

## 24/7 ASSET MONITORING SOLUTION ENERGY

## TSA-EV11 SENSOR DATASHEET

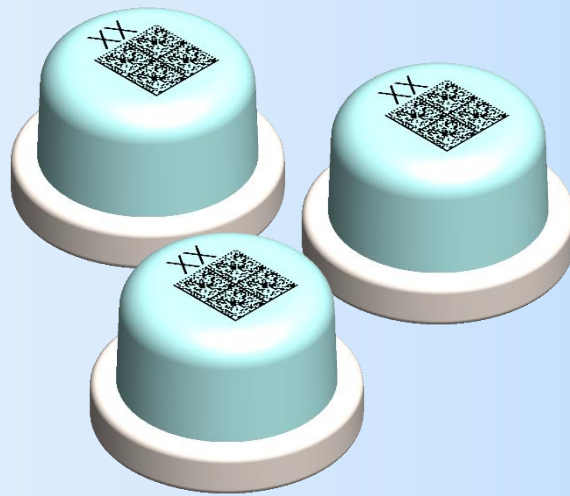
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## APPLICATION

This datasheet describes the specifications of the *TSA-EV11 surface temperature SAW sensor*. Configured to an HTR02 or AMS01 reader, this last generation of sensor is designed for the *SENSeOR* temperature monitoring solution.

This sensor has been designed specifically to measure inside a switchgear cubicle and operation under high current and voltage.

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 with one screw (not included) on the surface of a metallic carrier (left configuration), either with two tie wraps inserted into a plastic ring (right configuration).

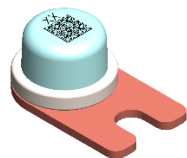


Figure 1: Sensor fixed with FORK-MX-TSA-EV type

Or



Figure 2: Sensor fixed with RING-TSA-EV

**When mounted with a metallic carrier, sensors must be grabbed by the metallic base to avoid any damage on the silicone radome. Damaging this part of the sensor may result in significant performance losses for which SENSeOR will not be responsible.**

## SPECIFICATIONS

### TSA-EV11 SENSOR

Product references	TSA-EV11-01	TSA-EV11-06	TSA-EV11-11
	TSA-EV11-02	TSA-EV11-07	TSA-EV11-12
	TSA-EV11-03	TSA-EV11-08	TSA-EV11-13
	TSA-EV11-04	TSA-EV11-09	TSA-EV11-14
	TSA-EV11-05	TSA-EV11-10	TSA-EV11-15
Measurement temperature 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		
Operating frequency range	From 430 to 450 MHz – depending on sensor reference		
Radiation pattern	Omnidirectional		
Polarization	Vertical		
Operating temperature range	From -30 to +160°C		
LV/MV/HV operation	Withstand dielectric, short-circuit, 185kV lightning tests & 545kV voltage on site – no current limitation (by design)		
Ingress protection code	IP67 as per IEC 60529		
Dimensions	Ø 34 x 21 mm		
Weight	44 g		
Fixation modes	M5 x 4 mm screw (included) with a metallic carrier (copper, references <i>FORK-M10-TSA-EV</i> and <i>FORK-M14-TSA-EV</i> ) Plastic ring (PTFE, reference <i>RING-TSA-EV</i> ) with two tie wraps (extra H.T. cable tie up to +150°C, reference <i>TIE-WRAP</i> S)		
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 CEPRI-EETC06-2019-0023 / CCAM19LP1860T6		

## PRODUCT LABEL

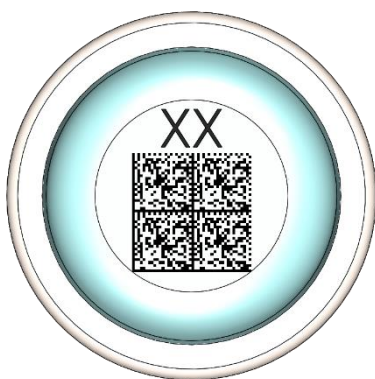


Figure 3: Top view



Figure 4: Bottom view

**PHYSICAL DIMENSIONS**

Unit in mm.

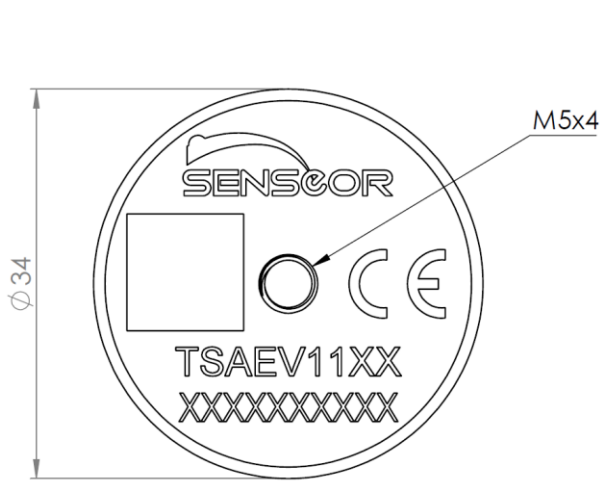


Figure 5: Sensor bottom view

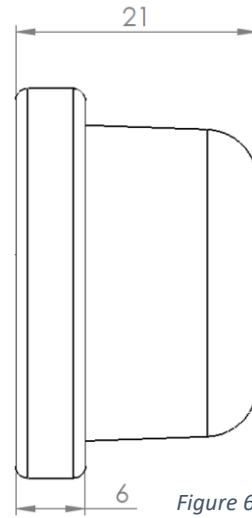


Figure 6: Sensor side view

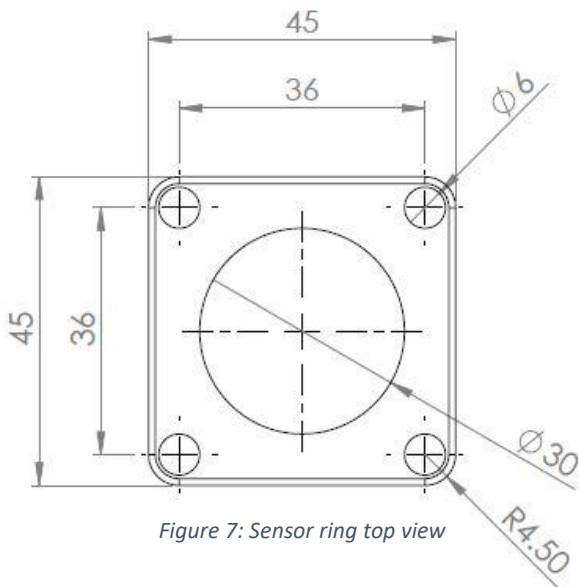


Figure 7: Sensor ring top view

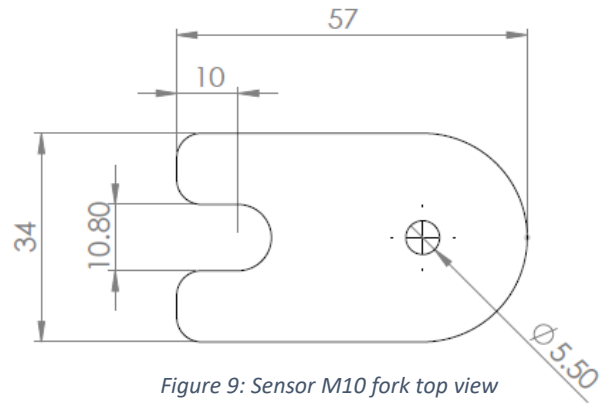


Figure 9: Sensor M10 fork top view

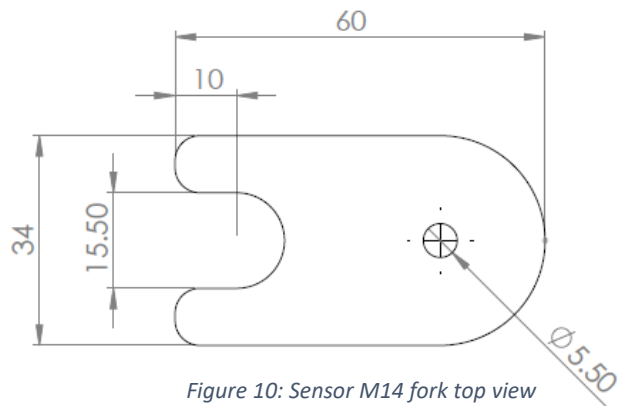


Figure 10: Sensor M14 fork top view

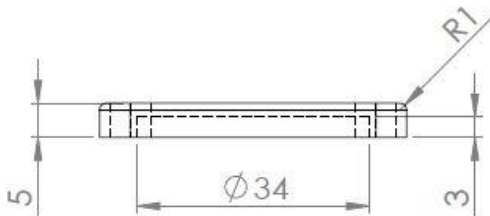


Figure 8: Sensor ring side view

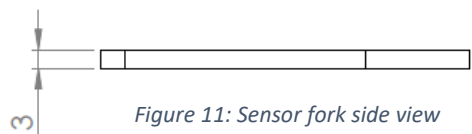


Figure 11: Sensor fork side view

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