



AERASGARD® RPC02 AERASGARD® RPC02-W

Room pendulum CO₂ sensor or measuring transducer,
self-calibrating, with multi-range switching
and active/switching output

NEW



S+S REGELTECHNIK

Maintenance-free room pendulum sensor **AERASGARD® RPC02** with active output and **RPC02-W** with active/switching output, automatic calibration (can be deactivated via DIP) and manual calibration (via push-button), in an impact-resistant plastic housing with quick-locking screws, optionally with / without display, for determining the CO₂ content in the air (0 to 2000 / 5000 / 10000 ppm). The measuring transducer converts the measurand into a standard signal of 0-10 V (output 1) and 4...20 mA (output 2).

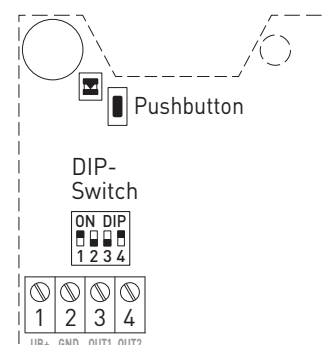
The CO₂ measurement is performed using an optical **NDIR sensor** (non-dispersive infra-red technology). The sensor is simply suspended into the room as a pendulum, which ensures an accurate measurement result in rooms with high walls. The zero point calibration (400 ppm CO₂) can be carried out in relation to the current ambient conditions by manual calibration on the unit. The air quality sensor performs an automatic self-calibration at regular intervals, which ensures CO₂ measurement with long-term stability. The sensor is used in ventilation and air conditioning technology, ventilation monitoring, filter monitoring, level measurement.

TECHNICAL DATA

Power supply:	24 V AC / DC (± 10 %), half-wave rectifier, read the instructions!
Power consumption:	Ø 100 mA, peak current up to 300 mA
Switching type:	3-wire connection
Output 1 (CO ₂):	0-10V
Output 2 (CO ₂):	4...20 mA
Relay output:	RPC02 without changeover contact RPC02-W with potential-free changeover contact (max. 48 V / 1 A), switch point can be set
Sensor:	optical NDIR sensor (non-dispersive infra-red technology), with manual calibration (via zero push-button), with automatic calibration (can be deactivated via DIP switches)
Measuring range:	multi-range switching (selectable via DIP switches) 0...2000 ppm; 0...5000 ppm; 0...10000 ppm (other measuring ranges optionally available upon request)
Accuracy:	typically ± 75 ppm ± 5 % of measured value up to 5000 ppm, otherwise ± 100 ppm ± 5 % of measured value (at 20 °C, 45 % RH, 1013 mbar, auto-calibration active)
Temperature dependence:	± 5 ppm per °C (at 20 °C)
Pressure dependence:	± 0.16 % per hPa based on standard pressure
Long-term stability:	< 1 % of final value per year
Gas exchange:	by diffusion
Warm-up time:	< 10 minutes
Response time:	< 5 minutes
Sensor protection:	filter foil (sensor in pendulum)
Protective tube:	Ø 25.5 mm, L = 95 mm (see dimensional drawing)
Sensor cable:	PVC, H03VV-F, 4 x 0.14 mm ² , KL = 2 m
Housing:	plastic, UV-resistant, polyamide material, 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 made of plastic (M 16 x 1.5; with strain relief, exchangeable, max. inner diameter 10.4 mm)
Electrical connection:	0.14–1.5 mm ² , via screw terminals
Process connection:	via screws
Ambient temperature:	0...+50 °C (operation); -20...+50 °C (storage)
Permitted humidity:	10...95 % RH, non-condensing air
Response time:	< 5 min, running-in time < 20 min
Protection class:	III (according to EN 60 730)
Protection type:	IP 65 (according to EN 60 529) housing IP 30 (according to EN 60 529) pendulum
Standards:	CE-conformity according to EMC Directive 2014 / 30 / EU
Optional:	with display in hinged cover housing BC* (90 x 80 x 47 mm), LCD display (128 x 64 pixels), display content can be rotated by 90° steps, backlight (on/off/auto), to display the actual CO ₂ content in ppm, set switching threshold, switching status and MIN/MAX of the selected interval (1 h / 6 h / 12 h / 24 h)

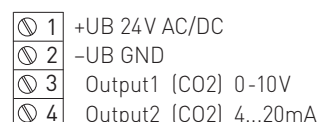
Schematic diagram

RPC02



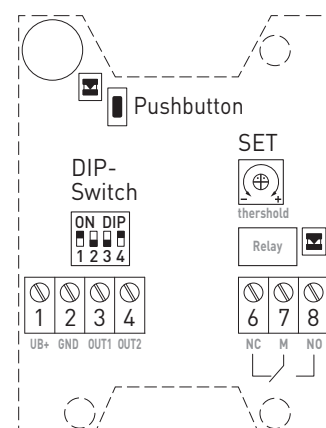
Connection diagram

RPC02



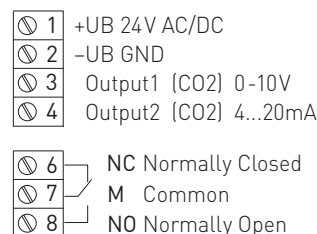
Schematic diagram

RPC02-W



Connection diagram

RPC02-W





NEW

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AERASGARD® RPC02
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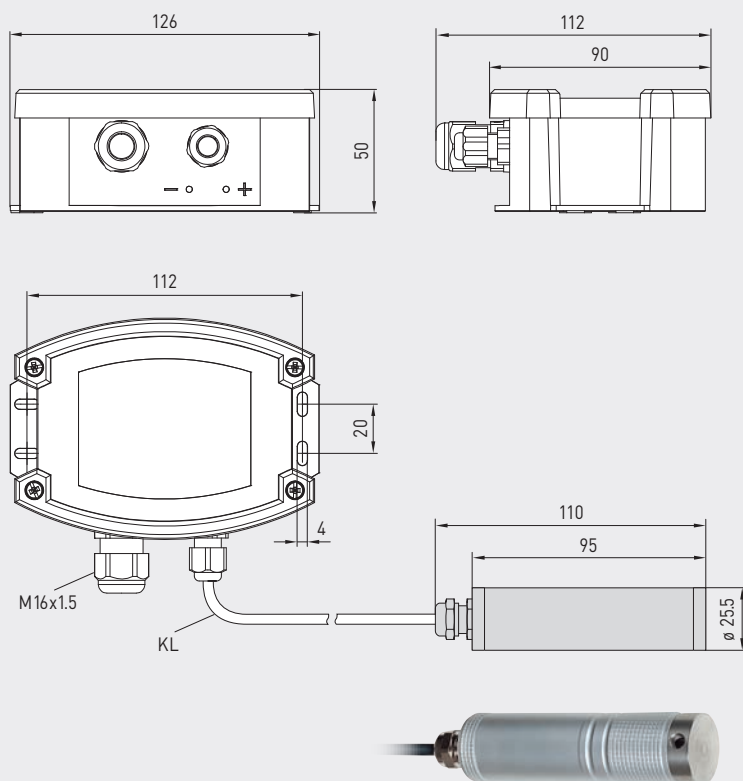
Room pendulum CO2 sensor or measuring transducer,
self-calibrating, with multi-range switching
and active/switching output



Dimensional drawing
[mm]

RPC02 - xx

RPC02 - xx



Measuring range CO2 content	DIP 1	DIP 2	DIP 3
0...2000 ppm (default)	ON	OFF	OFF
0...5000 ppm	OFF	ON	OFF
0...10000 ppm	OFF	OFF	ON

Automatic CO2 calibration	DIP 4
activated (default)	ON
deactivated	OFF

AERASGARD® RPC02 Room pendulum CO2 sensor or measuring transducer, Premium						
AERASGARD® RPC02 - W Room pendulum CO2 sensor or measuring transducer, Premium						
Type/WG02	Measuring ranges CO2	Output 1 CO2	Output 2 CO2	Output switching	Display	Item no. Price
RPC02 (switchable)						
RPC02	0...2000 ppm / 0...5000 ppm / 0...10000 ppm	0-10 V	4...20 mA	–		3CON-0203-0001-000 435,00 €
RPC02 LCD	(3x as above)	0-10 V	4...20 mA	–	■	3CON-0206-0001-000 494,41 €
RPC02 - W (switchable)						
RPC02-W	0...2000 ppm / 0...5000 ppm / 0...10000 ppm	0-10 V	4...20 mA	Changeover contact		3CON-0203-1001-000 449,62 €
RPC02-W LCD	(3x as above)	0-10 V	4...20 mA	Changeover contact	■	3CON-0206-1001-000 509,94 €
Note: This unit must not be used as a safety-relevant device!						