Safety Technique

SAFEMASTER STS
Safety switch- and key interlock system
STS Mounting Plate / Flush-Mount Frame

Original Datasheet

DOLD

Mounting plate to build up an STS unit

Flush-mount frame for concealed installation of a STS unit

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, 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 mounting plate / flush-mount frame
- For surface and flush-mount installation of units
- Easier mounting
- Preassembled modules available in the requested direction

Installation Examples
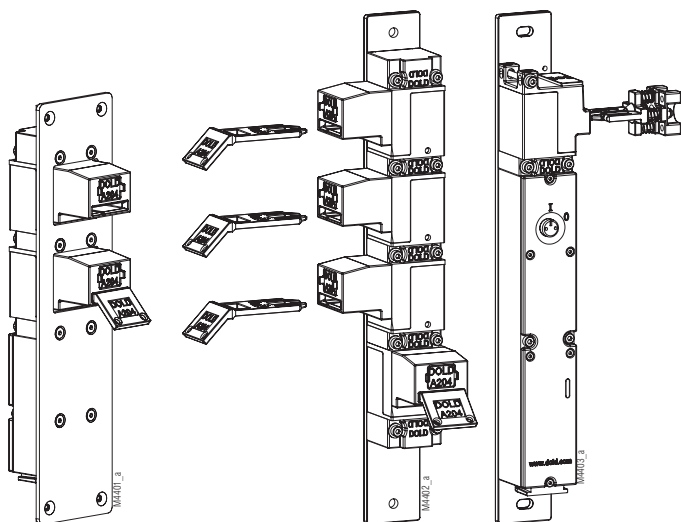
STS-RX11M
in flush-mount
frame

STS-M13M on mounting
plate with M8 threaded holes,
module orientation VLLL

STS-ZAHA
on mounting
plate in elongated
holes, module
orientation VR

Application

The mounting plate facilitates the easy attachment of SAFEMASTER STS units to machines and plants.

The flush-mount frame enables the concealed installation of the SAFEMASTER STS units, e.g. in switching cabinets or machine enclosures.

Design and Function of the Mounting Plate

The mounting plate is made of acid-resistant stainless steel 1.4404 (V4A / AISI 316L). The threaded holes in the mounting plate allow many different installation options for up to 8 SAFEMASTER STS modules. They can be supplied preassembled upon request.
The mounting plate is available in different sizes and is suitable to be mounted on fences and system profiles. The plate can thereby be fastened using bolts with sliding blocks or by welding.

The flush-mount frame is also made of stainless steel 1.4404 (V4A / AISI 316L). The holes in the frame enable the simple installation of a SAFEMASTER STS unit with up to 4 modules. Additional holes are available for installation in a precut opening in the switching cabinet or machine enclosure. A nitrile rubber seal is bonded to the back. The flush-mount frame is available in different sizes and is suitable for the concealed installation of STS units in switching cabinets or similar. For installation in a switching cabinet we recommend the use of key modules with protective cover to prevent dirt from entering.

Please note when designing your switching cabinet that the SAFEMASTER STS key modules are not sealed and can reach max. IP20.

Important Note

To prevent faults of joint cause as required in EN ISO 13849-1 (CCF) it must be ensured that the mounting plate or the flush-mount frame on which the SAFEMASTER STS units are installed cannot become detached!
We therefore recommend welding the mounting plate or the flush-mount frame to the plant or to secure it otherwise against loosening.

All technical data in this list relate to the state at the moment of edition. We reserve the right for technical improvements and changes at any time.

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SAFEMASTER STS mounting plate / 25.10.13 en / 382

Mounting Plate Selection Aid

The selection table below helps your search for the correct mounting plate. It contains information on the maximum possible number of modules which can be mounted each on the specific plate version.

Procedure:

1. Determine which STS unit shall be mounted on the mounting plate.
2. Find out the base of the STS unit:
   a) purely mechanical
   b) electrical: Switch (S_ / R_ series)
   c) electromechanical: locking module (Z_ _ - /Y_ _ series)
   and choose the corresponding column.
3. Now determine the number of the assembled mechanical modules which must be installed on the mounting plate above the basic modules.
4. The Article numbers of the mounting plate determined can be found below in the columns with the same name.

Notes

Please note that the mounting plates are optionally available with elongated holes or with M8 threaded holes!

Please remember also possible system extensions when determining the correct mounting plate!

Included in scope of delivery: An STS unit installed on the mounting plate and the installation material including coded screws. Customer preferences, such as the orientation of the modules, can be considered here (see definition of the module orientation for mounting plates).

Definition of the Module Orientations for Mounting Plate

The direction from which an actuator or key is inserted when viewing the STS unit vertically from the front is relevant here. The selection options are Left (L), Front (V) as well as Right (R) and are specified from bottom to top with the product designation.

Selection example 1:

1. STS unit: STS-SXB02M
2. Determine the base of the STS unit: Switch module SX = electrical
3. Number of modules build above:
   1 x B-module + 2 x key module 01 = +3 modules
4. In the electrical column go the the quantity +3 and from here horizontally to the right to the column of Article numbers.
   Here you will find, e.g. the Article number of the mounting plate with elongated holes: 0062907.
5. Defining the mounting orientation of the individual modules:
   The switch module SX can only be mounted fron the front (V).
   The actuator is inserted e.g. from the right (R) and the keys from the front (VV).
   The Ordering Designation is then: **0062907 / VRVV**

Selection example 2:

1. STS unit: STS-M10A
2. Determine the base of the STS unit: 1 key module 10 = mechanical
3. Number of mechanical modules above:
   1 x A-module = +1
4. In the mechanical column go the the quantity +1 and from here horizontally to the right to the column of Article numbers.
   Here you will find, e.g. the Article number of the mounting plate with threaded holes: 0062861
5. Defining the mounting orientation of the individual modules:
   e.g. the key is inserted from the left (L) and the actuator from the right (R) eingeführt.
   The Ordering Designation is then: **0062861 /LR**

Mounting Plate Selection Table

| Basis module | mechanical | electrical | electromechanical | Article number | | Total length L1 [mm] |
	1 key / actuator module (10, 10S, K, E, W)	1 switch (S_ _ - / R_ _ series)	1 locking module (Z_ _- / Y_ _ series)	Mouting plate with elongated holes	Mounting plate with M8 threaded holes	
Number of assembled modules (above the basic modules)	+1	+1	-	0062723	0062861	231
	+2	+2	-	0062724	0062862	291
	+3	+3	+1	0062907	0063552	351
	+4	+4	+2	0062726	0063127	411
	+5	+5	+3	0062908	0063767	471
	+6	+6	+4	0062909	0063553	531
	+7	+7	+5	0062910	-	591
	-	-	+6	0062911	0064610	651
	-	-	+7	0062912	0064611	711

Flush-Mount Frame Selection Aid

The selection table below helps your search for the correct flush-mount plate.

Procedure:

1. Determine which STS unit shall be mounted on the flush-mount plate.
2. Find out the base of the STS unit:
   a) mechanical
   b) electrical: Switch (S_ / R_ series)
   c) electromechanical: locking module (Z_ _ - /Y_ _ series)
3. Now determine the number of the assembled mechanical modules to be installed on the flush-mount frame.
4. You will find the Article number of the suitable flush-mount frame in the corresponding columns of the selection tables.

Notes

Please remember also possible system extensions when determining the correct flush-mount plate!

The scope of delivery of the flush-mount frame also includes the installation material with coded screws to fasten the STS unit.

Included in scope of delivery of the flush-mount frame: Installation of the STS unit on the flush-mount frame. The mechanical modules are installed here toward the front, the electrical modules are installed turned backward to facilitate easy access to the terminal.

Not icluded in scope of delivery: Screws for fastening the flush-mount frame in the switching cabinet or similar.

Selection Example 1

1. STS unit: STS-SX02M
2. Determine the base of the STS unit: Switch module SX = electrical
3. Number of modules build above:
   2 x key modules 01 = +2 modules
4. In the electrical column go the the quantity +2 and from here horizontally to the right in the last but one column. Here you will find the Article number of the flush-mount frame: 0064908

Flush-Mount Frame Selection Table

For key / actuator modules and switch

Basis module	mechanical	electrical	Article number	Total length L2 [mm]
	1 key /actuator module (10, 10S, K, E, W)	1 switch (S_ _ - / R_ _ series)		
Number of assembled modules (above the basic modules)	+1	+1	0064907	229,5
	+2	+2	0064908	290
	+3	+3	0064910	350,5
	+4	+4	0064911	411

For locking modules

| Basis module	electromechanical	Article number	Total length L3 [mm]
	1 locking module (Z_ _- / Y_ _ series)		
Number of assembled modules (above the basic modules)	+1	0064485	350,5
	+2	0064486	411
	+3	0064487	471,5
	+4	0064488	532

Technical Data

Material: Stainless steel V4A / AISI 316L
User area: Mounting plate / flush-mount frame to connect and fasten complete functional units of the SAFEMASTER STS modules

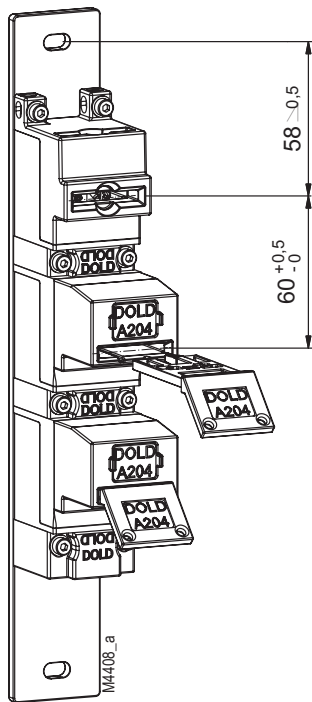## Dimensional Drawing Mounting Plate with Elongated Holes [mm]
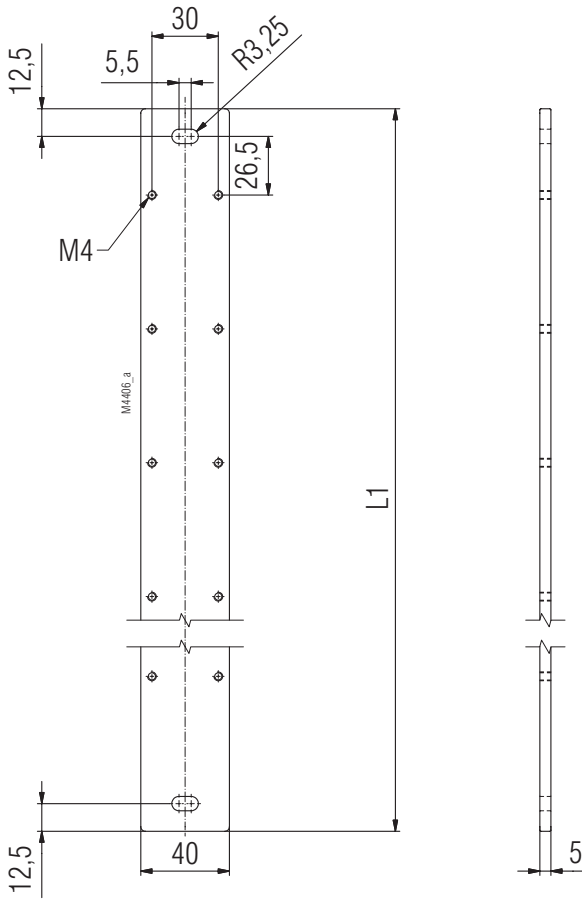
M8 threaded holes are located centred on the mounting plate at the same level as the elongated holes.

Dimensional Drawing Flush-Mount Frame [mm]

A-A (2 : 1)

Seal
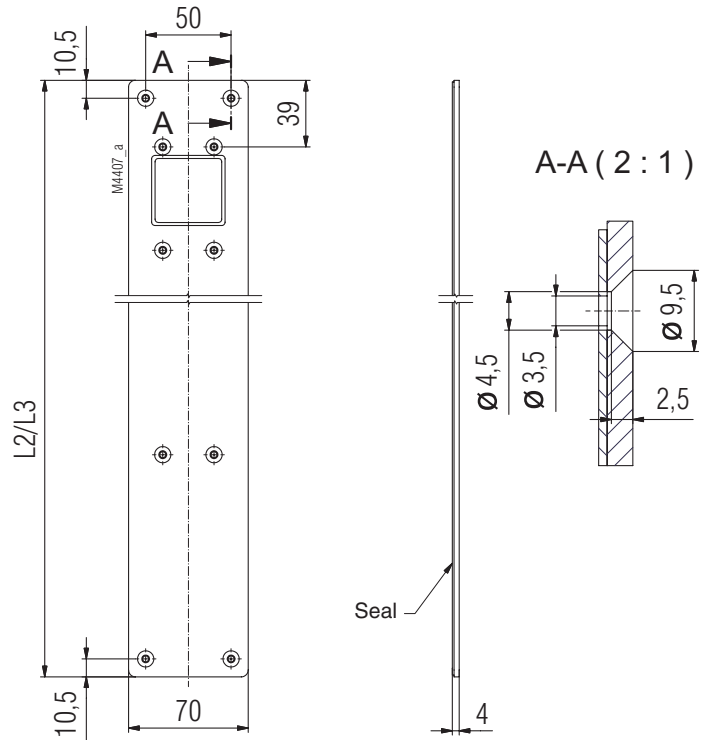
Mounting Example STS-M11A

Cut-out for units with Flush-Mount Frame

Panel cut-out