BK16XX-16A Module

KNX ACTUATORS

DESCRIPTION

The BK16-XX actuator Module is a KNX switching device for all smart building automation and controls systems.

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BK16-XX modules are available with 4, 8, 12, 16, 20 and 24 channels compatible with KNX bus which can be configured by ETS tool.

All Actuators modules are supplied by the KNX bus voltage and no need for any auxiliary Voltage supply.

The communication of the devices via the KNX bus enables information exchanges with KNX sensors and the integration with building management systems.

Moreover, in case of any communication failure, the manual buttons in the actuators can be used to control the output manually.

MAIN FUNCTIONAL CHARACTERISTICS

- Lighting control can be made with every output of the combo switch actuator.
- Heating control can be made with every output of the combo switch actuator.
- Pumps, Valves, Parking Barriers & E-Locks control can be made with every output of the combo switch actuator.
- Every output of the combo module can be configured as shutter/blind provided that 2 consecutive outputs are available.
- Shutter/blind 24V configuration can be with 4 outputs of the combo module. However, it is only available in the first four outputs of the (*) blocks.
- Fan Coil 2 pipes configuration can be with 4 outputs of the combo module. However, it is only available in the first four outputs of the (*) blocks.
- Fan Coil 4 pipes configuration can be with 5 outputs of the combo module. However, it is only available in the first five outputs of the (*) blocks.
- The functionalities for each output include among other things timing functions, logic gates, scenes, disabling function, forced, working hours counter, periodical monitoring and different configurations for feedback telegrams.
- Last situation memory against power failure.

(*): Each block consists of every 6 outputs of the Actuator module that is starts from C1:C6, C7:C12, C13:C18 & C19:C24 output.

KNX BUS & HARDWARE CONFIGURATION

1- Physical Addressing Button

This button is used to give a physical address to devices and to verify the bus presence. The red led switched on means the presence of KNX bus and the device status as physical addressing.

2- Manual Control Button

Manual test can be carried out Via the push buttons present on the device; the load connected to each output can be controlled manually. This manual control function has priority over the commands from the KNX bus and possible to be performed without bus voltage.

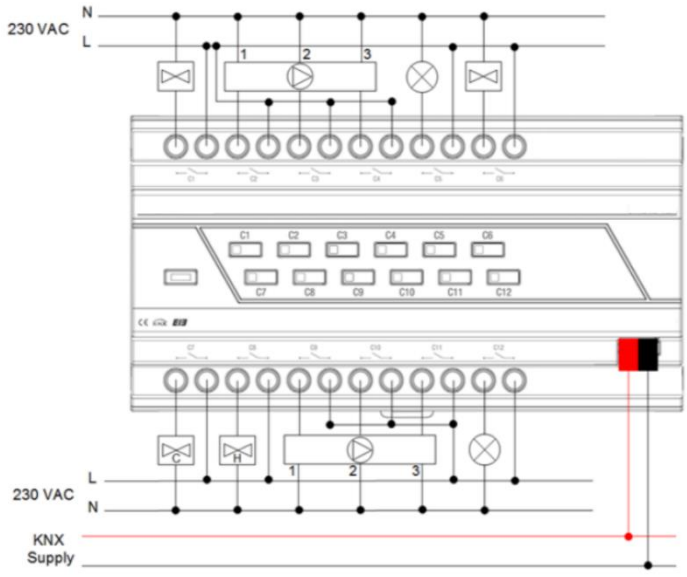
3- Status Led

The button led indicates the status of the outputs. When the green led is on, the output relays are closed.

4- Configuration

The complete configuration of the device is carried out via ETS software.

Connection Diagram:



MOUNTING AND SAFETY INSTRUCTIONS

↗ The device should only be installed and put into operation by qualified electrician or authorized person.

↗ Failure to observe the instructions may cause damage to the device and result in fire and other hazards

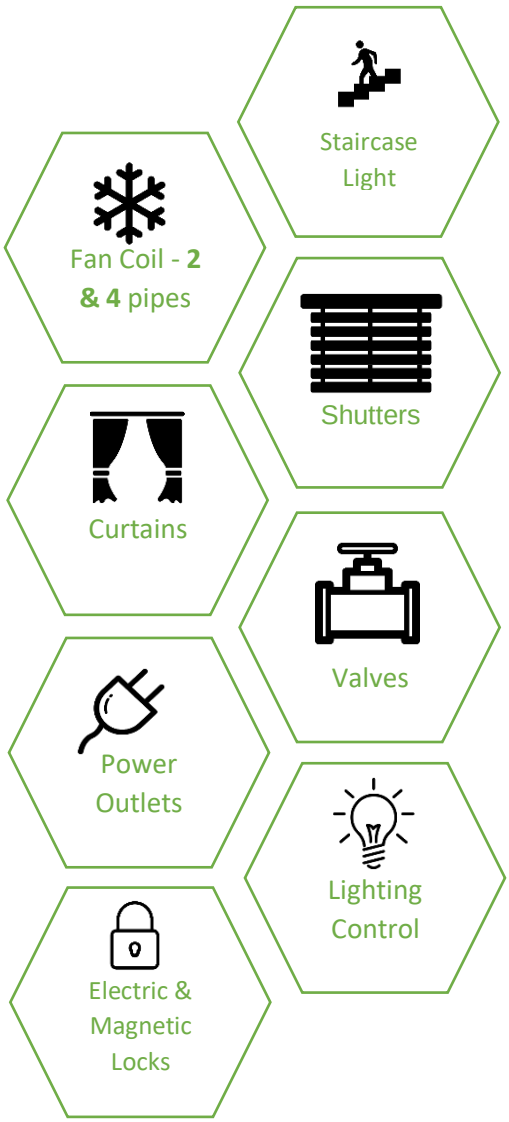
↗ Do not connect the main voltage (230 VAC) or any other external voltages to any point of the KNX bus.

↗ Ensure that there is enough insulation and space between the 230 VAC voltage cables and KNX bus.

↗ Installation only in dry locations and on a 35 mm DIN rail (35 mm) and do not expose this device to direct sunlight, rain or high humidity.

↗ Do not use aerosol sprays, solvents or abrasives that might damage the device.

↗ Accessibility of the device for operation and visual inspection must be provided.



Electrical Parameters						
Device Name	BK1604	BK1608	BK1612	BK1616	BK1620	BK1624
Channels Number	4	8	12	16	20	24
No. of logic Gates	4	4	4	4	4	4
No. of output converters	4	4	4	8	8	8
Working hours counter	Yes	Yes	Yes	Yes	N/A	N/A
Max. Group address	245	245	245	245	245	245
Power Supply	KNX BUS Voltage					
Current consumption, Bus	>20mA					
Output current	16A @ 240 Volt AC					
Network frequency	50~60 Hz					
Output Load						
16A@250VAC, 100A inrush						
Incandescent lamp	1500 W 20 000 Cycles					
Halogen lamps	1500 W 20 000 Cycles					
Fluorescent tubes not compensated	Load not recommended					
Fluorescent tubes connected in parallel	Load not recommended					
Compact fluorescent lamps	5 lamps of max 20W 20 000 Cycles					
LEDs	5 lamps of max 20W 20 000 Cycles					
Halogen lamps VLV (ferromagnetic or electronic ballasts)	900 VA - 20 000 Cycles					
Fluorescent tubes with electronic ballasts (Mono + duo)	700 W - 20 000 Cycles					
Shutter motors (cos phi=0,6)	6 A - 20 000 Cycles					
Fan coil motors (cos phi=0,6)	4 A - 50 000 Cycles					
Minimal switching capacity	100mA 5 V DC					
16A@250VAC, 165A inrush						
Incandescent lamp	1500 W 30 000 Cycles					
Halogen lamps	1500 W 30 000 Cycles					
Fluorescent tubes not compensated	800 W 30 000 Cycles					
Fluorescent tubes connected in parallel	600 W 30 000 Cycles					
Compact fluorescent lamps	10 lamps of max 20W 30 000 Cycles					
LEDs	10 lamps of max 20W 30 000 Cycles					
Halogen lamps VLV (ferromagnetic or electronic ballasts)	1500 VA - 30 000 Cycles					
Fluorescent tubes with electronic ballasts (Mono + duo)	450 W - 30 000 Cycles					
Shutter motors (cos phi=0,6)	-					
Fan coil motors (cos phi=0,6)	-					
Minimal switching capacity	-					
Environmental parameters						
Operating Humidity	>90 RH					
Storage Humidity	Up to 92%					
Operating temperature	-10°C ~ +60°C					
Storage Temperature	-15°C ~ +70°C					
Transport Temperature	-15°C ~ +85°C					
Device Parameters						
Protection type	IP20					
Mode of communication	S-Mode					
Mounting	(35m) Din-Rail					
Flammability	Non-Flammable Product					
Dimensions (W x H x D) mm	105 X 90 X 64		171 X 90 X 64		274 X 90 X 64	
KNX Bus Connector	0.6 ~0.8 Ø, solid					
Output connectors	Screw terminal, 2.5 mm2 stranded ~ 4 mm2 Solid					
Tightening torque	Maximum 0.5 Nm					
Available colors	White, Black & Light Gray					