Routine tests

· Precision in module and argument	$\pm 1\%$ / $\pm 1^\circ$ at ambient temperature (20°C $\pm 5^\circ\text{C}$)
· Partial discharges test (UNE-EN 61869-1)	<50 pC for 1,2 • 24 kV <20 pC for 1,2 • 24 kV / $\sqrt{3}$
· Industrial frequency withstand voltage	50 KV

General features

- Accuracy in module: $\pm 1\%$ for the temperature range defined
- Accuracy in argument: $\pm 1^\circ$ for the temperature range defined
- Service conditions: -10°C to 60°C
- Transformation ratio: 10,000:1
- Connection type: phase-ground
- Lifetime: 40 years

Electrical characteristics

- Possible primary voltages assigned: 11 kV, 13.2 kV, 15 kV, 20 kV
- Grid frequency: 50/60 Hz
- Isolation voltage (U_m): 24 KV
- Overvoltage protection: gas discharger
- Power consumed: <3 W
- Total length: 250 ± 1 mm
- Leakage line: 625 mm ± 1 mm
- Leakage line / arc distance: <3

Mechanical characteristics

- Protection level in primary side: IP65
- Primary sidematerial: silicone
- Low voltage connector: BNC or TNC type
- Earthing terminal: stud bolt and M8 screw
- Connection format with MV: M10 stud bolt with 30 mm maximum length
- Fixing: M12 screw with 25 mm maximum length
- Weight: 1480 ± 30 g
- Maximum diameter: 110 mm
- Screw material: A2 steel, hardness 70