



Description

The SAC CO₂ sensor measures air quality through 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

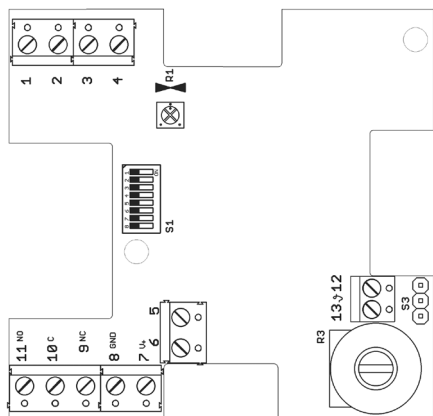
Measurement range CO₂	see configuration
Accuracy CO₂	±60 ppm (0...2000 ppm) ±2% FS ±150 ppm (0...5000 ppm) ±2% FS
Accuracy temperature (*)	± 0,3°C (5...60°C) + 2,5% FS
Accuracy humidity (*)	± 2% (20...80%RH) + 2% FS
Power supply	12...34 V AC/DC
Power consumption	50...120 mA
Working resistance at 0...10 V DC	10...100 kOhm
Working resistance at 4...20 mA	50...500 Ohm
Sensible element	NDIR self adjusting
Electrical connection	Screw terminal for cables 1,5 mm ²
Protection type	IP 30
Housing	ABS RAL9010
Working range RH	0...98% RH in aria pulita e non condensata
Working temperature °C	0...+50°C
Standards	Conformità CE, RoHs



(*) See models hereafter.

Model	Temperature	Humidity	Output
SACV	-	-	0...10 V DC
SACTV	●	-	0...10 V DC
SACTHV	●	●	0...10 V DC
SACC	-	-	4...20 mA
SACTC	●	-	4...20 mA
SACHC	-	●	4...20 mA

Electrical wirings



Output 0...10 V				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	-

Dip-switch setting

SACT

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	-		-10...+120°C	OFF	OFF	ON	ON	OFF	-		CO ₂				
	-50...0°C	ON	OFF	OFF	OFF	OFF	-		0...+40°C	ON	OFF	ON	ON	OFF	-		0...2000 ppm	OFF			
	-50...50°C	OFF	ON	OFF	OFF	OFF	-		0...+50°C	OFF	ON	ON	ON	OFF	-		0...5000 ppm	ON			
	-50...+150°C	ON	ON	OFF	OFF	OFF	-		0...+70°C	ON	ON	ON	ON	OFF	-		Self adjusting				
	-30...+20°C	OFF	OFF	ON	OFF	OFF	-		0...+100°C	OFF	OFF	OFF	OFF	ON	-		Not activated	ON			
	-30...+60°C	ON	OFF	ON	OFF	OFF	-		0...+150°C	ON	OFF	OFF	OFF	ON	-		Activated	OFF			
	-30...+70°C	OFF	ON	ON	OFF	OFF	-		0...+160°C	OFF	ON	OFF	OFF	ON	-						
	-20...+50°C	ON	ON	ON	OFF	OFF	-		0...+200°C	ON	ON	OFF	OFF	ON	-						
	-20...+80°C	OFF	OFF	OFF	ON	OFF	-		0...+250°C	OFF	OFF	ON	OFF	ON	-						
-20...+120°C	ON	OFF	OFF	ON	OFF	-	0...+400°C	ON	OFF	ON	OFF	ON	-								
-20...+150°C	OFF	ON	OFF	ON	OFF	-	0...+600°C	OFF	ON	ON	OFF	ON	-								
-10...+15°C	ON	ON	OFF	ON	OFF	-	+10...+35°C	ON	ON	ON	OFF	ON	-								

SACTH

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						CO ₂				
	-20...+80°C	ON	OFF		0...100%	OFF	OFF	OFF	OFF		0...2000 ppm	OFF			
	0...+50°C	ON	ON		Absolute humidity						0...5000 ppm	ON			
	0...+100°C	OFF	ON		0 g/m ³ ...30g/m ³	ON	OFF	OFF	OFF		Self adjusting				
			0 g/m ³ ...50g/m ³	ON	ON	OFF	OFF	Not activated	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								

Dimension (mm)

