



DCCOM-R

Intelligent CO/NO₂ duct sensor

The DCCOM-R are intelligent multifunctional duct sensors featuring adjustable temperature, relative humidity and CO / NO₂ ranges. The used algorithm generates an output value based on the measured T, rH and CO / NO₂ levels which can be used to directly control an EC fan, an AC fan speed controller or an actuator powered damper. They are Power over Modbus supplied and all parameters are accessible via Modbus RTU.

Key features

- 24 VDC power supply via RJ45 (PoM)
- Fan speed control based on T, rH and CO / NO₂
- Selectable temperature, relative humidity and CO / NO₂ ranges
- Silicon based sensor element for CO / NO₂ measurements
- Bootloader for updating the firmware via Modbus RTU communication
- Modbus RTU communication
- Long-term stability and accuracy
- Replaceable CO / NO₂ sensor module

Area of use

- Demand controlled ventilation based on temperature, relative humidity and CO / NO₂
- Suitable for mounting in air ducts

Article codes

Article code	Supply	I _{max}	Connection
DCCOM-R	24 VDC, PoM	40 mA	RJ45

Technical specifications

Supply voltage	24 VDC, Power over Modbus		
Warm-up time	1 hour		
Typical range of use	Temperature range	-30—70 °C	
	Relative humidity range	0—100 % rH (non-condensing)	
	CO range	0—1.000 ppm	
	NO ₂ range	0—10 ppm	
Accuracy	±0,4 °C (-30—70 °C)		
	±3 % rH (0—100 % rH)		
Protection standard	Enclosure: IP54; probe: IP20		

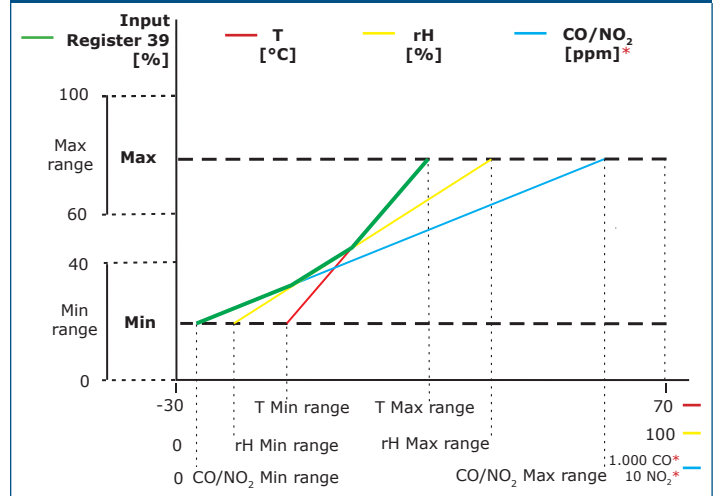
Wiring and connections

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 diagram



*CO and NO₂ measurements will return 0 ppm during warm-up time.

Note: The output changes automatically depending on the highest of the T, rH or CO/NO₂ values, i.e. the highest of the three output values controls the output. See the green line in the operational diagram above. One or multiple sensors can be deactivated. E.g. it is also possible to control the output based on the measured CO value only. It is not possible to control the output based on the measured CO and NO₂ levels simultaneously.

Global trade item numbers (GTIN)

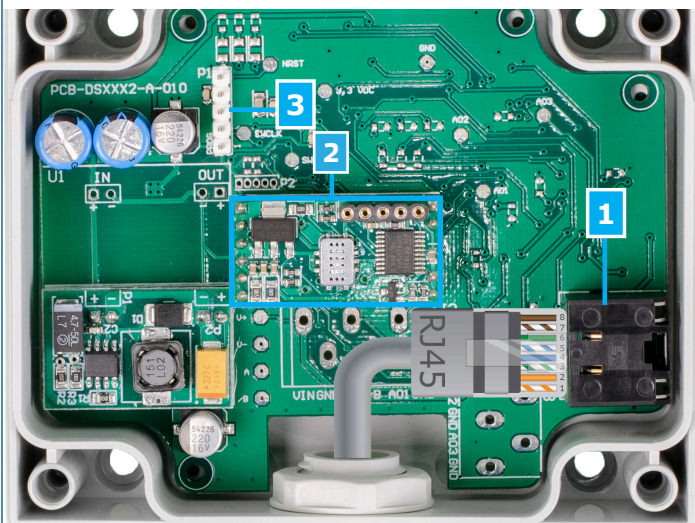
Packaging	DCCOM-R
Unit	05401003018200
Box	05401003503935




DCCOM-R

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Connection

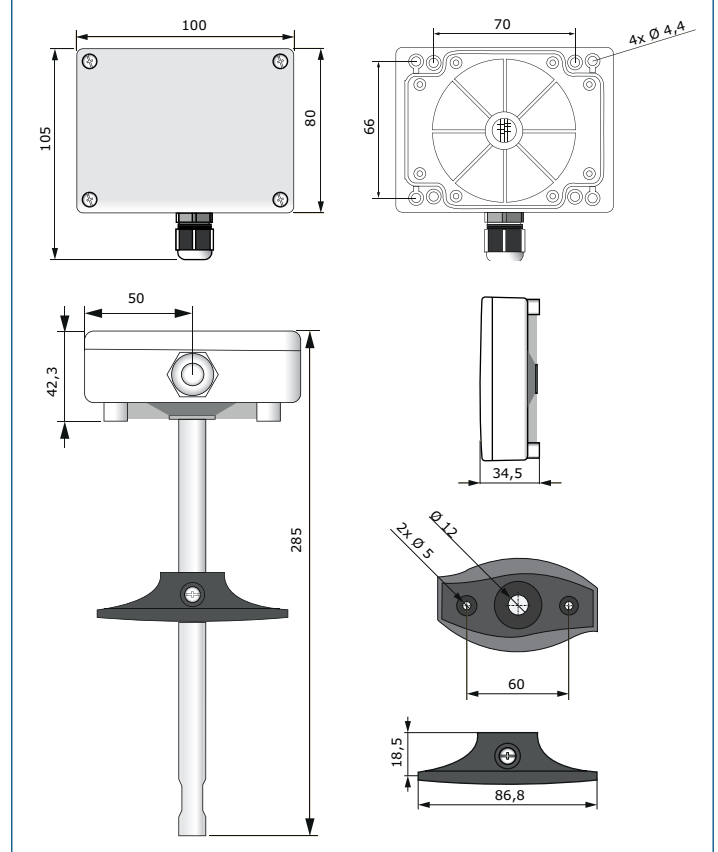


1 - RJ45 Socket		Plug the communication and power cable into the socket
2 - CO / NO ₂ sensor element		Replaceable in case of faulty operation
3 - PROG header, P1		Put a jumper onto pins 1 and 2 and wait for at least 5 seconds to reset the Modbus communication parameters
		Put a jumper onto pins 3 and 4 and restart the supply to enter bootloader mode

Standards

- CE**
- Low Voltage Directive 2014/35/EU
 - EN 60529:1991 Degrees of protection provided by enclosures (IP Code) Amendment AC:1993 to EN 60529
 - EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
 - EMC directive 2014/30/EU:
 - EN 60730-1:2011 Automatic electrical controls for household and similar use - Part 1: General requirements
 - 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 2012/19/EU
 - RoHS Directive 2011/65/EU

Fixing and dimensions

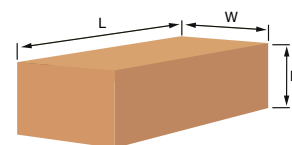


Modbus registers



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.

Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
DCCOM-R	Unit (1 pc.)	310	115	115	0,16 kg	0,26 kg
	Box (20 pcs.)	590	380	505	3,20 kg	6,50 kg