

Room air quality sensors/controllers (VOC) and measuring transducers, self-calibrating, with multi-range switching and active/switching output

The maintenance-free microprocessor-controlled **AERASGARD® RLQ** is used to detect the air quality or air quality based on a mixed gas sensor / VOC sensor. The measurement signals are converted to standard signals of 0-10V or 4...20mA. Elegant housing made of plastic, with snap-on lid, base with 4-hole attachment, for fitting to vertically or horizontally installed flush-mounted boxes, with predetermined breaking point for surface-mounted connection.

It is used

- For air quality measurement in offices, hotels, meeting rooms and convention centres, apartments, stores, and restaurants, etc.
- For quantitative evaluation of room air pollution with contaminating gases (cigarette smoke, body perspiration, exhaled breathing air, solvent vapours, emissions from building members and cleaning agents)
- For adjustable sensitivity regarding the maximum air contamination to be expected
- For room ventilation as-needed, enabled by air changes only taking place when air is polluted while conserving energy at the same time.

The sensor's service life depends on the type of burden and gas concentration and is more than 60 months under normal load conditions. The new design allows you to choose between three sensitivity ranges that are adjusted using DIP switches, giving you three measuring ranges: LOW for low, MEDIUM (default) for medium, and HIGH for high VOC sensitivity. VOC is the abbreviation for volatile organic compounds. According to the definition by the World Health Organization WHO, VOC are organic substances with a boiling range from +60 to +250 °C. Examples of VOCs include compounds of the substance groups alkanes / alkenes, aromatic compounds, terpenes, halogenated hydrocarbons, esters, aldehydes, and ketones. There is a large number of naturally occurring VOCs, some of which are also released into the atmosphere in substantial quantities, e.g. terpenes and isoprene from forests. For more information, please refer to beginning of this chapter.

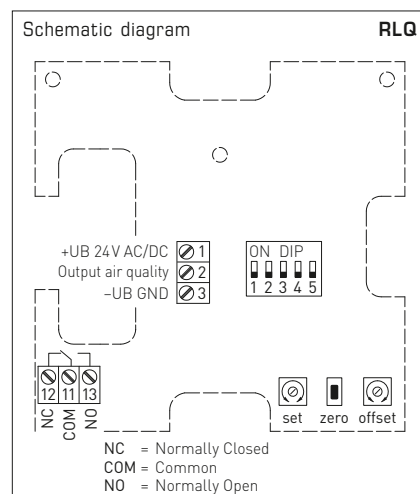
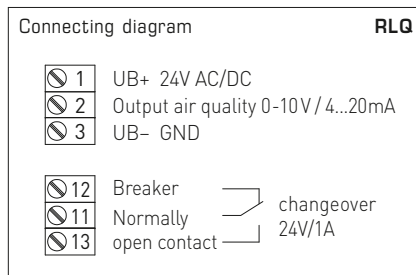
TECHNICAL DATA

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:	VOC sensor (metal oxide), with automatic self-calibration (VOC = volatile organic compounds)
Measuring range:	0...100% air quality; referred to calibrating gas; multi-range switching (selectable via DIP switches) VOC sensibility low, medium, high
Output:	0-10 V (0 V = clean air, 10 V = contaminated air) or 4...20 mA (selectable via DIP switches; switchpoint adjustable from 0...100% of output signal)
Measuring accuracy:	±20% of final value (referred to calibrating gas)
Service life:	> 60 months
Gas exchange:	by diffusion
Warm-up time:	approx. 1 hour
Ambient temperature:	0...+50 °C
Response time:	approx. 1 minute
Electrical connection:	0.14 - 1.5 mm ² , via 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, Ø 55 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 60 730)
Protection type:	IP 30 (according to EN 60 529)
Standards:	CE conformity, electromagnetic compatibility according to EN 61 326, EMC Directive 2014 / 30 / EU, Low Voltage Directive 2014 / 35 / EU

RLQ



DIP switches	RLQ	
VOC sensitivity	DIP 1	DIP 2
LOW	OFF	OFF
MEDIUM (default)	ON	OFF
HIGH	OFF	ON
VOC automatic zero point	DIP 3	
deactivated	OFF	
activated (default)	ON	
Output	DIP 4	
Voltage 0-10 V (default)	OFF	
Current 4...20 mA	ON	
Traffic light (5x LEDs)	DIP 5	
deactivated	OFF	
activated	ON	



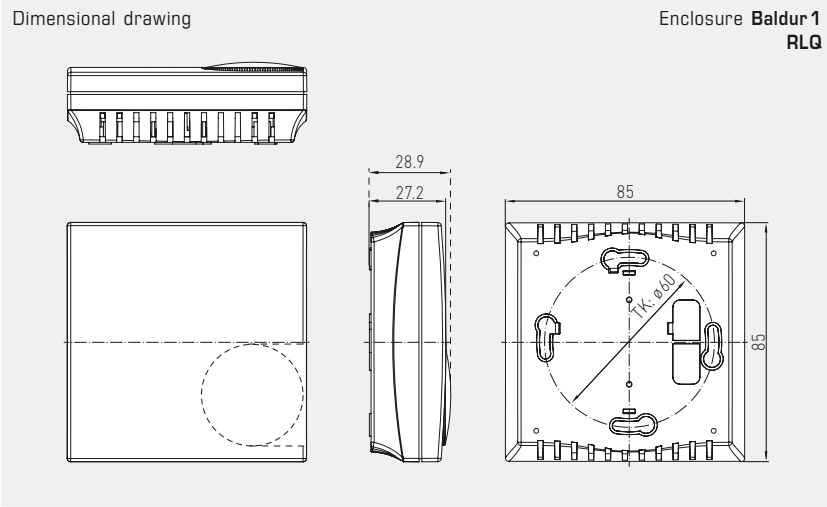


NEW

S+S REGELTECHNIK

AERASGARD® RLQ

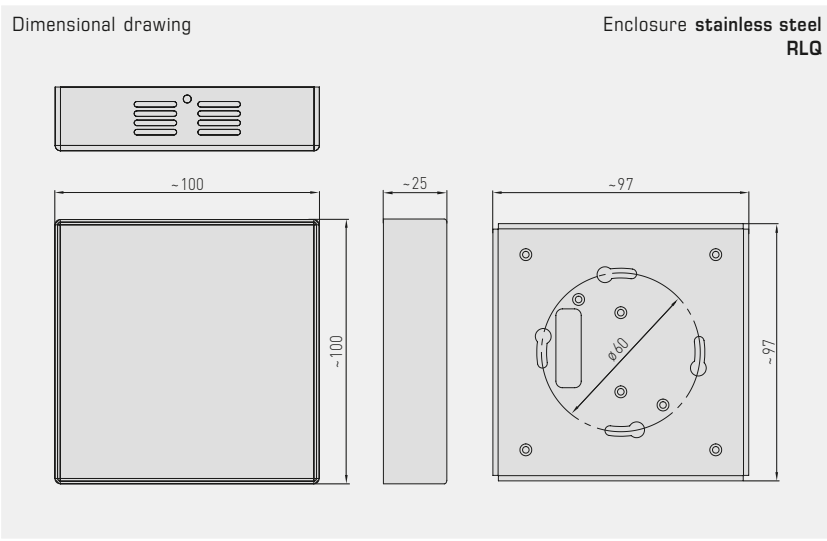
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RLQ-A with LED
(traffic light-LQ indication)



Traffic light indication		RLQ-A	
LED colour	VOC fractions	Output (U) approx.	Output (I) approx.
Green 1	OK	0... 1.9 V	4.0... 7.1 mA
Green 2	OK	2... 3.9 V	7.2...10.4 mA
Yellow 1	Increased	4... 5.9 V	10.5...16.6 mA
Yellow 2	Significantly increased	6... 7.9 V	16.7...16.8 mA
Red	Too high	8...10.0 V	16.9...20.0 mA



RLQ
(stainless steel)



AERASGARD® RLQ – Room air quality sensors/controllers (VOC)

Type / WG02	Measuring Range VOC	Output VOC	Features	Item No.	Price
RLQ		(switchable)		without traffic light	
RLQ-W	0...100 %	0 - 10V / 4...20 mA	Changeover contact	1501-61C0-7301-200	162,13 €
RLQ-W VA	0...100 %	0 - 10V / 4...20 mA	Changeover contact, Stainless steel enclosure	1501-61C0-7301-205	253,40 €
RLQ-A		(switchable)		with traffic light	
RLQ-W-A	0...100 %	0 - 10V / 4...20 mA	LED, Changeover contact	1501-61C0-7331-200	183,60 €

A = With "traffic light" (five coloured LEDs) indicating air quality (VOC).

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