

TECHNICAL DATA

ABB i-bus® KNX

FCC/S 1.5.2.1

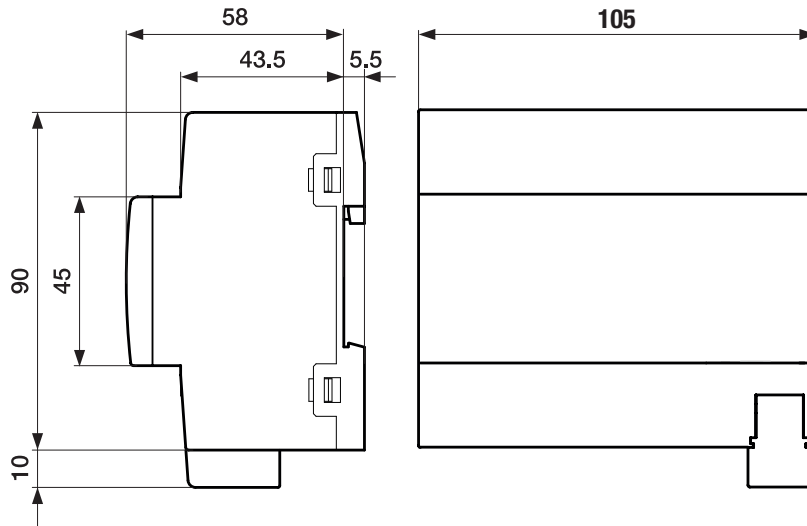
Fan Coil Controller, PWM, MDRC



Product description

The device is a modular installation device (MDRC) in pro *M* design. It is intended for installation in distribution boards on 35 mm mounting rails. Physical address assignment and parametrization are carried out with ETS. The device is powered by the ABB i-bus® KNX bus and requires no additional auxiliary voltage supply. The device is ready for operation after connecting the bus voltage.

Dimension drawing



2CDC072026F0017

Connection diagram

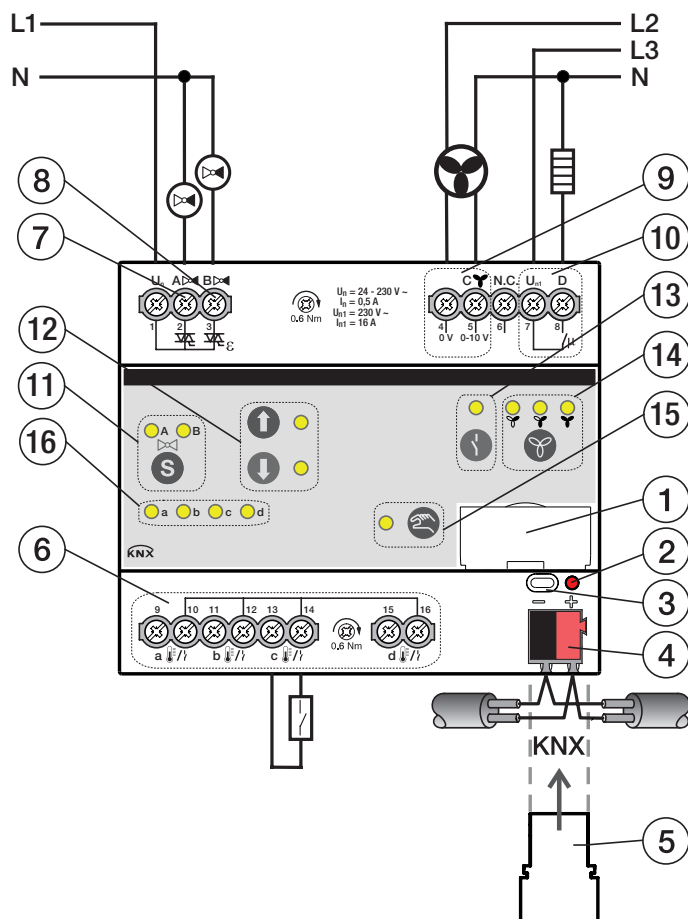


Fig. 2: FCC/S 1.5.2.1

LEGEND

1 Label carrier

2 Programming LED

3 Programming button

4 Bus connection terminal

5 Cover cap

6 Inputs (a, b, c, d)

7 Valve output A

8 Valve output B

9 Fan output

10 Auxiliary relay

11 Valve output changeover button/LED

12 Valve output open/close button/LED

13 Relay output open/close button/LED

14 Switch fan speed button/LED

15 Manual operation button/LED

16 Inputs (a, b, c, d) status indicator LEDs

General technical data

Supply	Bus voltage	21...32 V DC
	Current consumption, bus	< 12 mA
	Leakage loss, bus	Maximum 250 mW
	Leakage loss, device	Maximum 3 W
	KNX connection	0.25 W
	Relay 16 A	1.0 W
	Electronic outputs	1.2 W
Terminals	KNX	Via bus connection terminal
	Inputs/Outputs	Via screw terminals
Connection terminals	Screw terminal	Screw terminal with universal head (PZ 1)
		0.2...4 mm ² stranded, 2 x (0.2...2.5 mm ²)
		0.2...6 mm ² single core, 2 x (0.2...4 mm ²)
	Wire end ferrule without plastic sleeve	0.25...2.5 mm ²
	Wire end ferrule with plastic sleeve	0.25...4 mm ²
	TWIN ferrules	0.5...2.5 mm ²
	Wire end ferrule contact pin length	Min. 10 mm
	Tightening torque	Max. 0.6 Nm
	Grid	6.35
Protection degree and class	Degree of protection	IP 20 to EN 60529
	Protection class	II to EN 61140
Isolation category	Overvoltage category	III to EN 60664-1
	Pollution degree	II to EN 60664-1
SELV	KNX safety extra low voltage	SELV 24 V DC
Temperature range	Operation	-5...+45°C
	Transport	-25...+70°C
	Storage	-25...+55°C
Ambient conditions	Maximum air humidity	93%, no condensation allowed
	Atmospheric pressure	Atmosphere up to 2,000 m
Design	Modular installation device (MDRC)	Modular installation device
	Design	ProM
	Housing/color	Plastic housing, gray
Dimensions	Dimensions	90 x 105 x 63.5 mm (H x W x D)
	Mounting width in space units	6x 17,5 mm modules
	Mounting depth	63.5 mm
Mounting	35 mm mounting rail	To EN 60715
	Mounting position	Any
	Weight	0.22 kg
	Fire classification	Flammability V-0 as per UL94
Approvals	KNX certification	To EN 50491
	Certification	To EN 60669
	CE marking	In accordance with the EMC directive and low voltage directive

Device type

Device type	Fan Coil Controller	FCC/S 1.5.2.1
	Application	Fan Coil Unit Controller, PWM, continuous, manual operation/...*
	Maximum number of group objects	118
	Maximum number of group addresses	255
	Maximum number of assignments	255

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

Valve outputs (electrothermal, PWM)

Rated values	Number	2
	non-floating	Yes
	U _n rated voltage	24...230 V AC (50/60 Hz)
	I _n rated current (per output pair)	0.5 A
	Continuous current at T _u up to 20°C	0.25 A resistive load per channel
	Continuous current at T _u up to 45°C	0.15 A resistive load per channel
	Starting current	Maximum 1.6 A, 10 s at T _u up to 45°C
		T _u = ambient temperature
	Minimum load	1.2 VA per PWM output

Valve outputs (motor-driven, 3-point)

Rated values	Number	1
	non-floating	Yes
	U _n rated voltage	24...230 V AC (50/60 Hz)
	I _n rated current (per output pair)	0.5 A
	Continuous current at T _u up to 20°C	0.25 A resistive load per channel
	Continuous current at T _u up to 45°C	0.15 A resistive load per channel
	Starting current	Maximum 1.6 A, 10 s at T _u up to 45°C
		T _u = ambient temperature
	Minimum load	1.2 VA per output

Inputs

For Analog Room Controller	Number	1
Contact scanning	Scanning current	1 mA
	Scanning voltage	12 V
Resistance	Select	User-defined
	PT 1.000	2-conductor technology
	PT 100	2-conductor technology
	KT	1k
	KTY	2k
	NI	1k
	NTC	20k
Line length	between sensor and device input	Max. 100 m, one-way

Rated current output 16 A

Rated values	Number	1
	U_{n2} rated voltage	250 V AC (50/60 Hz)
	I_{n2} rated current (per output pair)	16 A (resistive load for additional heater)
Switching currents	AC3* operation ($\cos \phi = 0.45$) to EN 60947-4-1	16 A / 230 V AC
	AC1* operation ($\cos \phi = 0.8$) to EN 60947-4-1	16 A / 230 V AC
	Minimum switching capacity at 100 mA	24 V AC
	DC current switching capacity, resistive load, at 16 A	24 V DC
Service life	Mechanical service life	> 3 x 10 ⁶ cycles
	Electrical endurance of switching contacts to IEC 60947-4-1	> 10 ⁶ cycles
	AC1* (240 V/ $\cos \phi=0.8$)	> 10 ⁵ cycles
Switching times	Maximum relay position change per output and minute if only one relay is switched.	> 500

Fan output (analog)

Rated values	Number	1, non-isolated, short-circuit proofed
	Control signal	0...10 V DC
	Signal type	Analog
	Output load	> 10 kohms
	Output tolerance	± 10%
	Current limitation	max. 1.5 mA

Note

For a detailed description of the application see product manual. It is available free-of-charge at <http://www.abb.com/knx>

ETS and the current version of the device application are required for programming.

The device does not support the locking function of a KNX device in 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.

Ordering details

Description	MB	Type	Order No.	Packag- ing unit [pcs.]	Weight 1 pc. [g]
Fan Coil Controller	6	FCC/S 1.1.1.1	2CDG 110 210 R0011	1	230
Fan Coil Controller	6	FCC/S 1.1.2.1	2CDG 110 211 R0011	1	235
Fan Coil Controller	6	FCC/S 1.2.1.1	2CDG 110 212 R0011	1	230
Fan Coil Controller	6	FCC/S 1.2.2.1	2CDG 110 213 R0011	1	235
Fan Coil Controller	6	FCC/S 1.3.1.1	2CDG 110 214 R0011	1	210
Fan Coil Controller	6	FCC/S 1.3.2.1	2CDG 110 215 R0011	1	215
Fan Coil Controller	6	FCC/S 1.4.1.1	2CDG 110 209 R0011	1	215
Fan Coil Controller	6	FCC/S 1.5.1.1	2CDG 110 234 R0011	1	210
Fan Coil Controller	6	FCC/S 1.5.2.1	2CDG 110 235 R0011	1	215

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