

AGNOSYS

**PRODUCT
SPECIFICATIONS**

**AGNOSYS Series F BR
V1.0**

**BRM-10-F
BRM-10-S
BRM-10-F-ST**

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1 History

Date	Editor	Description
01.09.2012	MAR	First version.
18.07.2013	MAR	Various changes and corrections.
19.12.2013	MAR	New photos, changed layout, various data
10.06.2014	MAR	Technical changes, new CD.
27.10.2014	LG	Typing errors, uniformity
07.07.2015	LG	Update Description
24.02.2016	RO	Hardware revision
16.03.2016	RO	Correction of the printing
21.03.2016	RO	BRM-10-F-ST supplemented
25.10.2016	MAR	Installation regulations adapted
11.11.2016	LG	Update figures; release status
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28.02.2018	LF	Updating ST contact assignment
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24.07.2020	SPA	Fall protection inserted
07.04.2022	MAR	Design / Date corrected
10.05.2022	FL	Mode table
17.05.2022	FL	Maximum detection resistance
08.03.2023	FL	Touch up Manual override contacts
10.12.2024	MH	Removed the erroneous tightening torque

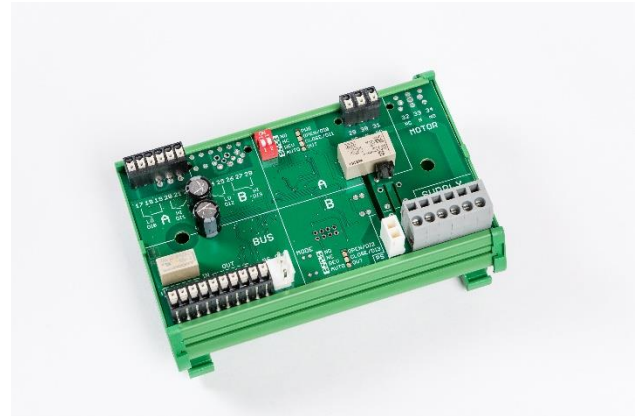
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3 General information



BRM-10-F



BRM-10-S



BRM-10-F-ST

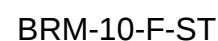
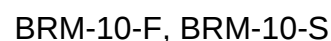
- BRM-10-S Fire smoke damper module IP20 for 35 mm DIN rail mounting
- BRM-10-F Fire smoke damper module IP20 for wall mounting
- BRM-10-F-ST Fire smoke damper module IP20 for wall mounting Plug version

The modules are used for monitoring, controlling and runtime testing of fire smoke actuators (smoke dampers, overflow/backflow openings, gates, etc.). One actuator drive per module can be controlled and the respective actuator limit switches can be monitored. Furthermore, a fully automatic test of the actuators with a check of the running times is implemented. During the test, the limit switches are monitored for faulty signal sequences. By means of a special relay output (change-over contact), it is ensured that the module forwards the last switching command to the damper actuator even in the event of an error or communication failure. For field mounting, the module must be installed in an enclosure of the appropriate protection class, unless otherwise provided on site.

Features:

- Communication with the higher-level control unit takes place via BusRing.
- Fully automatic test of the fire smoke actuators
- Relay output remains in the last switching position in the event of an error or communication failure.
- Operation of up to 126 modules per bus ring system on max. 900m length
- Redundant supply with 2 x 24 V DC in the ring
- Reverse polarity protected supply of the bus ring.
- Simple clamping through vertical push-in or spring-loaded terminals
- Actuator connection via 3 or 6 pole plug connector (BRM-10-F-ST)

Overview



Mode

The damper control can be set to the following states with the mode switch:

- Automatic (damper is controlled via the bus / status leds deactivated)
- Revision (damper 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: Switch positions Mode

Status BRSK

The status of a BRSK is signalled via 3 displays. The yellow OUT indicator signals active control of the output. The OPEN and CLOSE indicators signal the status of the feedback signals.

Limit switch	Description	Display OPEN	Display CLOSE
No limit switch active	Damper closed	Off	On (red)
LO Limit switch active	Damper between both limit switches	On (green)	On (red)
HI Limit switch active	Undefined state	Off	Off
Both limit switches active	Damper open	On (green)	Off

Table 2: Status BSK

Status module

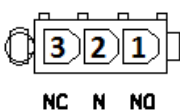
The module status display is used to visualise the supply status and communication. If the module is correctly supplied, this display lights up. With each correctly received telegram via the bus, the display flashes once. If a faulty telegram is received, the display flashes three times.

Feedback signals/motor BRSK for connector variant

Ä



- 1: Root LO (S1)
- 2: not connected
- 3: not connected
- 4: Root HI (S4)
- 5: NO LO (S3)
- 6: NO HI (S6)



- 1/NO: NO contact
- 2/N: GND(N)
- 3/NC: NC contact

4 Safety regulations

- The device must only be used for its intended purpose.
- Attention! Device 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.

CAUTION! The respective system design, installation, commissioning, modifications, extensions or other interventions in components, systems, software or parameterisation of plants or systems may only be carried out by AGNOSYS certified specialist companies!

Certified specialist companies have:

- Company certification as AGNOSYS partner for planning, parameterisation and commissioning of AGNOSYS products and systems. (Validity period: 2 years from date of issue).

5 Dimensional drawing and assembly instructions

The fire smoke damper module (BRM-10-F, BRM-10-F-ST) 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).

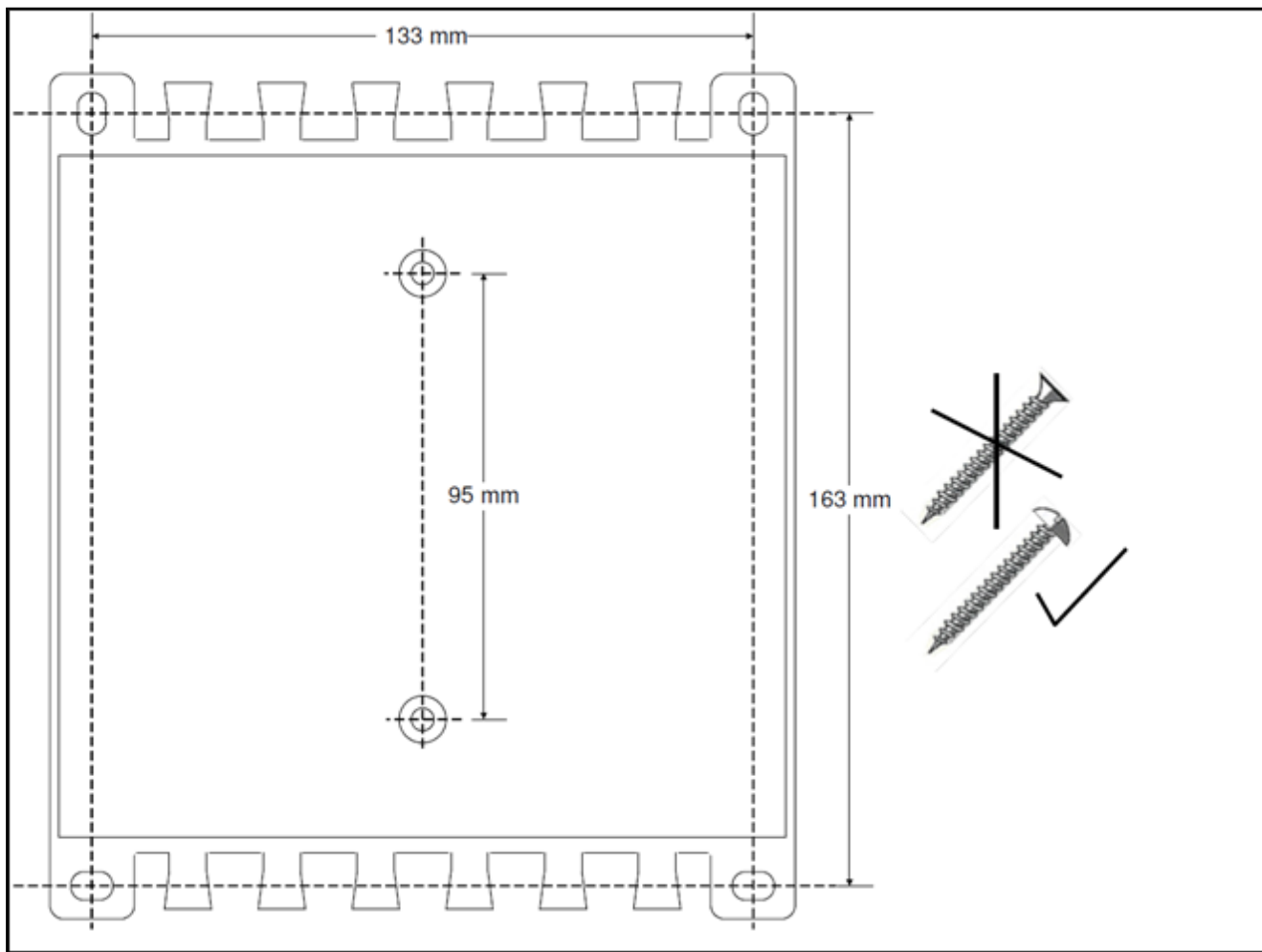
Due to the protection class, the module may only be installed in a dry environment and out of the reach of persons. (false ceilings, technical rooms, riser shafts, etc.).

Attention: The maximum tightening torque for the mounting screw ranges from 0,5 to 1 Nm.

NOTE: When attaching the cover, make sure that it audibly clicks into place on the right and the left side. Otherwise, the permanent dimensional stability of the fastener cannot be guaranteed!

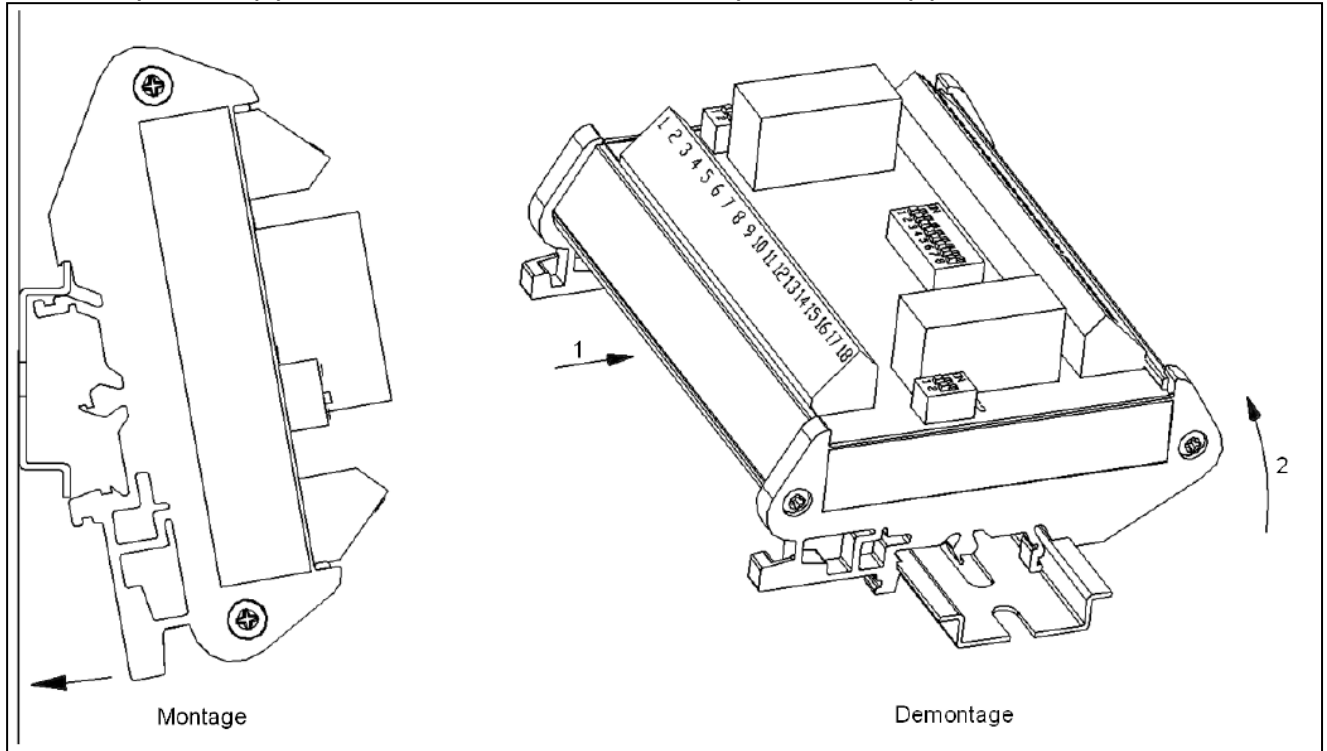
If necessary, the module must be installed in a thermal protection housing in accordance with the normative regulations. When connecting function-maintaining wiring, avoid cable crossings and insulate the sheaths as short as possible.

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



BRM-10-F, BKM-10-F-ST

The BRM-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).



BRM-10-S

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

Is a proper, as in **Fehler! Verweisquelle konnte nicht gefunden werden. Fehler! Verweisquelle konnte nicht gefunden werden.** prescribed assembly 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.

5.1.1 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 $D = 5\text{mm}$.
 - 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 1: 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 1: 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

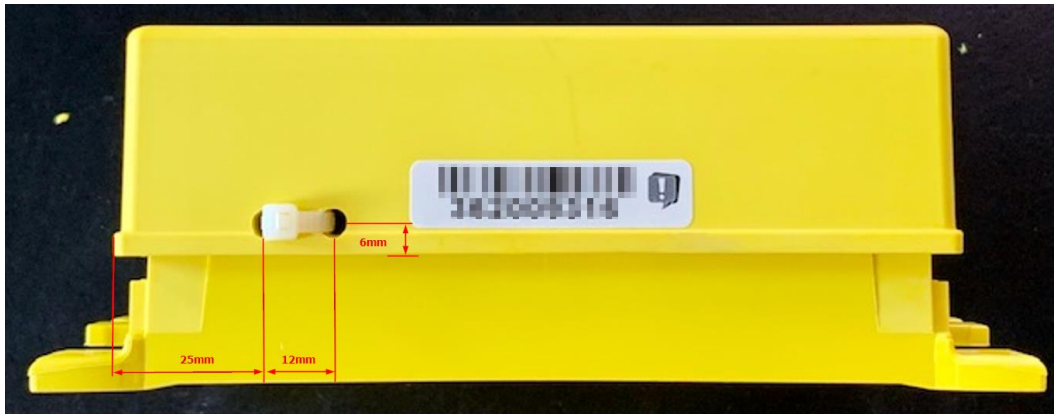


Figure 1: Fall protection with cable tie

5.1.2 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 $D = 2.5\text{mm}$.
 - 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 2: Safety catch with screw 75mm from left edge (measured at rebate) and 11mm from rebate edge.
- Mounting the screw (3.0x10 / lens head)

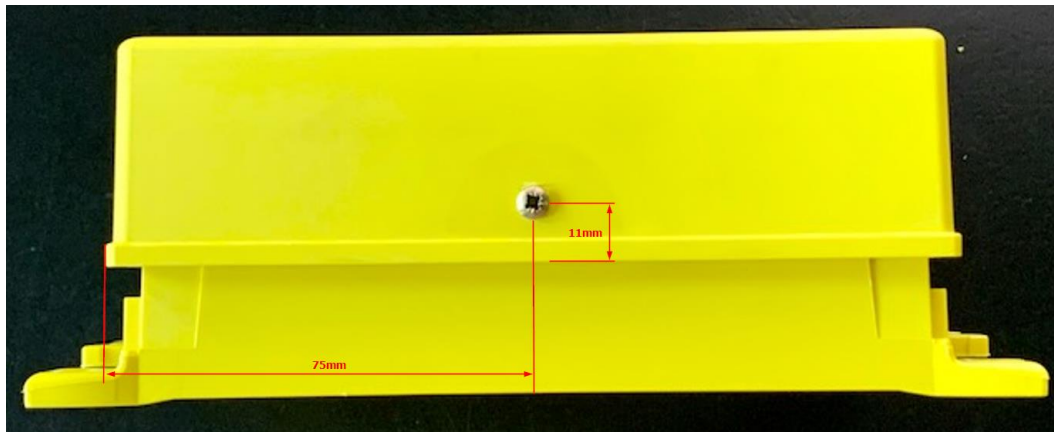
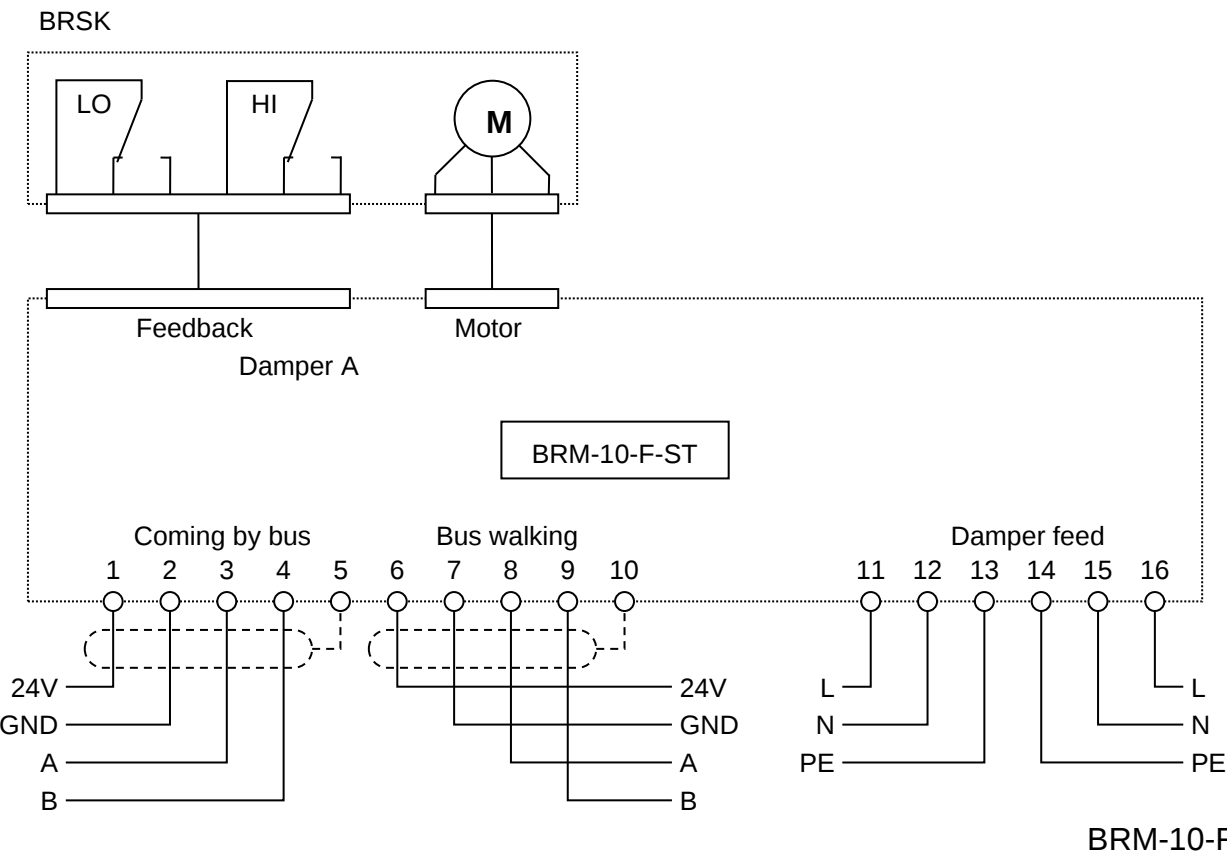
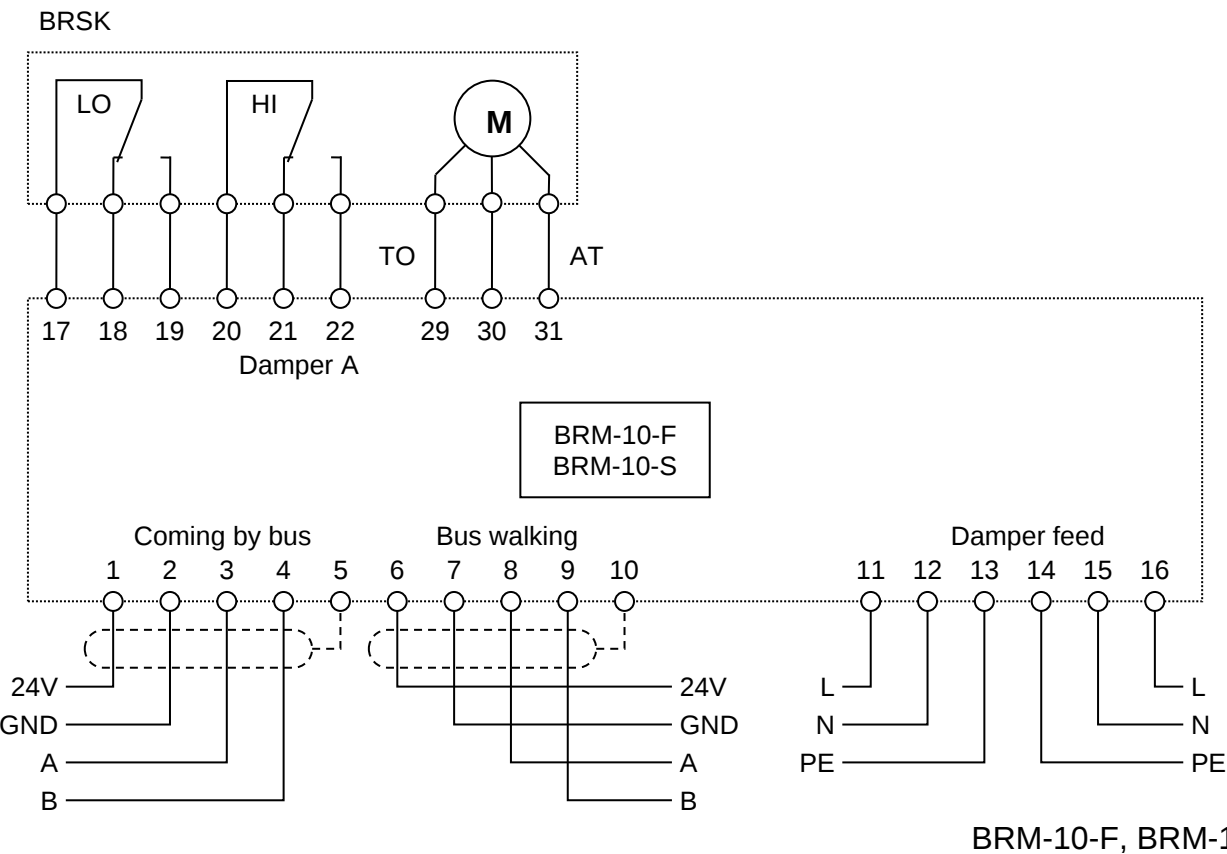


Figure 2: Safety catch with screw

6 Wiring diagram



7 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	2 for feedback fire smoke damper limit switch (potential-free)	
Digital outputs	1 for controlling the fire smoke damper	
Feedbacks / limit switches		
Maximum detection resistance*	875 Ω	
Outputs		
Damper 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 capacities	1250VA / 150W	
Terminals for damper supply		
Maximum connection cross-section	Single wire: 0.08 - 2.5 mm ² Fine-stranded (without AEH): 0.08 - 2.5 mm ² Fine-stranded (AEH with collar): 0,25 - 1, 5 mm ² Fine-stranded (AEH without collar): 0.25 - 2.5 mm ²	
Maximum bridge current terminals	10A	
Maximum back-up fuse	LSS 10A characteristic B	
Terminals BusRing, feedback signals, damper output		
Connection cross-sections	Single wire: 0.2 - 1.5 mm ² Fine-stranded (without AEH): 0.2 - 1.5 mm ² Fine-stranded (AEH with collar): 0.25 - 0.75 mm ² Fine-stranded (AEH without collar): 0.25 - 1.5 mm ²	
Environment variables		
Permissible ambient temperature	0 - 45°C	
Permissible ambient humidity	10 - 90 % RH non-condensing	
Dimensions (W x H x D) [mm]		
BRM-10-F, BRM-10-F-ST	158 x 180 x 65	
BRM-10-S	132 x 93 x 55	
Weight		
BRM-10-F, BRM-10-F-ST	Approx. 510 g	
BRM-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.