

SmartWatchWeb Steam Leak Monitor

SWW10 / SWW11

Improving Efficiency, Safety and Security

General Description

The valve monitors family SWW1X are steam leak detectors that belong to SmartWatchWeb™ monitoring system network. These devices allow to detect steam leakage on valves by monitoring ultrasounds, temperature and pressure (optional).

Typical Applications

BiTherm SmartWatchWeb™ system can be used to detect and survey steam leaks and presence of toxic or flammable gas. The steam leak monitor can be used for several applications such as:

- Improving energy efficiency.
- Reducing leaks of process gas.
- Reducing steam leaks.
- Reducing CO₂ emissions.
- Monitoring steam traps and safety valves.
- Reducing inspection costs.
- Reducing maintenance costs.

Main Features

- 4 Measurement channels:
 - Temperature.
 - Pressure (2x).
 - Ultrasounds.
- Half-Duplex communication over RS-485 bus up to 125 devices.
- Optional RF communication solution.
 - 2.4 GHz ISM band, 802.15.4 compliant.
- Certification:
 - ATEX, IECEx.
 - EMC 61326-1:2012.

- Low Power:
 - < 2 mA without pressure sensors.
 - each pressure sensor adds ~ 5 mA.
- Ip66, IP67 Protection Grade.
- Easy, non-intrusive installation.

Easy Installation

Bitherm SWW10 / SWW11 is easy to install, it being a non-invasive system, no penetration is required (except pressure sensor applications).

Field units can be installed on any kind of steam trap, safety valve or on-off valve.

Installation of field units on steam traps, safety valves, or on-off valves is made with clamps or brackets. Bitherm steam traps do not require brackets, as the sensor is mounted directly on the available connector on the top of the trap.



Valve monitor SWW1X with a pressure sensor connection.

SWW10 / SWW11 – Technical Specifications

Enclosure	Size	Body	90x90x80 mm (3.54x3.54x3.15 in)	
		Body and Connections	90x115x110 mm (3.54x4.52x4.33 in)	
	Weight		0.7 kg (1.55 lbs)	
	Material	Base	Brass/Cast Aluminum	
		Cover	Cast Aluminum	
Bolts		Stainless Steel		
Protection	IP66 , IP67 / NEMA 4x, 6 weatherproof housing			
Communications	Wired	RS-485 Half-Duplex, up to 125 devices per bus, Modbus protocol		
	Radiofrequency	2.4 GHz ISM Band, 802.15.4 standard compliant		
Sensors	Temperature	Type	NTC	
		Range	-20 to 170 °C	
	Pressure	Range	0 to 25 bar	
	Ultrasound	Type	Piezoelectric	
Frequency		40 kHz		
Operating Range	Pressure	n/a		
	Temperature	-20 to 80 °C		
	Humidity	0 to 99 %RH, non-condensing		
	Voltage	3.5 to 8 V		
Power Consumption	Idle	< 0.5 mA		
	Sampling	No extra sensors	< 2 mA	
		1 pressure sensor	< 7 mA	
		2 pressure sensors	< 12 mA	
Certification	ATEX	II 1G Ex ia IIC Ga T4 -20 < Ta < 80 °C		
	IECEX	Ex ia IIC Ga T4 -20 < Ta < 80 °C		
	EMC	IEC 61326-1:2012		
	CE Marking	According to ATEX directive (94/9/CE)		



More Information

For more information about SWW10/11 please visit www.bitherm.com or contact your Bitherm distributor.



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