



Description

The SDCV sensor measures air quality and the presence of carbon dioxide in air ducts in the range between 0...2000 or 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 V DC or 4 ... 20 mA outputs.

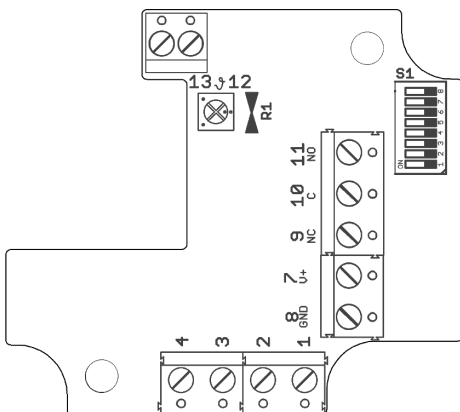
Technical specifications

Measurement range CO₂	see configuration
Accuracy CO₂	±60 ppm (0...2000 ppm) ±2% FS ±150 ppm (0...5000 ppm) ±2% FS
Measurement range VOC	0...2000 ppm
Measurement range °C (optional)	see configuration
Accuracy temperature °C	±0,3°C (5...60°C) + 1% FS
Measurement range RH (optional)	see configuration
Accuracy humidity RH	±2% RH (20...80%RH) + 2% FS
Power supply	12...34 V AC/DC
Power consumption	40...100 mA
Working resistance at 0...10 V DC	10...100 kOhm
Working resistance at 4...20 mA	50...500 Ohm
Sensible element CO₂	NDIR self adjusting
Electrical connection	Screw terminal for cables 1,5 mm ²
Protection type	IP65
Working range RH	0...98% RH in contaminant-free, non-condensing air
Working temperature °C	0...+50°C
Installation	Mounting flange (included)
Standards	CE conformity, RoHS



Models	Temperature	Humidity	Output
SDCVV	-	-	0...10 V DC
SDCVTV	•	-	0...10 V DC
SDCVTHV	•	•	0...10 V DC
SDCVC	-	-	4...20 mA

Electrical wirings



Output 0...10 V				Output 4...20 mA	
PIN	CO ₂ /VOC	CO ₂ /VOC/T	CO ₂ /VOC/T/H	PIN	CO ₂ /VOC
1	CO ₂	temp	temp	1	-
2	VOC	CO ₂	humidity	2	-
3	-	VOC	CO ₂	3	CO ₂
4	-	-	VOC	4	VOC
7		+		7	+
8		GND		8	GND

Dip-switch setting

SDCVT

Temperature range selection	Range	1	2	3	4	5	6	Temperature range selection	Range	1	2	3	4	5	6	CO ₂ range selection / setting	Range	7	8
	-100...+50°C	OFF	OFF	OFF	OFF	OFF	OFF		-	-10...+120°C	OFF	OFF	ON	ON	OFF		-	CO ₂	0...2000 ppm
-50...0°C	ON	OFF	OFF	OFF	OFF	OFF	-	0...+40°C	ON	OFF	ON	ON	OFF	-	0...5000 ppm	ON			
-50...50°C	OFF	ON	OFF	OFF	OFF	OFF	-	0...+50°C	OFF	ON	ON	ON	OFF	-	Self adjusting				
-50...+150°C	ON	ON	OFF	OFF	OFF	OFF	-	0...+70°C	ON	ON	ON	ON	OFF	-	Not activated		ON		
-30...+20°C	OFF	OFF	ON	OFF	OFF	OFF	-	0...+100°C	OFF	OFF	OFF	OFF	ON	-	Activated		OFF		
-30...+60°C	ON	OFF	ON	OFF	OFF	OFF	-	0...+150°C	ON	OFF	OFF	OFF	ON	-					
-30...+70°C	OFF	ON	ON	OFF	OFF	OFF	-	0...+160°C	OFF	ON	OFF	OFF	ON	-					
-20...+50°C	ON	ON	ON	OFF	OFF	OFF	-	0...+200°C	ON	ON	OFF	OFF	ON	-					
-20...+80°C	OFF	OFF	OFF	ON	OFF	OFF	-	0...+250°C	OFF	OFF	ON	OFF	ON	-					
-20...+120°C	ON	OFF	OFF	ON	OFF	OFF	-	0...+400°C	ON	OFF	ON	OFF	ON	-					
-20...+150°C	OFF	ON	OFF	ON	OFF	OFF	-	0...+600°C	OFF	ON	ON	OFF	ON	-					
-10...+15°C	ON	ON	OFF	ON	OFF	OFF	-	+10...+35°C	ON	ON	ON	OFF	ON	-					

SDCVTH

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

WARNING: At the VOC sensor is needed warming up at powering, therefore it takes about 15 minutes before having a signal. In this phase, the sensor must be placed in the fresh air to take it as a reference. If you remove the power supply voltage it is necessary to wait 15 minutes. Generally the sensor should be placed into fresh air at least once a day. This procedure prevents a long-term drift.

Dimensions (mm) and installation

