



ODTHM

Temperature and humidity outdoor transmitter

The ODTHM are multifunctional outdoor transmitters which measure outdoor temperature, relative humidity and ambient light. Based on these measurements, the dew-point temperature can be calculated. They are Power over Modbus supplied and all parameters are accessible via Modbus RTU.

Key features

- Selectable temperature and relative humidity ranges
- Bootloader for updating the firmware via Modbus RTU communication
- Day / Night detection via ambient light sensor
- Adjustable 'active' and 'standby' level depending on the ambient light intensity
- Modbus RTU (RS485)
- Long-term stability and accuracy

Technical specifications

Supply voltage	24 VDC, Power over Modbus	
Maximum power consumption	0,6 W	
Nominal or average power consumption in normal operation	0,45 W	
Imax	25 mA	
Selectable temperature range	-30—70 °C via Modbus RTU	
Selectable relative humidity range	0—100 % rH via Modbus RTU	
Accuracy	±0,4 °C (-30—70 °C)	
	±3 % rH (0—100 % rH)	
Enclosure	Protection class	IP65 (according to EN 60529)
	Material	POLYFLAM® RABS 90000 UV5, colour: grey RAL 7035
Ambient conditions	Temperature	-30—70 °C
	Rel. humidity	0—100 % rH (non-condensing)



Area of use

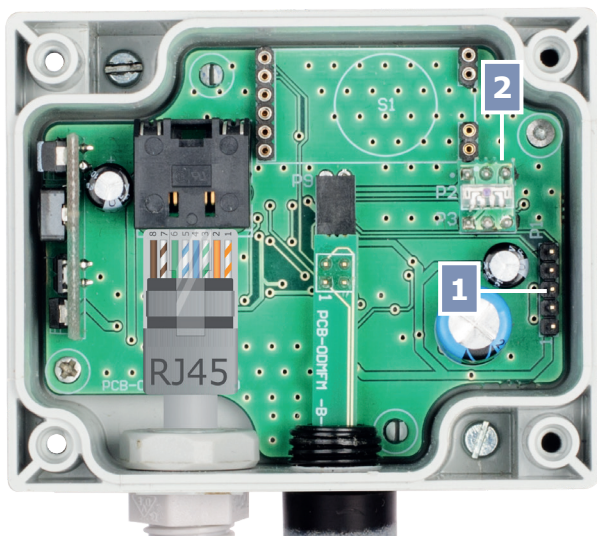
- Monitoring temperature and relative humidity in HVAC applications
- Suitable for both indoor and outdoor use

Wiring and connections



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

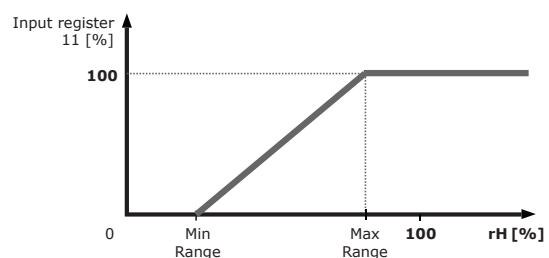
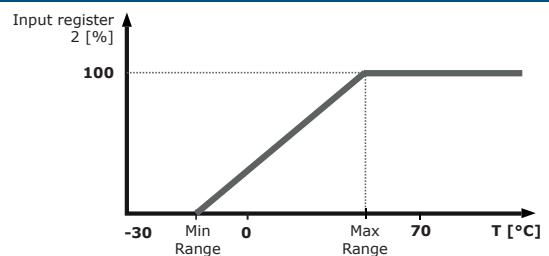
Settings



1 - 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
2 - Ambient light sensor		Low light intensity / Active / Standby

indicates the position of the jumper)

Operational diagrams

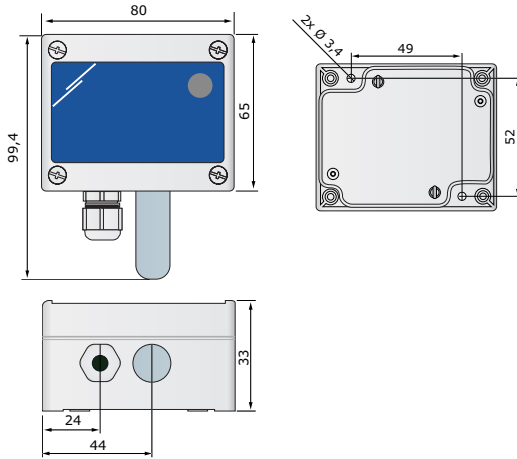




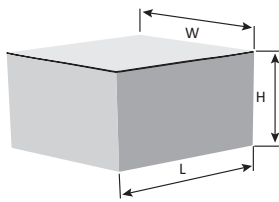
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Dimensions



Packaging



Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
Unit (1 pc.)	110	90	50	0,12 kg	0,15 kg
Box (80 pcs.)	590	380	280	9,60 kg	12,86 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



- 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 Directive 2012/19/EC

- RoHS Directive 2011/65/EC

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.



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Application example

