



DSMHM-2R

Multifunctional duct transmitter with corrosion protection

The DSMHM-2R are multifunctional duct transmitters which measure temperature, relative humidity and CO₂ concentration level. They are treated with anti-corrosion and ammonia resistant coating that makes them suitable for applications in the agriculture and horticulture industry or other harsh environments. Based on the temperature and relative humidity measurements, the dew point is calculated. They are Power over Modbus supplied and all parameters are accessible via Modbus RTU.

Key features

- Selectable temperature, relative humidity and CO₂ ranges
- Bootloader for updating the firmware via Modbus RTU communication
- Modbus RTU (RS485)
- Replaceable CO₂ NDIR sensor element
- Long-term stability and accuracy
- Electronic components treated with anti-corrosion and ammonia resistant coating

Technical specifications

Supply voltage	24 VDC, Power over Modbus	
Maximum power consumption	1,08 W	
Nominal power consumption	0,81 W	
Imax	45 mA	
Typical range of use	Temperature range	-30—70 °C
	Relative humidity range	0—100 % rH (non-condensing)
	CO ₂ range	400—5.000 ppm
Accuracy	± 0,4 °C (range -30—70 °C)	
	± 3% rH (range 0—100 %) ± 30 ppm (range 400—5.000 ppm)	
Min. airflow velocity	1 m /s	
Protection standard	Enclosure: IP54, Probe: IP20	



Article codes

Supply	
DSMHM-2R	Power over Modbus, 24 VDC

Area of use

- Monitoring duct temperature, relative humidity and CO₂ level in HVAC applications
- Suitable for harsh environments. Application field: greenhouses, livestock breeding farms, mushroom growing houses, etc.

Modbus registers



The Sensistant Modbus configurator allows you to easily monitor and/or configure Modbus parameters. Designed to be used in combination with PDM or DPOM modules.



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/Downloads>

You can find register maps in the mounting instructions. Download them from: <https://www.sentera.eu/en/Product>

Standards




- EMC Directive 2014/30/EC:
 - 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
- High protective conformal coating
 - MIL-I-46058C qualified
 - IPC-CC-830
- WEEE Directive 2012/19/EC
- RoHS Directive 2011/65/EC and EPA 33/50 compliant

Wiring diagram

RJ45 socket (Power over Modbus)

Pin	Signal	Description
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		

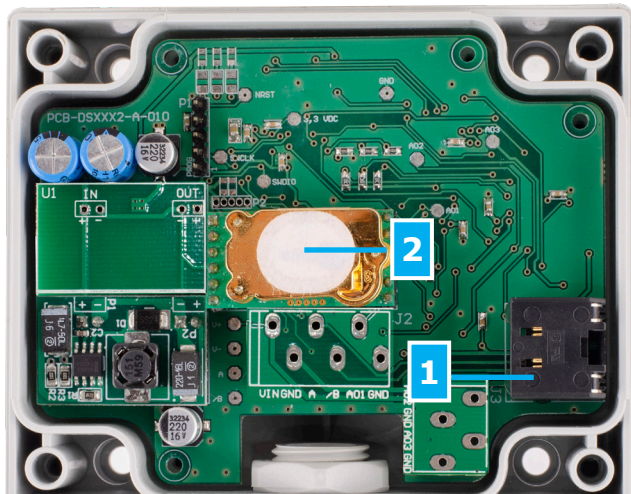


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Settings



1 - RJ45 socket

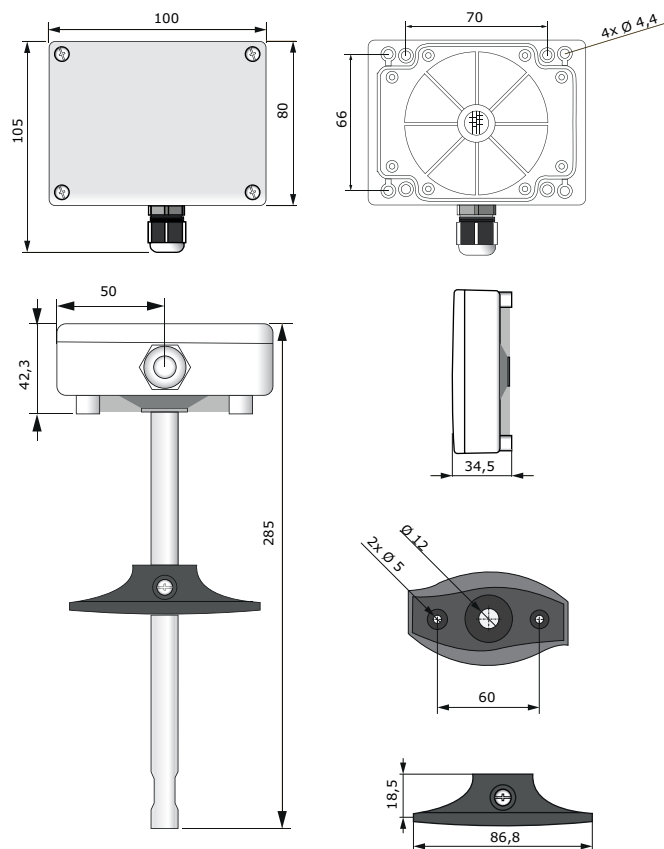


Plug the communication and power cable into the socket

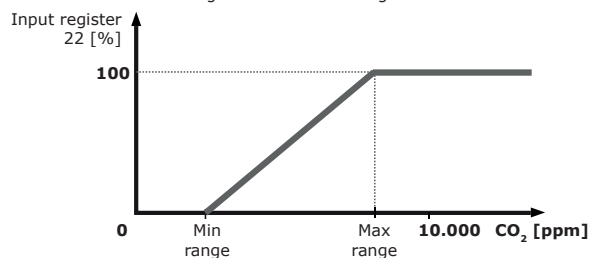
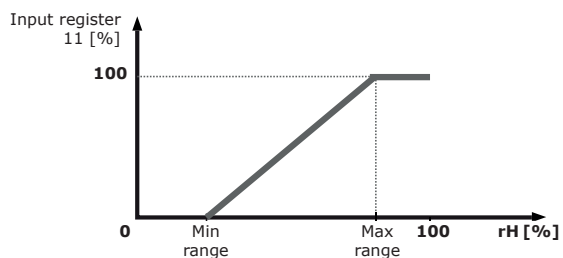
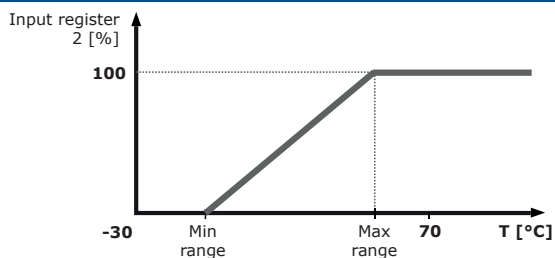
2 - CO₂ sensor element

Replaceable in case of faulty operation

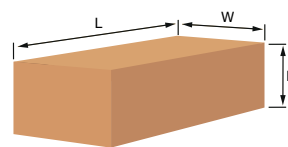
Fixing and dimensions



Operational diagram(s)



Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
DSMHM-2R	Unit (1 pc.)	310	115	115	0,16 kg	0,24 kg
	Box (20 pcs.)	590	380	505	3,20 kg	6,03 kg