

Gas Detection.



Presumably the smallest analog controller in the world.

Analog-Relay-Board ARB2



- All Products
- Made
- in Germany

Analog-Relay-Board

ARB2

Monitoring and warning of gases

Measurement, warning and control board for continuous monitoring of the ambient air to detect toxic, combustible and refrigerant gases.

The ARB2 is designed for the connection of one analog 4-20 mA sensor, e.g. MC2 sensor to measure a rising gas signal.

The board monitors the measured value and activates the alarm relays if the set alarm thresholds for pre-alarm and main alarm are exceeded. In addition, the value is provided at the analog output as 4-20 mA signal.

Benefits

- Modular technology (plug-in and exchangeable)
- Easy maintenance and calibration by exchanging the MC2 sensor or comfortable on-site calibration
- Hardware and software according to SIL compliant development process
- Sensor can be placed up to 500 m remote
- Reverse polarity protected, overload and short circuit proof
- 1x analog input 4-20 mA, 1x analog output 4-20 mA / 2-10 V
- 2x relays with changeover contact, potential-free, max. 250 V AC, 5 A

Options

- Operating voltage 24 V AC/DC, 100-240 V AC or 12 V DC
- Different housing types with protection class IP65
- Warning device WAO (Status-LED with warning buzzer)
- Display
- Version UL/CSA 61010-1

Gas measurement, warning and control board for continuous monitoring of ambient air.

Cable glands

Housing IP65

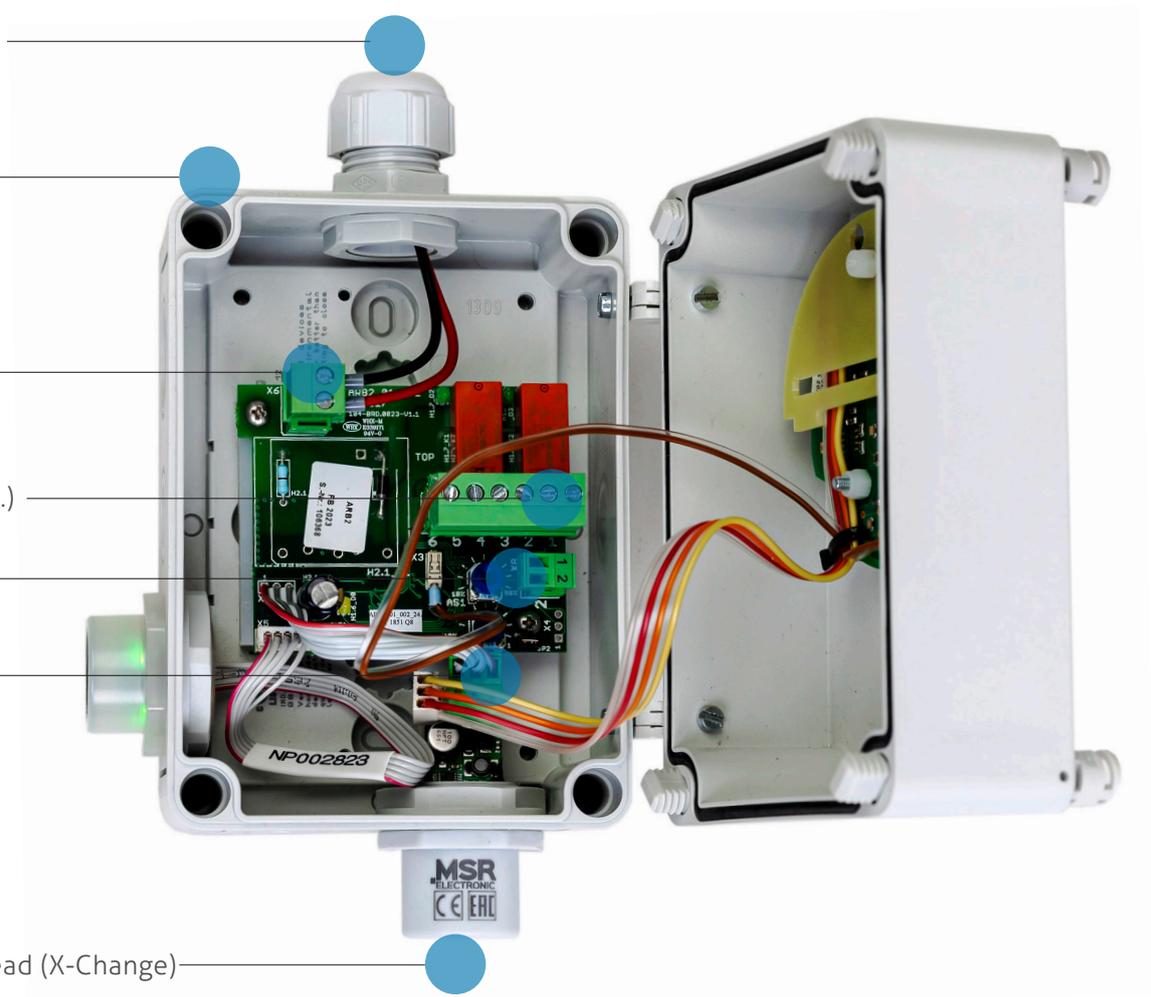
Power supply

Relay 230 V / 5 A (2 pcs.)

Potentiometer for
threshold setting

Analog output

Exchangeable sensor head (X-Change)



MSRSHOP24

Configure your products here.

SPECIFICATIONS

ELECTRICAL	
Power supply	24 V DC \pm 20 %, AC \pm 15 %, reverse-polarity protected
Power consumption (24 V) <ul style="list-style-type: none"> Control Board Sensor (MC2) WAO 	Max. 60 mA (1,5 VA), w/o sensor, w/o WAO Max. 85 mA (2,1 VA) Max. 40 mA (1,0 VA)
Overvoltage category	I
Alarm relays (2)	250 V AC, 5 A; 30 V DC, 2 A, potential-free, change-over contact (SPDT)
Analog input	4–20 mA overload and short-circuit proof, input resistance 130 Ω
Tension for analog sensor unit	24 V DC, max. 100 mA
Analog output signal	Proportional, overload and short-circuit proof, load \leq 500 Ω (for 12 V DC supply max. 200 Ω) 4–20 mA or 2–10 V

AMBIENT CONDITIONS	
Temperature range	-25°C to +50°C (-13°F to +122°F)
Humidity range	15-95 % RH non-condensing
Pressure range	Atmosphere \pm 10 %
Pollution degree	2 (for indoor use only), not suitable for wet environment
Permissible height above sea level	1500 m (approx. 5000 ft.)
Storage temperature	-20°C to +65°C (-40°F to +149°F)
Storage time	6 months

PHYSICAL		
Housing	Typ A	Typ G
Material	Polycarbonat	Polycarbonat
Combustion	UL 94 V2	UL 94 V2
Housing colour	Light grey RAL 7032	Light grey RAL 7032
Dimensions W x H x D (mm) / (inch.)	94 x 130 x 57 / (3.70 x 5.12 x 2.24)	94 x 130 x 81 / (3.70 x 5.12 x 3.18)
Weight ca. in kg / (lb.)	0.25 / (0.55)	0.3 / (0.66)
Protection class (delivery status)*	NEMA 4X (IP65)	NEMA 4X (IP65)
Installation	Wall mounting, sensor downwards	
Knockouts for cable entry	2x M12 / 3x M20	2x M12 / 3x M20
Knockouts for install. of MC2/WAO	2x	2x
Wire connection <ul style="list-style-type: none"> Power supply, field bus Relays Analog in/output; dig. input 	Screw-type terminals 0.25-2.5 mm ² , 24-10 AWG Screw-type terminals 0.25-2.5 mm ² , 24-10 AWG Screw-type terminals 0.25-1.3 mm ² , 24-16 AWG	
Max. cable lengths for remote sensor	500 m (1640 ft.)	

* If there are changes on the housing it has to be re-evaluated.

REGULATIONS	
Directives	EMC directives 2014/30/EU Low voltage directive 2014/35/EU CE UKCA EN 61010-1:2010 Option: ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1
Warranty	1 year on sensor (not if poisoned or overloaded) 2 year on device
OPTIONS DISPLAY	
Display Consumption	LCD, 2 lines, 16 characters each 5 V, 60 mA, 0,3 VA
WAO STATUS-LED/SUMMER	
LED colour / mode Buzzer – acoustic pressure Buzzer – frequency Protection class	Red / yellow / green (alarm-fault-operation) > 85 dB (A), (0,1 m Distance) 2300 Hz ± 300 Hz IP65
POWER SUPPLY 110/230 V AC	
Wide range input Consumption Overvoltage category	100-240 V AC – 50/60 Hz Max. 5 VA II
POWER SUPPLY 12 V	
Power consumption (12 V DC) • Control Board • Sensor (MC2) • WAO	Max. 120 mA (1,5 VA), w/o sensor, w/o WAO Max. 170 mA (2,1 VA) Max. 80 mA (1,0 VA)

All specifications were collected under optimal test conditions.
We confirm compliance with the minimum requirements of the applicable standard.

ORDERING INFORMATION

ARB2-	X-	X	X	X	X	X	0 No further options A Version UL/CSA 61010-1	Further Options
							0 Without sensor 1 Sensor MC2 installed ex works ¹⁾ 2 Accessory kit for remote sensor	Sensor unit ³⁾
							0 Without visual/audible indicator (WAO) 1 With buzzer & status LED (red, yellow, green)	Visual/Audible indicator
							0 Without Display 1 With Display ²⁾	Display
							1 12 V DC * 2 24 V AC/DC 5 100–240 V AC	Power supply
							0 Without housing A Housing type A (not for display option) G Housing Typ G (for display option)	Housing

1) Please specify exact type when ordering

2) Only in connection with MC2 sensor in the same housing

3) Excluding oxygen

* On request

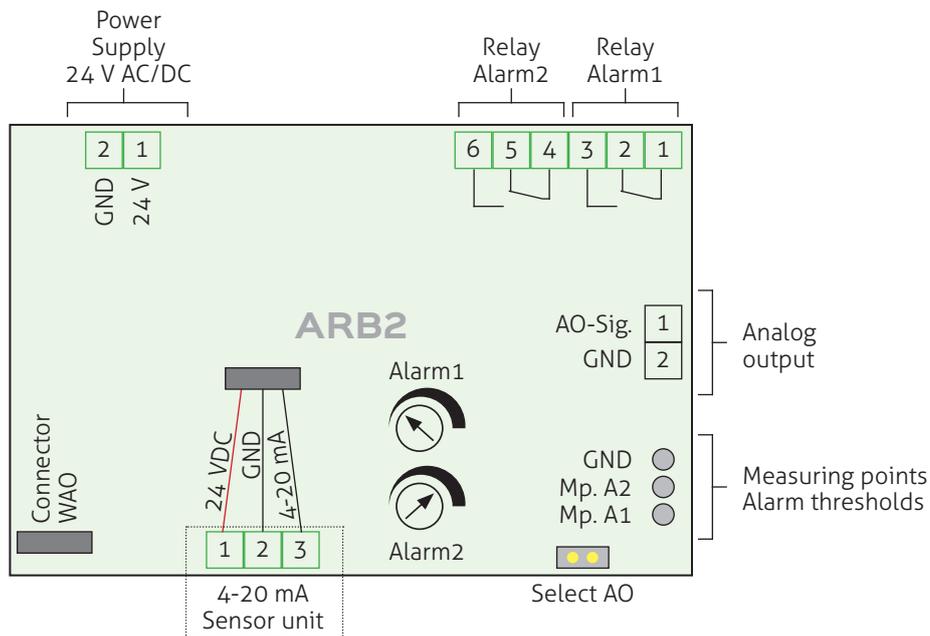
STANDARD VERSION

- Analog-Relay-Board, 24 V DC
- 2x digital output (pot. free relays)
- Thresholds adjustable via potentiometer
- 1x analog input (4-20 mA)
- 1x analog output (4-20 mA oder 2-10 V)
- Without display, without WAO
- Sensor integrated
- No further Optionen

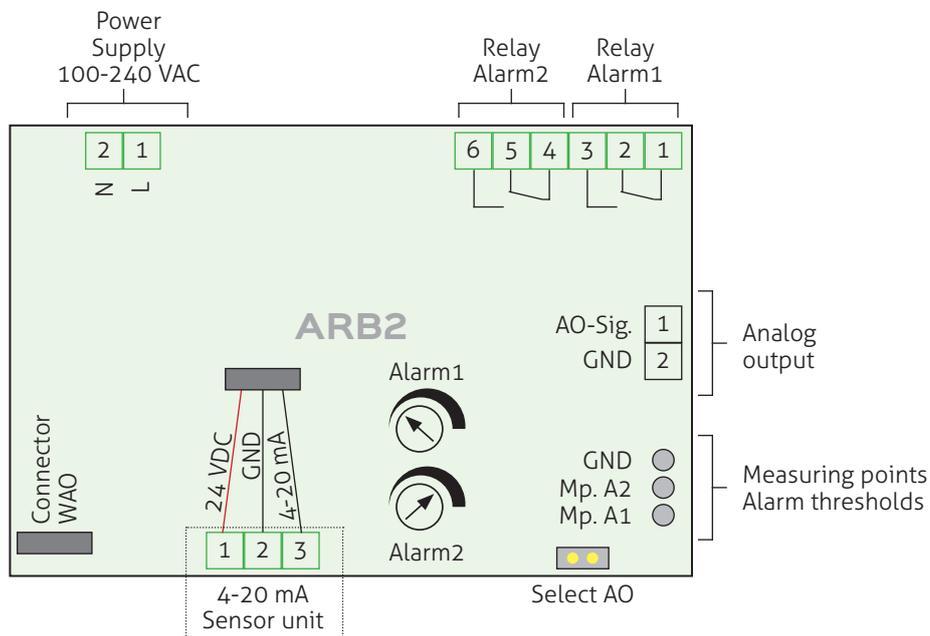
Ordering number: ARB2-A-20010

WIRING CONFIGURATION

24 V AC/DC



110 / 230 V AC



Note

When connecting catalytic bead sensors for combustible gases, you must provide an external „self-holding“ of the alarm relay if the measuring range may possibly be exceeded.

Gas Detection.



We are part of the MSR-Group.



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