

Control Unit SG-RS 204



Operating Instructions

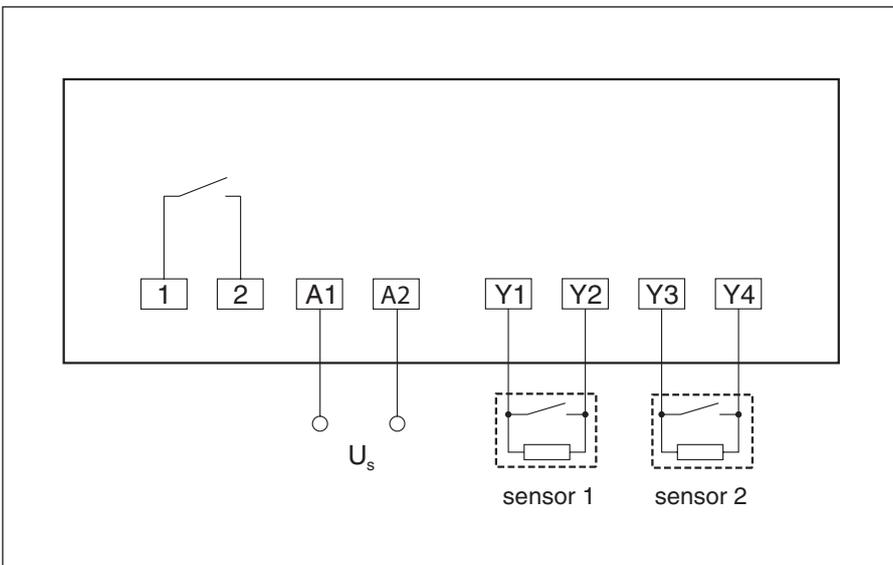
Control Unit
EN 954 category 1
for sensors with
monitoring resistor 1.2 k Ω .

These operating instructions apply to
the following Control Units:

1001825	SG-RS 204	12 V=
1001414	SG-RS 204	24 V=/~
1002943	SG-RS 204/invert	12 V=
1002944	SG-RS 204/invert	24 V=/~

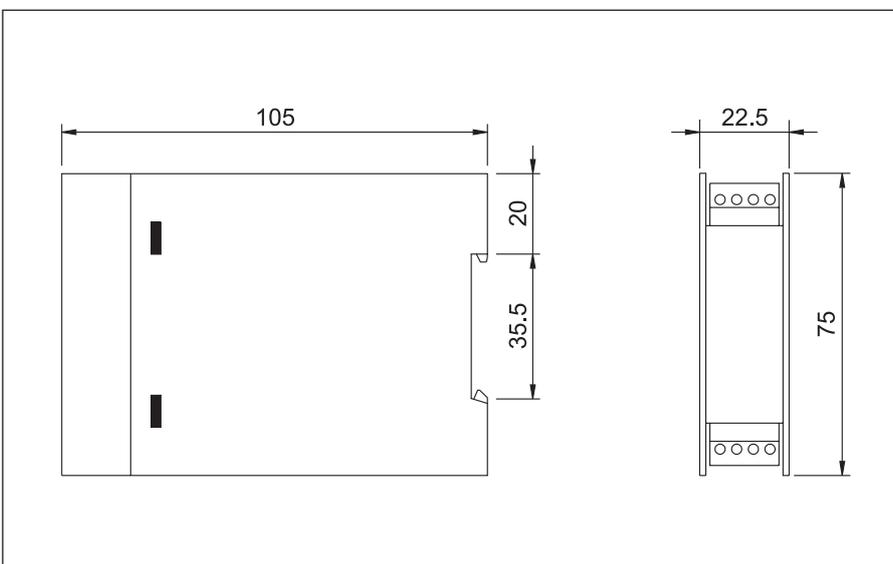
Control

This control unit has two monitoring circuits which operate one output relay. The electronics monitor the electrical resistance of the connected sensor, which operates on a specific closed-circuit current. When the sensors are not activated the relay is energized (normal operating conditions). When a sensor is activated, or if a break occurs in the power supply, the relay de-energized. In the case of Control Unit SG-RS 204/ invert the relay contact functions as a NC contact, not as a NO contact.



Note

When using only one sensor, bridge the second input with R = 1.2 k Ω



Enclosure

W x H x D (mm)	22.5 x 75 x 105
Degree of protection	IP20
Plug connection	each 4 channel
Cable terminals	max. 2.5 mm ²
Weight	approx. 100 g

Parts supplied

- **Control Unit**
Enclosure with electronics module and plug-in connectors
- **Operating Instructions**

Installation and Operation

Technical Data

Connecting voltage U_s

SG-RS 204		DC 10 - 16 V
	AC 24 V	DC 18 - 32 V
SG-RS 204/invert		DC 10 - 16 V
	AC 24 V	DC 18 - 32 V
Voltage tolerance	-15% to +10%	
Nominal frequency	50 Hz	
Power consumption	< 2 VA	< 2 W

Relay Data

Switching voltage	max. 125 V AC
Switching current	max. 5 A

Permissible ambient temperature range	- 25 °C to + 60 °C
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Installation

Fix the enclosure in any position to an IEC 60715 35 mm rail.

Wiring takes place in the cable terminals of the plug connection:

Sensor 1	Y1, Y2
Sensor 2	Y3, Y4
Supply voltage	A1, A2
Relay	1, 2

CAUTION

Do not disconnect the terminals or unplug the plug connection with power on!

Important notes:

- Supply voltage

must be in accordance with the connecting voltage U_s indicated on the type plate.

- Permissible ambient temperature range

Maintain sufficient distance from heat sources when mounting into a cabinet (min. 2 cm).

LED information

- yellow LED "Betätigt K1/K2" (activated K1/K2)

Sensor is activated and relays are de-energized

- red LED "Störung K1/K2" (fault K1/K2)

Break in power supply, Relay de-energized

- green LED "Betrieb" (on)
Line voltage present

Commissioning

After connecting up sensors, relay contacts and mains, carry out a function test in the following order:

Sensor not activated

- Output relay is energized

Sensor activated

- yellow LEDs "Betätigt" (activated) light up
- Output relay is de-energized

Troubleshooting and remedies

Prerequisite: SG-RS 204 connected to connecting voltage U_s an sensor.

Sensor not activated and Control Unit does not respond:

LED "Betrieb" (on) off.

> Supply voltage off or incorrect.

- ☞ Check connecting voltage U_s , compare with type plate.
- ☞ Observe correct polarity.
- ☞ Fault still exists: Control Unit faulty.
- ☞ Replace Control Unit.

Sensor not activated and relay not energized:

LED "Störung K1/K2" (fault K1/K2) or "Betätigt K1/K2" (activated K1/K2) on.

> Sensor or supply lines faulty (Change in resistance not high enough).

- ☞ Check sensor with gauge: set value = 1.2 k Ω \pm 2%
- ☞ Actual value \neq set value: sensor or supply line faulty.
- ☞ Replace sensor.

> Control Unit faulty.

- ☞ Connect resistor 1.2 k Ω instead of the sensor.
- ☞ Fault still exists: Control Unit faulty.
- ☞ Replace Control Unit.

Sensor interrupted and relay not de-energized:

> Control Unit faulty.

- ☞ Disconnect sensor.
- ☞ Relay not de-energized: Control Unit faulty.
- ☞ Replace Control Unit.

Maintenance

The Control Unit is maintenance-free.

Check safety system monthly by activating the sensors.

Disposal

At the end of their service life, the devices can be returned to us for disposal. WEEE-Reg.-Nr. DE 39141253

Sensor actuated and relay not de-energized:

> Control Unit faulty

- ☞ Disconnect sensor
- ☞ relay not de-energized: Control Unit faulty
- ☞ Replace Control Unit.

Fault can still not be detected?

Mayser Support will help:

Tel. +49 731 2061-0

Subject to technical modifications.