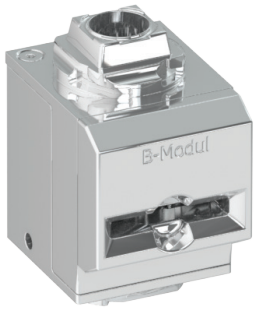

SAFEMASTER STS
Safety switch- and key interlock system actuator module B and D

Translation of the original instructions

DOLD

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Content

Before installing, operating or maintaining this device, these instructions must be carefully read and understood.

The installation must only be done by a qualified electrican!

The installation must only be done by a qualified mechanic!

Do not dispose of household garbage!
The device must be disposed of in compliance with nationally applicable rules and requirements.

Storage for future reference.

To help you understand and find specific text passages and notes in the operating instructions, we have important information and information marked with symbols.

Symbol and Notes Statement

DANGER:
Indicates that death or severe personal injury will result if proper precautions are not taken.

WARNING:
Indicates that death or severe personal injury can result if proper precautions are not taken.

CAUTION:
Indicates that a minor personal injury can result if proper precautions are not taken.

INFO:
Referred information to help you make best use of the product.

ATTENTION:
Warns against actions that can cause damage or malfunction of the device, the device environment or the hardware / software result.

General Notes

The product hereby described was developed to perform safety functions as a part of a whole installation or machine. A complete safety system normally includes sensors (SAFEMASTER STS System), evaluation units, signals and logical modules for safe disconnections. The manufacturer of the installation or machine is responsible for ensuring proper functioning of the whole system. DOLD cannot guarantee all the specifications of an installation or machine that was not designed by DOLD. The total concept of the control system into which the device is integrated must be validated by the user. DOLD also takes over no liability for recommendations which are given or implied in the following description. The following description implies no modification of the general DOLD terms of delivery, warranty or liability claims.

Notes

Risk!
Danger to life or risk of serious injuries.

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

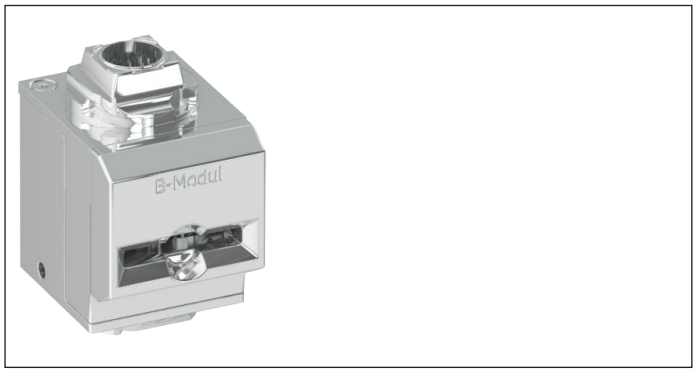
INFO

- For information regarding use in the system and validation according to EN ISO 13849-2, see SAFEMASTER STS application guide.
- Take advantage of the advice of the **E. DOLD & SÖHNE KG** specialists regarding the choice of units and combination of a system.

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 SAFEMASTER STS. The requirements of the mounting and operating instruction must be fulfilled.

SAFEMASTER STS
Safety Switch- And Key Interlock System
Actuator Module B and D



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STS-System Benefits
- EU-Test certificate according to the directive 2006/42/EG, annex IX
- For safety applications up to PLe/Cat. 4 according to DIN EN/ISO 13849-1
- Modular and expandable system
- Rugged stainless steel 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
- Actuator module with an insertion opening
- Module expansions possible below and above the module
- Choice of direction in 4 increments of 90°
- Can be coded

Product Description

The actuator modules B and D are assembled together with other modules into a STS unit and used in connection with an actuator. The actuator modules are then always part of the STS unit and connected with the stationary part of a separating guard while the actuator is mounted on the movable part of a separating guard.
The actuator modules can be installed in 4 positions on the STS unit, each turned by 90°.

ATTENTION!

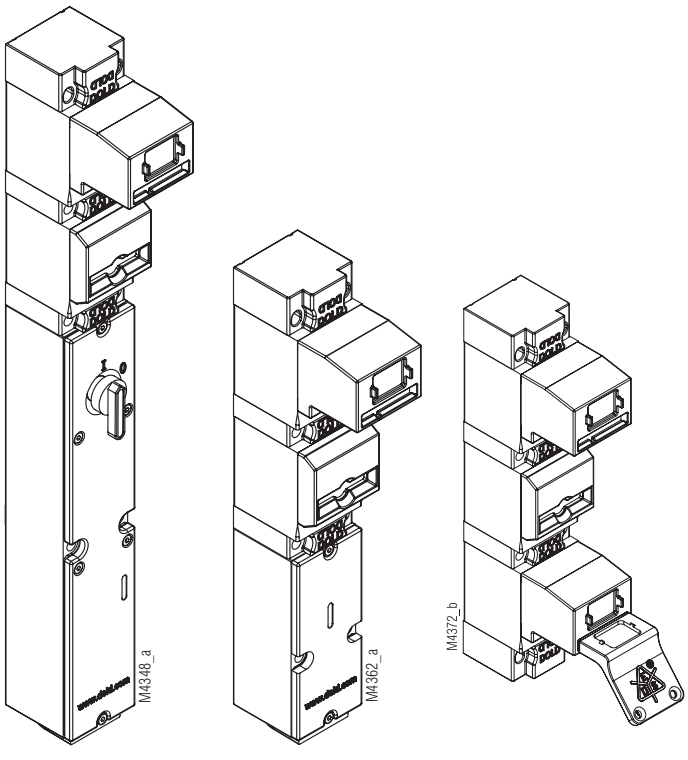
Mechanical function modules can be installed above and/ or below the actuator module!

Electrical modules can only be installed below the actuator module!

Approvals and Markings

CE TÜVRheinland CERTIFIED Functional Safety Type Approved www.tuv.com ID 0600000000 TÜVRheinland C US

Installation Examples



ZRNB01M SXB01M M10B01M

Design and Function

The extremely robust and flexible actuator module ensures safe access, for instance, to a guard or protective door.
The function of the actuator module is ensured only in combination with additional function modules, e.g. switch, door lock and/or key modules. The mechanical function modules can be installed both below and above actuator modules B and D. The switching and solenoid lock can only be installed below actuator modules B and D.

When securing separating guards it must be ensured then that hazardous movements when opening the movable part of the guard will be stopped. Actuator module B or D can transfer the release or locking of a protective door or hood mechanically. A door, for example, can thus be opened or kept closed.

In addition to function and sequence, the operating frequency of guards can also be realised with the actuator module.
Primary or secondary entries can be defined depending on the position of a B module in an STS unit or STS system. A primary access which is opened frequently, can be realised, for example with an SXB03M unit. The 3 keys of this unit may be used to operate secondary entries which are not used as frequently.

Actuator module D
The actuator module is also available as a coded model with the type designation actuator module D. This coded actuator module is always delivered in pairs with an associated actuator which is also coded. Different types of code available. The coding used is neither identified on the actuator module or on the actuator.

Technical Data

Mechanical Data

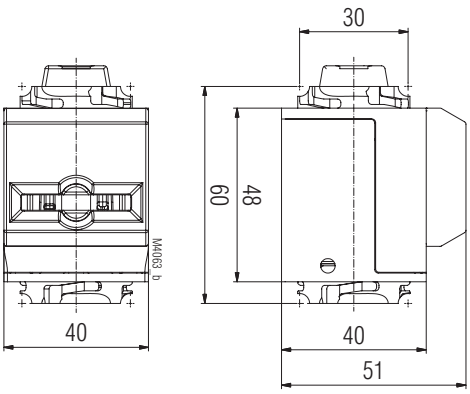
Enclosure: Stainless steel V4A / AISI 316 / AISI 630
Locking force: F_{zh} 4000 N
(in a locked unit e.g M10BM)

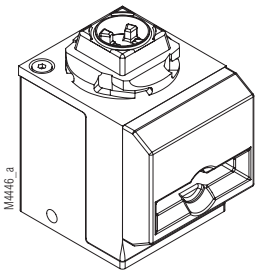
General Data

Temperature range: - 40°C to + 100°C
Storage range: - 40°C to + 100°C
Application: only as part of a unit of the SAFEMASTER STS series

Coding level according to DIN EN ISO 14119:2014-03
Actuator module B coding level low
Actuator module D coding level medium

Dimensional Drawings [mm]





Ordering Designation

Actuator module B
Article number: 0061873

Actuator module D
Article number: 0063586

Safety Related Data

Data suitable for the PFH_d summation method according to EN ISO13849-1:2016				
Data according to EN ISO13849-1:2016	Actuator module B and D			
Category	2	3	3	4
PL	d	d	e	e
PFH_d	1,061E-09	6,84592E-10	5,44569E-10	1,00122E-10
T_{10d}	20	20	20	20
CCF required	65-100	85-100	85-100	85-100
B_{10d}	2.000.000	2.000.000	2.000.000	2.000.000
d_{op} (d/a)	365	365	365	365
h_{op} (h/d)	24	24	24	24
t_{cycle} (h)	1	1	1	1
n_{op}	8760	8760	8760	8760
Diagnostic coverage DC	60%	60%	90%	99%
Test interval according to ISO14119	1 / year	1 / year	1 / month	1 / month

Category 2: The prerequisites for installation and integration into a category 2 architecture must be met

Category 3: The prerequisites for installation and integration into a category 3 architecture must be met

Category 4: The prerequisites for installation and integration into a category 4 architecture must be met, in particular 2 actuators must be used

PFH_d: A single module has no function. As a result, an individual module cannot have any safety-related characteristic values. The safety-related characteristic data in the table only serve to determine the values of a unit into which it is integrated.

When used as part of a **key transfer system**:

- PFH_d total STS system = SUM PFH_{d1} + … PFH_{dn}
- Lowest category of a module = category of whole STS system
- Lowest DC of a module = DC entire STS unit

! If the design of a unit is changed, the safety-related data may also change.