

24/7 ASSET MONITORING SOLUTION

TSAEV11 SENSOR DATASHEET

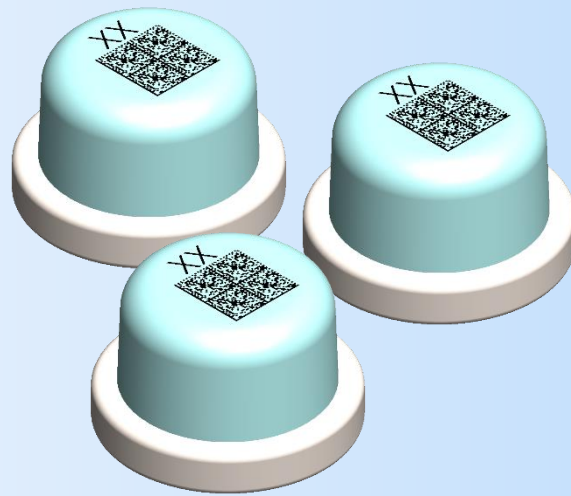
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ISO 9001:2015

BUREAU VERITAS
Certification

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APPLICATION

The *TSAEV11* sensors are dedicated to switchgear monitoring as a passive SAW temperature sensors. They are designed for use inside metallic cavities only like the switchgear cabinet and tuned to be compliant with IEC 62271 enabling a license-free use in switchgear worldwide.

This datasheet covers the following products:

- **TSA-EV11-01:** Sensor reference 1.
- **TSA-EV11-02:** Sensor reference 2.
- **TSA-EV11-03:** Sensor reference 3.
- **TSA-EV11-04:** Sensor reference 4.
- **TSA-EV11-05:** Sensor reference 5.
- **TSA-EV11-06:** Sensor reference 6.
- **TSA-EV11-07:** Sensor reference 7.
- **TSA-EV11-08:** Sensor reference 8.
- **TSA-EV11-09:** Sensor reference 9.
- **TSA-EV11-10:** Sensor reference 10.
- **TSA-EV11-11:** Sensor reference 11.
- **TSA-EV11-12:** Sensor reference 12.
- **TSA-EV11-13:** Sensor reference 13.
- **TSA-EV11-14:** Sensor reference 14.
- **TSA-EV11-15:** Sensor reference 15.

FIXATION MODES

The sensor can be mounted either directly with one screw (not included) on the live part or on the surface of a fork metallic carrier (configuration 1), either with two high end tie wraps inserted into a plastic ring (configuration 2).

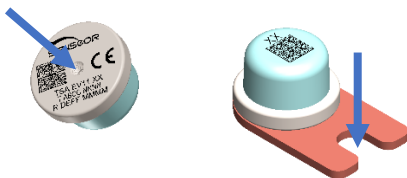


Figure 1: Configuration 1

Or



Figure 2: Configuration 2

SPECIFICATIONS

PRODUCT REFERENCES	WIKA PART NUMBER
TSAEV1101	14578144
TSAEV1102	14578152
TSAEV1103	14578153
TSAEV1104	14578156
TSAEV1105	14578158
TSAEV1106	14578160
TSAEV1107	14578163
TSAEV1108	14578166
TSAEV1109	14578168
TSAEV1110	14578172
TSAEV1111	14578177
TSAEV1112	14578180
TSAEV1113	14578184
TSAEV1114	14578208
TSAEV1115	14578209

TEMPERATURE MEASUREMENT	
Operating range	From -25 to +150°C
Accuracy	± 2°C from 0°C to +120°C ± 3°C from -25 to 0°C and from 120°C to 150°C

TECHNICAL CHARACTERISTICS	
Mode	Passive
Radiation pattern	Omnidirectional

PHYSICALS	
Dimensions	Ø 34 x 21 mm
Weight	44 g
Ingress protection code	IP67
Enclosure	Silicone resin
Fixation modes	<ul style="list-style-type: none"> Using the thread under the sensor base (M5) Using fork metallic carriers (references <i>FORK-M9/10/14-TSA-EV</i> or <i>MOUNTING-BRACKET-TSA-EV</i>) Using plastic ring (reference <i>RING-TSA-EV</i>) + 2x high end tie wraps 390 mm length (reference <i>TIE-WRAP-TSA-EV</i>)

OPERATION	
LV/MV/HV	Withstand dielectric, short-circuit, 185kV lightning tests & 545kV voltage on site – no current limitation (by design)
Requirements	Sensor must be fixed on the live parts No metallic parts within 3 cm around the sensor

CERTIFICATIONS

RoHS 2011/65/EU and 2015/863/EU

IEC 62271-1: Switchgear – lightning impulse voltage, power frequency voltage, partial discharge measurement tests

IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-30

IEC 60068-2-6, IEC 60068-2-78

IEC 60255-21-1, IEC 60255-21-3



PRODUCT MARKING

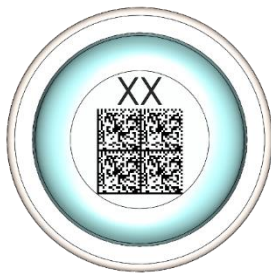


Figure 3: Top view



Figure 4: Bottom view

PHYSICAL DIMENSIONS OF SENSOR

Unit in mm.

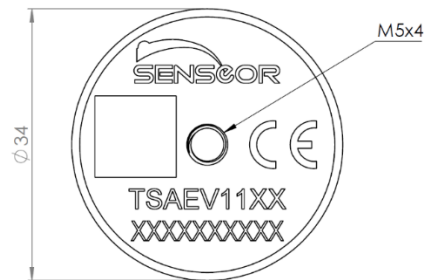


Figure 5: Bottom view

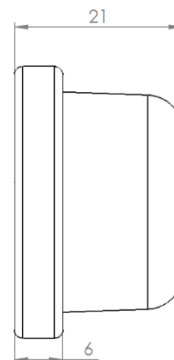


Figure 6: Side view

PHYSICAL DIMENSIONS OF FIXATION MODES

Unit in mm.

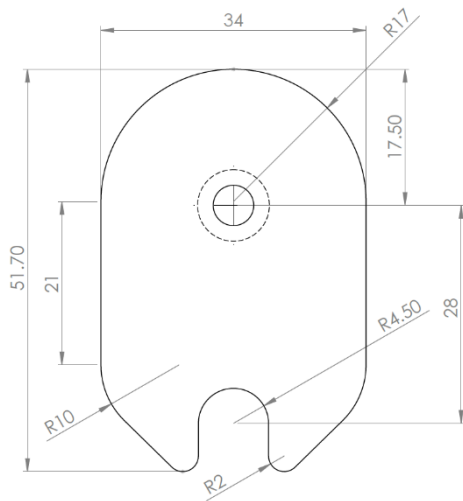


Figure 7: FORK-M9-TSA-EV (2 mm thickness)

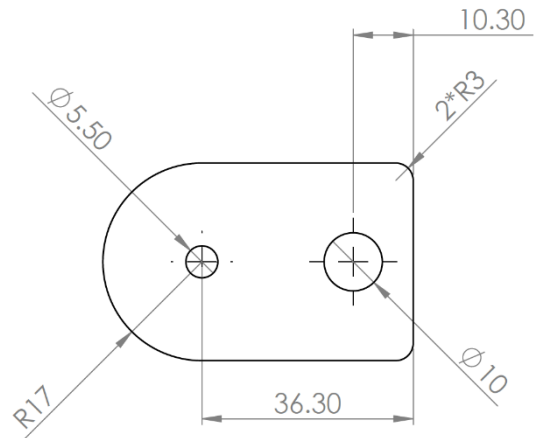


Figure 10: MOUNTING-BRACKET-TSA-EV (3.5 mm thickness)

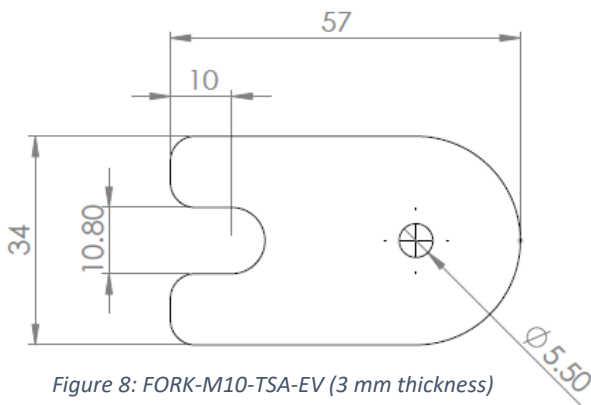


Figure 8: FORK-M10-TSA-EV (3 mm thickness)

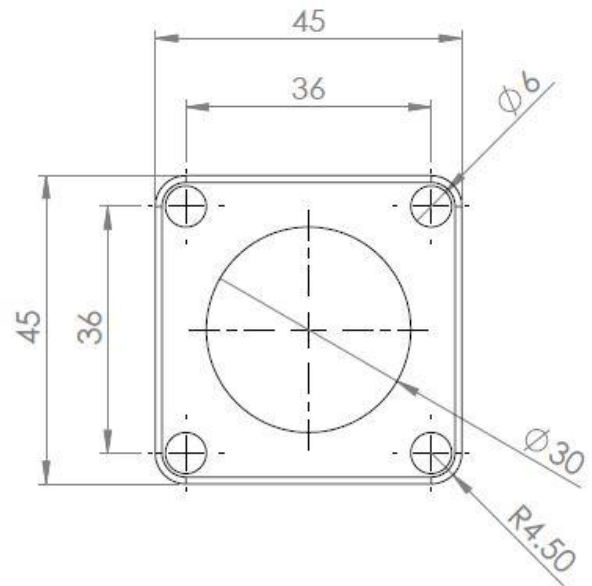


Figure 11: RING-TSA-EV

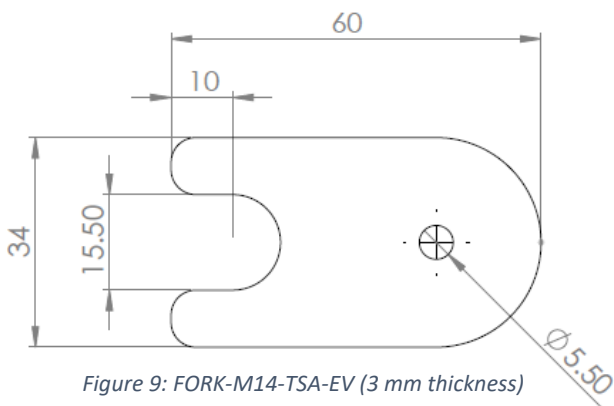


Figure 9: FORK-M14-TSA-EV (3 mm thickness)

