

# ABB i-bus® KNX

## Blower Actuator, xfach, 6A, MDRC

### FCL/S x.6.1.1, 2CDG 110 16x R0011



2CDC 071 026 S0012

The FCL/S x.6.1.1 Blower Actuator is a modular installation device (MDRC) in ProM design. It is intended for installation in the distribution board on 35 mm mounting rails. The assignment of the physical address as well as the parameterization is carried out using ETS and the current application.

The device is powered via the ABB i bus® KNX and requires no additional auxiliary voltage supply. The device is ready for operation after connecting the bus voltage.

#### FCL/S 2.6.1.1

#### Technical data

<b>Power supply</b>	KNX bus voltage	21...32 V DC	
	Current consumption, bus	< 12 mA	
	Power consumption	maximal 250 mW	
<b>Rated output value</b>	FCL/S Type	1.6.1.1	2.6.1.1
	Number	4	8
	U <sub>n</sub> rated voltage	250/440 V AC (50/60 Hz)	
	I <sub>n</sub> rated current (per output)	6 A	6 A
	Leakage loss per device at max. load	1.5 W	2.0 W
<b>Output switching current</b>	AC3 <sup>2)</sup> operation (cos φ = 0.45) To EN 60 947-4-1	6 A/230 V AC	
	AC3 <sup>2)</sup> operation (cos φ = 0.8) To EN 60 947-4-1	6 A/230 V AC	
	Fluorescent lighting load to EN 60 669-1	6 A/250 V AC (35 μF) <sup>1)</sup>	
	Minimum switching capacity	20 mA/5 V AC 10 mA/12 V AC 7 mA/24 V AC	
<b>Output service life</b>	Mechanical service life	> 10 <sup>7</sup>	
	Electronic endurance to IEC 60 947-4-1		
	AC1 <sup>2)</sup> (240 V/cos φ = 0.8)	> 10 <sup>5</sup>	
	AC3 <sup>2)</sup> (240 V/cos φ = 0.45)	> 1.5 x 10 <sup>4</sup>	
	AC5a <sup>2)</sup> (240 V/cos φ = 0.45)	> 1.5 x 10 <sup>4</sup>	

<sup>1)</sup> The maximum inrush current peak may not be exceeded.

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#### <sup>2)</sup> What do the terms AC1, AC3 and AC5a mean?

In Intelligent Building Control, different switching capabilities and performance specifications, required by special applications, have become established in industrial and residential systems. These performance specifications are rooted in the respective national and international standards. The tests are defined to simulate typical applications, e.g. motor loads (industrial) or fluorescent lamps (residential).

Specifications AC1 and AC3 are switching performance specifications which have become established in the industrial field.

Typical application:

AC1 – Non-inductive or slightly inductive loads, resistive furnaces (relates to switching of ohm-ic/resistive loads)

AC3 – Squirrel-cage motors: Starting, switching off motors during running (relates to (inductive) motor load)

AC5a – Switching of electric discharge lamps

These switching performances are defined in standard EN 60 947-4-1 *Contactors and motor-starters – Electromechanical contactors and motor-starters*. The standard describes starters and/or contactors that were originally used primarily in industrial applications.

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<b>Output switching times<sup>3)</sup></b>	Maximum output relay position change per minute if all relays are switched simultaneously.	1.6.1.1 60	2.6.1.1 30
	The position changes should be distributed equally within the minute.		
	Maximum output relay position change per minute if only one relay is switched.	240	240
<b>Connections</b>	KNX	Via bus connection terminals, 0.8mm Ø, solid	
	Load circuits	Screw terminal 0.2... 2.5 mm <sup>2</sup> fine stranded 0.2... 4 mm <sup>2</sup> solid	
	Tightening torque	max. 0.6 Nm	
<b>Operating and display elements</b>	<i>Programming</i> Button/LED	For assignment of the physical address	
<b>Degree of protection</b>	IP 20	To EN 60 529	
<b>Protection class</b>	II	To EN 61 140	
<b>Isolation category</b>	Overvoltage category	III to DIN EN 60 664-1	
	Pollution degree	2 to DIN EN 60 664-1	
<b>KNX safety extra low voltage</b>	SELV 24 V DC		
<b>Temperature range</b>	Operation	-5 °C...+45 °C	
	Storage	-25 °C...+55 °C	
	Transport	-25 °C...+70 °C	
<b>Ambient conditions</b>	Maximum air humidity	95 %, no condensation allowed	
<b>Design</b>	Modular installation device (MDRC)	Modular installation device, ProM	
	FCL/S Type	1.6.1.1	2.6.1.1
	Dimensions	90 x W x 64.5mm (H x W x D)	
	Width W in mm	72	108
	Mounting width in units (18mm modules)	4	6
	Mounting depth in mm	64.5	64.5
<b>Weight</b>		1.6.1.1	2.6.1.1
	in kg	0.13	0.24
<b>Installation</b>	On 35 mm mounting rail	To EN 60 715	
<b>Mounting position</b>	As required		
<b>Housing/color</b>	Plastic housing, gray		
<b>Approvals</b>	KNX to EN 50 090-1, -2	Certification	
<b>CE mark</b>	In accordance with the EMC guideline and low voltage guideline		

<sup>3)</sup> The specifications apply only after the bus voltage has been applied to the device for at least 30 seconds. Typical relay delay is approx. 20 ms.

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#### Lamp output load at 230VAC

<b>Lamps</b>	Incandescent lamp load	1200 W
<b>Fluorescent lamps T5/T8</b>	Uncorrected	800 W
	Parallel compensated	300 W
	DUO circuit	350 W
<b>Low-voltage halogen lamps</b>	Inductive transformer	800 W
	Electronic transformer	1000 W
	Halogen lamps 230 V	1000 W
<b>Dulux lamp</b>	Uncorrected	800 W
	Parallel compensated	800 W
<b>Mercury-vapor lamp</b>	Uncorrected	1000 W
	Parallel compensated	800 W
<b>Switching capacity (switching contact)</b>	Maximum peak inrush current $I_p$ (150 $\mu$ s)	200 A
	Maximum peak inrush current $I_p$ (250 $\mu$ s)	160 A
	Maximum peak inrush current $I_p$ (600 $\mu$ s)	100 A
<b>Number of electronic ballasts (T5/T8, single element)<sup>1)</sup></b>	18 W (ABB EVG 1 x 18 SF)	10
	24 W (ABB EVG-T5 1 x 24 CY)	10
	36 W (ABB EVG 1 x 36 CF)	7
	58 W (ABB EVG 1 x 58 CF)	5
	80 W (Helvar EL 1 x 80 SC)	3

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

Device type	Application	Maximum number of Communication objects	Maximum number of group addresses	Maximum number of associations
<b>FCL/S 1.6.1.1</b>	Switch Blower 1f 6A/1.0*	64	254	254
<b>FCL/S 2.6.1.1</b>	Switch Blower 2f 6A/1.0*	124	254	254

\* ... = current version number of the application. **Please refer the software information on our homepage for this purpose.**

#### Note

For a detailed description of the application see *Blower Actuator FCL/S x.6.1.1* product manual. It is available free-of-charge at [www.abb.com/knx](http://www.abb.com/knx). ETS and the current version of the device application are required for programming.

The current version of the application is available for download at [www.abb.com/knx](http://www.abb.com/knx). After import into ETS it appears in the *Catalogs* window under *Manufacturers/ABB/Heating, Ventilation, Air conditioning/ Ventilation actuator*.

The device does not support the locking function of a KNX device in the ETS. If you use a *BCU code* to inhibit access to all the project devices, it has no effect on this device. Data can still be read and programmed.

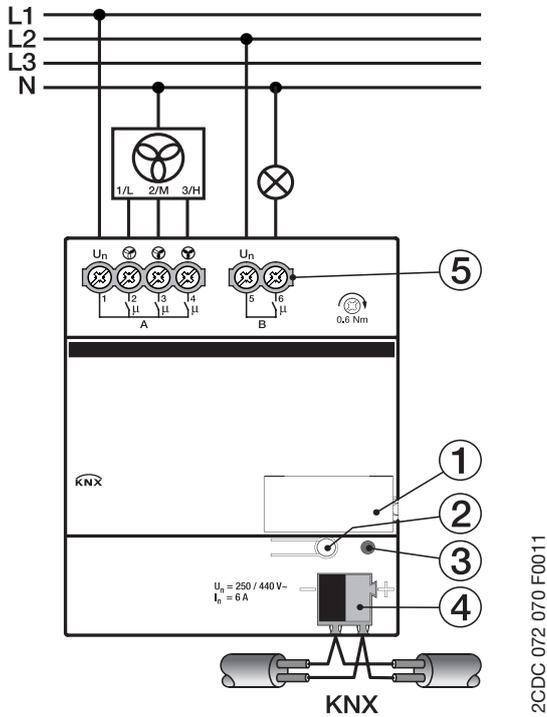
# ABB i-bus® KNX

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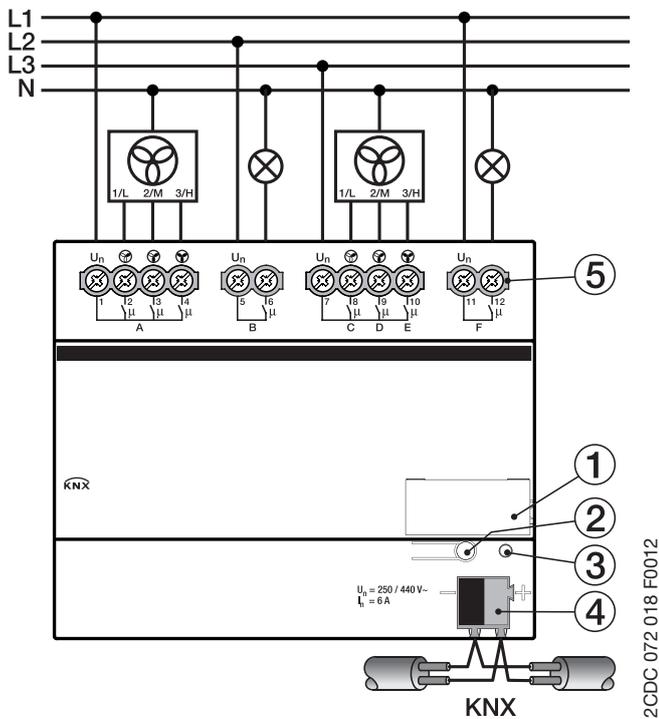
### FCL/S x.6.1.1, 2CDG 110 16x R0011

#### Connection diagrams

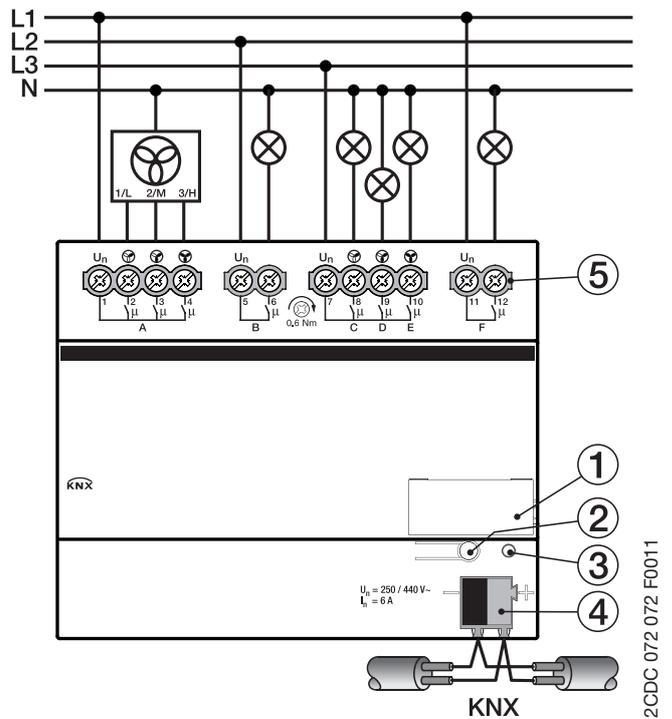
##### FCL/S 1.6.1.1



##### FCL/S 2.6.1.1 (2 fans)



##### FCL/S 2.6.1.1 (1 fan)

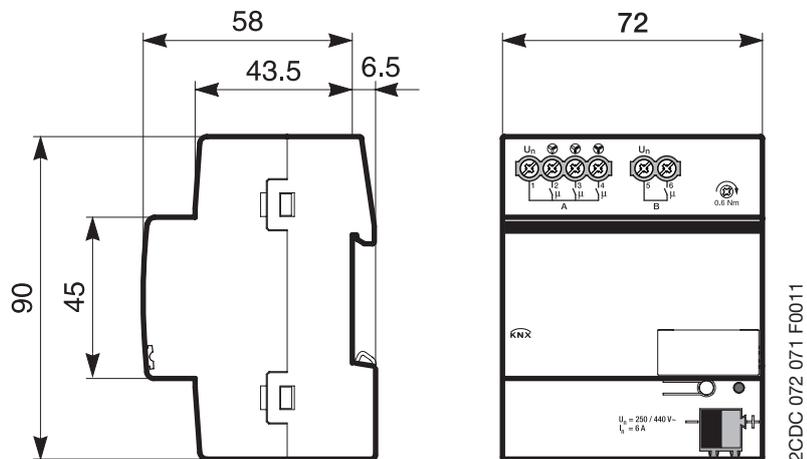


- 1 Label carrier
- 2 Programming button
- 3 Programming LED (red)
- 4 Bus connection terminal
- 5 Power outputs

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## Dimension drawings

FCL/S 1.6.1.1



FCL/S 2.6.1.1

