



# RE13-SAC

RE1

NON-CONTACT SAFETY SWITCHES

**SICK**  
Sensor Intelligence.



### Ordering information

| Type     | Part no. |
|----------|----------|
| RE13-SAC | 1059503  |

Other models and accessories → [www.sick.com/RE1](http://www.sick.com/RE1)



### Detailed technical data

#### Features

|   |                      |
|---|----------------------|
| <b>System part</b>                                  | Sensor with actuator |
| <b>Sensor principle</b>                             | Magnetic             |
| <b>N/O contacts</b>                                 | 2                    |
| <b>N/C contacts</b>                                 | 0                    |
| <b>Signaling contacts</b>                           | 0                    |
| <b>Safe switch on distance <math>S_{ao}</math></b>  | 7 mm                 |
| <b>Safe switch off distance <math>S_{ar}</math></b> | 20 mm                |
| <b>Active sensor surfaces</b>                       | 1                    |
| <b>Actuation directions</b>                         | 3                    |

#### Safety-related parameters

|   |   |
|---|---|
| <b><math>B_{10d}</math> parameter</b>     | $2 \times 10^7$ switching cycles (with small load)  |
| <b>Type</b>                               | Type 4 (EN ISO 14119)   |
| <b>Actuator coding level</b>              | Low coding level (EN ISO 14119)   |
| <b>Safe state in the event of a fault</b> | The switch has no internal fault detection and is unable to assume a safe state in the event of a fault. Fault detection is performed by the connected safety-related logic unit. |

#### Functions

|                                |   |
|--------------------------------|---|
| <b>Safe series connections</b> | None, only individual wiring (with diagnostics) |
|--------------------------------|---|

#### Interfaces

|                        |                           |
|------------------------|---------------------------|
| <b>Connection type</b> | Plug connector, M8, 4-pin |
| Coupling nut material  | Nickel-plated brass       |

#### Electronics

|                          |                |
|--------------------------|----------------|
| <b>Type of output</b>    | Reed contacts  |
| <b>Switching voltage</b> | $\leq 30$ V DC |
| <b>Switching current</b> | $\leq 100$ mA  |

#### Mechanics

|               |             |
|---------------|-------------|
| <b>Design</b> | Rectangular |
|---------------|-------------|

|                               |                       |
|-------------------------------|-----------------------|
| <b>Dimensions (W x H x D)</b> | 26 mm x 36 mm x 13 mm |
| <b>Weight</b>                 | 0.1 kg                |
| <b>Housing material</b>       | VISTAL®               |

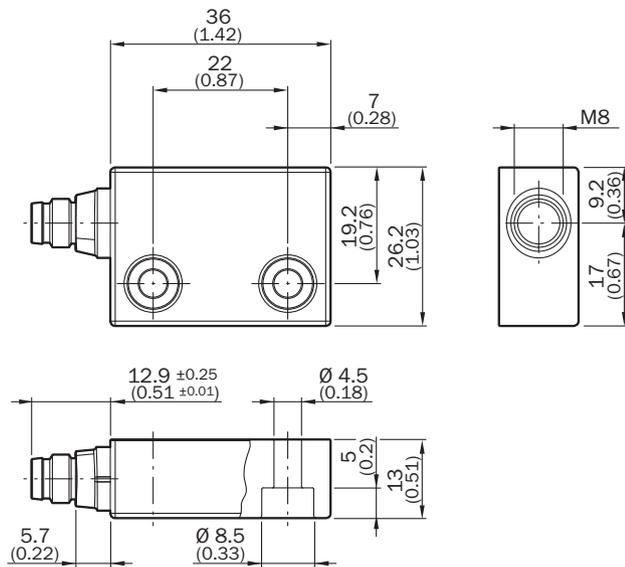
Ambient data

|                                      |                                      |
|--------------------------------------|--------------------------------------|
| <b>Enclosure rating</b>              | IP67 (IEC 60529)                     |
| <b>Ambient operating temperature</b> | -30 °C ... +60 °C                    |
| <b>Storage temperature</b>           | -30 °C ... +60 °C                    |
| <b>Vibration resistance</b>          | 10 Hz ... 55 Hz, 1 mm (EN 60947-5-3) |
| <b>Shock resistance</b>              | 30 g, 11 ms (EN 60947-5-3)           |

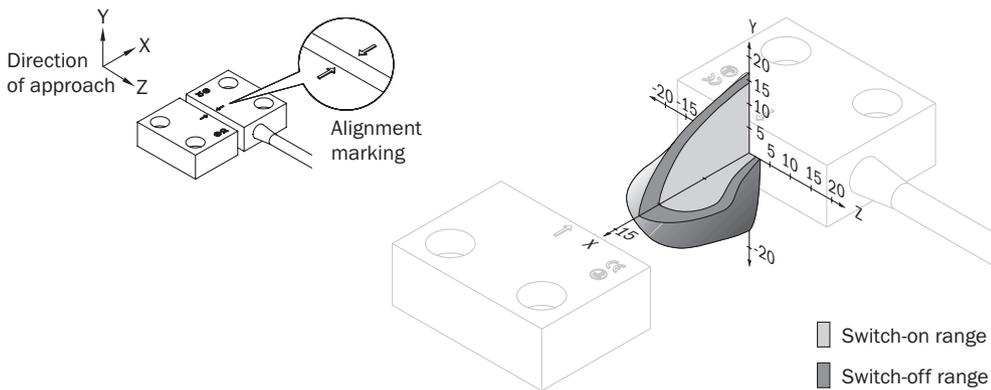
Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27272402 |
| <b>ECLASS 5.1.4</b>   | 27272402 |
| <b>ECLASS 6.0</b>     | 27272402 |
| <b>ECLASS 6.2</b>     | 27272402 |
| <b>ECLASS 7.0</b>     | 27272402 |
| <b>ECLASS 8.0</b>     | 27272402 |
| <b>ECLASS 8.1</b>     | 27272402 |
| <b>ECLASS 9.0</b>     | 27272402 |
| <b>ECLASS 10.0</b>    | 27272402 |
| <b>ECLASS 11.0</b>    | 27272402 |
| <b>ECLASS 12.0</b>    | 27274401 |
| <b>ETIM 5.0</b>       | EC002544 |
| <b>ETIM 6.0</b>       | EC002544 |
| <b>ETIM 7.0</b>       | EC002544 |
| <b>ETIM 8.0</b>       | EC002544 |
| <b>UNSPSC 16.0901</b> | 39122205 |

### Dimensional drawing (Dimensions in mm (inch))

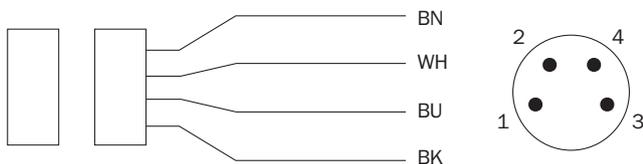


### Response range



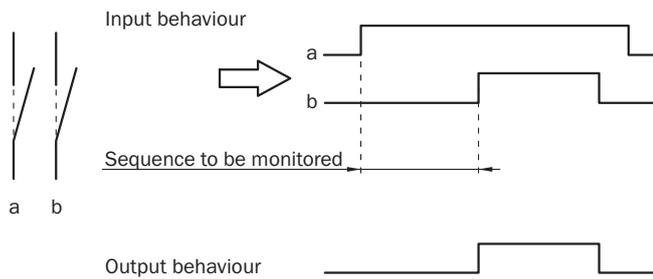
### Pinouts

REx3: sensor connections (plug M8)



|      |             |
|------|-------------|
| 1 BN | N/O contact |
| 2 WH |             |
| 3 BU | N/O contact |
| 4 BK |             |

## Sensor timing



## Recommended accessories

Other models and accessories → [www.sick.com/RE1](http://www.sick.com/RE1)

|   | Brief description   | Type               | Part no. |
|---|---|--------------------|----------|
| Others  |   |                    |          |
|    | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 2 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>  | YF8U14-020VA3XLEAX | 2095888  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>  | YF8U14-050VA3XLEAX | 2095889  |
|  | <ul style="list-style-type: none"> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 10 m, 4-wire, PVC</li> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>   | YF8U14-100VA3XLEAX | 2095890  |
| Safety switching amplifier  |   |                    |          |
|  | <ul style="list-style-type: none"> <li>• <b>Applications:</b> Evaluation unit</li> <li>• <b>Compatible sensor types:</b> Safety sensors with potential-free outputs</li> <li>• <b>Connection type:</b> Front connector with spring terminals</li> <li>• <b>Restart interlock:</b> yes</li> <li>• <b>External device monitoring (EDM):</b> Integrated</li> <li>• <b>Outputs:</b> 2 enabling current paths (safe), 2 application diagnostic outputs (not safe), 3 test pulse outputs (not safe)</li> <li>• <b>Housing width:</b> 18 mm</li> </ul> | RLY3-EMSS100       | 1085345  |
|  | <ul style="list-style-type: none"> <li>• <b>Applications:</b> Evaluation unit</li> <li>• <b>Compatible sensor types:</b> Safety sensors with potential-free outputs</li> <li>• <b>Connection type:</b> Front connector with spring terminals</li> <li>• <b>Restart interlock:</b> yes</li> <li>• <b>External device monitoring (EDM):</b> Integrated</li> <li>• <b>Outputs:</b> 3 enabling current paths (safe), 2 application diagnostic outputs (not safe), 3 test pulse outputs (not safe)</li> <li>• <b>Housing width:</b> 18 mm</li> </ul> | RLY3-EMSS300       | 1099973  |

|   | Brief description   | Type         | Part no. |
|---|---|--------------|----------|
|  | <ul style="list-style-type: none"> <li>• <b>Applications:</b> Evaluation unit for stop category 1 applications</li> <li>• <b>Compatible sensor types:</b> Safety sensors with OSSDs, safety sensors with potential-free outputs</li> <li>• <b>Connection type:</b> Front connector with spring terminals</li> <li>• <b>Restart interlock:</b> yes</li> <li>• <b>External device monitoring (EDM):</b> Integrated</li> <li>• <b>Outputs:</b> 2 enabling current paths (safe), 1 release-delayed enabling current path, for stop category 1 applications (safe), 2 application diagnostic outputs (not safe), 3 test pulse outputs (not safe)</li> <li>• <b>Housing width:</b> 18 mm</li> </ul> | RLY3-TIME100 | 1100688  |

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)