

Critical Asset Monitoring



Temperature Sensors

The IntelliSAW temperature sensors are the ideal method for real-time, continuous monitoring of low and medium voltage critical asset hot-spots such as bus bars, breaker contacts, and cables.

Surface acoustic wave (SAW) technology enables a 100% wireless, passive (no power required) continuous temperature monitoring sensor. The SAW sensors were specifically designed for electrical power assets with basic insulation levels (BIL) up to 185kV.

Benefits

- 100% passive. No power source required
- Designed for electrical power critical asset environments
- 20+ year operational expectancy
- Small, simple to fit existing asset structures
- Type tested for low and medium voltage applications

Integrated Antenna (IS)

The Integrated Antenna SAW Sensors are the most reliable method of thermal monitoring in a wide range of electrical power critical asset applications including switchgear, bus ties, bus ducts, transformers, and generator circuit breakers. The sensors seamlessly interface to all IntelliSAW Critical Asset Monitoring systems and provide up to twelve measurement locations per asset.



Specifications

Temperature Measurement

Range	-25°C to +125°C
Resolution	± 0.2°C
Accuracy	
Standard Range (0 to 80°C)	± 2°C
Full Range	± 4°C
Number of Sensor Channels	12 (non-overlapping channels)
Sensor Frequencies	Between 425 MHz to 442 MHz

Physical

Base Plate Material	260 Brass, Tin Plated
Cover Material	Polycarbonate, UL94-HB
International Protection (IEC 60529)	IP 30
Cover Dielectric Strength	15 kV
Dimensions	30.5 W x 53.5 L x 35.5 mm H

Mounting

Bolt (Max)	13 mm or ANSI ½ in.
Mounting Torque (Max)	102 N-m (75 lb-ft) Use asset manufacturer's recommended bolt torque at all times. A high strength flat washer between the nut and sensor must be used.
Alternative Solutions	Cable Tie: 5.5 W x 1.65 mm Thick (Max) Non-conducting ETFE, 150°C operating temperature (McMaster-Carr 70215K93) Bonding Tape: 3M VHB 4646 Bonding Tape (150°C Operating temperature)

Type Testing

IEC 62271-100	MV Switchgear, Voltage withstand: 95 kV/1m, 185 kV pulse
IEC 62271-200	MV Switchgear, Short circuit with stand: (63 kA/3s, 171 kA peak)



Sensor Groupings

Sensors are grouped with unique color codes to support easy installation and visualization in electrical power assets. When commissioning a system, care must be taken not to duplicate same sensor frequency bands within a given asset. IntelliSAW recommends selecting sensors based on their groupings for optimal performance. Please contact sales for more details.

COLOR	SENSOR BANDS
Orange	01, 03, 05
White	02, 04, 06
Grey	07, 09, 11
Tan	08, 10, 12



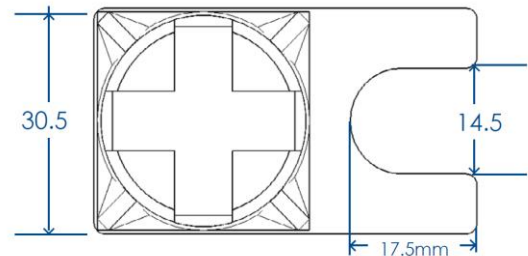
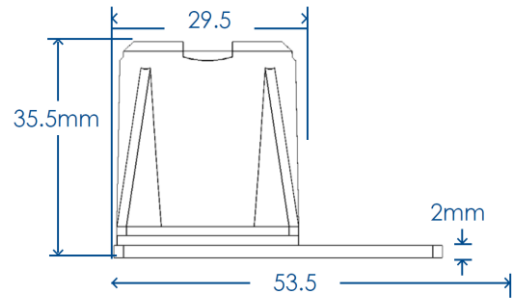
Suitable For



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GROUP
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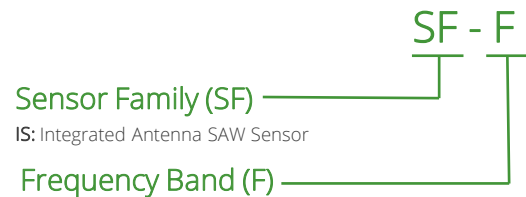
TECHIMP
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Mechanical



Model numbers

Not all model combinations are stocked. Please contact sales before ordering.



- 01: Band 01
- 02: Band 02
- 03: Band 03
- 04: Band 04
- 05: Band 05
- 06: Band 06
- 07: Band 07
- 08: Band 08
- 09: Band 09
- 10: Band 10
- 11: Band 11
- 12: Band 12



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