IRISS ESC-STC Sensor

Wireless Ambient Temperature, Humidity, Surface Temperature, and Current Condition Monitoring

Overview

The Surface Temperature Current Sensor is a compact, high-accuracy device within the E Sentry Connect system, built for reliable performance in tough industrial environments. It tracks ambient and surface temperature, humidity, and electrical current, giving teams real-time insight into equipment health and energy use. Connecting to the E Sentry Hub via Long Range Bluetooth Low Energy, it becomes part of a smart condition monitoring network that enables proactive maintenance and audit-ready documentation. With a -20°C to +80°C range, full humidity coverage, and a 3+ years battery life, it delivers durable, hands-off monitoring for critical systems.

Key Features

Multi-Parameter Connection Monitoring

Combines surface temperature measurement and current monitoring directly at the connections, turning small gradients at bus joints into early alerts before they fail.

Low Cost, Easy to Use

With plug-and-play setup and intuitive controls, the ESC-STC can begin transforming your maintenance program without a huge upfront investment.

Bridge The Gap Between Inspections

The ESC-STC provides continuous data between scheduled infrared inspections, reducing the chance of missing a rapidly escalating hotspot.

Turn Any Asset into a Smart Asset

The ESC-STC transforms your existing assets into smart, connected assets with real-time visibility, data insights, and automated alerts that drive safer and more efficient operations.

Wireless Continuous Condition-Monitoring

The battery-powered wireless ESC-STC deliver continuous, real-time visibility into your critical assets—no cables, no hassle, cutting installation time and costs dramatically.

American Made, Globally Trusted

The ESC-STC is proudly designed, engineered, and built in the USA - delivering the quality, reliability, and innovation expected from American manufacturing.

Specifications

Model	ESC-STC
General Specifications	
Dimensions (H x W x D)	3.4 in x 1.6 in x 0.73 in (87 mm x 40 mm x 18.5 mm)
Weight (Including Battery)	36 g (0.080 lbs) with Battery
Operating Temperature	-20°C to 80°C (-4°F to 176°F)
Operating Humidity	5% to 85% RH (non-condensing)
Body Material	UL 94 5VA Nylon (switchgear-grade plastic); -40°C to 273°C (-40°F to 523°F)
Gasket Material	UL 94 5VA TPE; -40°C to 273°C (-40°F to 523°F)
Hardware Material	316 Stainless Steel
Battery	1x 3V CR2477
Battery Life	3+ Years
Wireless Antenna Type	Omnidirectional Dipole
Wireless Range	2,000+ ft (610 m) (Line of Sight) with E Sentry Connect Hub
Wireless Protocol	Long Range BLE
Wireless Transmission Power	8 dBm
Security	AES-128 CTR
Measurement Capabilities	Ambient Temperature, Ambient Humidity, Surface Temperature, and Current
Ambient and Surface Temperature Measurement	
Range	-20°C to +80°C (-4°F to +176°F)
Accuracy	±1.0°C (±33.8°F)
Resolution	0.01°C (0.018°F)
Repeatability	±0.15°C (±0.27°F)
Ambient Humidity Measurement	
Range	0 - 100% RH
Accuracy	±1.5% RH
Resolution	0.01%
Repeatability	±0.21%
Current Monitoring	
Range	50 - 5000 A
Accuracy	±30 A
Minimum Amp Detection	50 A
Certifications	
FCC ID: 2AE7J-ESC	
IC: 20368-ESC	
Other	
Warranty	12 Month Limited Warranty

Specifications are subject to change without notice. For the most up-to-date specs, go to www.iriss.com

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