

SmartWatchWeb Wireless Field Device

SWWRF40

Improving Efficiency, Safety and Security

General Description

Bitherm SmartWatch Web Radiofrequency 40 is a Wireless field device part of the SmartWatch™ monitoring network. This device is able to control up to 125 SWW field devices and send the data collected from them through a Wireless network.

SWWRF40 design is optimized for low power operation, improving lifetime of battery-powered devices.

High output power (up to 20 dBm) allows to improve link quality and maximum distance between nodes even in industrial environments.

The SWWRF40 can handle up to 125 SmartWatch Web devices, reducing the number of RF nodes in the Wireless network. This helps to reduce costs while deploying the SmartWatch network and reduces RF interferences.

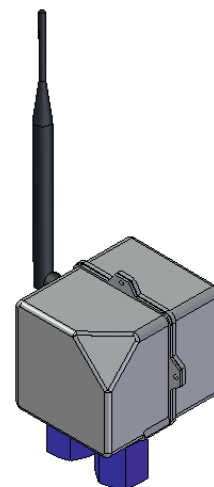
Typical Applications

Bitherm's SmartWatch™ system can be used to detect and survey steam leaks and the presence of toxic or flammable gases. Among the typical applications for this product we can list:

- Improving energy efficiency.
- Reducing deployment costs.
- Autonomous monitoring nodes.
- Network support for other Bitherm

Main Features

- 2.4 GHz ISM Band RF link:
 - 802.15.4 standard compliant.
 - Up to 20 dBm output power.
- Wireless network protocol.
 - ISA100.
- Half-Duplex communication over RS-485 bus up to 125 devices
- ATEX / IECEx Certification.
 - IECEx Pending.
- Low Power:
 - < 100 μ A while sleeping
 - down to 500 μ A equivalent continuous consumption in active mode (configuration



SmartWatchWeb RF40 enclosure,

SWWRF40 – Technical Specifications

Hardware	Size	Enclosure	90x90x80 mm (3.54x3.54x3.15 in)
		Antenna	Ø12.5x195 mm (Ø 0.49 x7.68 in)
	Weight		1.2 kg (2.65 lbs)
	Material	Enclosure	Cast Aluminum
Communications	Protection		IP66 , IP67 / NEMA 4x, 6 weatherproof housing
	Wired	RS-485 Half-Duplex, up to 125 devices per bus, Modbus protocol	
	Wireless Network protocol	ISA100	
	Radiofrequency	2.4 GHz ISM Band, 802.15.4 standard compliant	
Sensors	Battery	Range	0 to 8 V
		Resolution	13 mV
	RSSI	Range	-128 to 127 dBm
Operating Range	Temperature		-20 to 60 °C
	Humidity		0 to 90 %RH, non-condensing
	Voltage ⁽¹⁾		3.5 to 7.9 V
Power Consumption	Sleep		< 100 µA
	Active ⁽²⁾	Idle	< 15 mA
		RX	< 30 mA
		TX	< 65 mA
Certification	ATEX	Expedient	pending
		Marking	II 1G Ex ia IIC T4 Ga -20 < Ta < 60 °C
	IECEX		Pending
	EMC	Standard	IEC 61326-1:2012
	CE Marking		According with ATEX directive (94/9/CE)



More Information

For more information on the SWWRF40 please visit www.bitherm.com or contact your Bitherm distributor.



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