CO_2 duct sensor with ModBus output

SDCM

Description

The SDCM CO_2 sensor measures air quality through the presence of carbon dioxide in air ducts in the range between 0 and 2000 ppm. The measurement of CO_2 concentration happens through a NDIR sensor that operates on an infrared basis and which compensates the presence of any impurity. The product is provided with ModBus 485 output.

Technical specifications

Measurement range CO_2	0...2000 ppm
Accuracy CO_2	< ± 60 ppm +2% FS (at 25°C and 1013 mbar)
Accuracy temperature (*)	±0,3°C (5...60°C) + 1% FS
Accuracy humidity (*)	±2% RH (20...80%RH) + 2% FS
Power supply	12...24 V AC/DC
Consumption	max. 9 mA
Sensible element	NDIR self adjusting
Output	ModBus RS485 (ASCII/RTU)
Electrical connection	Screw terminal for cables 1,5 mm^2
Protection type	IP65
Working range RH	10...95% RH in contaminant-free, non-condensing air
Working temperature °C	-20...+50°C
Storage temperature	-20...+50°C
Installation	Mounting flange (included)
Standards	CE conformity, RoHS

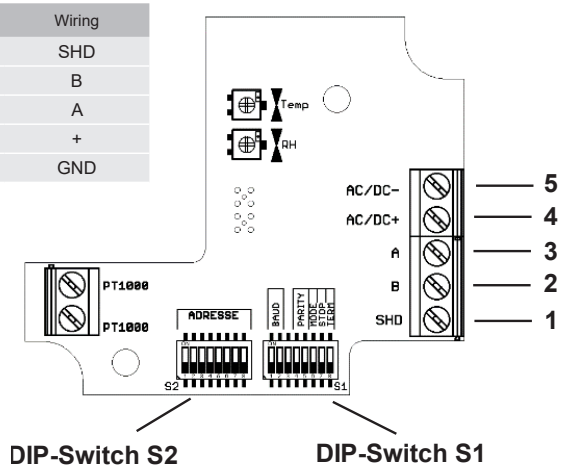
Model	Temperature	Humidity
SDCM	-	-
SDCTM	•	-
SDCTHM	•	•

Measurement source

Unit	ModBus source	Gain
ppm CO_2	10	10
Temperature °C	20	10
Relative humidity %u.r.	21	10
Absolute humidity g/m^3	22	10
Dewpoint °C	23	10
Enthalpy J	24	10

Electrical wirings

PIN	Wiring
1	SHD
2	B
3	A
4	+
5	GND



DIP Switch 1

Setting	1	2	3	4	5	6	7	8
Baudrate								
9600	OFF	OFF						
19200	OFF	ON						
38400	ON	OFF						
57600	ON	ON						
Termination								
nessuna								OFF
120 Ω								ON
Parity								
Even				OFF	OFF			
Odd				OFF	ON			
No parità				ON	OFF			
No parità				ON	ON			
Modality								
RTU						OFF		
ASCII						ON		
Bit stop								
1							OFF	
2							ON	

DIP-switch 2

Address	1	2	3	4	5	6	7	8
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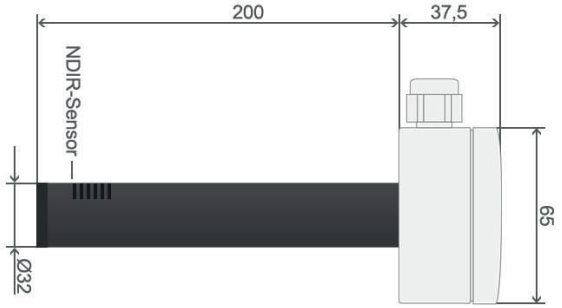
ON		Switch at: ON
OFF		

Dimensions (mm)



Installation