

On-wall CO2 sensor and measuring transducer, self-calibrating, with multi-range switching and active / switching output

Maintenance-free on-wall sensor **AERASGARD® ACO2-SD** with active output, automatic calibration (fixed), in an impact-resistant plastic housing with quick-locking screws, for determining the CO2 content of the air (0...2000 ppm/0...5000 ppm). The measuring transducer converts the measured values into a standard signal of 0-10V.

Maintenance-free on-wall sensor **AERASGARD® ACO2-W** with active/switching output, automatic calibration (can be deactivated), in an impact-resistant plastic housing with quick-locking screws, optionally with/without display, for determining the CO2 content of the air (0...2000 ppm/0...5000 ppm). The measuring transducer converts the measured values into a standard signal of 0-10V or 4...20 mA (switchable).

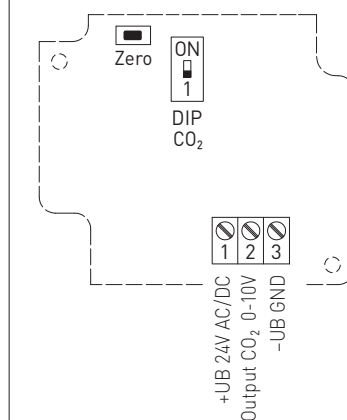
The sensor is used in offices, hotels, convention centres, apartments, shops, etc. for the purpose of evaluating the indoor climate. This enables energy-saving room ventilation on an as-needed basis, thereby reducing operating costs and improving well-being. One sensor for every 30m² of room area is recommended.

The CO2 measurement is performed using an optical **NDIR sensor** (non-dispersive infra-red technology). The detection range is calibrated for standard applications such as monitoring residential rooms and conference rooms.

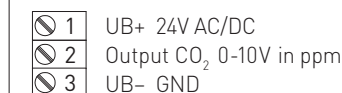
TECHNICAL DATA

Power supply:	24 V AC / DC (± 10%)
Power consumption:	< 1.5 W / 24 V DC typical; < 2.9 VA / 24 V AC typical; peak current 200 mA
Sensor:	optical NDIR sensor (non-dispersive infra-red technology), with manual calibration (via zero button), ACO2-SD with automatic calibration (fixed) ACO2-W with automatic calibration (can be deactivated via DIP switches)
Measuring range:	multi-range switching (selectable via DIP switches) 0...2000 ppm; 0...5000 ppm
Output:	ACO2-SD 0-10 V (fixed) ACO2-W 0-10 V or 4...20 mA, working resistance < 800 Ω (selectable via DIP switches), with offset potentiometer (± 10% of the measuring range)
Relay output:	ACO2-SD without changeover contact ACO2-W with potential-free changeover contact (24V / 1 A), switchpoint adjustable
Accuracy:	typically ± 30 ppm ± 3% of measured value
Temperature dependence:	± 5 ppm / °C or ± 0.5% of measured value / °C (whichever is higher)
Pressure dependence:	± 0.13% / mm Hg
Long-term stability:	< 2% in 15 years
Gas exchange:	by diffusion
Warm up time:	approx. 1 hour
Ambient temperature:	-10...+60 °C
Response time:	approx. 1 minute
Electrical connection:	0.14 - 1.5 mm², via screw terminals
Housing:	plastic, UV-resistant, material polyamide, 30% glass-globe reinforced, with quick-locking screws (slotted / Phillips head combination), colour traffic white (similar to RAL 9016)
Housing dimensions:	126 x 90 x 50 mm (Tyr 2)
Cable connection:	cable gland , plastic (M 16 x 1.5; with strain relief, exchangeable, max. inner diameter 10.4 mm) or M12 connector according to DIN EN 61076-2-101 (optional on request)
Process connection:	by screws
Protection class:	III (according to EN 60 730)
Protection type:	IP 65 (according to EN 60 529)
Standards:	CE conformity according to EMC Directive 2014 / 30 / EU
Optional:	with display (see AERASGARD® AFTM-LQ-CO2) for displaying the actual CO2 content in ppm
ACCESSORIES	see table

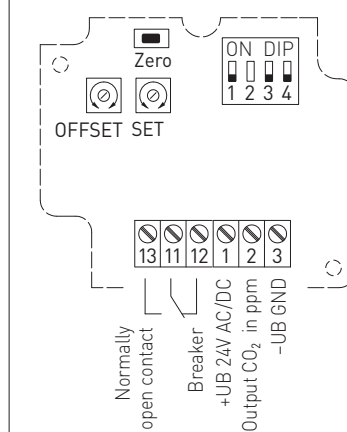
Schematic diagram **ACO2 - SD**



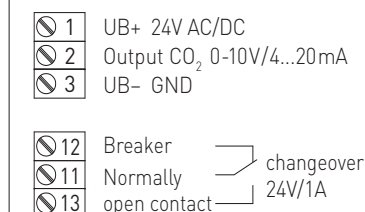
Connecting diagram **ACO2 - SD**



Schematic diagram **ACO2 - W**



Connecting diagram **ACO2 - W**

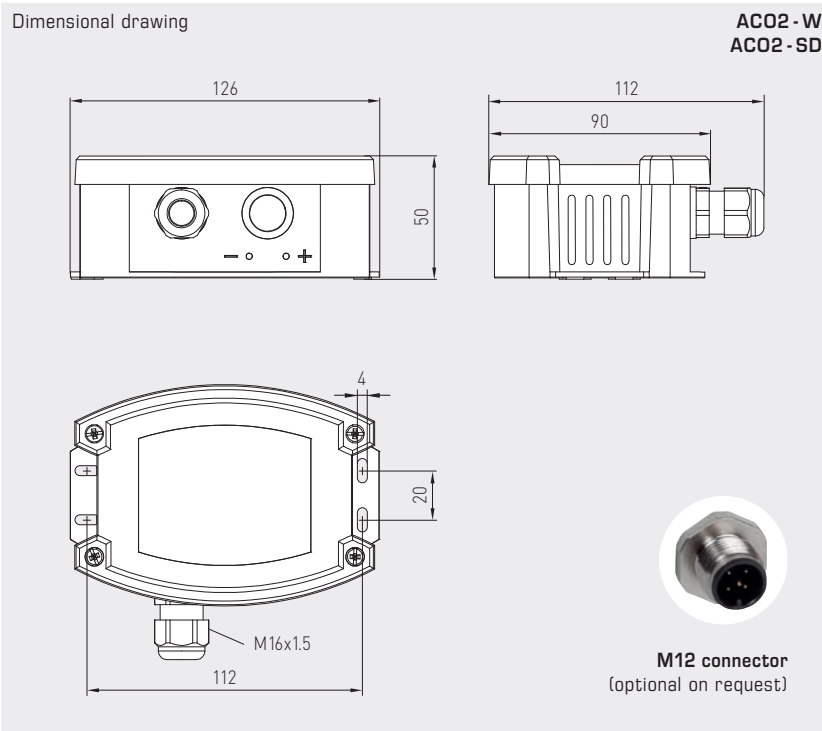




S+S REGELTECHNIK

AERASGARD® AC02-W
AERASGARD® AC02-SD

On-wall CO2 sensor and measuring transducer,
self-calibrating, with multi-range switching
and active/switching output



AC02-W
AC02-SD



WS-03

Weather and sun protection hood
(optional)

DIP switch	AC02-W
CO2 content	DIP 1
0...2000 ppm (default)	OFF
0...5000 ppm	ON
CO2 automatic zero point	DIP 3
deactivated	OFF
activated (default)	ON
Output	DIP 4
Voltage 0-10 V (default)	OFF
Current 4...20 mA	ON
Note: DIP 2 is not assigned!	

DIP switch	AC02-SD
CO2 content	DIP 1
0...2000 ppm (default)	OFF
0...5000 ppm	ON



AERASGARD® AC02-SD On-wall CO2 sensor and measuring transducer, *Standard*
AERASGARD® AC02-W On-wall CO2 sensor and measuring transducer, *Premium*

Type / WG02	Measuring Range CO2	Output CO2	Equipment	Display	Item No.	Price
AC02-SD	(switchable)	(fixed)				
AC02-SD-U	0...2000 ppm / 0...5000 ppm	0-10 V	–		1501-7110-1001-200	262,24 €
AC02-W	(switchable)	(switchable)				
AC02-W	0...2000 ppm / 0...5000 ppm	0-10 V / 4...20 mA	changeover contact		1501-7110-7301-200	376,24 €
AC02-W LCD	0...2000 ppm / 0...5000 ppm	0-10 V / 4...20 mA	changeover contact, display	■	see AFTM-LQ-C02	
Optional:	Cable connection with M12 connector according to DIN EN 61076-2-101 (on request)					
Note:	This unit must not be used as safety-relevant device!					

ACCESSORIES

WS-03	Weather and sun protection hood , 200 x 180 x 150 mm, stainless steel V2A (1.4301)	7100-0040-6000-000	47,92 €
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For further information see last chapter!

