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)

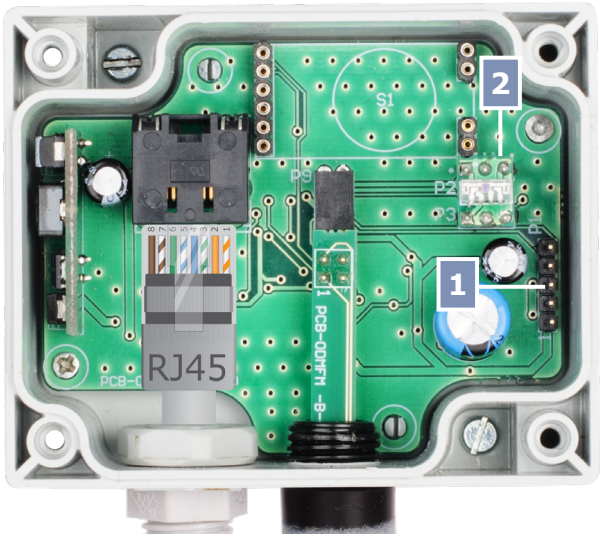
Area of use

- 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

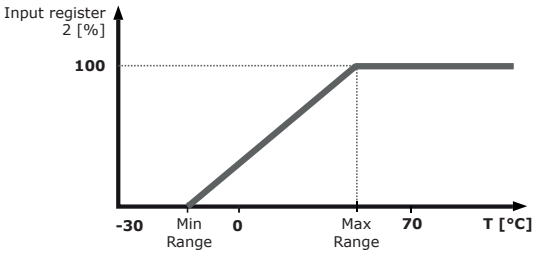
Settings

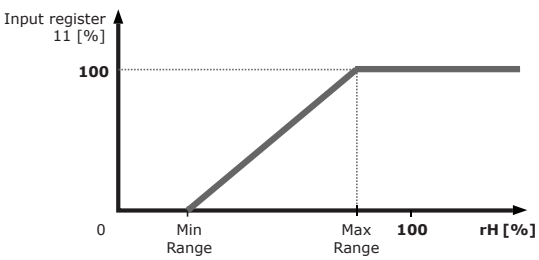


1 - PROG header, P1	1 2 3 4 5	Put a jumper onto pins 1 and 2 and wait for at least 5 seconds to reset the Modbus communication parameters
	1 2 3 4 5	Put a jumper onto pins 3 and 4 and restart the supply to enter bootloader mode
2 - Ambient light sensor		Low light intensity / Active / Standby

(■■ indicates the position of the jumper)

Operational diagrams

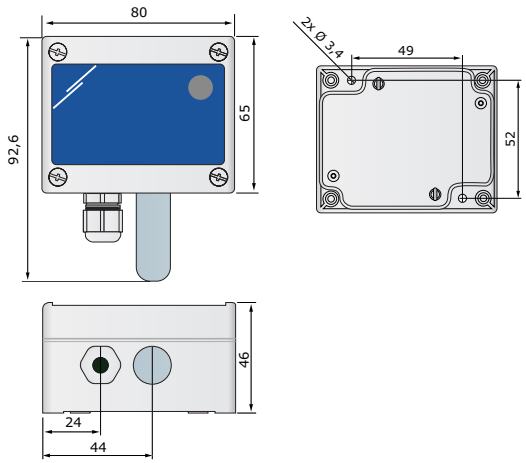




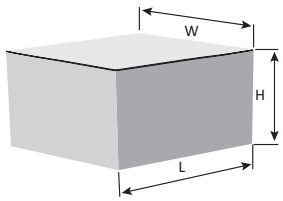
ODTHM

Temperature and humidity outdoor transmitter

Dimensions



Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
ODTHM	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.

Global trade item numbers (GTIN)

Packaging	ODTHM
Unit	05401003010693

SENTERA CONTROLS

ODTHM

Temperature and humidity outdoor transmitter

Application example