

Surface acoustic wave sensor for temperature measurement

Model TSA-EV11

WIKA data sheet SP 63.27

Applications

- Condition monitoring for medium-voltage switchgear in conjunction with the reader (AMS01), the antenna (AN-F1) for partial discharge detection by UHF and the environmental sensor (EXT-ENV-SENS)
- Measurement and monitoring of the temperature of live conductors
- Compatible with ANSI and IEC medium-voltage standards
- New installation or retrofitting of medium-voltage switchgears

Special features

- Wireless and passive temperature sensor
- Easy to install and commission
- Maintenance-free
- Comprehensive data communication (local, remote, Modbus®, SCADA, IIoT PD service)

**SAW temperature sensor, model TSA-EV11**

Description

The advanced monitoring solution for monitoring partial discharge and temperature in medium-voltage switchgear uses surface acoustic wave and ultra high frequency sensing technology. It features an integrated IIoT platform to improve the safety, efficiency and durability of medium-voltage switchgear.

By using condition monitoring systems, approx. 75 % of disruptions can be prevented through early fault detection, thus reducing both maintenance costs and intervals.

The model TSA-EV11 passive SAW temperature sensor is designed for switchgear monitoring. By measuring and monitoring the temperature of live conductors, overheating and overloading can be prevented.

The sensor can only be used in metal cavities such as control cabinets.

It is IEC 62271 compliant and can therefore be used in switchgear worldwide without a licence.

Specifications

Operating conditions	
Place of use	Indoor
Temperature of use / Operating temperature	-25 ... +150 °C [-13 ... +302 °F]
Mounting type	■ Using the threaded hole under the sensor base (MS) ■ Using metal fork carriers (FORK-M9/10/14-TSA-EV or MOUNTING-BRACKET-TSA-EV) ■ Using a plastic ring (RING-TSA-EV) and 2 high-quality cable ties with a length of 390 mm [15.35 in] (TIE-WRAP-TSA-EV)
Ingress protection of the complete instrument	IP67
Case	Silicone resin
Weight	44 g [1.55 oz]

Temperature measurement	
Accuracy	
0 ... 120 °C [32 ... 248 °F]	±2 °C [35.6 °F]
-25 ... 0 °C [-13 ... +32 °F]	±3 °C [37.4 °F]
120 ... 150 °C [248 ... 302 °F]	±3 °C [37.4 °F]

Characteristics	
Mode	Passive
Radiation characteristics	Omnidirectional

Approvals

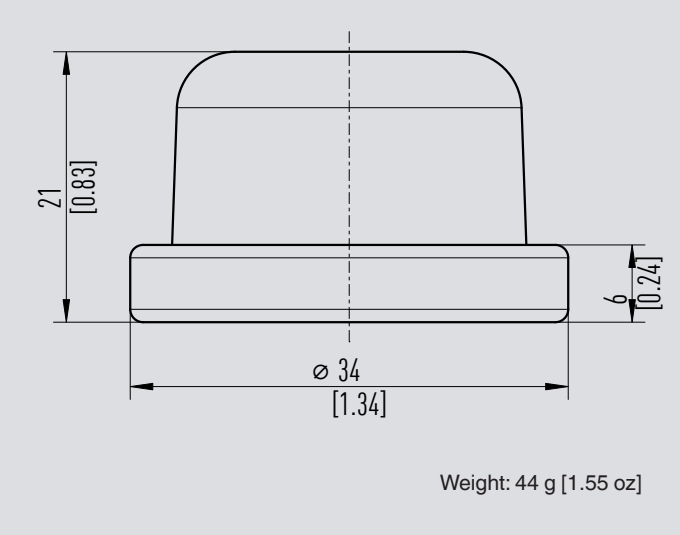
Logo	Description	Region
	EU declaration of conformity	European Union
	RED – Radio Equipment Directive EN 300328, harmonised frequency band 2,400 ... 2,500 MHz is used; Bluetooth® 5.2 Low Energy (BLE), max. transmission power 3.3 mW. The instrument may be used without restrictions in the EU and in the EFTA countries.	
	RoHS directive	
-	NCC - CCAM Radio approval	Taiwan
-	WPC Radio certification	India

Optional approvals

Logo	Description	Region
	UL Safety (e.g. electrical safety, overpressure, ...)	USA and Canada

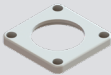
→ For approvals and certificates, see website

Dimensions in mm [in]



Accessories and spare parts

Mounting systems for temperature sensor

Model	Description	Order number
	FORK-M9-TSA-EV FORK-M10-TSA-EV FORK-M14-TSA-EV	14578210 14578211 14578212
	RING-TSA-EV	14578214
	TIE-WRAP-TSA-EV	14578215

Ordering information

To order the described product the order number is sufficient.

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