AGNOSYS

PRODUCT SPECIFICATIONS

AGNOSYS Series F BR V1.0

IOM-10-F

IOM-10-S

3rd generation

1 History

Date	Editor	Description
30.01.2020	DAA	Adaptation to 3rd generation
27.03.2020	MAR	Adjustments / corrections
24.07.2020	SPA	Fall protection inserted
10.05.2022	FL	DI/DO status and mode tables
17.05.2022	FL	Maximum detection resistance
08.03.2023	FL	Touch up Manual override contacts
28.11.2024	MH	Changed Figure 4 and corresponding text
06.12.2024	MH	Removed erroneous tightening torque of screw

2 Content

3 General information

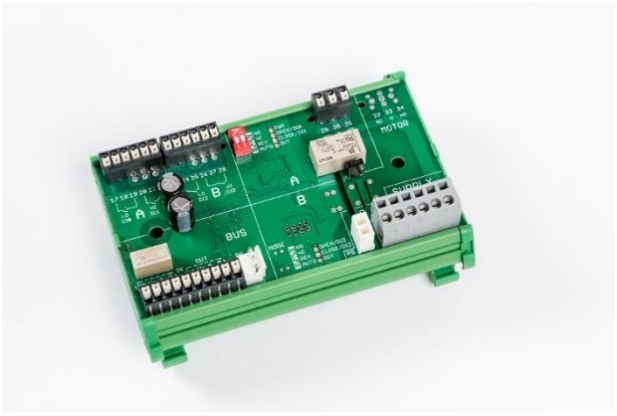


Figure 1: IOM-10-S (figure similar)

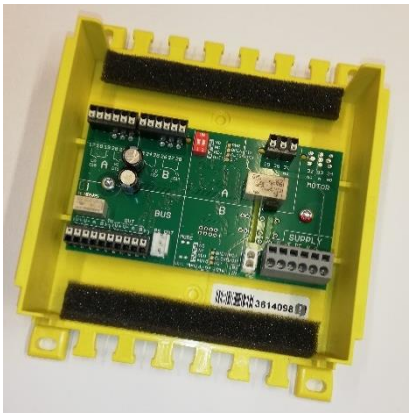


Figure 2: IOM-10-F (figure similar)

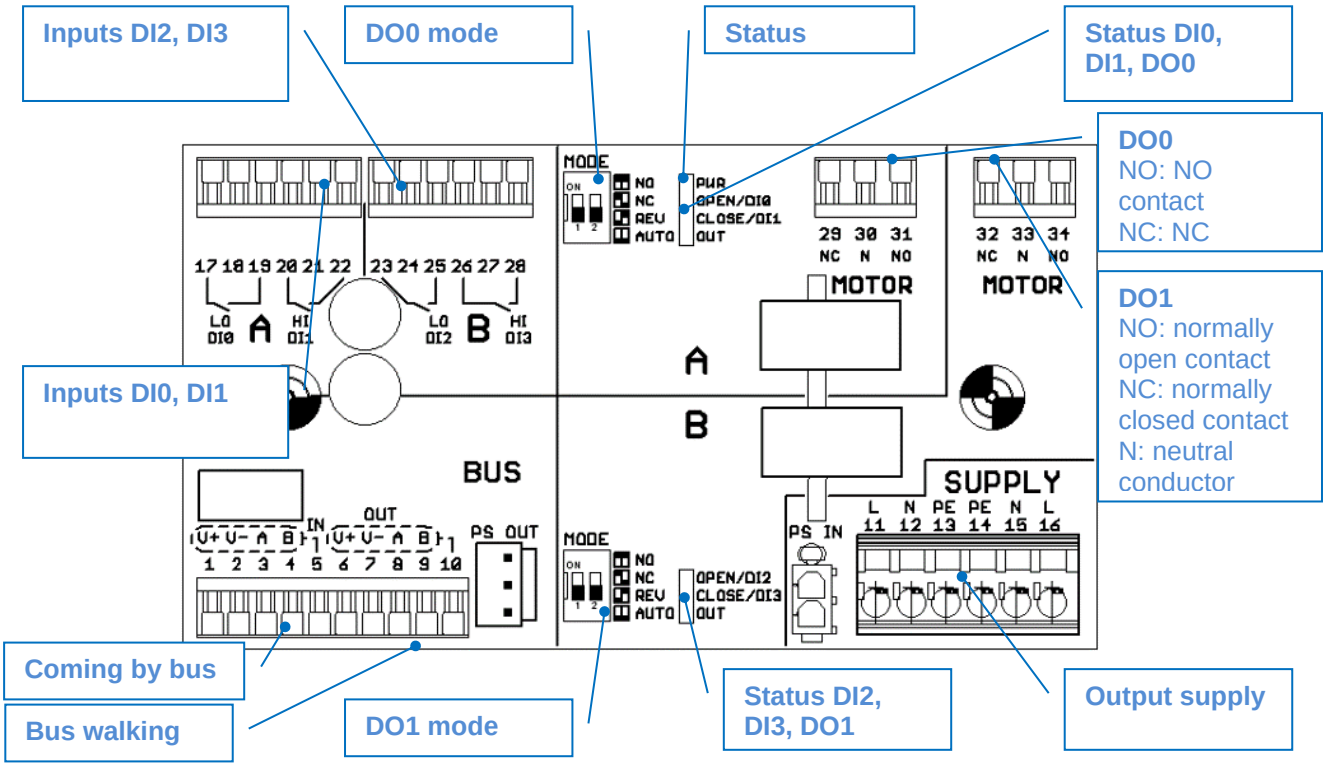
- IOM-10-S Digital IO module IP20 for 35 mm DIN rail mounting
- IOM-10-F Digital IO module IP20 for wall mounting

The modules are used to send and receive digital signals on the AGF bus ring system. Fan releases can be realised with it. In addition, it is possible to send and receive various fault and information messages. Actuator control is not possible with the IOM-10-x and must be realised with the BRM-10-x.

Features:

- Communication with the higher-level control unit takes place via BusRing.
- Record up to 4 digital inputs.
- Setting off two digital outputs, as a changeover contact.
- Operation of up to 47 modules per BusRing on max. 900m length and max. 126 bus ring participants
- Supply with 24 V DC voltage
- Simple clamping through vertical push-in or spring-loaded terminals

Overview



Mode

The relay outputs can be set to the following states with the mode switches:

- Automatic (relay is controlled via the bus / status leds deactivated)
- Revision (relay is controlled via the bus / status leds activated)
- Manual NC contact (commands via the bus are ignored)
- Manual NO contact (commands via the bus are ignored)

Switch positions Mode/Mode Switch		
1	**2**	**Description**
OFF	OFF	Automatic
ON	OFF	Manual NC contact active
OFF	ON	Revision/LEDs active
ON	ON	Manual NO contact active

Table 1: Mode switch

Status DI, DO

The status of the inputs is displayed via a green LED. The outputs are indicated by orange LEDs. This signalling is only active when the module is in Revision mode.

Digital inputs	**Display**
DI0 Active	LED DI0 (green)
DI1 Active	LED DI1 (green)
DI2 Active	LED DI2 (green)
DI3 Active	LED DI3 (green)
Digital outputs	**Display**
DO0 Active	LED OUT A (orange)
DO1 Active	LED OUT B (orange)

Table 2: DI and DO status

Status module

The module status display is used to visualise the supply status and communication. If the module is correctly supplied, this display lights up. With each correctly received telegram via the bus, the display flashes once. If a faulty telegram is received, the display flashes three times.

4 Safety regulations

- The device must only be used for its intended purpose.
- Attention! Device is under voltage!
- The device may only be installed and commissioned by trained specialist personnel.
- The device may only be opened by the manufacturer. It does not contain any user-serviceable parts.
- The device contains electronic components and must not be disposed of in household waste.

5 Dimension drawing and installation instructions IOM-10-S

The IOM-10-S module is designed for mounting on a 35 mm DIN rail in the control cabinet area and is attached to the DIN rail by snapping it on. To remove the module, push the module upwards (1). Then it must be lifted off the top of the rail (2).

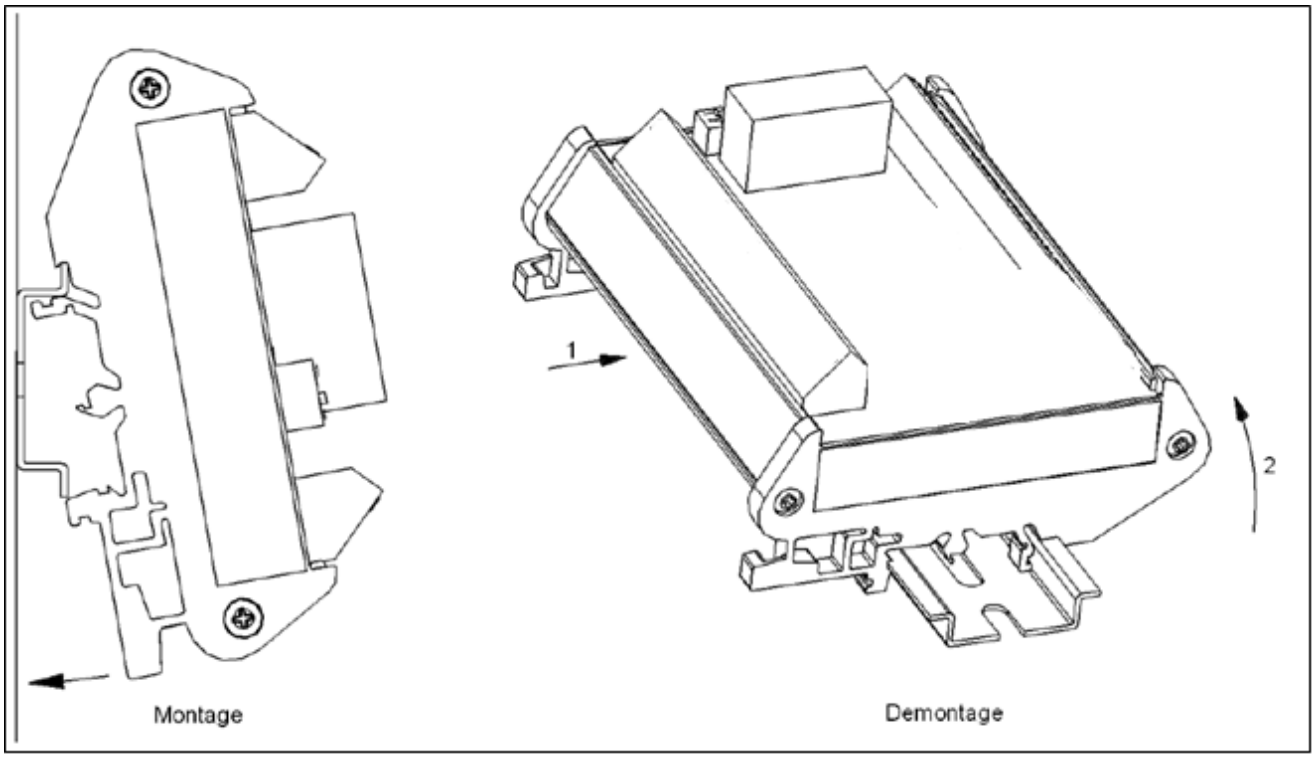


Figure 3: Mounting instructions IOM-10-S

6 Dimensional drawing and installation instructions IOM-10-F

The digital IO module (IOM-10-F) can be fixed to any flat surface, either externally with 4 5.0mm thick half-round head screws or internally with 2 5mm thick self-tapping cylinder head screws (not included).
It is important that the maximum tightening torque of the assembly screws is between 0.5 and 1 Nm.
Due to the protection class, the module may only be installed in a dry environment and out of the reach of persons. (false ceilings, technical rooms, riser shafts, etc.).

In order not to exceed the permissible operating temperature, the module must not be mounted above or next to a large heat source such as an oven. Please note that heating can also occur via the surface on which the module is mounted.

NOTE: When attaching the cover, make sure that it is positioned on the left and audibly clicks into place on the right!

Otherwise, the permanent dimensional stability of the closure cannot be guaranteed.
be guaranteed!

The cables connected to the module are to be fastened to the cable anchors on the module base by means of cable ties.

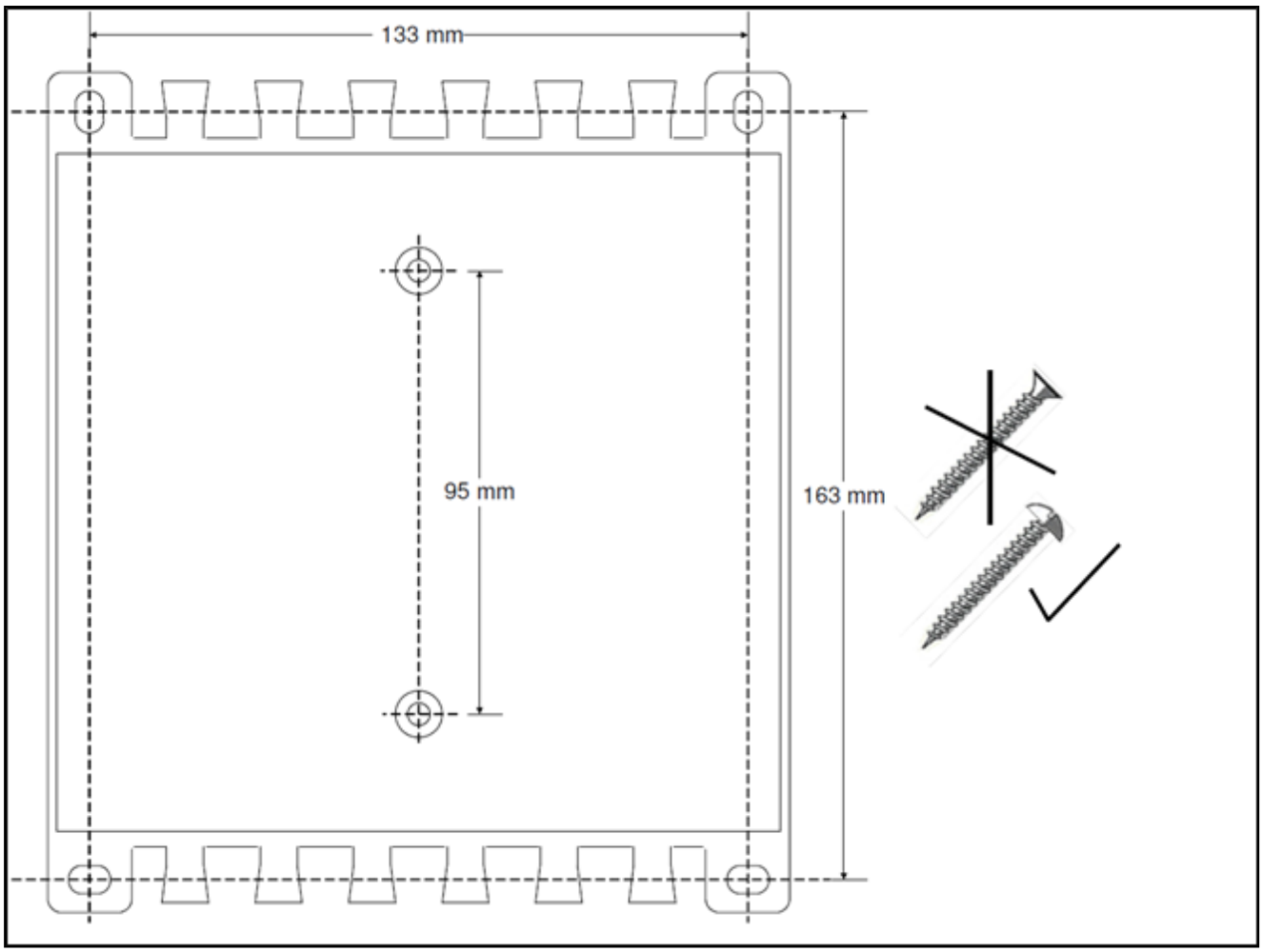


Figure 4: Mounting instructions IOM-10-F

6.1 Fall protection module cover of field modules (*-F)

If a proper installation, as described in 6 dimensional drawing and installation instructions IOM-10-F prescribed mounting is not possible or if additional securing is required, the cover can be secured against falling in a simple manner. Two approved variants are available for this purpose.

6.1.1 Securing via cable tie

When securing with cable ties, two holes must be drilled through the lid and base so that a cable tie can be inserted when the lid is mounted.

The following procedure is recommended for this:

- Drilling of two holes while lid is mounted on base, drill with D = 5mm.
    - Here it is important to ensure that the cover sits loosely on the module and is not manually pressed too hard onto the floor. - Otherwise, damage cannot be ruled out during drilling.
- First hole (left hole according to figure 5: Fall protection with cable tie) 25mm from the left edge (measured at the rebate) and 6mm from the edge of the rebate.
- Second hole (right hole according to figure 5: Fall protection with cable tie) 37mm from the left edge (measured at the rebate) and 6mm from the edge of the rebate.
- Feed-through and mounting of cable ties with width 3.5mm

Figure 5: Fall protection with cable tie

6.1.2 Securing via screw

When securing with a screw, a hole must be drilled through the lid and base so that a screw can be fitted when the lid is assembled.

The following procedure is recommended for this:

- Drill a hole while lid is mounted on base, drill with D = 2.5mm.
    - Here it is important to ensure that the cover sits loosely on the module and is not manually pressed too hard onto the floor. - Otherwise, damage cannot be ruled out during drilling.
- Hole according to figure 6: Safety catch with screw 75mm from left edge (measured at rebate) and 11mm from rebate edge.
- Mounting the screw (3.0x10 / lens head)

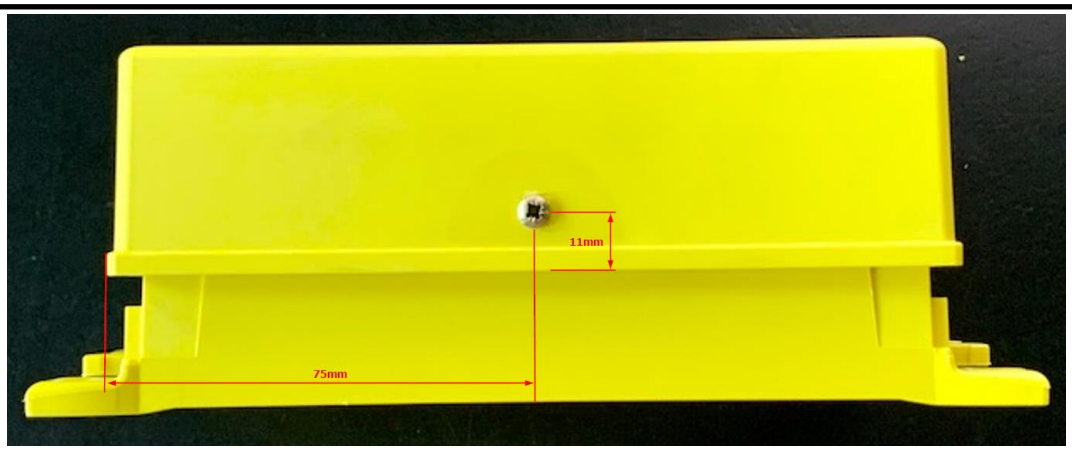
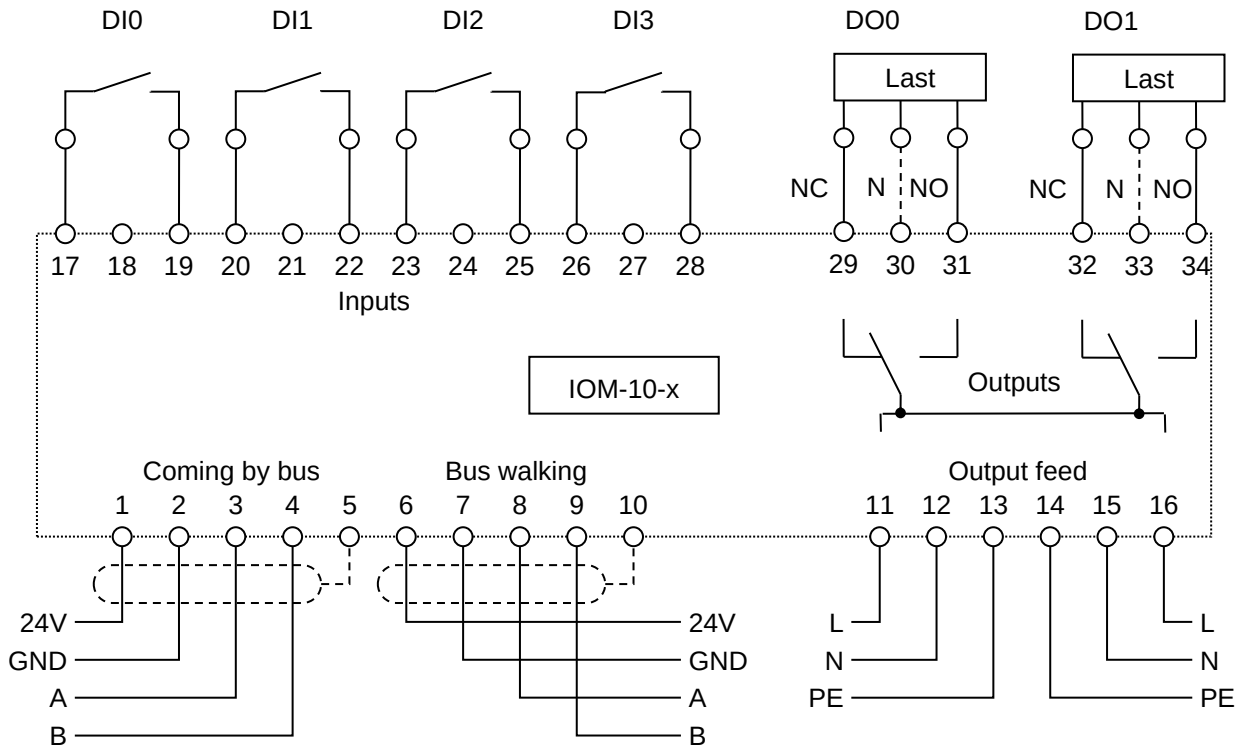


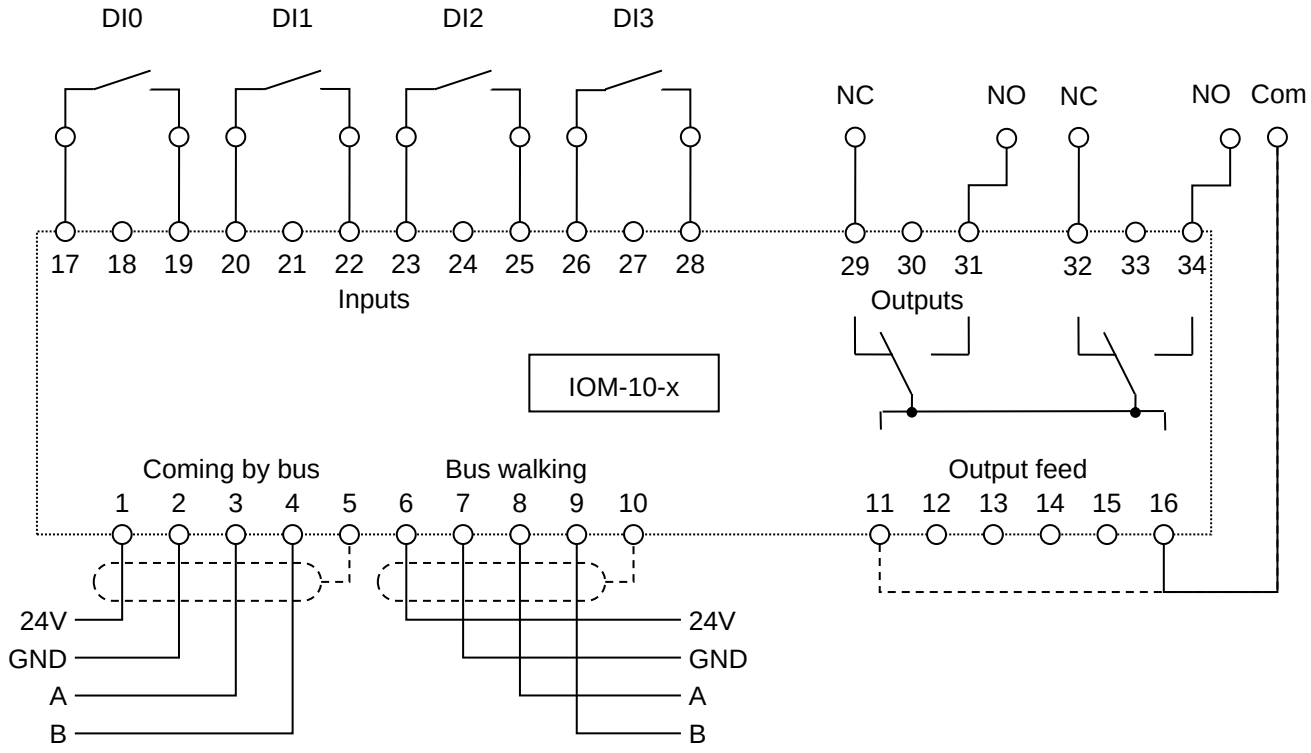
figure 6: Safety catch with screw

7 Connection diagram

7.1 Output voltage switching



7.2 Output potential free



8 Technical data

Electrical data		
Supply voltage	DC 18 - 32 V (24 V typ.)	
Power consumption	5 mA typ. 26 mA max. (for 100 ms when relay energises)	
Degree of protection	IP20 (EN 60529)	
Protection class	II	
Version		
Digital inputs	4	
Digital outputs	2 with variable voltage (24VUC/230VAC) or potential-free. Appropriate wiring of the output required.	
Inputs		
Maximum detection resistance*	875 Ω	
Outputs		
Supply	24 / 230 V_{AC}	24 V_{DC}
Max. Continuous current	AC 5 A	DC 5 A
Max. Inrush current (< 15 ms)	AC 8 A	DC 8 A
Switching capacity	1250 VA / 150W (up to 30 V_{DC})	
Terminals Output supply		
Maximum connection cross-section	Single wire: 0.08 - 2.5 mm² Fine-stranded (without AEH): 0.08 - 2.5 mm² Fine-stranded (AEH with collar): 0,25 - 1, 5 mm² Fine-stranded (AEH without collar): 0.25 - 2.5 mm²	
Maximum bridge current terminals	10A	
Maximum back-up fuse	LSS 10A characteristic B	
BusRing terminals, inputs, outputs		
Connection cross-sections	Single wire: 0.2 - 1.5 mm² Fine-stranded (without AEH): 0.2 - 1.5 mm² Fine-stranded (AEH with collar): 0.25 - 0.75 mm² Fine-stranded (AEH without collar): 0.25 - 1.5 mm²	
Environment variables		
Permissible ambient temperature	0 - 45°C	
Permissible ambient humidity	10 - 90 % RH non-condensing	
Dimensions *(W x H x D) [mm]*		
IOM-10-F	158 x 180 x 65	
IOM-10-S	132 x 93 x 55	
Weight		
IOM-10-F	Approx. 371 g	
IOM-10-S	Approx. 250 g	

** Maximum possible resistance between the DI pins (e.g. pin 17 to pin 19) with which the input is still recognised.*