

OCTHM-R

Intelligent temperature and humidity sensor



The OCTHM-R are intelligent sensors featuring adjustable temperature and relative humidity ranges suitable for outdoor applications or tough environments. Their algorithm generates an output value based on the measured temperature and humidity values, which can be used to directly control an EC fan, an AC fan speed controller or an actuator powered damper. They are Power over Modbus supplied and all parameters are accessible via Modbus RTU communication.

Key features

- Wiring via RJ45 connector
- Suitable for harsh environments
- Selectable temperature and relative humidity ranges
- Fan speed control based on temperature and humidity
- Bootloader for updating the firmware via Modbus RTU communication
- Ambient light sensor with adjustable 'active' and 'standby' level
- Modbus RTU communication
- Long-term stability and accuracy

Article codes

Article code	Supply	Imax	Connection
OCTHM-R	24 VDC, PoM	25 mA	RJ45

Technical specifications

Supply voltage	24 VDC, Power over Modbus	
Typical range of use	Temperature range	-30—70 °C
	Relative humidity range	0—100 % rH (non-condensing)
Accuracy		±0,4 °C (-30—70 °C)
		±3 % rH (0—100 % rH)
Protection standard	IP65 (according to EN 60529)	

Area of use

- Demand controlled ventilation based on temperature and relative humidity levels
- Suitable for both indoor and outdoor use (e.g. open-air spaces, multi-storey and subterranean car parks, residential and commercial buildings)

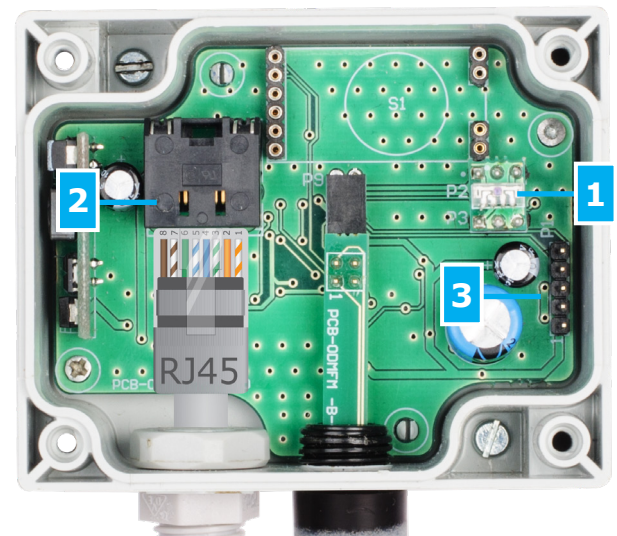
Wiring and connections

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		



Settings



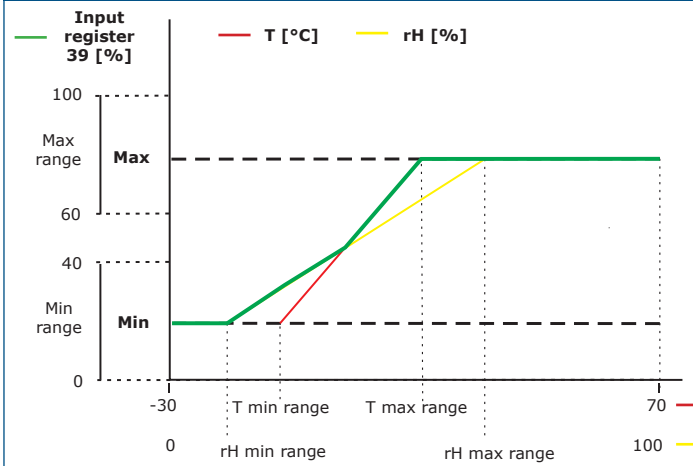
1 - Ambient light sensor		Low light intensity / Active / Standby
2 - RJ45 Socket		Plug the communication and power cable into the socket
3 - PROG header, P1		Put a jumper onto pins 1 and 2 and wait for at least 10 seconds to reset the Modbus communication parameters
		Put a jumper onto pins 3 and 4 and restart the power supply to enter bootloader mode

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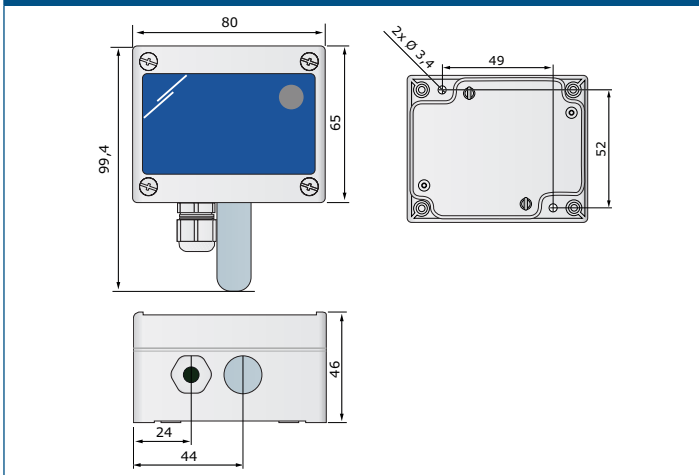


Operational diagram



Note: The output changes automatically depending on the highest of the T and rH values, i.e. the highest of the two output values controls the output. See the green line in the operational diagram above. One or multiple sensors can be deactivated. E.g. it is also possible to control the output based on the measured relative humidity values only.

Fixing and dimensions



Global trade item numbers (GTIN)

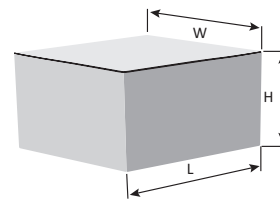
Packaging	OCTHM-R
Unit	05401003018255
Box	05401003503980
Pallet	05401003701003

Standards

- Low Voltage Directive 2014/35/EU
 - EN 60529:1991 Degrees of protection provided by enclosures: (IP Code) Amendment AC:1993 to EN 60529
- EMC directive 2014/30/EU:
 - EN 61000-6-1:2007 Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light industrial environments
 - EN 61000-6-3:2007 Electromagnetic compatibility (EMC) - Part 6-3: Generic standards - Emission standard for residential, commercial and light-industrial environments Amendments A1:2011 and AC:2012 to EN 61000-6-3
 - EN 61326-1:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements
 - EN 61326-2-3:2013 Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 2-3: Particular requirements Test configuration, operational conditions and performance criteria
- WEEE Directive 2012/19/EU
- RoHS Directive 2011/65/EU



Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
OCTHM-R	Unit (1 pc.)	105	80	55	0,115 kg	0,160 kg
	Box (80 pcs.)	590	380	280	9,20 kg	13,65 kg
	Pallet (2,240 pcs.)	1,200	800	2,100	257,6 kg	397,2 kg

Modbus registers



The Sensistart Modbus configurator allows you to easily monitor and/or configure Modbus parameters.

The parameters of the unit can be monitored / configured through the 3SMobus software platform. You can download it from the following link:



<https://www.sentera.eu/en/3SMCenter>

For more information about the Modbus registers, please refer to the product Modbus Register Map.