

Room CO<sub>2</sub> sensor and measuring transducer,  
self-calibrating, with multi-range switching  
and active/switching output

The maintenance-free microprocessor-controlled room sensor **AERASGARD® RCO<sub>2</sub>-SD** with automatic calibration (fixed) is used for recording the CO<sub>2</sub> content of the air within a range of 0...2000 ppm. The measurement value is converted into standard signal of 0-10V.

The maintenance-free microprocessor-controlled room sensor **AERASGARD® RCO<sub>2</sub>-W** with automatic calibration (can be deactivated via DIP switches) is used for detecting the CO<sub>2</sub> content of the air within a range of 0...2000 ppm or 0...5000 ppm. The measurement value is converted into standard signal of 0-10V or 4...20mA. Optional with traffic light indicator (five coloured LEDs).

Elegant enclosure made of plastic, with snap-on lid, based with 4-hole attachment, for installation on vertically or horizontally installed flush-mounted boxes, with predetermined breaking point for surface-mounted connection or in enclosure made of stainless steel (top and bottom parts are stainless steel, the cover is screwed on), vandal-proof version e.g. for schools, barracks and public buildings.

The CO<sub>2</sub> content of the air is measured using an optical NDIR sensor (non-dispersive infra-red technology). The detection range of the CO<sub>2</sub> sensor is calibrated for standard applications such as monitoring residential rooms and conference rooms. Room ventilation on an as-needed basis, improved well-being and customer benefit, increased comfort as well as reduced operating costs through energy conservation. For more information, see the start of the chapter!

#### 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), <b>RCO<sub>2</sub>-SD</b> with automatic calibration (fixed) <b>RCO<sub>2</sub>-W</b> with automatic calibration (can be deactivated via DIP switches)
Measuring range:	<b>RCO<sub>2</sub>-SD</b> 0...2000 ppm (fixed) <b>RCO<sub>2</sub>-W</b> 0...2000 ppm or 0...5000 ppm (selectable via DIP switches)
Output:	<b>RCO<sub>2</sub>-SD</b> 0-10 V (fixed) <b>RCO<sub>2</sub>-W</b> 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:	<b>RCO<sub>2</sub>-SD</b> without changeover contact <b>RCO<sub>2</sub>-W</b> with potential-free <b>changeover contact</b> (24 V / 1 A)
Measuring accuracy:	± 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
Ambient temperature:	0...+50 °C
Warm up time:	approx. 1 hour
Response time:	< 2 minutes
Electrical connection:	0.14 - 1.5 mm <sup>2</sup> , via screw terminals
Enclosure:	plastic, material ABS, colour pure white (similar to RAL 9010), stainless steel enclosure optional
Dimensions:	85 x 85 x 27 mm (BalduR 1) 100 x 100 x 25 mm (stainless steel)
Installation:	wall mounting or on in-wall flush box, Ø55 mm, base with 4-hole for mounting on vertically or horizontally installed in-wall flush boxes for cable entry from the back, with predetermined breaking point for on-wall cable entry from top / bottom in case of plain on-wall installation
Protection class:	III (according to EN 60730)
Protection type:	IP 30 (according to EN 60529)
Standards:	CE conformity, electromagnetic compatibility according to EN 61326, EMC Directive 2014 / 30 / EU, Low Voltage Directive 2014 / 35 / EU
Optional:	<b>with traffic light indicator</b> (five coloured LEDs, see table) for displaying the CO <sub>2</sub> concentration <b>with display</b> (see <b>AERASGARD® RFTM-LQ-CO<sub>2</sub></b> ) for displaying the actual CO <sub>2</sub> content in ppm

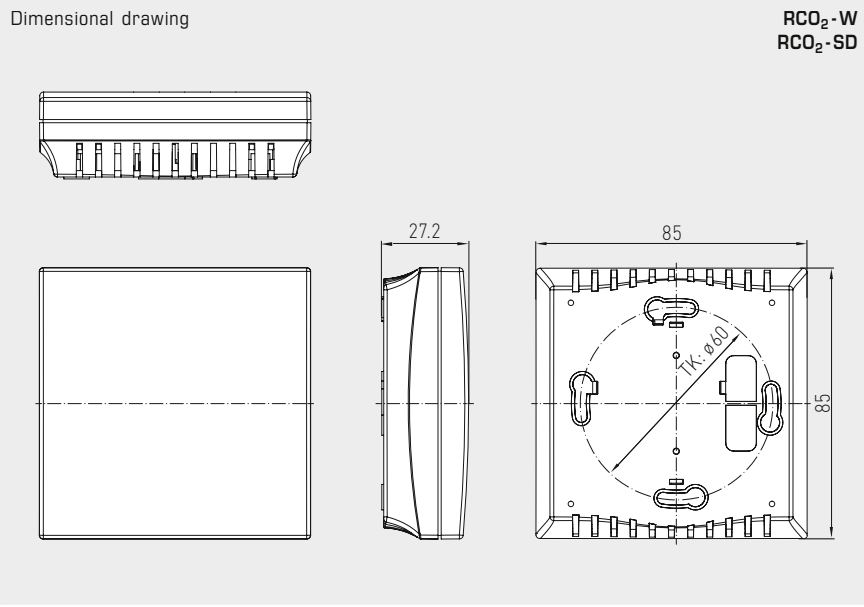


**NEW**

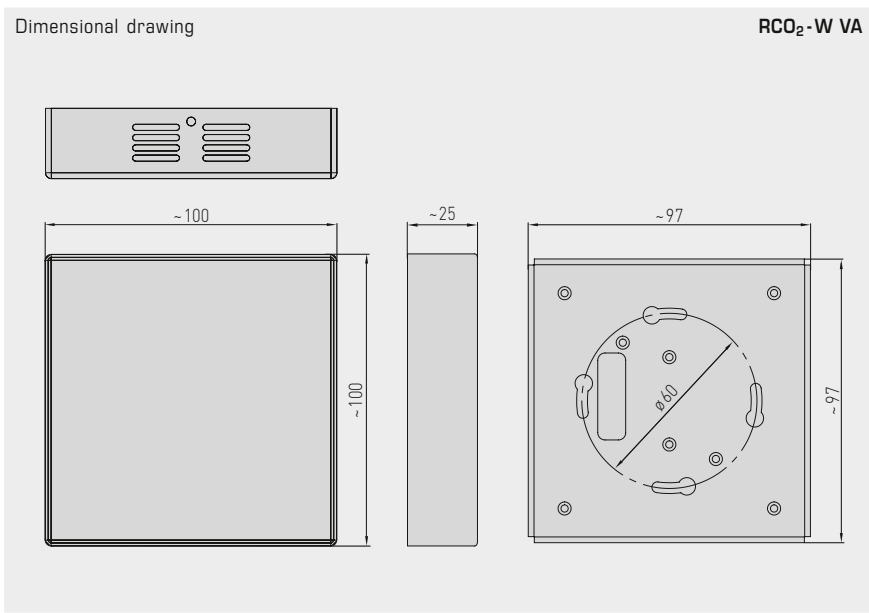
S+S REGELTECHNIK

AERASGARD® RCO<sub>2</sub>-W  
AERASGARD® RCO<sub>2</sub>-SD

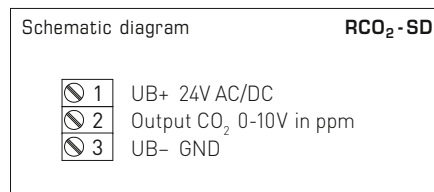
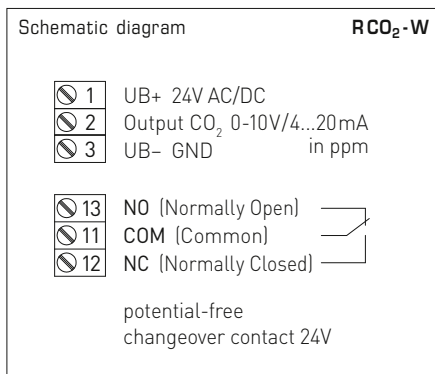
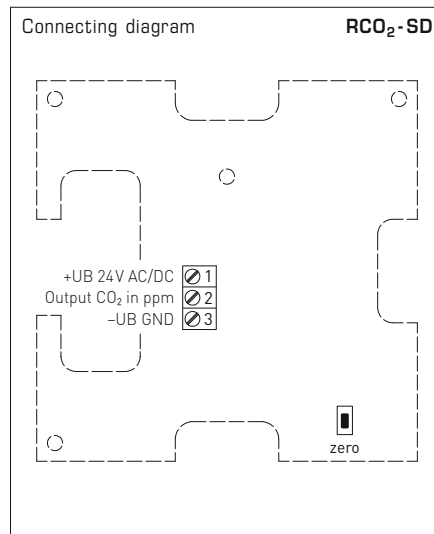
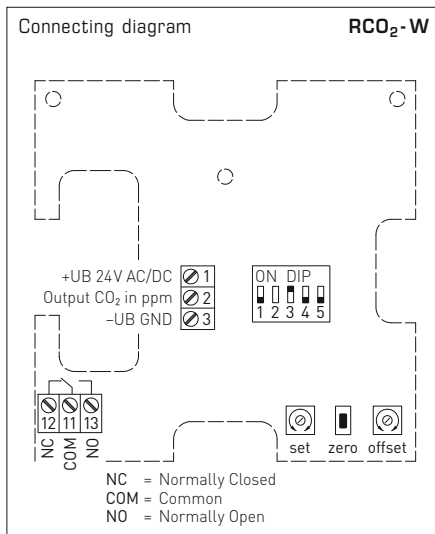
Room CO<sub>2</sub> sensor and measuring transducer,  
self-calibrating, with multi-range switching  
and active /switching output



RCO<sub>2</sub>-W  
RCO<sub>2</sub>-SD



RCO<sub>2</sub>-W VA  
(stainless steel enclosure)



DIP switches RCO <sub>2</sub> -W	
<b>CO<sub>2</sub> content</b>	<b>DIP 1</b>
0...2000 ppm (default)	OFF
0...5000 ppm	ON
<b>CO<sub>2</sub> automatic zero point</b>	<b>DIP 3</b>
deactivated	OFF
activated (default)	ON
<b>Output</b>	<b>DIP 4</b>
Voltage 0-10V (default)	OFF
Current 4...20 mA	ON
<b>Traffic light (5x LEDs)</b>	<b>DIP 5</b>
deactivated	OFF
activated	ON

Note: DIP 2 is not assigned!



**NEW**

S+S REGELTECHNIK

**AERASGARD® RCO<sub>2</sub>-W**  
**AERASGARD® RCO<sub>2</sub>-SD**

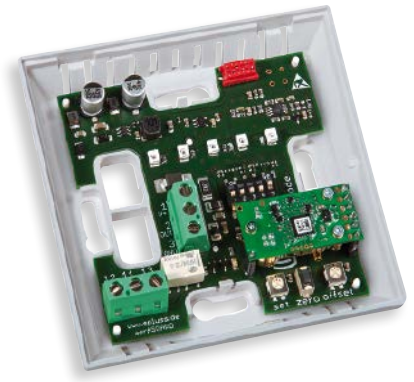
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Traffic light indicator		RCO <sub>2</sub> -W-A				
CO <sub>2</sub> content in ppm		LED 1	LED 2	LED 3	LED 4	LED 5
0...2000 ppm	0...5000 ppm	green	green	yellow	yellow	red
-	350	50 %	-	-	-	-
-	500	75 %	-	-	-	-
<b>350</b>	<b>750</b>	<b>100 %</b>	-	-	-	-
400	1000		25 %	-	-	-
500	1250		50 %	-	-	-
600	1500		75 %	-	-	-
<b>700</b>	<b>1750</b>		<b>100 %</b>	-	-	-
800	2000			25 %	-	-
900	2250			50 %	-	-
1000	2500			75 %	-	-
<b>1100</b>	<b>2750</b>			<b>100 %</b>	-	-
1200	3000				25 %	-
1300	3250				50 %	-
1400	3500				75 %	-
<b>1500</b>	<b>3750</b>				<b>100 %</b>	-
1600	4000					25 %
1700	4250					50 %
1800	4500					75 %
<b>1900</b>	<b>4750</b>					<b>100 %</b>
2000	5000					

Once the aforementioned values have been reached, the respective LED becomes active (with increasing luminosity of 25 %, 50 %, 75 % and 100 %); LEDs that are already active continue to be illuminated.

RCO<sub>2</sub>-W-A  
with LEDs



**AERASGARD® RCO<sub>2</sub>-SD** – Room CO<sub>2</sub> sensor and measuring transducer, *Standard*  
**AERASGARD® RCO<sub>2</sub>-W** – Room CO<sub>2</sub> sensor and measuring transducer, *Premium*

Type / WG02	Measuring Range CO <sub>2</sub>	Output CO <sub>2</sub>	Equipment	Display	Item No. (Baldur 1)	Price
<b>RCO<sub>2</sub>-SD</b>	(fixed)	(fixed)				
RCO2-SD-U	0...2000 ppm	0-10 V	-		1501-61A0-1001-200	<b>182,58 €</b>
<b>RCO<sub>2</sub>-W</b>	(switchable)	(switchable)				
RCO2-W	0...2000 ppm / 0...5000 ppm	0-10 V / 4...20 mA	Changeover contact		1501-61A0-7301-200	<b>219,30 €</b>
RCO2-W VA	0...2000 ppm / 0...5000 ppm	0-10 V / 4...20 mA	Changeover contact, stainless steel enclosure		1501-61A0-7301-205	<b>309,24 €</b>
RCO2-W DISPLAY	0...2000 ppm / 0...5000 ppm	0-10 V / 4...20 mA	Changeover contact, display	■ see RFTM-LQ-CO <sub>2</sub>		
<b>RCO<sub>2</sub>-W-A</b>	(switchable)	(switchable)			<b>with traffic light</b>	
RCO2-W-A	0...2000 ppm / 0...5000 ppm	0-10 V / 4...20 mA	Changeover contact, LEDs		1501-61A0-7331-200	<b>256,02 €</b>

A = with "traffic light" (five coloured LEDs) for displaying the CO<sub>2</sub> concentration.

Note: This unit **must not** be used as safety-relevant device!