



CE

RCI2

Features

- Hardware and software according to SIL2 compliant development process. Max 1 serious fault/100 yrs.
- Easy maintenance / calibration by replacing the RCI2 sensors or via comfortable on-site calibration
- Modular technology (plug-in and exchangeable)
- Remote installation of the detector in a distance of up to 500 m
- Reverse polarity protected, overload and short-circuit proof
- One analog output 4-20 mA / 2-10V
- Two relays with change-over contact, potential-free, max. 250Vac, 5A
- Different types of housing with IP 65
- Buzzer, status LEDs with warning buzzer (option)
- Display (option)
- Operating voltage 24 Vac/dc 90-230 Vac (option)
- 12 Vdc (option)
- Duct mounting kit (accessory): See datasheet duct kit

Technical data:

Power supply	24 Vac/dc $\pm 20\% \pm 15\%$, reverse-polarity protected
Power consumption (24 V)	Max. 60mA (1.5VA)
- Sensor	Max. 85mA (2.1VA)
- Buzzer	Max. 40mA (1.0 A)

Overvoltage category I

Alarm relays (2)	250 Vac, 5 A, potential-free, change-over contact (SPDT)
Analog input	4 – 20mA overload and short-circuit proof, input resistance 200 Ω

Ambient conditions

Temperature range	-25 °C to +50 °C (-13 °F to +113 °F)
Humidity range	15 - 90 % rH non-condensing
Storage temperature	+5 °C to +30 °C (+41 °F to +86 °F)
Pressure range	Atmospheric $\pm 10\%$
Pollution degree	2 (for indoor use only), not suitable for wet environment
Storage temperature	+5 °C to +40 °C +41 °F to +104 °F)
Storage time	6 months

Physical

Housing type Std	ABS
Protection class	IP 65 (Nema Yx)
Permissible height above sea level	1500 m (5000 ft)

Installation	Wall, sensor pointing downwards
Knockouts for cable entry	2 x M12/3 x M20 (type A) Drilling hole 1 x M20 (type N)

Application

The RCI2 is designed for display and warning of chlorine in many commercial and industrial applications. The detector can be placed remotely in a distance of up to 500 m away from the RCI2.

Function

Gas measuring, monitoring and warning gas leak unit based on state-of-the-art technology for continuous monitoring of the ambient air to detect chlorine.

The board monitors the measured value and activates the alarm relays if the set alarm thresholds for pre-alarm and main alert are exceeded.

In addition, the value is provided at the analog output as 4-20 mA signal.

Options such as LCD display and warning unit (buzzer) ensure proper adaptation to the wide range of applications in gas detection technology.



Chlorine - toxic gas Standalone Detector, Relay and Analog Output

RCI2

Oct. 18

Knockouts for installation of MC2/OAW	2 x (type A) 1 x MC2, 1 x OAW (drilling jole type N)
Wire connection:	
Power supply fieldbus	Screw-type terminals 0.25 to 2.5mm ² , 24 to 10 AWG
Analog in-/output	Screw-type terminals 0.25 to 2.5mm ² , 24 to 10 AWG
Digital input relays	Screw-type terminals 0.25 to 1.3mm ² , 24 to 16 AWG

Cable lengths for remote sensor 500 m (1500ft)

Directives EMC directives 2014/30/EU
Low voltage directive 2014/35/EU
CE
Conformity to:
EN 50271 / IEC 61508
EN 61010-1:2010
ANSI/UL 61010-1
CAN/CSA-C22.2 No. 61010-1

Warranty 1 year on sensor (not if poisoned or overloaded), 2 years on device

OPTIONS

Display LCD, two lines, 16 characters each

Power consumption 5V, 60 mA, 0.3 VA

Status LED (Buzzer)

Colour / mode Red / yellow / green (alarm – fault – operation - service)

Buzzer Acoustic pressure > 85 dB (A), frequency 2300 Hz

Housing	Std	XL	XXL
Dimensions (mm)	80x82x55	90x130x57	130x130x75
Protection class	IP 65	IP 65	IP 65

Power unit & wide range input 110 -240Vac - 50/60 Hz

Consumption 15VA

Overvoltage Category II

Power supply 12V

Power consumption (12Vdc)	Max. 120 mA (1.5 VA)
- Detector	Max. 170 mA (2.1 VA)
- Buzzer	Max. 80 mA (1.0 VA)

Ordering Codes

RCI2 005	24Vac/dc power supply, 12Vdc on demand Chlorine 0-5ppm. Life time 2 years.
RCI2 010	24Vac/dc power supply, 12Vdc on demand Chlorine 0-10ppm. Life time 2 years.
RCI2 020	24Vac/dc power supply, 12Vdc on demand Chlorine 0-20ppm. Life time 2 years.
RCI2 005/3	230Vac Chlorine 0-5ppm. Life time 2 years.
RCI2 010/3	230Vac Chlorine 0-10ppm. Life time 2 years.
RCI2 020/3	230Vac Chlorine 0-20ppm. Life time 2 years.
RCI2 005D	24Vac/dc power supply, display and keypad buttons, 12Vdc on demand Chlorine 0-5ppm. Life time 2 years.
RCI2 010D	24Vac/dc power supply, display and keypad buttons, 12Vdc on demand Chlorine 0-10ppm. Life time 2 years.
RCI2 020D	24Vac/dc power supply, display and keypad buttons, 12Vdc on demand Chlorine 0-20ppm. Life time 2 years.
RCI2 005D/3	230Vac/dc power supply, display and keypad buttons Chlorine 0-5ppm. Life time 2 years.
RCI2 010D/3	230Vac/dc power supply, display and keypad buttons Chlorine 0-10ppm. Life time 2 years.
RCI2 020D/3	230Vac/dc power supply, display and keypad buttons Chlorine 0-20ppm. Life time 2 years.

Alarm Units

Buzzer	Warning Siren - built in
AAW 24	Warning Horn 24Vdc 98dB
AAW 230	Warning Horn 230Vac 98dB

OA 24R	Flashlight 24Vdc, red
OA 24Y	Flashlight 24Vdc, yellow
OA 24B	Flashlight 24Vdc, blue
OA 24G	Flashlight 24Vdc, green

OAW 24R Combined Warning Horn/Flashlight, 24Vdc 98dB, red



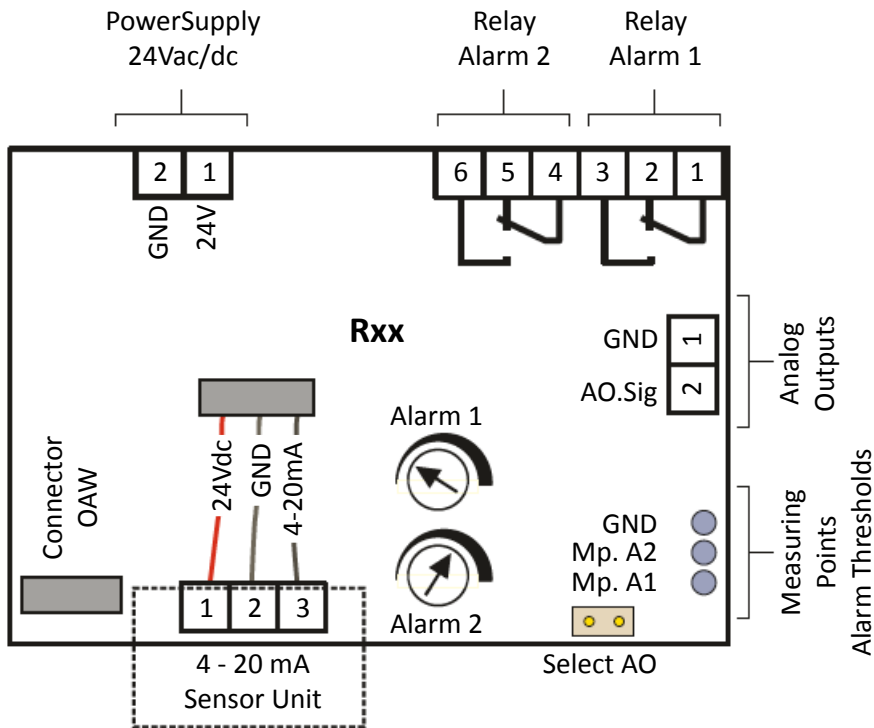
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RCI2

Oct. 18

Technical Data	Sensor		
Power Supply	16 - 19Vdc, reverse polarity protected; 18 - 27Vac (only for output signal 2 - 10V)	OAW 24Y	Combined Warning Horn/Flashlight, 24Vdc 98dB, yellow
Power Consumption	223mA max. (o.6VA for 24V)	OAW 24B	Combined Warning Horn/Flashlight, 24Vdc 98dB, blue
Analog output signal	Proportional overload- and short-circuit proof > 20 - 21.2mA or 10 - 10.6V = overrange	OAW 24G	Combined Warning Horn/Flashlight, 24Vdc 98dB, green
Measuring range	0 - 5 ppm, 0 - 10 ppm, 0 - 20 ppm	OAW 230R	Combined Warning Horn/Flashlight, 230Vac 98dB, red
Accuracy	n.D	OAW 230Y	Combined Warning Horn/Flashlight, 230Vac 98dB, yellow
Resolution	0.1 ppm	OAW 230B	Combined Warning Horn/Flashlight, 230Vac 98dB
Repeatability	< ± 2% sig.	OAW 230G	Combined Warning Horn/Flashlight, 230Vac 98dB
Response time t_{90}	40 sec	Warning Signs	
Zero point variation	0,2 ppm	Gas Alarm IP65	Flashing gas alarm sign "GAS ALARM" 24Vac/dc, IP65
Zero Drift	< 1% signal/month	Gas Alarm IP54	Flashing gas alarm sign "GAS ALARM" 24Vac/dc, IP54
Zero Gain	< 2% signal/month	XL House	Large enclosure housing (90 x 130 x 57)
Sensor lifetime	2 years / normal ambient conditions	XXL House	Extra large enclosure housing (130 x 130 x 75), required with UPS option.
Calibration interval	6 months		
Pressure range	Atmospheric ± 20%		
Storage temperature range	+ 5 to + 30° C (41- 86° F)		

Electrical Connection



Alarm levels, garage

Alarm = Pre-Warning set at 0,5 ppm - flashlight

Alarm = Critical alarm level set at 1.5 ppm - siren or gas alarm sign

Cross Sensitivity

The sensor reacts differently to the following gases

Gas	Concentration, ppm	Reaction, ppm
Carbon Monoxide, CO	300	0
Sulphur Dioxide, SO ₂	5	0
Nitrogen Dioxide, NO ₂	20	20
Nitrogen Monoxide, NO	35	0
Hydrogen, H ₂	300	0

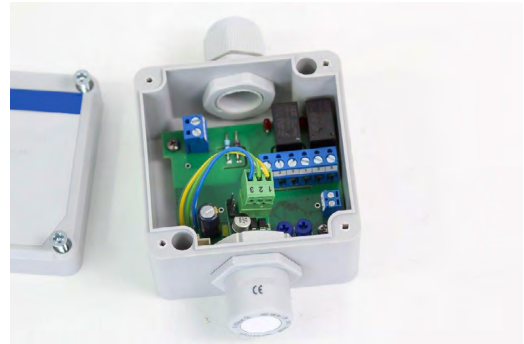
Sensor mounting height 0.2 m above floor

Density 2

Coverage 10 - 20 m²



RCL2 with sensor, buzzer and display



RCL2 - open

RCL2



RO3 with sensor



RCL2 with sensor and display



RCL2 90 - 240Vac/24Vac/dc power supply