



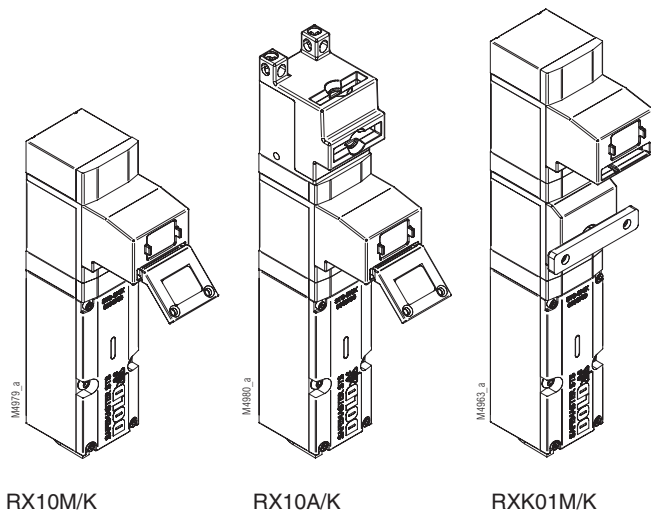
### STS/K-System Benefits

- EU-Test certificate according to the directive 2006/42/EG, annex IX
- For safety applications up to PLe/Category 4 according to EN/ISO 13849-1
- Modular and expandable system
- Rugged stainless steel and plastic design
- Wireless mechanical safeguarding
- Combines the benefits of safety switch, locking module and key transfer in a single system
- Easy installation through comprehensive accessories
- Protection against lock-in
- Coding level low, medium, high according to DIN EN ISO 14119:2014-03

### Features

- Switch module for access authorization applications or additional direct key/actuator monitoring of mechanical units
- Module expansions possible only above the module
- With integrated LEDs for status indication
- Optional single-channel / redundant / diverse switch-off possible
- This module is also available in stainless steel

### Installation Examples



### Approvals and Markings



### Application

Switch modules STS-RX/K is assembled together with other modules into a STS/K unit. They are used for access control or additional direct key / actuator monitoring of mechanical units with separating guard. In case of authorization applications it must be ensured that the hazard is stopped and/or entries are cleared when inserting the key/actuator.

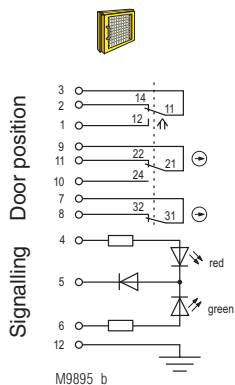
### Design and Operation

Switch module RX/K is a rugged and flexible switch module monitoring the safe position of one or several entries, e.g. protective hood or door, in the system. For this purpose the module is used in connection with other mechanical STS/K modules, e.g. actuator module K/K, key modules 10/K and 10S/ and/or padlock module W/K. The key and padlock modules can only be installed above the switch module used.

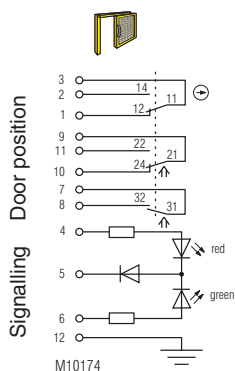
Switch modules RX/K is typically used in systems where access rights are distributed via SAFEMASTER STS keys. For access authorizations users and service employees receive an STS key allowing entry to predefined plant areas. Examples for such units are RX10A/K or RX11A/K. With unit RX10A/K a key must first be inserted before an access can be opened. With unit RX11A/K a second key can be removed in addition. Also, these modules without actuator module can only be used to release keys in a key interlock system if access authorizations are used here. This function is applied in key interlock systems with central shut-off or where the shut-off must take place outside the system, for instance in Ex zones, with strong vibration or dirt build-up, etc.

Switch module RX/K is used to monitor an actuator (of a mechanical unit). These are examples of such SAFEMASTER STS/K units: RXK01M/K and RXE11M/K.

For additional information refer to the data sheet of actuator modules K/K.



**Fig. 1:**  
Locked while activated:  
Key removed,  
Actuator inserted,  
Door closed



**Fig. 2:**  
Lock deactivated:  
Key inserted,  
Door unlocked and open

Switching logic

|               |   |    |               |               |
|---------------|---|----|---------------|---------------|
|               |   |    | <b>Fig. 1</b> | <b>Fig. 2</b> |
| Door contacts | 3 | 2  |               |               |
|               | 3 | 1  |               |               |
|               | 9 | 11 |               |               |
|               | 9 | 10 |               |               |
|               | 7 | 8  |               |               |

closed  
 open

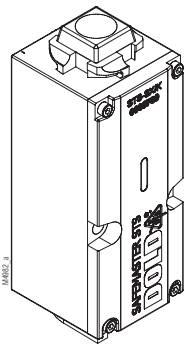
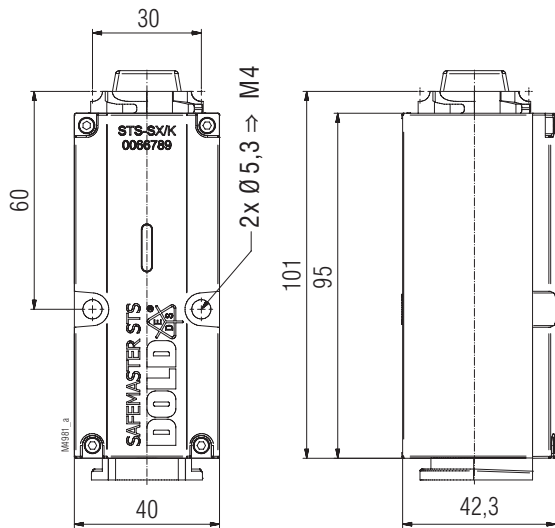
|  |  |
|--|--|
| Enclosure:                                 | PA + GF  |
| Internal parts and inserting slots:        | Stainless steel V4A / AISI 316   |
| Degree of protection:                      | IP 65  |
| Temperature range:                         | - 25 °C to + 40 °C   |
| Storage temperature:                       | - 25 °C to + 60 °C   |
| Mechanical principle:                      | Rotating axis with redundant actuator  |
| Connection method:                         | Cage clamp terminals   |
| min. connection cross-section:             | 0.25 mm <sup>2</sup>   |
| max. connection cross-section:             | 0.75 mm <sup>2</sup>   |
| Cable entry:                               | 1 x M20 x 1.5  |
| B10 <sub>d</sub> :                         | 2 x 10 <sup>6</sup> switching cycles   |
| Electrical service life:                   | 5 x 10 <sup>6</sup> switching cycles   |
| min. operating speed:                      | 100 mm/s   |
| max. operating speed:                      | 250 mm/s   |
| max. switching frequency:                  | 360/h  |
| Nominal voltage U <sub>N</sub> :           | AC/DC 24 V   |
| Nominal voltage range:                     | 0.85 ... 1.1 U <sub>N</sub>  |
| Power consumption:                         | 0.3 W  |
| Rated impulse voltage:                     | 0.8 kV   |
| Rated insulation voltage:                  | ≤ 50 V   |
| Overvoltage category:                      | III  |
| Pollution degree:                          | 2  |
| max. operating current:                    | 2 A  |
| Contacts:                                  | 1 NC contact, 2 diverse changeover contacts  |
| Switching principle:                       | Changeover contact with forced-opening snap-action switch  |
| Utilization category of switching elements |  |
| to AC 15:                                  | 1 A  |
| to DC 13:                                  | 0.5 A  |
| Short circuit strength, max. fusing:       | 2 A gG   |
| Contact material:                          | Ag / AgSnO <sub>2</sub>  |
| Indicator:                                 | LED red/green, separate selection possible   |
| Test principles:                           | EN ISO 13849-1:2008<br>DIN EN ISO 14119:2014-03<br>EN 60947-5-1:2005<br>GS-ET-15:02.2011<br>GS-ET-19:02-2011<br>GS-ET-31:02-2010 |
| Intended use:                              | up to max. cat. 4, PL e according to EN ISO 13849-1  |
| Mounting:                                  | according to DIN EN 50041  |
| Contact elements:                          | IEC EN 60947-5-1 Appendix K  |
| Diagnostic coverage (DC):                  | see data sheets STS basic units and STS design guide   |
| Protection against faults of common cause: | see table in STS design guide  |
| Repair and replacement:                    | by manufacturer only   |
| Test intervals:                            |  |
| for PL a to d:                             | min. once a year   |
| for PL e:                                  | min. once a month  |

**ATTENTION !**



To avoid wrong usage (e.g. by overload, mounting position or usage in acid, alkaline or other hostile ambient conditions) the limitations of the product have to be observed. Please check in advance if your application requires the usage of the more robust stainless steel model of SAFE-MASTER STS. The requirements of the mounting and operating instruction must be fulfilled.

## Dimension [mm]



## Variants and Accessories

### Switch modules SX/K

For applications where the key modules 01/K, 01S/K or actuator module B/K shall be installed above the switch module, version SX/K is available. For more information, refer to the data sheet for switch modules SX/K.

## Ordering Designation

Switching module RX/K  
Article number: 0066967

