



iTrapSensor®

MONITORING SENSOR

MODEL iT5-IS-SUN

WIRELESS SURFACE TEMPERATURE AND ULTRASONIC MEASUREMENT BASED ON ISA 100.11A

Benefits

Sensor with wireless communication for high frequency monitoring of crucial steam-using equipment such as heat exchangers, presses and turbines, equipment in difficult to reach locations, or steam traps*.

1. High frequency monitoring: measurement cycles configurable between 1 second and 1 hour.
2. Line-of-sight communication distance of 437 yd between sensor and repeater or between repeaters.
3. Powered by a long-life battery pack, replaceable in hazardous locations.
4. Surface temperature measurement up to 752 °F.
5. Intrinsically safe construction for use in hazardous and non-hazardous locations.
6. Optional extended antenna type for remote antenna mounting.

* Steam trap diagnostic software required separately. Contact TLV for details.



Specifications

Model		iT5-IS-SUN	
Type		Low Temperature	High Temperature
Maximum Measurement Temperature (°F)		482	752
Measurable Temperature Range (°F)		-40 to +482	-40 to +752
Minimum Ambient Temperature (°F)		-40	
Maximum Ambient Temperature (°F)	Maximum Measurement Temperature	-40 to < 275	176 (vertical), 176 (parallel)
		275 to < 392	167 (vertical), 170 (parallel)
		392 to < 482	152 (vertical), 167 (parallel)
		392 to < 572	—
		572 to < 752	152 (vertical), 167 (parallel)
Wireless Frequency Band		2.4 GHz	
Maximum No. of Connections		500 devices per gateway ¹⁾	
Maximum No. of Hops		4 (from access point to sensor)	
Measurement Cycle ²⁾		1 second to 1 hour	
Power Source	Type	Non-rechargeable lithium-thionyl chloride battery pack ³⁾	
	Rated Voltage	3.6 V	
	Rated Capacity	38 Ah	
Battery Life ⁴⁾		10 years for regular operation (60 s measurement cycle), or 5 years (15 s measurement cycle)	
Intrinsic Safety Specifications		ATEX: Ex II 1G Ex ia IIC T4 Ga	
		UL/cUL: Class I, Division 1, Groups ABCD	
		Class I, Zone 0, AEx ia op is IIC T4, Ex ia op is IIC T4	
Connecting Pipe		Straight pipe	
Wireless Module	Communication Protocol	ISA 100.11a, based on IEEE 802.15.4	
	Regulatory Compliance	FCC, IC, CE compliant	
	Frequency Bandwidth	2.405 to 2.480 GHz	
	Transmitter Power Output	7.0 mW/MHz	
	Communication Distance	Approx. 437 yd ⁵⁾ (with a clear line of sight)	
Protection Class		IP66 and IP67 (evaluation for intrinsic safety is performed at IP20)	
Material	Body, Cover	Aluminium Alloy Die Castings (ADC3, SG100A)	
	Sensor Tip	Stainless Steel (SUS304)	
	Heat Shield Plate	Polyetheretherketone (PEEK)	
Options		Extended antenna type: Sensor with 5 ^{5/16} in antenna and 9.8 ft or 42.7 ft cable (intrinsically safe) Sensor mounting method: Clamp or band type	

¹⁾ When using TLV-recommended system (Yokogawa Electric Corporation: YFGW410)

²⁾ Measurement cycle can be configured per sensor. Configurable cycle varies depending on gateway used.

³⁾ Battery pack can be replaced in hazardous locations.

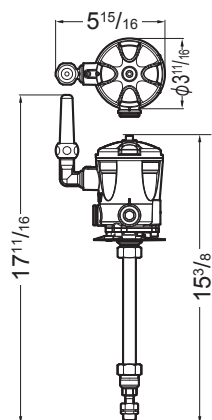
⁴⁾ Battery life is given for an ambient temperature of 77 °F and may vary depending on environmental conditions such as gateway used, transmission status and ambient temperature. ⁵⁾ Depends on environmental conditions and installation location.



To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

Dimensions

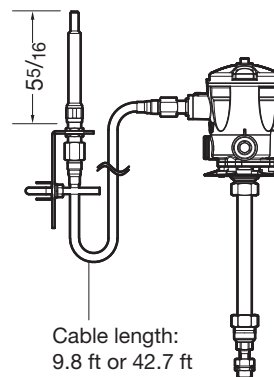
• iT5-IS-SUN Straight Pipe



Units: in
Weight: 3.2 lb
(incl. battery pack)

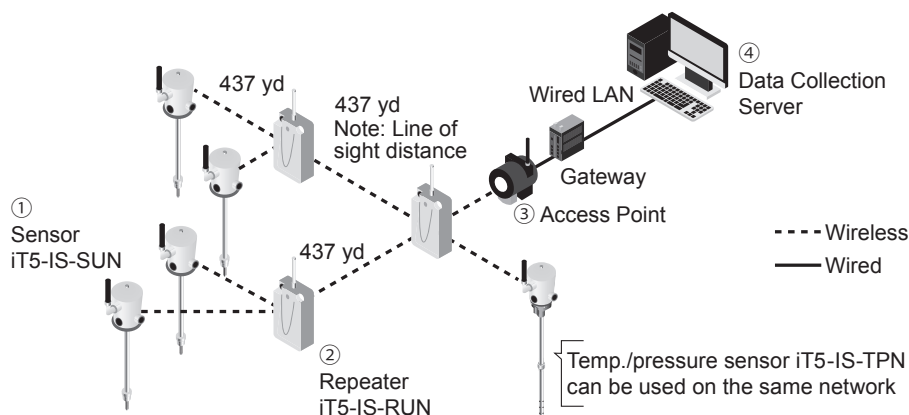
Options

Antenna Extension



Units: in

System Configuration Example



No.	Model	Function
①	Sensor: iT5-IS-SUN	Measurement of ultrasound and surface temperature, wireless transmission of information
②	Repeater: iT5-IS-RUN	Wireless relay of information
③	Access Point/Gateway	Relay of information via intranet
④	Data Collection Server	Importing collected data

Refer to individual specification data sheets (SDS) for full details.



DO NOT DISASSEMBLE OR REMOVE THIS PRODUCT WHILE IT IS UNDER PRESSURE.
Allow internal pressure of this product to equal atmospheric pressure and its surface to cool to room temperature before disassembling or removing. Failure to do so could cause burns or other injury. READ INSTRUCTION MANUAL CAREFULLY.

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Manufacturer
TLV CO., LTD.
Kakogawa, Japan
is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001
ISO 14001

