SENTERA
CONTROLS

DSVCM-R
Air quality duct transmitter

DSVCM-R are multifunctional duct transmitters which measure temperature, relative humidity and a broad range of total volatile organic compounds (TVOCs). The TVOC concentration is an accurate indicator for air quality. 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

- Suitable for duct mounting
- Selectable temperature, relative humidity and TVOC ranges
- Silicon based sensor elements for TVOC measurements
- Bootloader for updating the firmware via Modbus RTU communication
- Modbus RTU (RS485)
- Long-term stability and accuracy
- Replaceable TVOC sensor module

Area of use

- Measurement of temperature, relative humidity and TVOC in ducts
- Monitoring of air quality in ducts

Article codes

Article code	Supply	Imax	Connection
DSVCM-R	24 VDC, PoM	110 mA	RJ45

Technical specifications

Supply voltage		24 VDC, Power over Modbus
Warm-up time		15 minutes
Typical field of use	Temperature range	-30—70 °C
	Relative humidity range	0—100 % rH (non-condensing)
	TVOC range	0—60.000 ppb
Accuracy		±0,4 ºC (-30—70 ºC)
		±3 % rH (0—100 % rH)
Protection standard		Enclosure: IP54; probe: IP20

Wiring and connections

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		

Operational diagrams
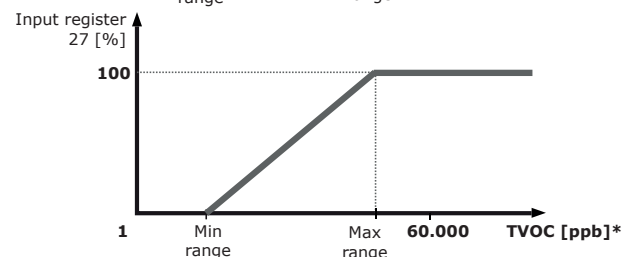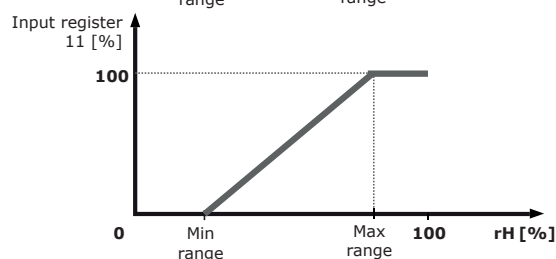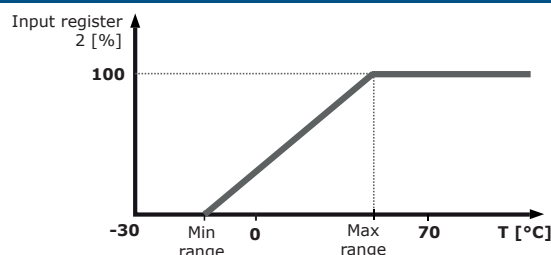
TVOC measurement will return 0 ppb during warm-up time.

Settings

1 - RJ45 Socket		Plug the communication and power cable into the socket
2 - TVOC sensor element		Replaceable in case of faulty operation

Standards

- 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.
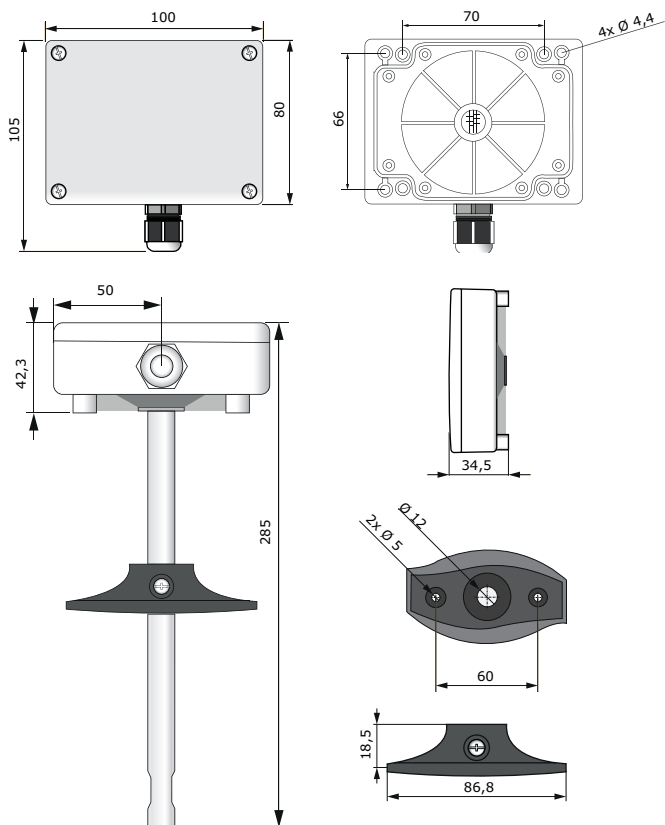
The parameters of the unit can be monitored / configured through the 3SModbus software platform. You can download it from the following link: https://www.sentera.eu/en/3SMCenter

For more information about the Modbus registers, please refer to the product Modbus Register Map.

Fixing and dimensions

Global trade item numbers (GTIN)

Packaging	DSVCM-R
Unit	05401003002025
Box	05401003500774

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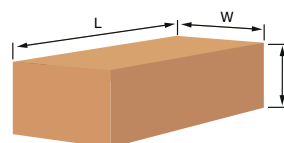
Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
DSVCM-R	Unit (1 pc.)	310	115	115	0,16 kg	0,24 kg
	Box (20 pcs.)	590	380	505	3,20 kg	6,03 kg