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PRODUCT SPECIFICATIONS



AGNOSYS Series F V3.5 BKM-35-F BKM-35-S BKM-35-F-ST

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Agnosys GmbH	Date:	16/11/2017	Title:	Typenblatt BKM-35-x	Pages
	Version:	01.09			Project:
	Edited by:	LG			
	Reviewed by:	-			
	Reviewed by:	-			

1 History

Date	Editor	Description
01/09/2012	MAR	First version
18/07/2013	MAR	Various changes and corrections
10/06/2014	MAR	Technical changes, new CD
27/10/2014	LG	Typos
05/01/2016	RO	Hardware overhaul
28/01/2016	RO	Current consumption adjusted
18/01/2016	RO	Overhaul of circuit board
22/01/2016	MAR	Various data changed, release
21/03/2016	RO	BKM-35-F-ST added
09/06/2016	RO	Max. permanent current of the outputs corrected to AC 5A
11/11/2016	LG	Update of images; release status
24/07/2018	LF	Update identification color hybrid cable

2 Contents

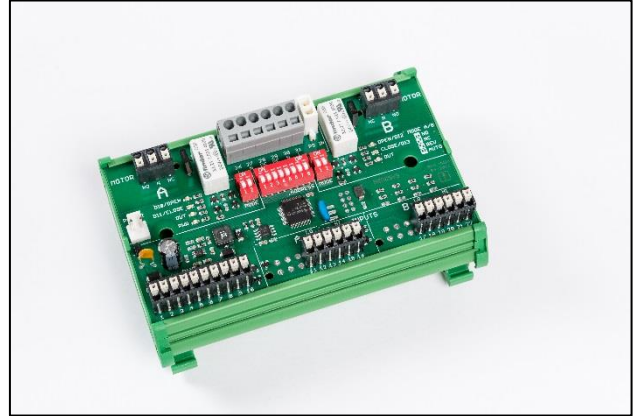
1 HISTORY	2
2 CONTENTS	2
3 GENERAL INFORMATION	3
4 SAFETY REGULATIONS	5
5 DIMENSIONED DRAWING AND MOUNTING INSTRUCTIONS	5
6 WIRING DIAGRAM	8
6.1 WIRING FOR BSK* CONTROL SYSTEM ACCORDING TO F3001.....	8
6.2 WIRING FOR BSK* MONITORING SYSTEM.....	9
7 TECHNICAL SPECIFICATIONS	10

*BSK: fire-damper

3 General Information



BKM-35-F



BKM-35-S



BKM-35-F-ST

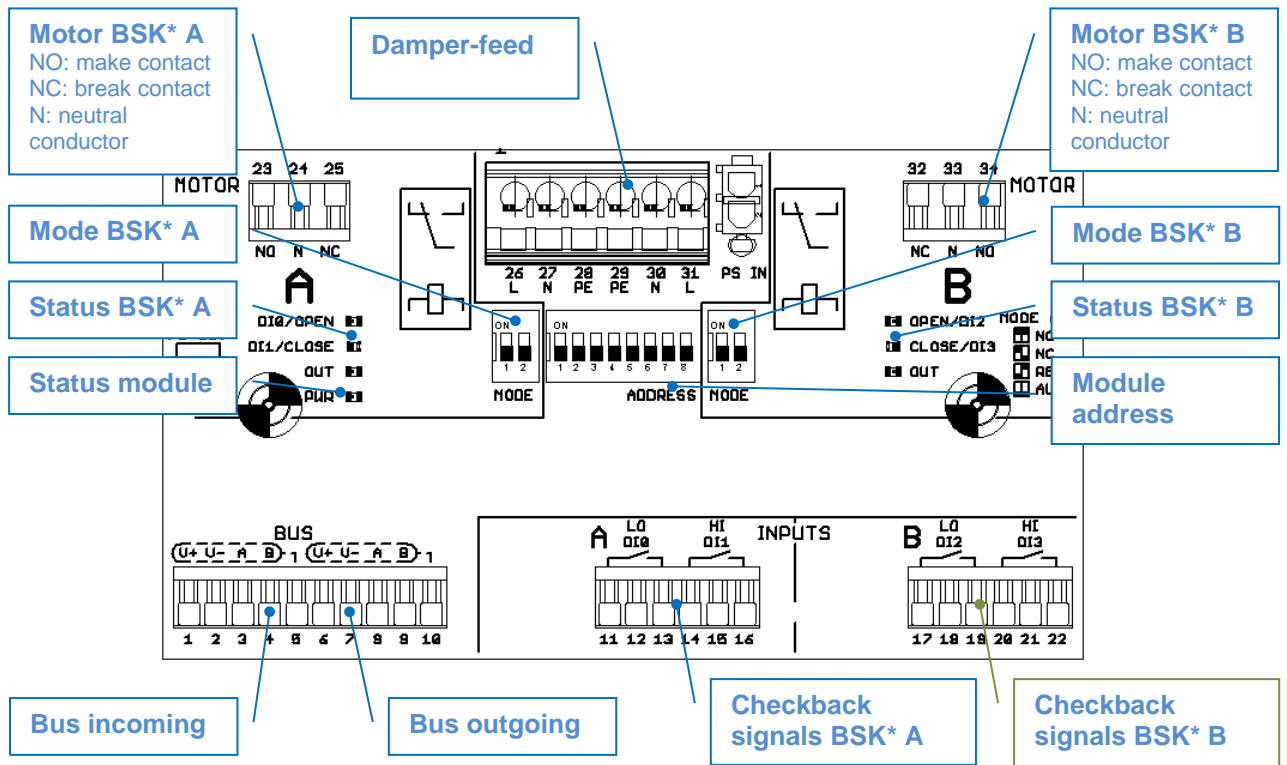
- BKM-35-S Fire-Damper Module IP20 for 35mm DIN rail-mounting
- BKM 35-F Fire-Damper Module IP20 for wall-mounting
- BKM 35-F-ST Fire-Damper Module IP20 for wall-mounting: connector version

The modules serve to monitor and operate fire-dampers, in addition to testing their runtime. Up to two damper motors can be operated per module and the respective damper limit switches can be monitored. Furthermore, a fully automated test of the dampers, executing a review of the runtimes is implemented. During the test, the limit switches are monitored for faulty signal sequence. The relay output has been designed as change-over contact. Thus, the secure location of the fire-damper can be defined via the connector on the module.

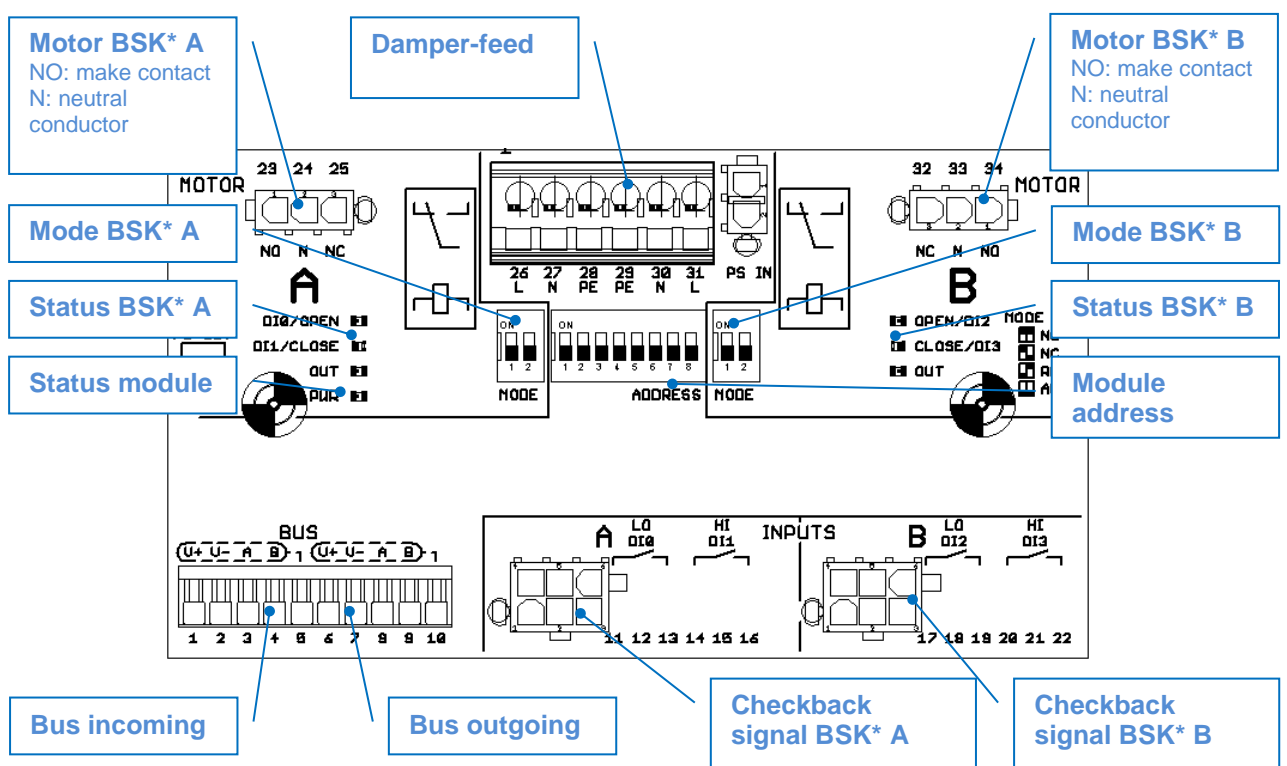
General Features:

- Communication with the superior control unit takes place via bus-ring.
- Monitoring and activation of up to two fire-dampers.
- Fully automated test of the fire-dampers.
- Relay output as change-over contact.
- Operation of up to 126 modules (252 fire-dampers) per bus-ring system within a max. distance of 900m.
- Supply with 24VDC voltage.
- Operation of fire-dampers with 24VAC or 230VAC.
- Simple connection through vertical push-in or spring-type terminals.
- Damper connection via a 3- or 6-pole connector (BKM-35-F-ST).

Overview



BKM-35-F, BKM-35-S



BKM-35-F-ST

*BSK: fire-damper

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Module Address

The module address is set via switches 1-7 as a binary-coded number. Switch 8 serves to reset the module. Switch 8 is essential in order to change the address during operation.

Mode

The damper-feed can be put into the following states via the mode switch:

- Automatic (damper is controlled via the bus / status LEDs deactivated)
- Revision (damper is controlled via the bus / status LEDs activated)
- Manual break-contact (commands via the bus are ignored)
- Manual make-contact (commands via the bus are ignored)

Status BSK (fire-damper)

The status of a BSK fire-damper is signalled via 3 indicators. The yellow indicator OUT signals active control of the output. The indicators OPEN and CLOSE signal the status of the checkback signals.

Limit switch	Description	Indicator OPEN	Indicator 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 status	Off	Off
Both limit switches active	Damper open	On (green)	Off

Status module

The module status indicator serves to visualise the supply status and communication. When the module is correctly supplied, this indicator is lit. The indicator flashes once every time a data packet has been correctly received via the bus. If a faulty data packet is received, the indicator flashes three times.

4 Safety Regulations

- The device may only be used for the specified purpose.
- Warning! The device carries live voltage!
- The device may only be installed and put into operation by trained specialists.
- The device may only be opened by the manufacturer. It does not contain any parts which the operator can maintain themselves.
- The device contains electronic components and may not be disposed of in general waste.

5 Dimensioned Drawing and Mounting Instructions

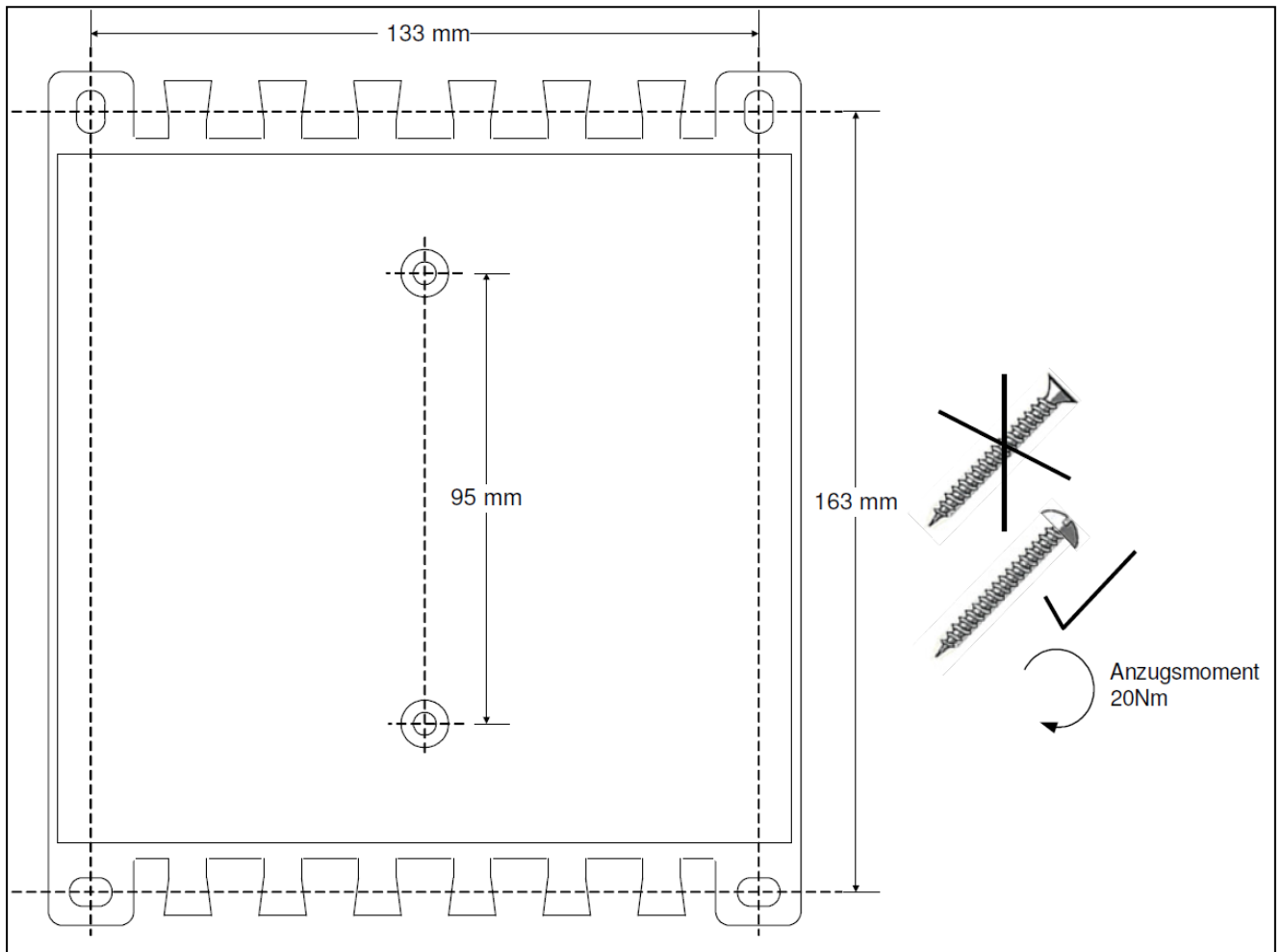
The fire damper module (BKM-35-F, BKM-35-F-ST) can be mounted on any flat surface, either externally with four 5mm round-head screws, or internally with two 5mm self-tapping cylinder-head screws (not included with the product).

Due to protection concerns, the module may only be mounted in a dry environment, out of normal human reach (suspended ceilings, engineering/maintenance rooms, vertical ducts etc.).

The module may not be mounted above or next to significant sources of heat, such as a furnace, in order not to exceed the maximum permissible operating temperature. It should be noted that an increase in temperature can also occur via the surface which the module is mounted on. Warning: the maximum tightening torque of the mounting screws is $\leq 20\text{Nm}$!

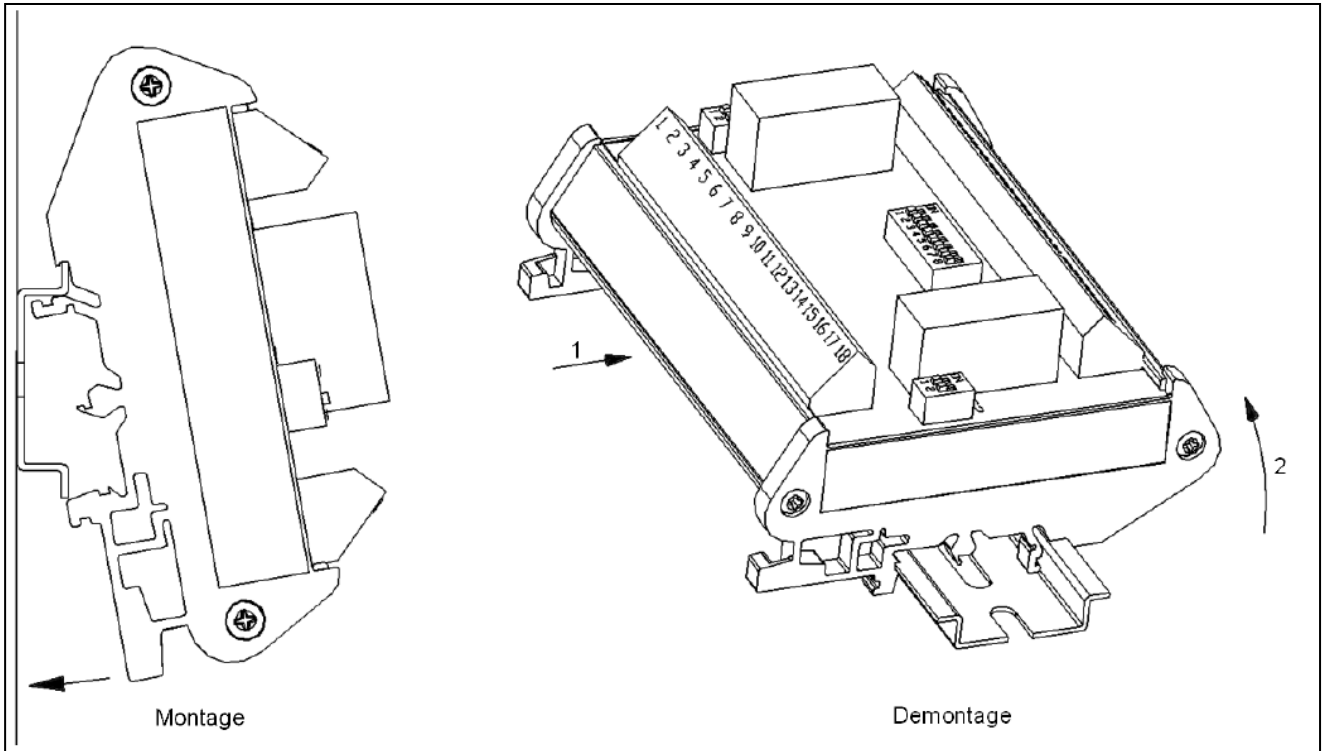
NOTE: When fitting the cover, it should be ensured that it audibly snaps into place on the left as well as on the right side!

Otherwise, the long-term shape and stability of the shutter cannot be guaranteed!



BKM-35-F, BKM-35-F-ST
Tightening torque: 20Nm clockwise

The module BKM-35-S is intended to be mounted on a 35mm DIN-rail in the control-cabinet area. It is mounted onto the DIN-rail by snapping it into place. In order to remove the module, it has to be pushed upwards (1) and it should then be lifted off the rail from above (2).



BKM-35-S

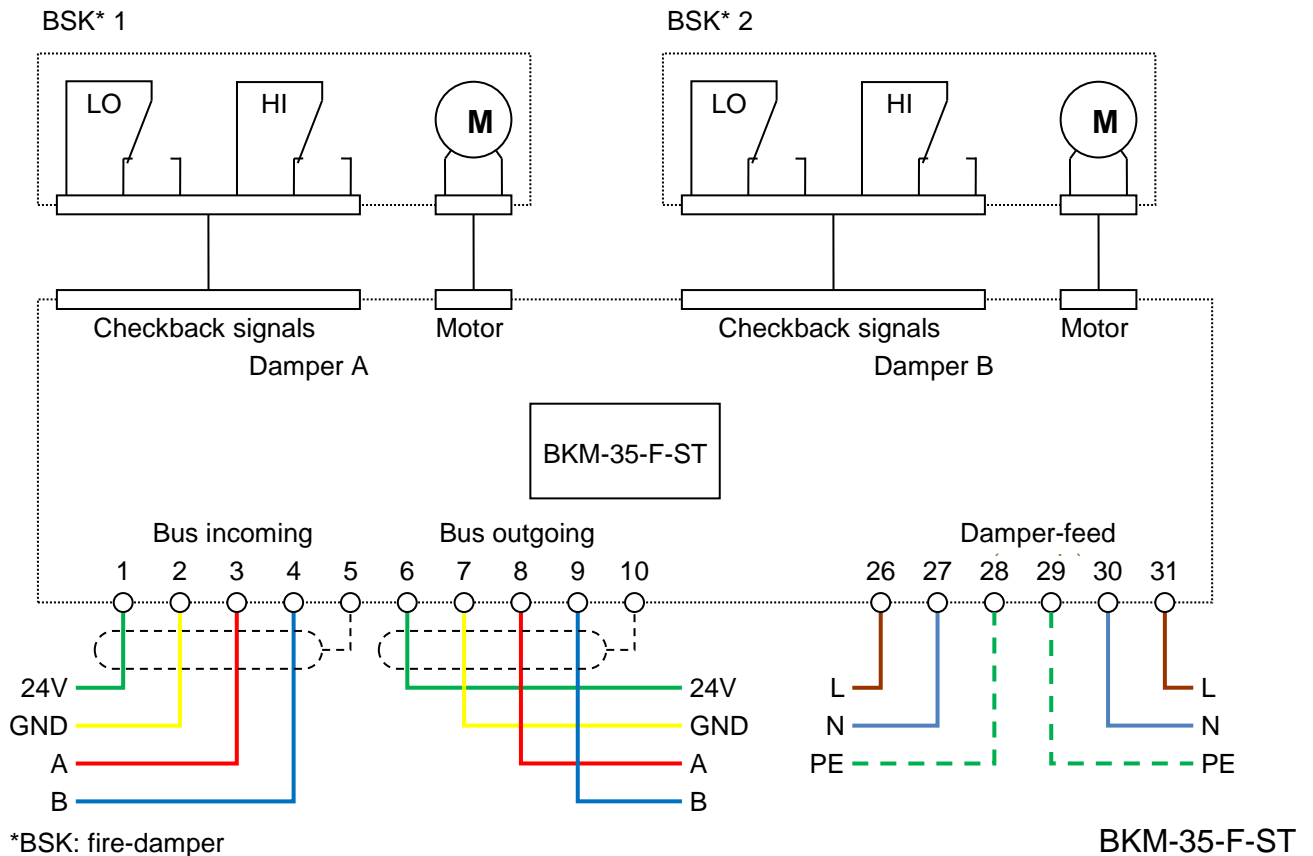
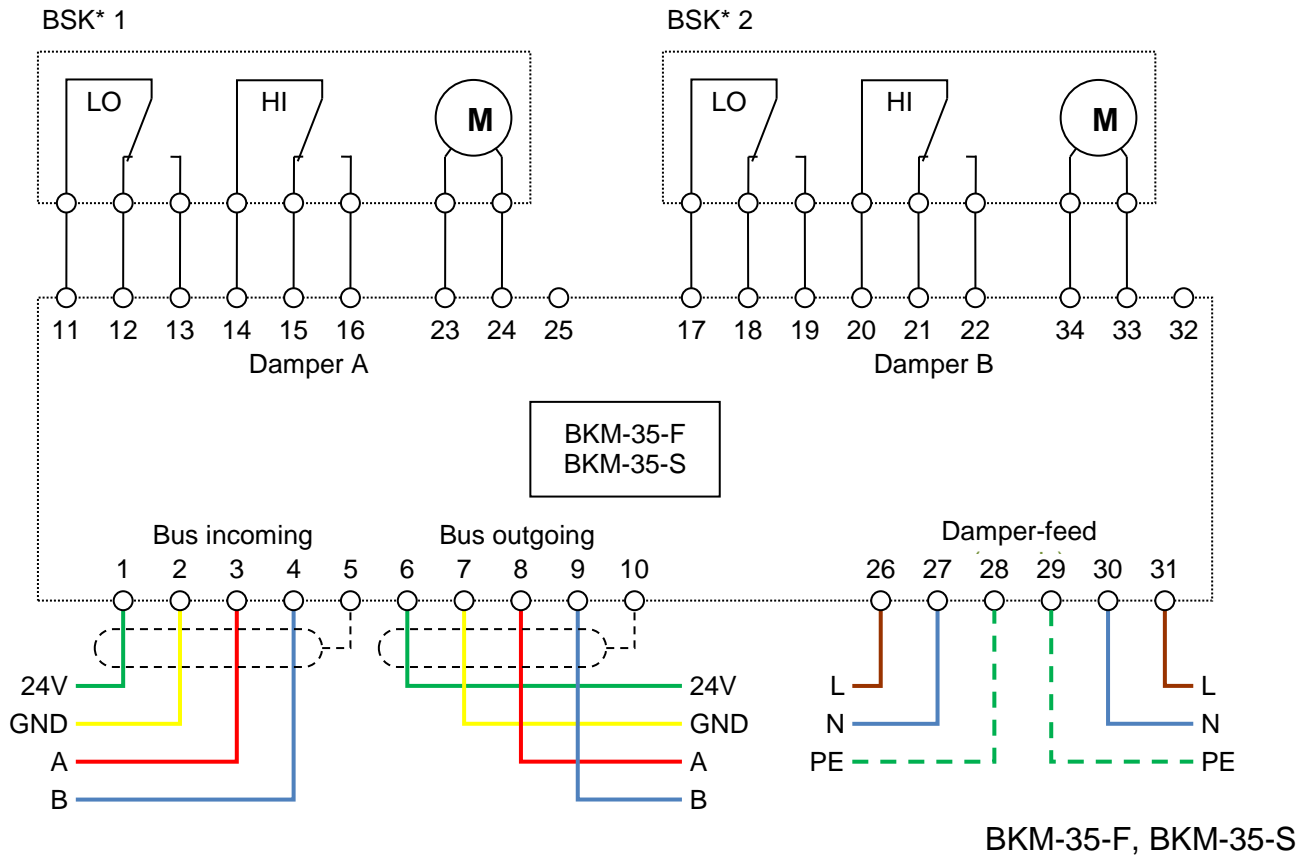
Montage: mounting
Demontage: removal

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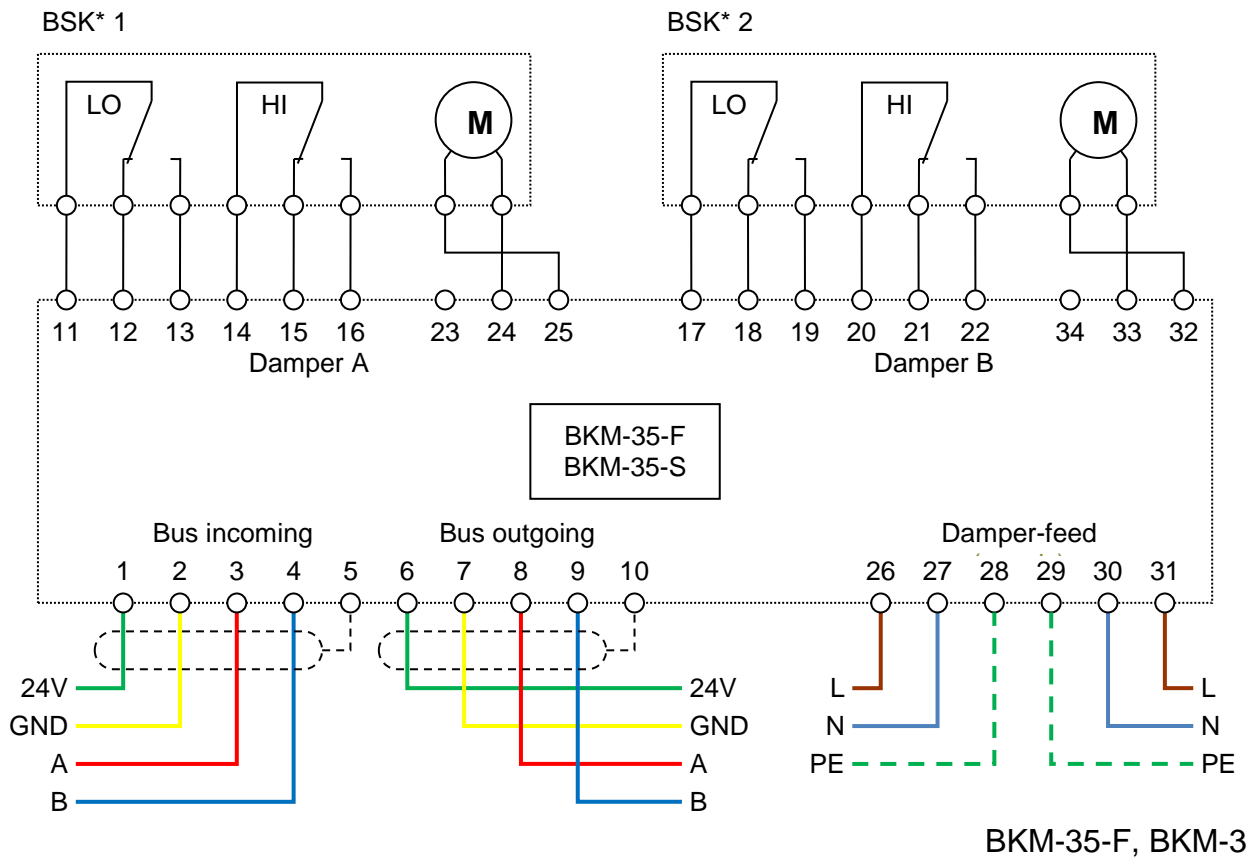
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6 Wiring Diagram

6.1 Wiring for BSK* control system according to F3001



6.2 Wiring for BSK* monitoring system



*BSK: fire-damper

Note:

The BKM-35-F-ST cannot be used in a fire-damper monitoring system because the NC contact is firmly wired onto the corresponding contacts of the motor connector!

Identification color of Agnosys hybrid cable

Description	Color
V+ / 24 V	Green (gn)
V- / GND	Yellow (ye)
Bus A	Red (rd)
Bus B	Blue (bu)

7 Technical Specifications

Electrical data		
Supply voltage	DC 18 – 32V (24V typ.)	
Current consumption	15 mA typ. (both relays energised) 26 mA max. (for 200ms when relays energise)	
Protection rating	IP20 (EN 60529)	
Protection class	II	
Execution		
Digital inputs	4 for checkback signal fire-damper limit switch (isolated)	
Digital outputs	2 for activation of fire-dampers only	
Outputs		
Damper-feed	24 / 230V _{AC}	24V _{DC}
Max. permanent current	AC 5 A	DC 3 A
Max. switch-on current (< 15ms)	AC 10 A	DC 10 A
Switching capacity (AC1/AC3/AC15)	1250VA / 185W / 250VA	
Terminals damper-feed		
Maximum terminal cross-section	Solid-wired: 0.08 – 2.5mm ² Fine-strand (without ferrule): 0.08 – 2.5mm ² Fine-strand (ferrule with collar): 0.25 – 1.5mm ² Fine-strand (ferrule without collar): 0.25 – 2.5mm ²	
Maximum bridge-current terminals	10A	
Maximum preliminary fuse	LSS 10A characteristic B	
Terminal bus-ring, checkback signals, damper outgoing circuit		
Terminal cross-sections	Solid-wired: 0.2 – 1.5mm ² Fine-strand (without ferrule): 0.2 – 1.5mm ² Fine-strand (ferrule with collar): 0.25 – 0.75mm ² Fine-strand (ferrule without collar): 0.25 – 1.5mm ²	
Environment variables		
Permissible ambient temperature	0 – 45°C	
Permissible ambient humidity	10 – 90 % RH non-condensing	
Measurements (width x height x depth) [mm]		
BKM-35-F, BKM-35-F-ST	158 x 180 x 65	
BKM-35-S	132 x 93 x 60	
Weight		
BKM-35-F, BKM-35-F-ST	467g	
BKM-35-S	196g	