AERASGARD® RCO2-AS xx 🔊

**CO2 traffic light / mobile CO2 sensor,
room CO2 sensor with traffic light indicator and acoustic signal,
self-calibrating**

S+S REGELTECHNIK

Maintenance-free room sensor **AER**ASGARD® **RCO2-AS xx** with traffic-light indicator and acoustic signal, self-calibrating, in an attractive plastic housing, for determining the CO2 content of the room air (0...3000 ppm). The measuring transducer converts the measurand to a standard signal, which is directly presented visually via coloured LEDs (traffic light indicator). An additional signal tone sounds when the warning levels are reached (can be switched off via DIP switch).

Available as a table-top unit **RCO2-AS NT ST** with micro USB power cord and stainless steel stand holder, as well as the device versions **RCO2-AS NT** (with plug-in power supply unit), **RCO2-AS UPNT** (with in-wall power supply unit) and **RCO2-AS** (without power supply unit) for wall mounting.

The room filter with **CO2 traffic light** is used in classrooms, training rooms and convention centres, offices, hotels, apartments, shops, etc. and is used for easy and quick evaluation of the indoor climate. This enables energy-saving demand-based room ventilation, thereby reducing operating costs and improving well-being. One sensor for every 30 m² of room area is recommended

The CO2 measurement is performed using an optical **NDIR sensor** (non-dispersive infra-red technology).

RCO2-AS
without power supply unit

RCO2-AS UPNT
with in-wall power supply unit

TECHNICAL DATA

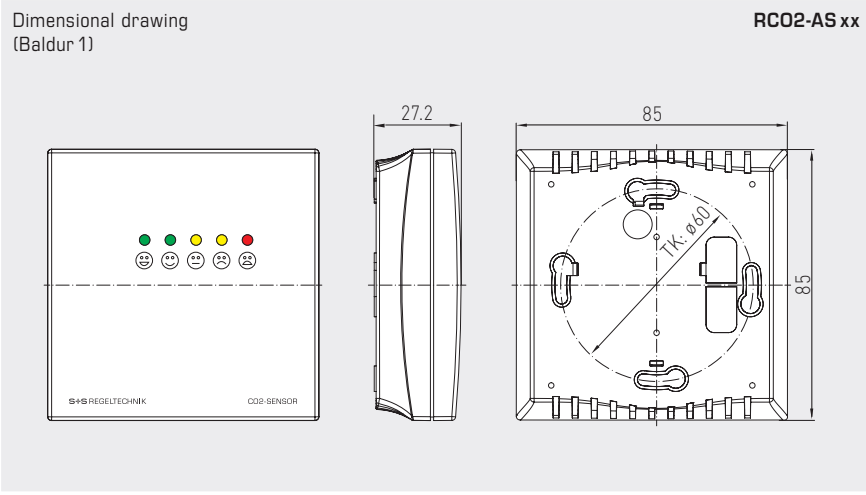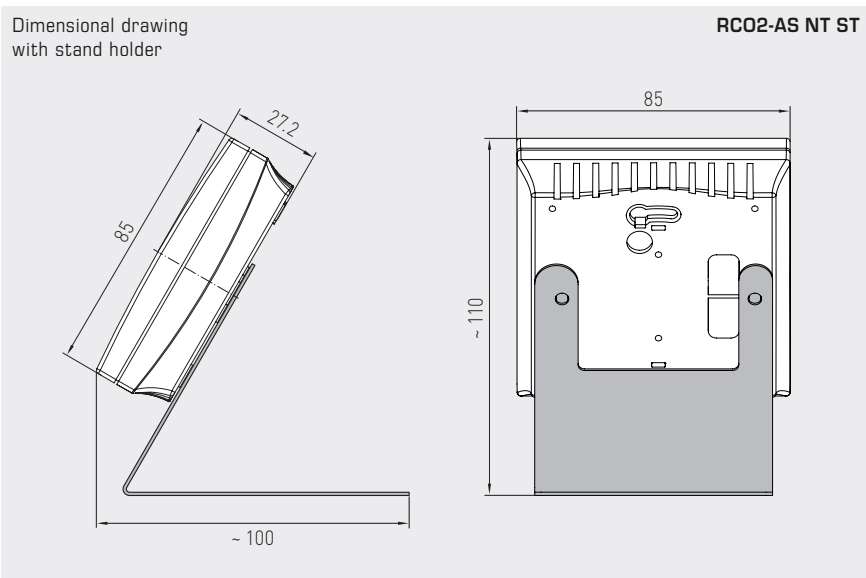|		
Power supply:	**RCO2-AS:**	5...24 V DC
	RCO2-AS UPNT:	5...24 V DC / 230 V AC (power supply unit)*
	RCO2-AS NT:	5...24 V DC / 230 V AC (power supply unit)*
	RCO2-AS NT ST:	5 V DC / 230 V AC (power supply unit)*
		*(included in the scope of delivery)
electrical connection:	**RCO2-AS:**	terminal screws on circuit board (0.14 - 1.5 mm²), without power supply unit
	RCO2-AS UPNT:	terminal screws on circuit board (0.14 - 1.5 mm²), in-wall power supply unit (open cable ends)
	RCO2-AS NT:	terminal screws on circuit board (0.14 - 1.5 mm²), plug-in power supply unit (open cable ends/Euro plug)
	RCO2-AS NT ST:	Micro-USB socket on circuit board, Micro-USB power supply (micro-USB/Euro plug)
Connection type:	2-wire circuit (no reverse polarity protection!)	
Sensor:	optical NDIR sensor (non-dispersive infrared technology), with manual calibration (via zero button) with automatic calibration	
Measurement range:	0...3000 ppm	
Accuracy:	typically ± 30 ppm ± 3 % of measured value	
Temperature dependence:	± 5 ppm / °C or ± 0.5 % of measured value / °C (whichever is greater)	
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	
Measuring interval:	< 3 seconds	
Housing:	plastic, flame retardant (UL 94 V-0), PC/ABS material, colour white (similar to RAL 9016)	
Dimensions:	85 x 85 x 27 mm (Baldur 1 housing) 110 x 85 x 100 mm (housing for stand holder)	
Mounting:	**RCO2-AS NT ST:** immediately usable free-standing device without mounting (plug-and-play) **RCO2-AS, RCO2-AS NT, RCO2-AS UPNT:** wall mounting or on in-wall flush box, Ø 55 mm, base with 4 holes, for attachment to vertically or horizontally installed in-wall flush boxes for rear cable entry, with predetermined breaking point for top/bottom cable entry for surface-mounted installation	
Protection class:	III (according to EN 60 730)	
IP rating:	**IP 30** (according to EN 60 529)	
Standards:	CE-conformity according to EMC directive 2014 / 30 / EU, low voltage directive 2014 / 35 / EU	
Equipment:	**traffic light indicator** (five coloured LEDs), **acoustic signal** (signal can be switched off) for displaying the CO2 concentration	
	Type-specific equipment (see table): **Plug-in power supply unit** (CL = approx. 1.5 m) **In-wall power supply unit** for mounting on in-wall flush boxes **Stand holder** made from stainless steel	

**CO2 traffic light / mobile CO2 sensor,
room CO2 sensor with traffic light indicator and acoustic signal,
self-calibrating**

Dimensional drawing
(Baldur 1)

RCO2-AS xx

27.2

85

85

TK: ø60

S+S REGELTECHNIK   CO2-SENSOR

Dimensional drawing
with stand holder

RCO2-AS NT ST

27.2

85

85

~ 110

~ 100

RCO2-AS NT
with plug-in power supply unit

RCO2-AS NT ST
with Micro-USB power supply unit
and stainless steel
stand holder

AERASGARD® RCO2-AS xx 🔊

CO2 traffic light / mobile CO2 sensor,
room CO2 sensor with traffic light indicator and acoustic signal,
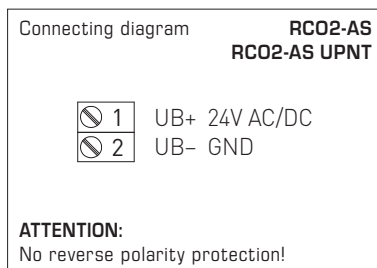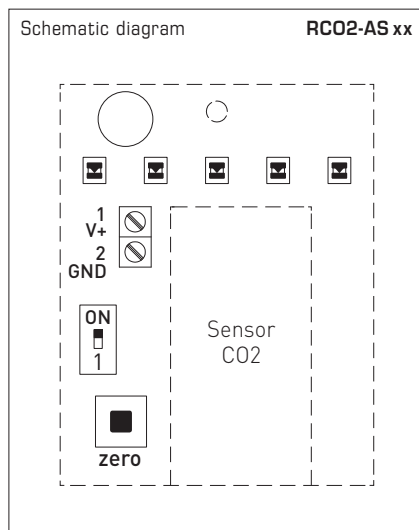self-calibrating

S+S REGELTECHNIK

Indicator						RCO2-AS xx
CO2 content [ppm]	LED 1 green	LED 2 green	LED 3 yellow	LED 4 yellow	LED 5 red	signal tone
< **400**	20 %	–	–	–	–	
401 - 500	40 %	–	–	–	–	
501 - 600	60 %	–	–	–	–	
601 - 700	80 %	–	–	–	–	
701 - 800	**100 %**	–	–	–	–	
801 - 840		20 %	–	–	–	
841 - 880		40 %	–	–	–	
881 - 920		60 %	–	–	–	
921 - 960		80 %	–	–	–	
961 - 1000		**100 %**	–	–	–	
1001 - 1080			20 %	–	–	1x **0.5 s**
1081 - 1160			40 %	–	–	
1161 - 1240			60 %	–	–	
1241 - 1320			80 %	–	–	
1321 - 1400			**100 %**	–	–	
1401 - 1520				20 %	–	2x **0.5 s**
1521 - 1640				40 %	–	
1641 - 1760				60 %	–	
1761 - 1880				80 %	–	
1881 - 2000				**100 %**	–	
2001 - 2200					20 %	3x **0.5 s**
2201 - 2400					40 %	
2401 - 2600					60 %	
2601 - 2800					80 %	
2801 - 3000					**100 %**	1x **1.5 s**

Once the aforementioned values have been reached, the respective LED becomes active
(with increasing luminosity of 20 %, 40 %, 60 %, 80 % and 100 %);
LEDs that are already active continue to be illuminated.

Recommendation		RCO2-AS xx
Level	Traffic light indicator Actions	signal tone (0.5 sec)
1 🟢	**green** no action required	
2 🟢	**green** prompt airing recommended	
3 🟡	**yellow** airing recommended	🔊
4 🟡	**yellow** airing required	🔊🔊
5 🔴	**red** intensive airing necessary	🔊🔊🔊

Schematic diagram — RCO2-AS xx

1 V+
2 GND

ON 1

Sensor CO2

zero

Connecting diagram — RCO2-AS / RCO2-AS UPNT

1	UB+ 24V AC/DC
2	UB– GND

ATTENTION:
No reverse polarity protection!

DIP switches	RCO2-AS xx
Acoustic signal (can be switched off)	DIP 1
active signal tone On (default)	**ON**
deactivated signal tone Off	OFF

S+S REGELTECHNIK

**CO2 traffic light / mobile CO2 sensor,
room CO2 sensor with traffic light indicator and acoustic signal,
self-calibrating**

RCO2-AS
without power supply unit

RCO2-AS UPNT
with in-wall power supply unit

RCO2-AS NT
with plug-in power supply unit

RCO2-AS NT ST
with Micro-USB power supply unit
and stainless steel
stand holder

AERASGARD® **RCO2-AS xx**	Room CO2 sensor with traffic light display and acoustic signal				
Type / WG02	Measuring ranges CO2	Display CO2	Equipment	Item no. (Baldur 1)	Price
RCO2-AS xx					
RCO2-AS	0...3000 ppm	5 LEDs, signal tone	without power supply unit	1501-61A0-0686-230	**216,09 €**
RCO2-AS NT	0...3000 ppm	5 LEDs, signal tone	Plug-in power supply unit	1501-61A0-0686-232	**220,71 €**
RCO2-AS NT **ST**	0...3000 ppm	5 LEDs, signal tone	Micro-USB power supply unit, **stainless steel stand holder**	1501-61A0-0686-231	**217,30 €**
RCO2-AS UPNT	0...3000 ppm	5 LEDs, signal tone	In-wall power supply unit	1501-61A0-0686-233	**322,15 €**
Note:	This unit must **not** be used as a safety-relevant device!				