

STS-SX module

STS-SV module

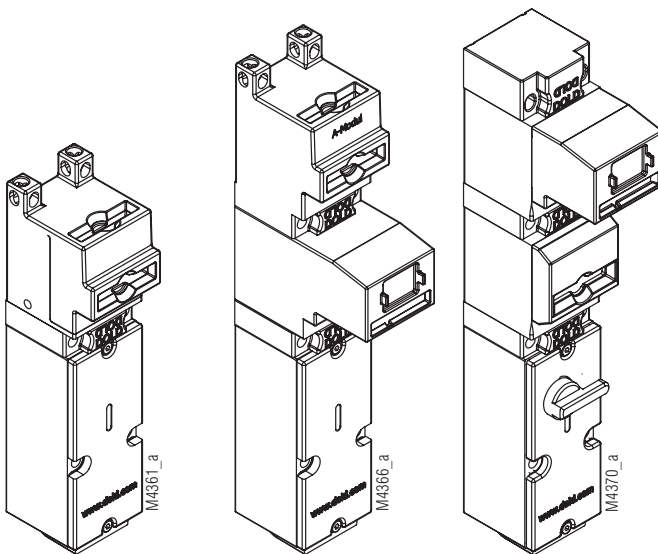
STS-System Benefits

- 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 design
- Wireless mechanical safeguarding
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- 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 STS-SX and STS-SV

- Switch module for monitoring actuator and key position
- Module expansions possible only above the module
- Optionally as 3-level lock (prEN ISO 14119:2011)
- With integrated LEDs for status indication
- Optional / redundant / diverse switch-off possible

Installation Examples



STS-SXA

STS-SX01A

STS-SVB01M

Approvals and Marking



Application

Switch modules STS-SX and STS-SV are assembled together with other modules into a STS unit. They are used to secure separating guards by switching off hazardous movements. It must be ensured here that when the switch is being actuated the hazard will be stopped and/or the entries will be unlocked.

Function

Switch modules STS-SX and STS-SV are extremely rugged and flexible switch modules monitoring the safe position of one or several entries, e.g. protective hood or door, in the system. For this purpose the modules are used in connection with other mechanical STS modules, e.g. actuator modules STS-B and STS-D, key modules STS-01, STS-R1 and STS-01S and/or padlock module STS-V. The key and padlock modules can be installed either above or below the actuator module used.

The switch module can also be used to only release keys in a key interlock system without an actuator module. 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.

Optionally, 1-channel redundant or diverse shut-off is possible.

Switch module STS-SV with manual locking module function

The STS-SV switch module with 3-level locking module function has the same design as the STS-SX, but is equipped with additional manual lock. It has been built in such a way that the actuator or key engages after the introduction and is mechanically blocked. Mechanical blocking is unlocked again by manual release and the actuator or key is released.

Switch module STS-SV is especially suitable for applications with strong vibration and tensile strain from actuator or key.

The manual locking of switch module STS-SV prevents the unintentional ejection of actuator or key. The actuator / key is released only after manual unlocking.

Attention!



The use of the STS-SV switch module may cause persons to be locked in case of full body access. Additional measures against lock-in are necessary.

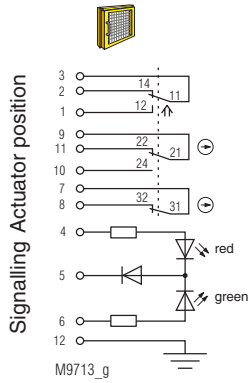


Fig. 1:
Locked while activated:
Actuator and key inserted,
door closed

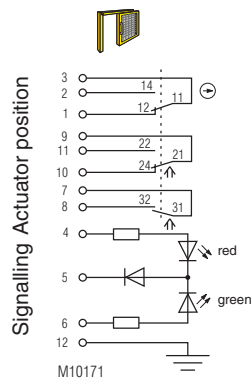


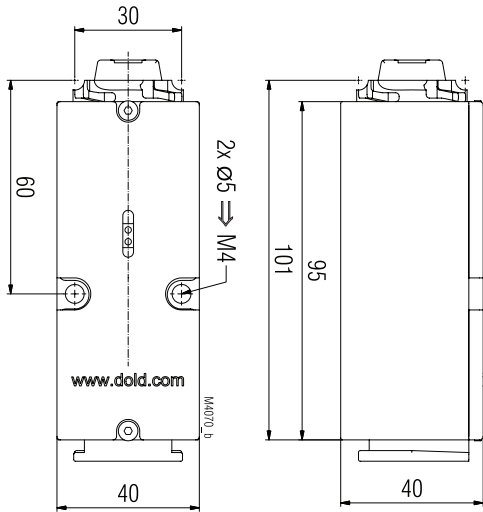
Fig. 2:
Lock deactivated:
Actuator removed
Door open

Switching logic

| | | | | |
|-------------------|---|----|---------------|---------------|
| | | | Fig. 1 | Fig. 2 |
| Actuator contacts | 3 | 2 | | |
| | 3 | 1 | | |
| | 9 | 11 | | |
| | 9 | 10 | | |
| | 7 | 8 | | |

closed
 open

Enclosure: Stainless steel V4A AISI 316L
 Degree of protection: IP 65
 Temperature range: - 25 °C to + 65 °C
 Storage temperature: - 40 °C to + 80 °C
 Mechanical principle: Rotating axis with redundant actuation
 Connection method: Cage tension spring clamping
 min. connection cross-section: 0.25 mm²
 max. connection cross-section: 1.5 mm²
 Cable entry: 1 x M20 x 1.5
 B10_d: 2 x 10⁶ switching cycles
 Electrical service life: 5 x 10⁶ switching cycles
 min. operating speed: 100 mm/s
 max. operating speed: 500 mm/s
 (by exception, 1500 mm/s is permitted)
 max. switching frequency: 360/h
 Nominal voltage U_N: AC/DC 24 V
 Nominal voltage range: 0.85 ... 1.1 U_N
 Power consumption: 0.3 W
 Rated impulse voltage: 0.8 kV
 Rated insulation voltage: < 60 V
 Contacts: 1 NC contact, 2 diverse changeovers contacts
 Switching principle: Changeover contact with forced-opening snap-action switches
 max. operating current: 2 A
 Short circuit strength, max. fusing: 2 A gG
 Contact material: Ag / AgSnO₂
 Indicator: LED red/green (separate selection possible)
 Test principles: EN ISO 13849-1:2008
 DIN EN ISO 14119:2014-03
 EN 60947-5-1:2005
 GS-ET-15:02.2011
 GS-ET-19:02-2011
 GS-ET-31:02-2010
 Intended use: up to max. cat. 4, PL e according to EN ISO 13849-1
 Installation: according to DIN EN 50041
 Contact elements: IEC EN 60947-5-1 Appendix K
 Diagnostic Coverage (DC): see data sheets of STS basic units and STS design guide
 Protection against faults joint cause: see table in STS design guide
 Repair and replacement: by manufacturer only
 Test intervals: semi-annually recommended
 min. once a year



Switch module STS-RX and STS-RV

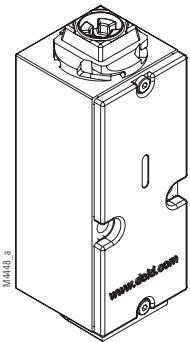
For applications where key modules STS-10 or STS-10S or an actuator module STS-K or STS-E shall be installed above the switch module, the STS-RX and STS-RV variants are available. For more information refer to the data sheet of switch modules STS-RX and STS-RV and also to the data sheet of actuator modules STS-K and STS-E.

Ordering Designation

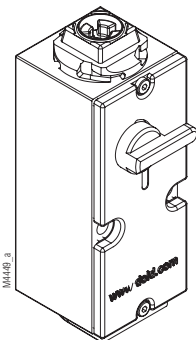
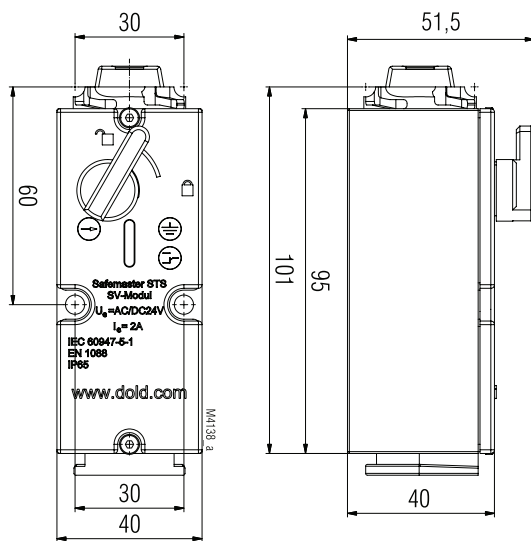
Switch module STS-SX
Article number: 0060797

Switch module STS-SV
Article number: 0062959

Switch module STS-SV cover
Article number: 0062991



STS-SX module



STS-SV module

