ODMHM-R

Multifunctional transmitter for agriculture

The ODMHM-R are multifunctional transmitters which measure temperature, relative humidity, CO_2 level and ambient light designed for applications in the agriculture industry. Based on these measurements, the dew-point temperature can be calculated. They are Power over Modbus supplied and all parameters and the output are accessible via Modbus RTU.

Key features

- Suitable for harsh environments thanks to the special ammonia resistant coating
- Selectable temperature, relative humidity and CO_2 ranges
- Bootloader for updating the firmware via Modbus RTU communication
- Day / Night detection via ambient light sensor
- Ambient light sensor with adjustable 'active' and 'standby' level
- Modbus RTU (RS485)
- Replaceable CO_2 sensor element
- Long-term stability and accuracy

Technical specifications

Supply voltage		24 VDC, Power over Modbus
Maximum power consumption		1,2 W
Nominal power consumption		0,9 W
Imax		50 mA
Selectable temperature range		-30—70 °C via Modbus RTU
Selectable relative humidity range		0—100 % rH via Modbus RTU
Selectable CO_2 range		0—10.000 ppm via Modbus RTU
Accuracy		±0,4 °C (-30—70 °C)
		±3 % rH (0—100 % rH)
		30 ppm CO_2 ±3 % (0—10.000 ppm CO_2)
Protection standard		IP65
Ambient conditions	Temperature	-30—70 °C
	Rel. humidity	0—100 % rH (non-condensing)

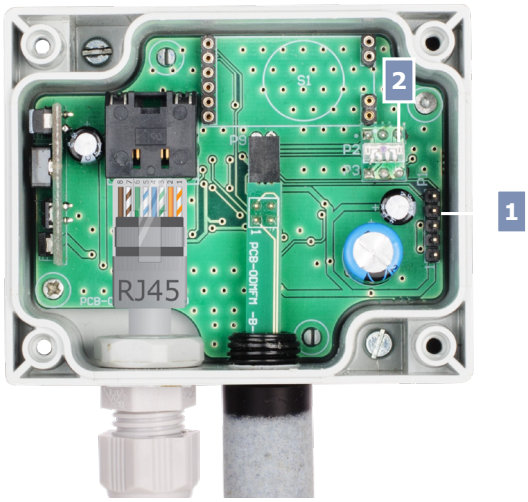
Article codes

	Supply	Connection
ODMHM-R	24 VDC, PoM	RJ45

Area of use

- Monitoring of temperature, relative humidity and CO_2 levels
- Suitable for harsh environments. Application field: greenhouses, livestock breeding farms, mushroom growing houses, etc.

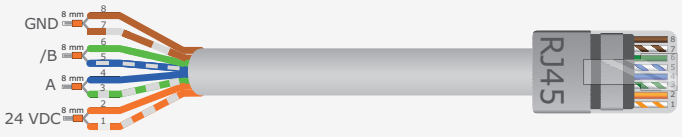
Settings



1 - PROG header, P1	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
	1 2 3 4 5	Put a jumper onto pins 3 and 4 and restart the supply to enter bootloader mode
2 - Ambient light sensor		Low light intensity / Active / Standby

Wiring and connections

24 VDC	Supply voltage 24 VDC
GND	Ground
A	Modbus RTU communication, signal A
/B	Modbus RTU communication, signal /B



Global trade item numbers (GTIN)

Packaging	ODMHM-R
Unit	05401003010686
Box	05401003502334

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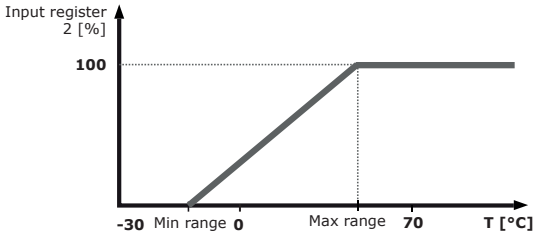
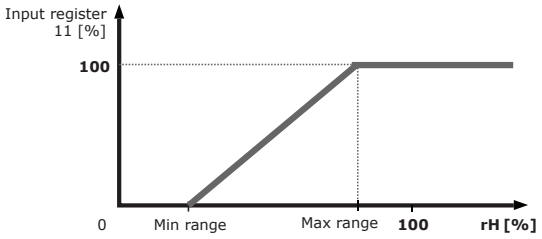
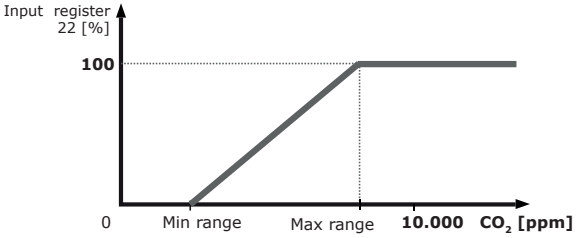
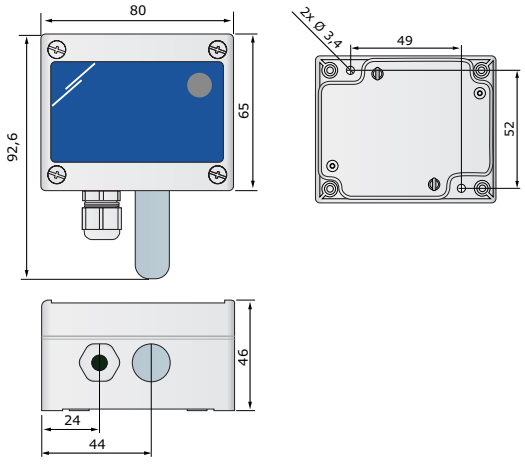
Operational diagram(s)







Fixing and dimensions



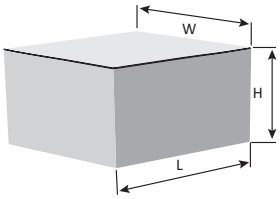
Modbus registers

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

The parameters of the unit can be monitored / configured through the 3SModbus 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.

Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
ODMHM-R	Unit (1 pc.)	110	90	50	0,125 kg	0,155 kg
	Box (80 pcs.)	590	380	280	10,00 kg	13,26 kg

Standards

- Low Voltage Directive 2014/35/EC:
  - EN 60529:1991 Degrees of protection provided by enclosures (IP Code) Amendment AC:1993 to EN 60529

CE

- EMC Directive 2014/30/EC:
  - 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 for transducers with integrated or remote signal conditioning
- WEEE 2012/19/EC
- High protective conformal coating
  - MIL-I-46058C qualified
  - IPC-CC-830
- RoHS Directive (2011/65/EU) and EPA 33/50 compliant

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Application example