



Description

The SDC CO₂ sensor measures air quality through the presence of carbon dioxide in air ducts in the range between 0...2000 ppm / 0...5000 ppm. The measurement of CO₂ concentration happens through a NDIR sensor that operates on an infrared basis and which compensates the presence of any impurity. The product can be provided with humidity or humidity/temperature sensor. Output 0 ... 10 Vdc or 4 ... 20 mA outputs.

Technical specifications

CO₂ measuring range	0 ... 2000 ppm / 0 ... 5000 ppm
Accuracy	± 60 ppm (0 ... 2000 ppm) ± 2% FS / ± 150 ppm (0 ... 5000 ppm) ± 2% FS
Measuring range ° C (optional)	See configuration
Accuracy ° C	± 0.3 ° C (5 ... 60 ° C) + 1% FS
Measurement range RH (optional)	See configuration
RH accuracy	± 2% RH (20 ... 80% RH) + 2% FS
Supply voltage	12 ... 34 V AC / DC
Power consumption	40 ... 100 mA
Resistive load at 0 ... 10 V DC	10 ... 100 kOhm
Resistive load at 4 ... 20 mA	50 ... 500 Ohm
CO₂ sensitive element	Self-calibrating NDIR
Electrical connections	Screw terminals for cables max. 1.5 mm ²
Sensor setting up time	60 min.
Cable gland	M16 x 1.5 for cables ø 4 ... 10 mm
Protection	IP65
Material	PA6
Working range RH	0 ... 98% RH in clean, non-condensed air
Working range ° C	0 ... + 50 ° C
Installation	PVC mounting flange (included)
Standards	CE, RoHs compliance



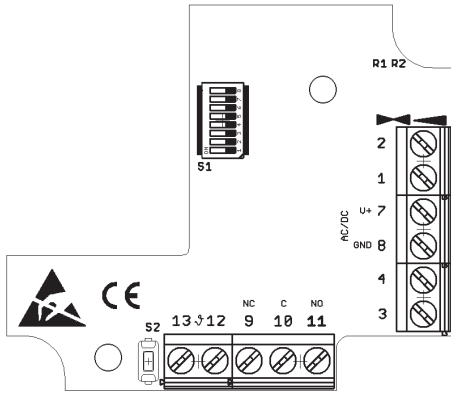
Models	Temperature	Humidity	Output
SDCV	-	-	0...10 V DC
SDCT(x)V*	●	-	0...10 V DC
SDCTH(x)V*	●	●	0...10 V DC
SDCC	-	-	4...20 mA
SDCTC	●	-	4...20 mA
SDCHC	-	●	4...20 mA

Optional: Suffix D version with display

(*) Replace "X" with the number of selected passive sensor:

"X"	Type of passive sensor
1	Pt100 (DIN EN 60751 Cl. B)
3	Ni1000 (TK6180)
5	NTC20k (±1%)
6	NTC10k (±1%) BETA 3435K

Electrical wirings



Output 0...10 Vdc				Output 4...20 mA			
PIN	CO ₂	CO ₂ /T	CO ₂ /T/H	PIN	CO ₂	CO ₂ /T	CO ₂ /H
1	ppm	temp	temp	1	-	-	-
2	-	ppm	humidity	2	-	-	-
3	-	-	ppm	3	ppm	temp	humidity
4	-	-	-	4		ppm	ppm
7		+		7		+	
8		GND		8		GND	
12		passive sensor		12		passive sensor	
13		passive sensor		13		passive sensor	

Dip-switch setting

Temperature range selection	Range	1	2	Humidity range selection	Range	3	4	5	6	CO ₂ range settings	Range	7	8		
	-30...+70°C	OFF	OFF		Relative humidity	0...100%	OFF	OFF	OFF		OFF	CO ₂ ranges	0...2000 ppm	OFF	
	-20...+80°C	ON	OFF		Absolute humidity	0 g/m ³ ...30g/m ³	ON	OFF	OFF		OFF	0...5000 ppm	ON		
	0...+50°C	ON	ON		0 g/m ³ ...50g/m ³	ON	ON	OFF	OFF		Auto-calibration	Not activated	ON		
	0...+100°C	OFF	ON		0 g/m ³ ...80g/m ³	ON	ON	ON	OFF		Activated	OFF			
			Mix ratio	0 g/kg...30g/kg	OFF	OFF	OFF	ON							
			0 g/kg...50g/kg	OFF	OFF	ON	ON								
			0 g/kg...80g/kg	OFF	ON	ON	ON								
			Dew point	0...+50°C	OFF	ON	ON	OFF							
			-50...+100°C	ON	OFF	OFF	ON								
			-20...+80°C	OFF	ON	OFF	ON								
			Enthalpy	0 kJ/kg...85kJ/kg	ON	ON	ON	ON							

Dimensions (mm) and installation

