DSMFM-2R

Multifunctional duct transmitter

The DSMFM-2R are multifunctional duct transmitters which measure temperature, relative humidity and CO_2 concentration level. 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 CO_2 ranges
- Bootloader for updating the firmware via Modbus RTU communication
- Modbus RTU (RS485)
- Replaceable CO_2 NDIR sensor element
- Long-term stability and accuracy

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 field of use	Temperature range	-30—70 °C
	Relative humidity range	0—100 % rH (non-condensing)
	CO_2 range	400—2.000 ppm
Accuracy		± 0,4 °C (range -30—70 °C)
		± 3% rH (range 0—100 %)
		± 30 ppm (range 400—2.000 ppm)
Min. airflow velocity		1 m /s
Protection standard		Enclosure: IP54, probe: IP20

Article codes

	Supply
DSMFM-2R	Power over Modbus, 24 VDC

Area of use

Monitoring duct temperature, relative humidity and CO_2 level in HVAC applications

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.

Wiring diagram

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		

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
- WEEE Directive 2012/19/EC
- RoHs Directive 2011/65/EC

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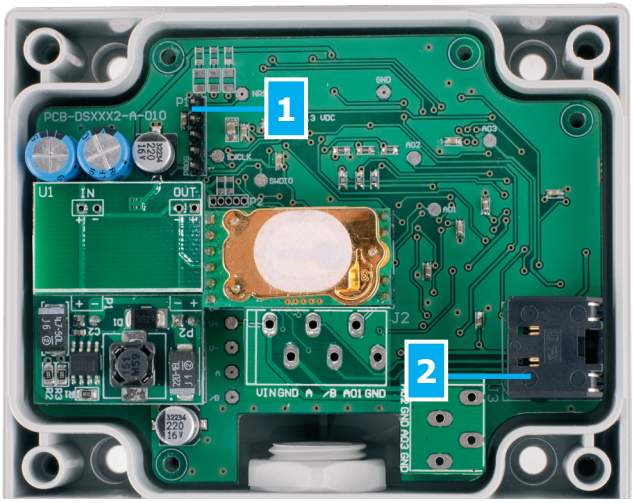
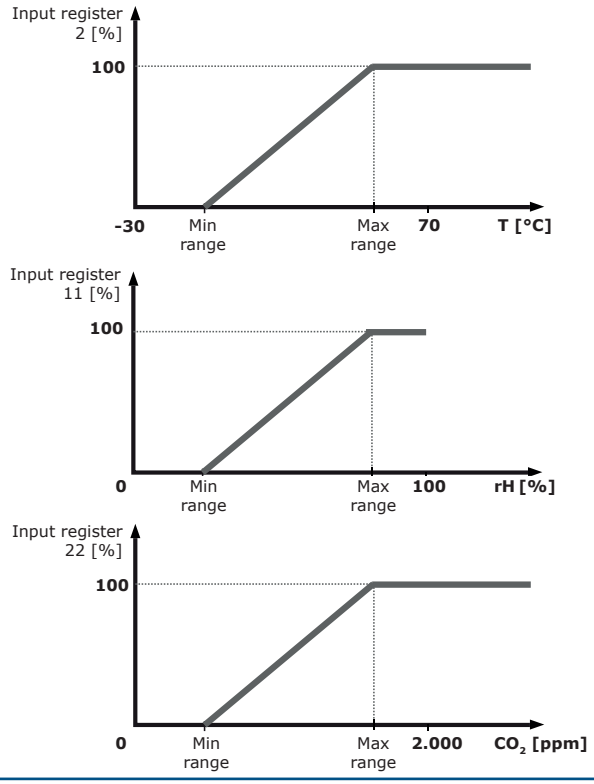
Settings



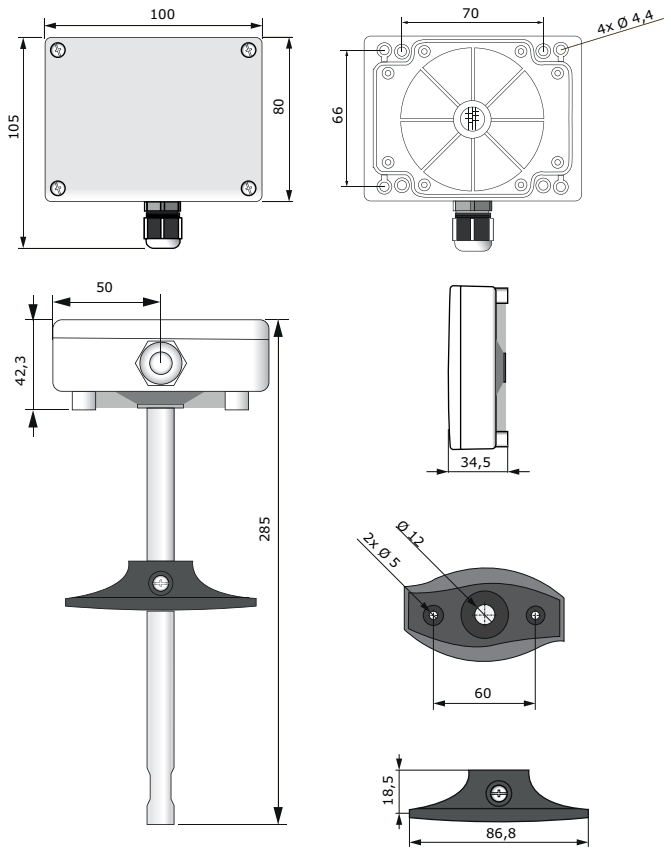
1 - PROG header, P1	1 2 3 4 5	Put a jumper onto pins 1 and 2 and wait for at least 5 seconds to reset the Modbus communication parameters
	1 2 3 4 5	Put a jumper onto pins 3 and 4 and restart the supply to enter bootloader mode
2 - RJ45 Socket		Plug the communication and power cable into the socket

(indicates the position of the jumper)

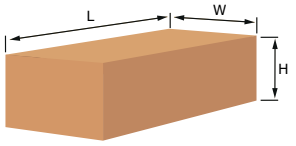
Operational diagram(s)



Fixing and dimensions



Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
DSMFM-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