



The Blower/Fan Coil actuator is a modular installation device in ProM design for installation in the distribution board on 35 mm mounting rails. The 2-fold Blower/Fan Coil actuator can control single phase ventilation, fans and fan coil units (2-, 3- or 4-pipe systems) with the application program "FanCoil, 2f 6A/1". The connection to the ABB i-bus® EIB / KNX is implemented via bus connection terminals.

The Blower/Fan Coil actuator controls two 3-stage or a 5-stage fans as a changeover or step switch via a group

with relays. The relays in a fan group are interconnected by software. The outputs not used by the fan control can be used to control valves or for switching of electrical loads.

The 8 outputs are connected using screw terminals in groups of 2 contacts. Each output is controlled separately via the EIB / KNX. The rated current of each output is 6 A.

The device does not require an additional power supply.

Technical data

Power supply

- Operating voltage 21...30 V DC, made available by the bus
- Current consumption EIB / KNX < 12 mA
- Power consumption EIB / KNX Max. 250 mW

Output nominal values

- Number (potential free contacts 2 per group) 8
- U_n rated voltage 250 / 440 V AC (50/60 Hz)
- I_n rated current (per output) 6 A
- Power loss at max. load 2.0 W

Output switching currents

- AC3 operation ($\cos\phi = 0.45$) EN 60 947-4-1 6 A / 230 V
- AC1 operation ($\cos\phi = 0.8$) EN 60 947-4-1 6 A / 230 V
- Fluorescent lighting load to EN 60 669-1 6 A / 250 V (35 μ F)²⁾
- Minimum switching performance 20 mA / 5 V
- 10 mA / 12 V
- 7 mA / 24 V
- DC current switching capacity (ohmic load) 6 A / 24 V DC

Output life expectancy

- Mechanical endurance > 10⁷
- Electrical endurance to IEC 60 947-4-1
 - AC1 (240 V/ $\cos\phi = 0.8$) > 10⁵ Operations (state change)
 - AC3 (240 V/ $\cos\phi = 0.45$) > 1.5 x 10⁴
 - AC5a (240 V/ $\cos\phi = 0.45$) > 1.5 x 10⁴

Output switching times¹⁾

- Max. number of relay position changes per output and minute, if all relays are switched simultaneously. The position changes should be distributed equally within the minute. 30
- Max. number of relay position changes per output and minute only one relay is switched. 240

Connections

- EIB / KNX Bus Connection Terminal, 0.8 mm Ø, single core
- Load current circuits (1 terminal per contact) Screw terminal
- Phase (1 terminal for 2 contacts) 0.2... 2.5 mm² finely stranded
- cord-end-sleeves with/without plastic 0.2...4 mm² single core
- TWIN-Cord-end-sleeves with plastic 0.25–2.5/0.25–1.5 mm²
- Tightening torque 0.5–1.5 mm²
- 0.25–2.5/0.25–1.5 mm²
- Max. 0.6 Nm

EIB / KNX operating and display elements

for assignment of the physical address

Housing

to EN 60 529

Safety class

to EN 61 140

Isolation category

III to EN 60 664-1

- Overvoltage category 2 to EN 60 664-1
- Pollution degree

¹⁾ The specifications apply only after the bus voltage has been applied to the device for at least 10 seconds.
The typical elementary delay of the relay is approx. 20 ms.

²⁾ The maximum inrush-current peak (see table 2) may not be exceeded.

Table 1 – Part 1: LFA/S 2.1, technical data

EIB / KNX voltage	– SELV 24 V DC (safety extra low voltage)	
Temperature range	– Operation	– 5 °C ... + 45 °C
	– Storage	– 25 °C ... + 55 °C
	– Transport	– 25 °C ... + 70 °C
Environment conditions	– humidity	max. 93 %, without bedewing
Design	– Modular DIN-Rail Component (MDRC) – Dimensions (H x W x D) – Mounting width (modules at 18 mm) – Mounting depth	Modular installation device, ProM 90 x 72 x 64 4 64
Weight	– In kg	0.24
Installation	– On 35 mm mounting rail	EN 60 715
Mounting position	– As required	
Housing, colour	– Plastic housing, grey	
Approvals	– EIB / KNX nach EN 50 090-2-2	Certification
CE mark	– In accordance with the EMC guideline and low voltage guideline	

Table 1 – Part 2: LFA/S 2.1, technical data

Lamp loads

Lamps	– Incandescent lamp load	1200 W
Fluorescent lamp T5 / T8	– Uncompensated luminaire – Parallel compensated – DUO circuit	800 W 300 W 350 W
Low-volt halogen lamps	– Inductive transformer – Electronic transformer – Halogen lamp 230 V	800 W 1000 W 1000 W
Dulux lamp	– Uncompensated luminaire – Parallel compensated	800 W 800 W
Mercury-vapour lamp	– Uncompensated luminaire – Parallel compensated	1000 W 800 W
Switching performance (switching contact)	– Max. peak inrush-current I_p (150 μ s) – Max. peak inrush-current I_p (250 μ s) – Max. peak inrush-current I_p (600 μ s)	200 A 160 A 100 A
Number of electronic ballasts (T5/T8, single element) ¹⁾	– 18 W (ABB EVG 1x58 CF) – 24 W (ABB EVG-T5 1x24 CY) – 36 W (ABB EVG 1x36 CF) – 58 W (ABB EVG 1x58 CF) – 80 W (Helvar EL 1x80 SC)	10 10 7 5 3

¹⁾ For multiple element lamps or other types the number of electronic ballasts must be determined using the peak inrush current of the electronic ballasts.

Table 2: Lamp load for LFA/S 2.1

Application programs

Type	Name	Max. number of communication objects	Max. number of group addresses	Max. number of associations
LFA/S 2.1	FanCoil 2f 6A/1	63	254	254

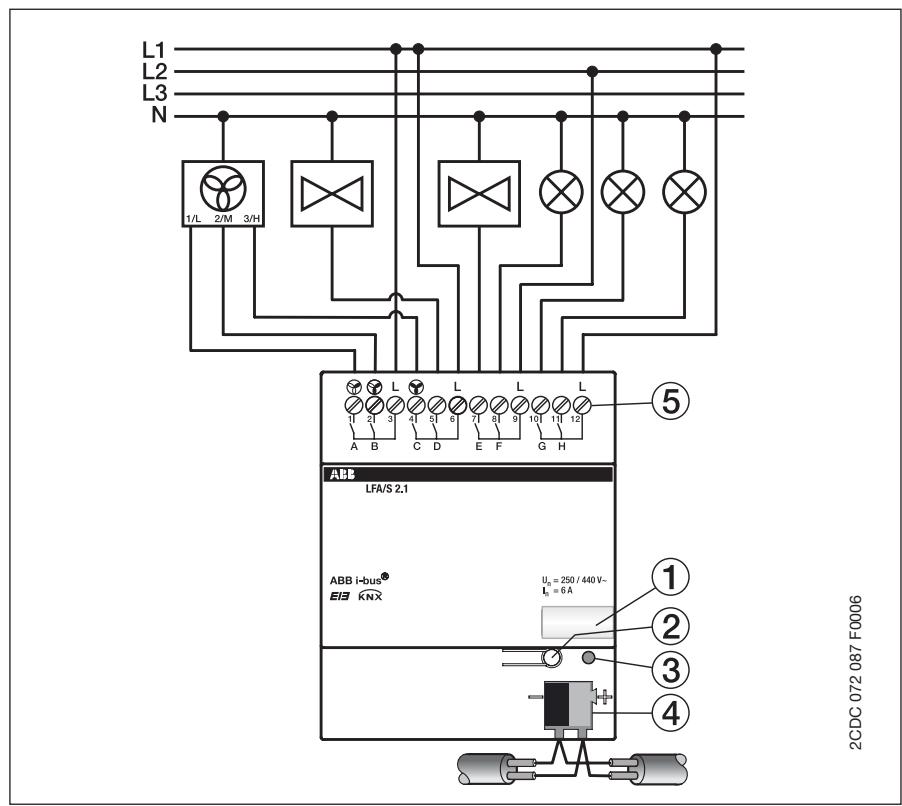
Table 3: Application programs LFA/S 2.1

Note: The programming requires the EIB Software Tool ETS2 V1.3 or higher. If the ETS3 is used a ".VD3" type file must be imported.

The application program is located within the ETS2 / ETS3 in the category ABB/heating, air-con., ventilation / Air-con. actuator/FanCoil 2f 6A/1.

Detailed information about the application can be found in the product manual for the "Blower/Fan Coil Actuator LFA/S 1.1, LFA/S 2.1". This manual can be free downloaded under www.abb.de/eib.

Wiring diagram



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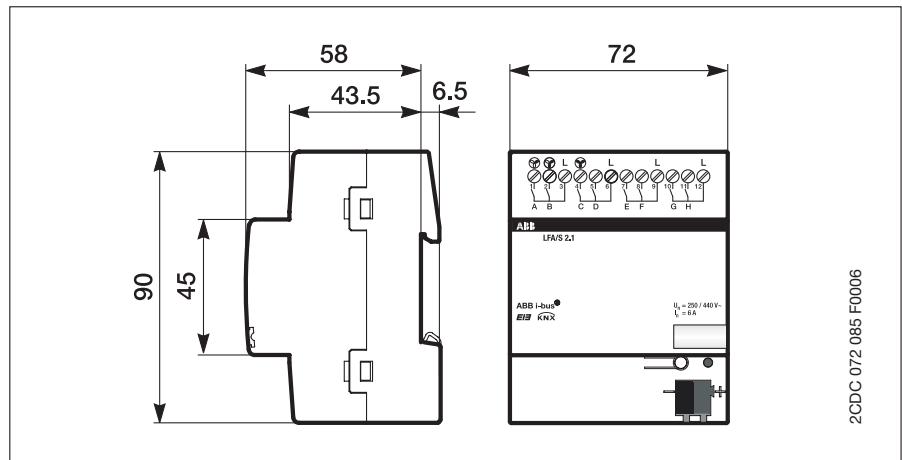
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1 Label carrier
2 Programming button
3 Programming LED
4 Bus Connection Terminal

5 Load current circuit
one single input terminal or two outputs

Note: All-pole disconnection must be observed in order to avoid dangerous contact voltage which can develop via loads in other phases.

Dimension drawings



	LFA/S 2.1
B	72 mm 4 module widths

