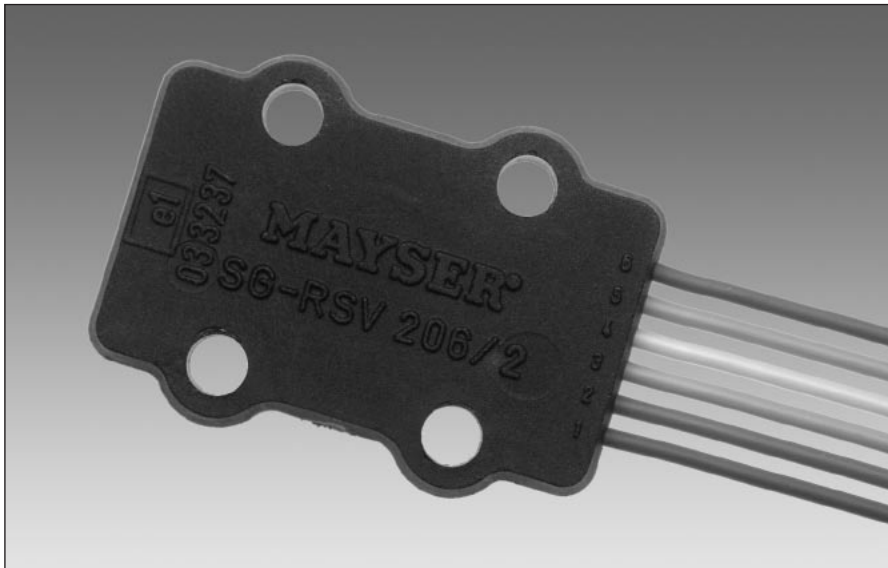


## Control Unit SG-RSV 206/X

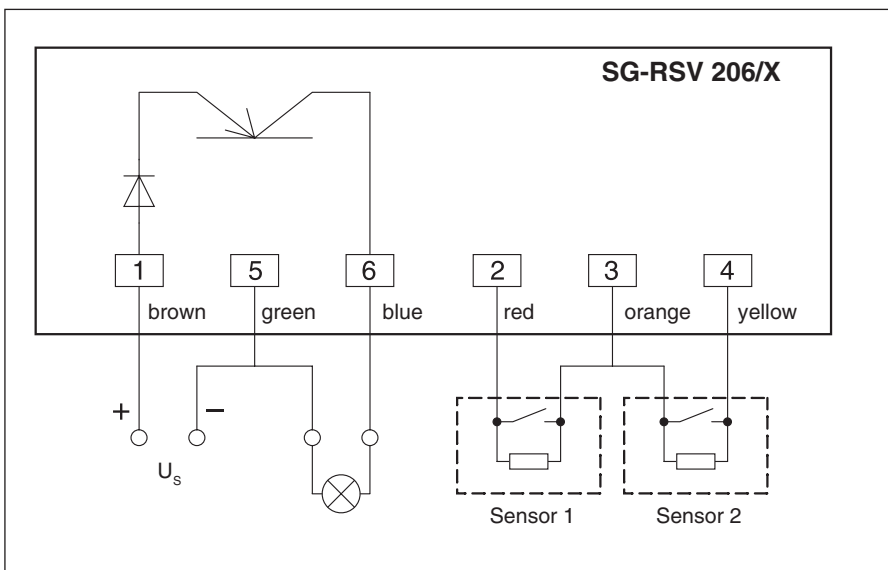


## Operating Instructions

**Control Unit**  
**EN 954 Category B**  
for sensors with  
monitoring resistor 1k $\Omega$ .

These operating instructions apply to the following Control Units:

- 1002565 SG-RSV 206/112 / 24 V =  
Output: pnp not inverted
- 1003181 SG-RSV 206/2 12 / 24 V =  
Output: pnp inverted



### Control

This Control Unit contains two monitoring circuits which act on an output transistor.

The electronics monitor the electrical resistance of the connected sensors which have a specific closed-circuit current.

### SG-RSV 206/1

When the sensors are not activated (normal operating conditions), there is no voltage on the output.

When a sensor is activated or a cable break in the supply lines occurs, there is voltage on the output.

### SG-RSV 206/2

When the sensors are not activated (normal operating conditions), there is voltage on the output.

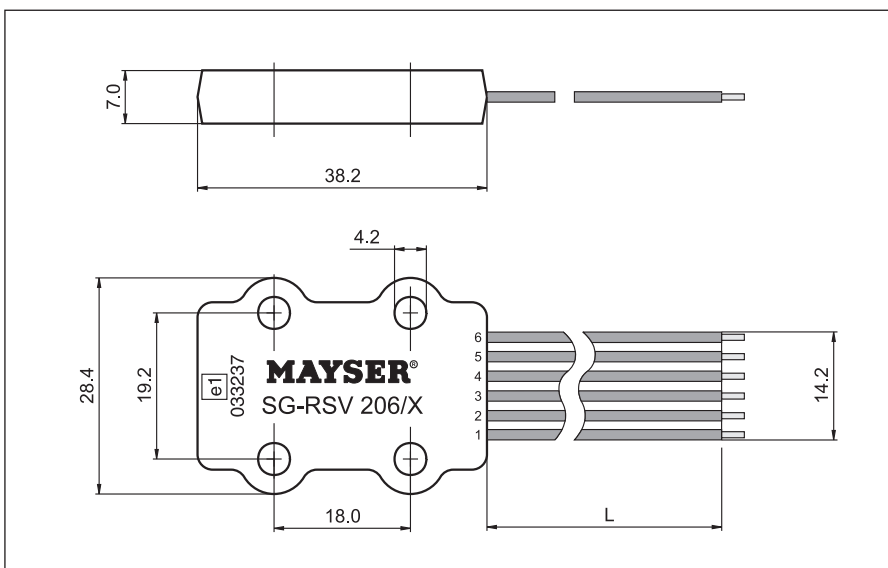
When a sensor is activated or a cable break in the supply lines occurs, there is voltage on the output.

### Enclosure

W x H x D (mm)	38.2 x 28.4 x 7.0
Cable length L	190 mm
	Ends tin-plated
Degree of protection enclosure	IP67
Weight (with cable)	approx. 15 g

### Parts supplied

- Control Unit  
Potted electronics with firmly installed connection wires
- Operating Instructions



version 2

170409 v2.3

# Control Unit SG-RSV 206/X

## IMPORTANT NOTES!

To ensure correct and safe operation of the unit, it must be properly transported and stored, properly installed and commissioned, and operated in accordance with its intended use. Only persons familiar with the installation, commissioning and operation, and with the corresponding qualifications to prove their skills, may work on the units. They must observe the contents of these operating instructions, the information stated on the unit and the relevant safety regulations for the installation and operation of electrical systems. This unit is designed and tested in

## Please read!

accordance with the latest technical standards and left our factory in a perfectly safe condition. To maintain this condition, you must observe the safety regulations marked WARNING! in these operating instructions. Failure to observe the safety regulations can lead to death, injury to personnel, or damage to the unit and other systems and equipment. Should the information given in these operating instructions be inadequate in any way, please contact your local technical centre, subsidiary or representative. When using the device outside the

European Union, you must observe the relevant regulations valid for the country of use.

## Technical Data

### Connecting voltage $U_s$

SG-RSV 206/1	DC 8 - 32 V
SG-RSV 206/2	DC 8 - 32 V
Power consumption	max. 1.0 W

### Sensor voltage

max.  $U_s$

### Switching thresholds at +23 °C

Sensor activated	< 650 Ohm
Cable break	> 3k2 Ohm

### Output (transistor)

Switching voltage	max. $U_s$
Switching current	max. 50 mA
Response time	max. 1 ms
Output type SG-RSV 206/1	pnp not inverted
Output type SG-RSV 206/2	pnp inverted

### Connecting cable

Bend radius	min. 15 mm
Insulation voltage	1500 V / 50 Hz

### Environmental conditions

Permissible ambient temperature	- 30 °C to + 80 °C
Humidity	max. 85% rel., non-condensing
Vibration fatigue limit	1 g in all 3 levels

## Important notes:

### Supply voltage

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

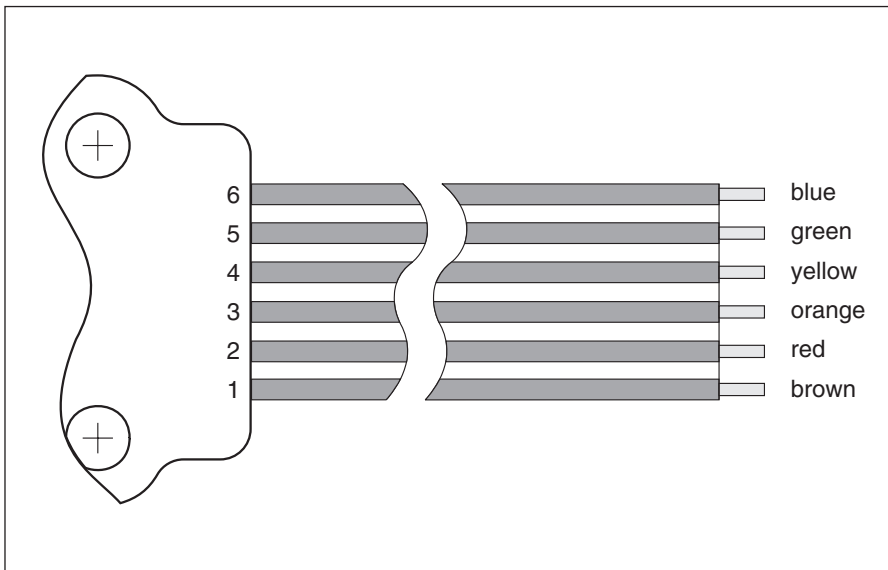
### - Permissible temperature range

When installing, maintain sufficient distance from heat sources (min. 2 cm).

### - if only one sensor

When using only one sensor, terminate the second input with Resistor 1k2 ±5% .

# Installation and Operation



## Installation

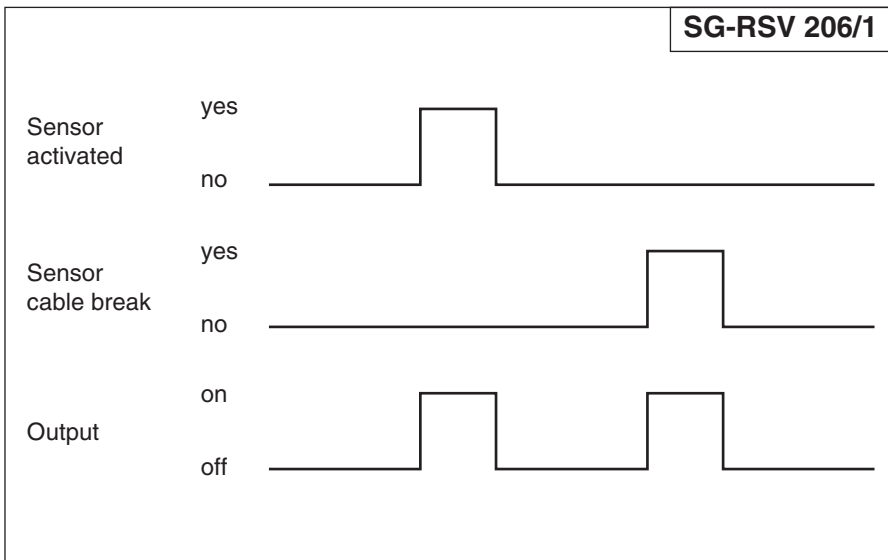
Fix with the aid of the 4 integrated fixing eyelets:  
 - with screws (M4)  
 - with cable ties

## WARNING!

**Always affix rear side (with type plate) to assembly surface.**

## Connection

Supply voltage	1(+), 5 (-)
Sensor 1	2, 3
Sensor 2	3, 4
Output circuit	5, 6



## WARNING!

**Do not disconnect or connect live lines.**

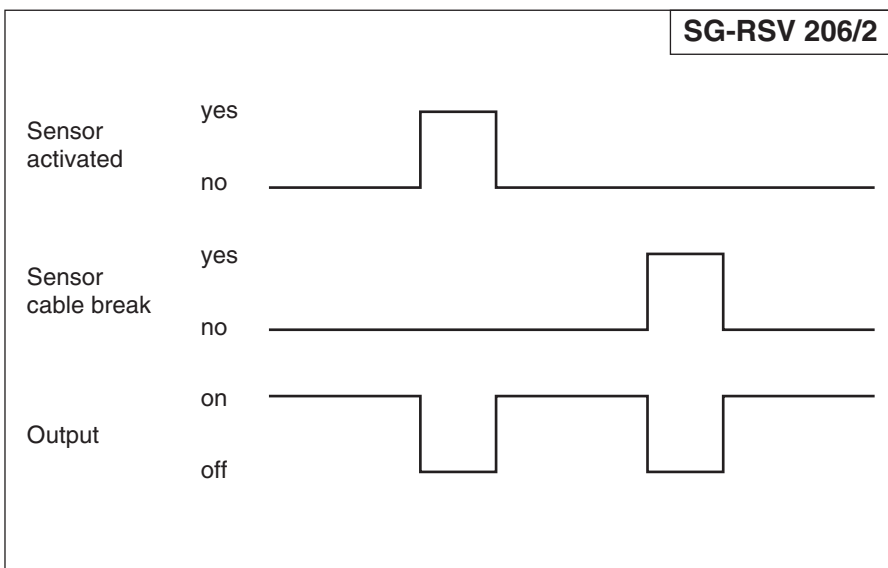
**When using screw terminals, end sleeves should be used on non-tin-plated conductor cores.**

## Commissioning

After connecting the sensors, the output circuit and the supply voltage, carry out a function test in the following order:

### SG-RSV 206/1

- **Sensor not activated**  
no output signal; connected load is inactive
- **Sensor activated**  
- Output signal present; connected load is active



### SG-RSV 206/2

- **Sensor not activated**  
Output signal present; connected load is active
- **Sensor activated**  
no output signal; connected load is inactive

# Maintenance and troubleshooting

## Maintenance

The Control Unit is maintenance-free. Check safety installation at least once a month by activating the individual sensors.

## Troubleshooting and Remedies

Prerequisites: SG-RSV 206/X with connected sensor and supply voltage.

### SG-RSV 206/1

#### Sensor activated and output does not switch on:

- > Supply voltage off or incorrect
  - ☞ Check polarity and level of supply voltage.
- > Sensor or supply lines faulty
  - ☞ Check sensor with gauge, activated: Resistor < 400 Ohm.
- > Fault still exists: Control Unit faulty
  - ☞ Replace Control Unit

#### Sensor not activated and output does not switch off:

- > Sensor or supply lines faulty (short-circuit or line break)
  - ☞ Check sensor with gauge, not activated: set value =  $1k\Omega \pm 5\%$ .
- > Actual value  $\neq$  set value: sensor or supply lines faulty.
  - ☞ Replace Sensor.
- > Fault still exists: Control Unit faulty
  - ☞ Replace Control Unit.

### SG-RSV 206/2

#### Sensor not activated and output does not switch on:

- > Supply voltage off or incorrect
  - ☞ Check polarity and level of supply voltage.
- > Sensor or supply lines faulty (short-circuit or line break)
  - ☞ Check sensor with gauge, not activated: set value =  $1k\Omega \pm 5\%$ .
- > Actual value  $\neq$  set value: sensor or supply lines faulty.
  - ☞ Replace Sensor.
- > Fault still exists: Control Unit faulty
  - ☞ Replace Control Unit.

#### Sensor activated and output does not switch off:

- > Sensor or supply lines faulty
  - ☞ Check sensor with gauge, activated: Resistor < 400 Ohm.
- > Fault still exists: Control Unit faulty
  - ☞ Replace Control Unit.

Fault can still not be detected? - Mayser Support will help: tel. +49 731 2061-0