SIGWM

Wall mounted Wi-Fi Sentera Internet Gateway

SIGWM is an internet gateway to connect a stand-alone Sentera device or a network of devices to the Internet in order to configure or monitor them via SenteraWeb. The SIGWM makes wireless connection with an existing Wifi network. The unit has 2 Modbus RTU channels - a Master channel to communicate with the connected Slave devices, and a Slave channel to make the unit accessible for a Master controller or a BMS.

Key features

- Power over Modbus, 24 VDC supply voltage and Modbus RTU for communication with the connected devices via an RJ45 socket
- Modbus communication via 3SMCenter suite with additional CNVT-USB-RS485-V2 converter (updating Modbus registers)
- Firmware update over SenteraWeb portal
- Network connection type: Wi-Fi only
- Data transmission to and from the Internet via Wi-Fi (WLAN 802.11 b/g/n)
- Built-in Wi-Fi module
- Backup battery for real time clock, in case the power supply is interrupted
- Enclosure: plastic ABS, UL94-V0, grey RAL 7035, IP65
- Implemented MQTT protocol
- Supports TCP Client/UDP Client/HTTP Client mode
- LED indications: Connected, Error, Bootloader mode

Area of use

- Connecting Sentera devices to SenteraWeb
- Gateway for application dedicated firmware and firmware updates via SenteraWeb
- Update setpoints, ranges and other parameters from the connected Sentera slave devices
- Data monitoring and data logging via SenteraWeb
- Receive warnings and notifications (e.g. clogged filter notification, motor failure alarm, etc.) via the gateway

Technical specifications

Supply voltage		24 VDC, Power over Modbus
Imax		300 mA
Ambient conditions	Temperature	-10—60 °C
	Relative humidity	5—95 % rH, (non-condensing)
Protection standard		IP65

Wiring diagram

RJ45 socket (Power over Modbus)

Pin 1	24 VDC	Supply voltage
Pin 2		
Pin 3	A	Modbus RTU communication, signal A
Pin 4		
Pin 5	/B	Modbus RTU communication, signal /B
Pin 6		
Pin 7	GND	Ground, supply voltage
Pin 8		

Standards

- EMC Directive 2014/35/EU:
  - EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
  - EN 55011:2016 Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement Amendment A1:2017 and A11:2020 to EN 55011:2016
  - EN 55024:2010 Information technology equipment - Immunity characteristics - Limits and methods of measurement
  - EN 50561-1:2013 Power line communication apparatus used in low-voltage installations – Radio disturbance characteristics – Limits and methods of measurement – Part 1: Apparatus for in-home use Amendment AC:2015 to EN 50561-1:2013
- LVD directive 2014/35/EU:
  - EN 60950-1:2006 Information technology equipment - Safety - Part 1: General requirements Amendments AC:2011, A11:2009, A12:2011, A1:2010 and A2:2013 to EN 60950-1
  - EN 62311:2008 Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz - 300 GHz)
- Radio equipment directive 2014/53/EU:
  - EN 300 328 V2.1.1 Wideband transmission systems; data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
- ETSI EN 301 489-1 V2.1.1 (2017-02) Electro-magnetic compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU
- ETSI EN 301 489-17 V3.1.1 (2017-02) Electro-magnetic compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU
- RoHS Directive 2011/65/EU
  - EN IEC 63000:2018 Technical documentation for the assessment of electrical and electronic products with respect to the restriction of hazardous substances

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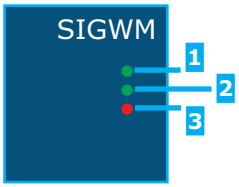
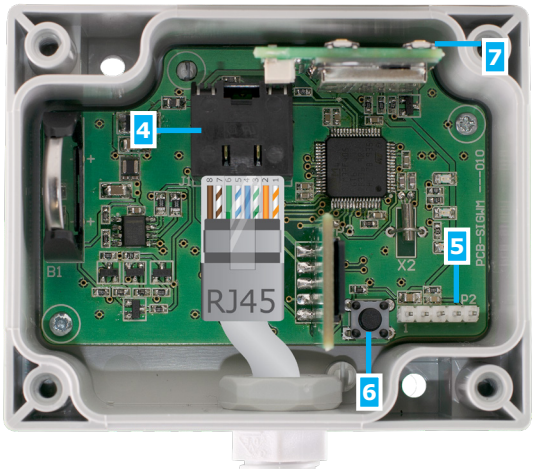
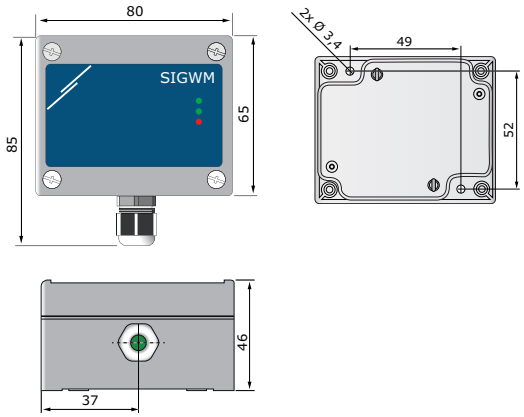
Settings and indications



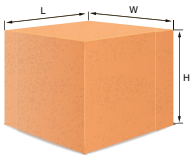


1 - Green LED1	On	The unit is supplied and connected to SenteraWeb via the internet
2 - Green LED2	Blinking slow	The unit is in bootloader mode
	Blinking	The unit is sending/receiving data from SenteraWeb
3 - Red LED3	Blinking	The unit is supplied but there is no connection with SenteraWeb
4 - RJ45 socket		To connect master/slave devices via Power over Modbus
		Blinking LEDs indicate that packages are transmitted via Modbus RTU communication
5 - PROG header, P2	 1 2 3 4 5	Put a jumper onto pins 1 and 2 and wait for at least 5 seconds to reset the Modbus communication parameters to their default values
	 1 2 3 4 5	Put a jumper onto pins 3 and 4 and restart the supply to enter bootloader mode
6 - Reset button on main PCB		Hold the reset button for 2 to 3 seconds to reset and clear the selected and stored Wi-Fi network of the device
7 - Wi-Fi reset tact switch		Same functionnality as the reset button on the main PCB

Fixing and dimensions



Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
SIGWM	Unit (1 pc.)	95	85	70	0,126 kg	0,16 kg
	Carton (10 pcs.)	492	182	84	1,26 kg	1,61 kg
	Box (60 pcs.)	590	380	280	7,56 kg	10,65 kg

Global trade item numbers (GTIN)

Packaging	SIGWM
Unit	05401003017753
Carton	05401003302408
Box	05401003503515

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Application example