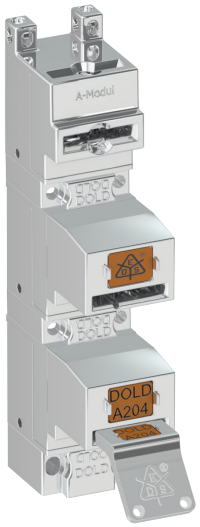
SAFEMASTER STS
Safety Switch- And Key Interlock System
Basic Unit STS-M11A

Original Datasheet

0258039



Presentation
in the deactivated condition:
1. Key inserted;
2. Key and actuator removed

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
- Combines the benefits of safety switch, solenoid locking 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-M10A
The unit is particularly suitable for applications with:
- Full body access (lock-in danger)
- Forced key removal
- Several secured entries
- ATEX areas
- Extremely rugged ambient conditions

Approvals and marking

Function

Mechanical solenoid locking for separating guards with forced key entry and forced key removal.

Application

To secure separating guards such as safety gates and hoods in machine and plant engineering.

Design and Operation

Attention!

Hazards must be ruled out before a key can be entered and the movable part of the guard can then be opened!

The STS solenoid locking unit is to be integrated into a system and connected with a control unit so that the hazardous machine can run only when the guard is locked and closed.

After entering a first key in key module 10 the second key can be removed from key module 01. The first key is blocked and the actuator released after removing the second key. The second key is blocked when the access is opened and the actuator is thus removed from actuator module A. This ensures an escape route. Only after the access is locked, the actuator and then the second key were returned to their starting position can the first key be removed again and the solenoid locking is activated.

STS-M11A is used in the system in connection with additional STS units and SAFEMASTER products. The first key to be entered may originate from these units (e.g. release through upstream solenoid locking STS-ZRH01A in connection with a speed monitor UH 5947 or standstill monitor LH 5946). The second key to be removed can serve as protection against lock-in or for the operating release of additional units (e.g. STS-M10A, STS-M11A, STS-M12M, STS-M10B01M).

Technical Data

Enclosure:	Stainless steel V4A / AISI 316L
Temperature range:	- 40 °C to + 100 °C
Storage temperature:	- 40 °C to + 80 °C
Mechanical principle:	Rotating axis with redundant actuation
$B10_d$:	2 x 10^6 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
Locking force:	min. 1000 N
Shearing force:	depending on actuator
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
Mounting:	according to DIN EN 50041
Additional requirement for cat. 4 structure (as single unit):	Add 2nd actuator module, Type STS-M11BA
Diagnostic coverage (DC), (mechanical):	
Logic and output	
STS-M11A:	90 %
STS-M11BA:	99 %
STS-MK11M:	90 %
STS-MKK11M:	99 %
Protection against faults of common cause:	see table in STS design guide
Repair and replacement:	only by manufacturer
Test intervals:	semi-annually recommended, min. once a year

Ordering Example

STS- M 1 1 A

- A: Actuator module A
- 1: Key module 01
- 1: Key module 10
- M: End module M

Variants and Combination Options

Because of their modular design the basic units of the SAFEMASTER STS System can be combined and expanded according to customer requests. This allows for a variety of possible units and functions.

Overview of the basic units

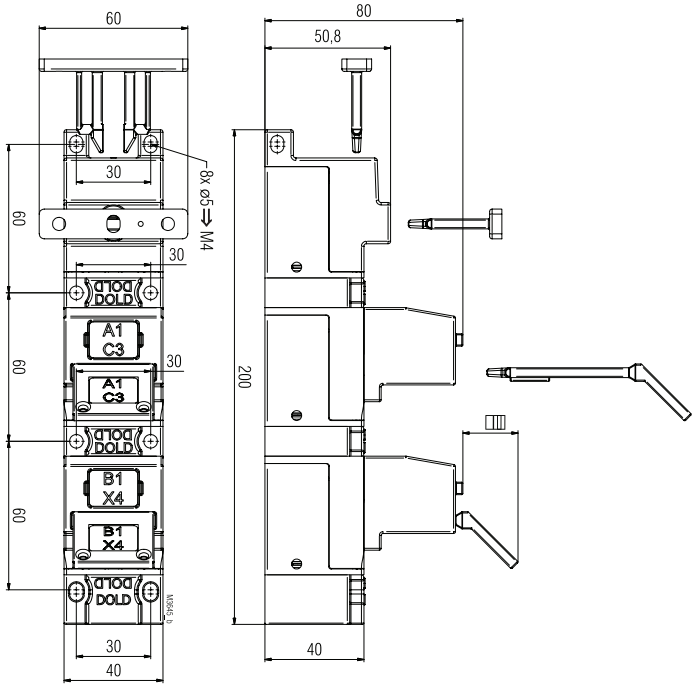
Functions	Safety switches design type 2	Safety switches design type 2 with solenoid lock	Mechanical units design type 2	Mechanical units with electrical monitoring	Mechanical units with electrical release
Units with standard function	SXA	ZRHA	M10A	RXK01M RX10A	YRXKM
Units with mechanical lock and forced key extraction	SX01A	ZRH01A	M11A	RXK11M RX11A	YRX10A
Units with optional key extraction	SXB01M	ZRHB01M	M10B01M	RX10K01M	YRX10B01M
Units without actuator	SX01M	ZRH01M	M12M	RX11M	YRX11M
For additional information refer to the data sheets of the individual modules and other basic units.					

Data sheets

STS End module M
STS Key module 01/10
STS Actuator module A

Info Take advantage of the advice of the **E. DOLD & SÖHNE KG** specialists regarding the choice of units and combination of a system.

Dimensional Drawing [mm]



Clearance tolerances ± 2%