



# DIGWM

## DIN rail mountable Sentera Wi-Fi Internet Gateway

### Description

DIGWM is an internet gateway intended for connecting a stand-alone Sentera device or a network of devices to the Internet in order to configure or monitor them via SenteraWeb. The DIGWM makes wireless connection with an existing Wi-Fi network. The unit has two 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 (Building Management System).

Some of the main benefits of the DIGWM internet gateway include:

- Internet Connectivity:
  - Provides wireless access to SenteraWeb for remote monitoring and configuration
  - Connects to an existing Wi-Fi network for seamless data exchange
- Modbus RTU Communication: Equipped with two Modbus RTU channels for flexible communication:
  - Master Channel:
    - » Interfaces with Slave devices such as sensors and controllers
    - » Facilitates real-time data exchange and control
  - Slave Channel:
    - » Allows the unit to be accessed by a Master controller or Building Management System (BMS)
    - » Enables easy integration into automation infrastructures

The DIGWM internet gateway reliably connects Sentera devices to IoT (Internet of Things) systems, enabling wireless access, dual Modbus RTU communication and remote monitoring through SenteraWeb.



### Key Features

- Power over Modbus Connection via the RJ45 Socket:
  - 24 VDC supply voltage
  - Modbus RTU communication
- Connectivity and Communication
  - Firmware updates via SenteraWeb
  - Data transmission through Wi-Fi (WLAN 802.11 b/g/n)
  - Implemented MQTT protocol
  - Supports TCP Client, UDP Client, and HTTP Client modes
- Additional Features
  - Backup battery for real-time clock in case of power interruption
  - LED indicators for status: Connected, Error, Bootloader mode
- Enclosure:
  - DIN rail mountable
  - Made of ABS (Acrylonitrile Butadiene Styrene) plastic (UL94-V0)
  - Colour: Grey (RAL 7035)

### Technical Specifications

Supply voltage	24 VDC, Power over Modbus	
Imax	300 mA	
Output voltage for connecting slave devices	24 VDC	
Ambient conditions	Temperature	-10—60 °C
	Relative humidity	5—95 % rH, (non-condensing)
Protection standard	IP20	

### 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		

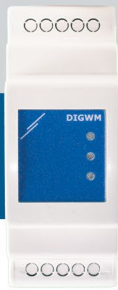


### Area of Use

- Connecting Sentera devices to the SenteraWeb service database
- Application dedicated firmware and/or firmware updates via the SenteraWeb Service Database
- Update setpoints, ranges and other parameters from the connected Sentera slave devices
- Data monitoring and data logging via the SenteraWeb Service Database
- Receive warnings and notifications (e.g. clogged filter notification, motor failure alarm, etc.)

### Standards

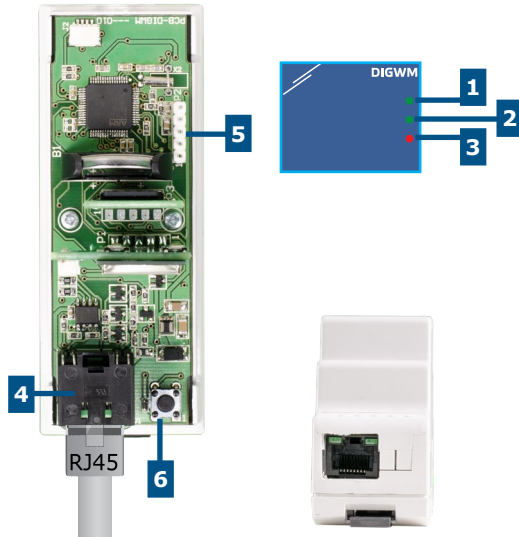
- EMC Directive 2014/30/EU
  - EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
  - EN 55011:2016 Industrial, scientific and medical equipment - Radio-frequency disturbance characteristics - Limits and methods of measurement 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 60950-1:2006
  - 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) Electromagnetic 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) Electromagnetic 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
- Commission Delegated Directive (EU) 2015/863 of 31 March 2015 amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards the list of restricted substances
  - 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 LED	On	The unit is supplied and connected to SenteraWeb via the internet
2 - Green LED	Blinking slowly	The unit is in bootloader mode
	Blinking	The unit is sending/receiving data from SenteraWeb
3 - Red LED	Blinking	The unit is supplied but there is no connection with SenteraWeb
4 - RJ45 socket		To connect master/slave devices or BMS and/or PoM power supply Blinking LEDs indicate that packages are transmitted via Modbus RTU communication
5 - PROG header, P1		Put a jumper onto pins 1 and 2 and wait for at least 5 seconds to reset the Modbus communication parameters
		Put a jumper onto pins 3 and 4 and restart the supply to enter bootloader mode
6 - Reset button		Hold the Reset button for 2-3 seconds to perform a Modbus RTU register reset and to clear the actual Wi-Fi network connection. After this, the default IP-address is restored: 192.168.1.123

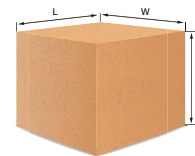
### Global Trade Item Numbers 14 (GTIN 14)

Packaging	DIGWM
Unit	5401003017760
Box	5401003503522

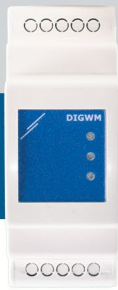
### Fixing and Dimensions

Bottom view	Top view
Front view	Rear view
Side view	

### Packaging



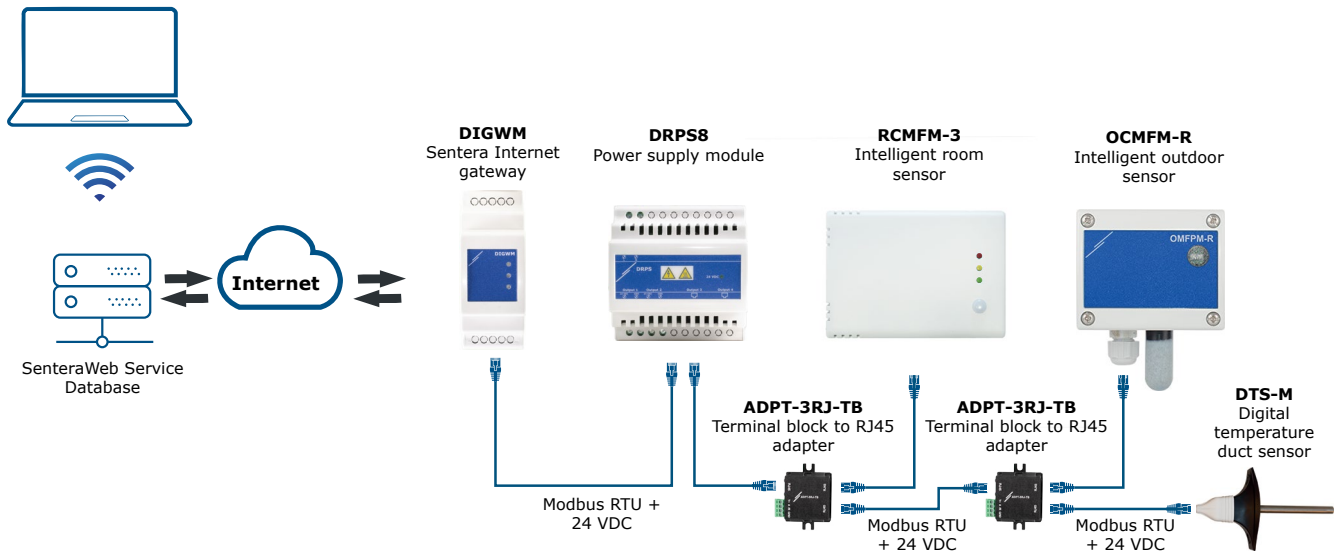
Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
DIGWM	Unit (1 pc.)	96	94	40	0,128 kg	0,158 kg
	Box (60 pcs.)	590	380	280	7,9 kg	12,2 kg



# DIGWM

## DIN rail mountable Sentera Wi-Fi Internet Gateway

### Application Example



### Application explanation

#### • System Overview:

- Sentera sensors are connected via **ADPT-3RJ-TB** adapters.
- A single system integrates different sensors for various applications.
- The system is powered by the **DRPS8** power supply module.

#### • Sensors and Their Functions:

- **RCMFM-3**
  - » Measures CO<sub>2</sub>, temperature and relative humidity.
  - » Designed for indoor use and should be wall-mounted.
- **OCMFM-R**
  - » Measures CO<sub>2</sub>, temperature and relative humidity.
  - » Designed for outdoor use, capable of withstanding harsh weather conditions.
- **DTS-M**
  - » Measures temperature.
  - » Designed for duct installation.

#### • Communication and Connectivity:

- The sensors communicate via Modbus using RJ45 cables.
- The **DIGWM internet gateway** allows remote access.
- Device parameters can be modified through the **SenteraWeb** platform.

#### • Benefits and Applications:

- Enables users to measure various parameters in different environments.
- Provides full remote control over measurements, ranges and data.
- Ideal for office buildings with enclosed parking garages, trade centres or other buildings requiring effective ventilation.