iBK412XX-C

KNX ROOM CONTROLLER

C SERIES | 4-inch Touch Display | iBeeSwitch



DESCRIPTION

The iBK412XX-C is a wall-mounted KNX room controller with a 4-inch touch display and integrated temperature and humidity sensors, giving one elegant point of control for the whole room.

It provides precise heating and cooling control with 2-point and proportional (continuous) thermostat functions, while its 12 programmable pages bring lighting, blinds, scenes and HVAC together on one screen.

The low-power LCD offers excellent viewing angles and an adjustable backlight for user comfort. The device is commissioned with ETS, and consists of two parts: the BCU, which handles KNX communication and auxiliary power, and the Application Board, which holds the downloaded firmware.

Main Functional Characteristics

- Switching, toggle, dimming, shutters/blinds, VRV, FCU and ventilation control, scenes, value, 2-channel and step-switching functions.
- Locking for each function and for the complete device; password protection.
- On/Off (2-point) and proportional (continuous) thermostat functions.
- Integrated temperature sensor (±0.2 °C) and humidity sensor; values are sent to the bus on change and periodically.
- The display shows measured, external, setpoint and outdoor temperature (°C or °F), humidity, operating mode, fan level, on/off status, warnings and locking status.
- Fan control with up to 3 speeds.
- Threshold alarms can be defined for temperature and humidity.
- 12 programmable pages, each with up to 8 function icons.

Models and Variations

Every model is ordered with one code. Read it from left to right:

iBK	4	12	X	X	-C
iBeeSwitch KNX	Screen size: 4 = 4" | 7 = 7" | 10 = 10"	Programmable pages: 12	Material	Color	C series

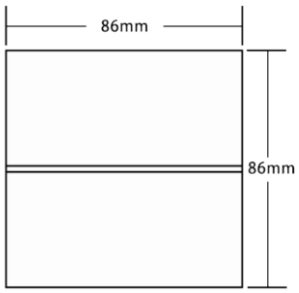
Code	Material
1	Aluminum
2	Brushed Aluminum
3	Glass
4	Plastic

Code	Color
0	Black
1	Gray
4	Gold
7	Red

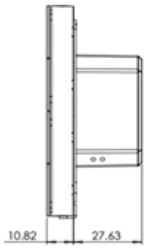
Example: iBK41210-C = 4-inch screen, 12 pages, Aluminum (1), Black (0).

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Dimensions (mm)



Front view (W × H): 86 × 86 mm



Side view: 10.82 mm + 27.63 mm

Features

- **4-inch Touch Display:** clear view of lighting, curtains, environmental sensors and HVAC parameters, with responsive touch control of every function and of the room temperature.
- **Pre-programmed Scenarios:** four ready-made scenarios to set fan speed, power and other settings in one touch.
- **Versatile System Support:** works with VRV, FCU (Fan Coil Unit), heating and ventilation systems.
- **Enhanced Functionality:** also controls lighting, dimming, blinds and other KNX-compatible devices.
- **Personal Design:** the settings icon changes the background color and the page style.

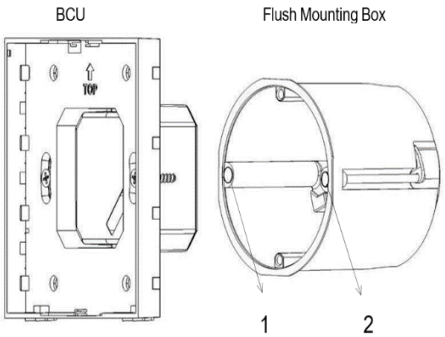
Pages

- Each page holds up to 8 icons, each linked to a function: On, Off, Toggle, Step Value Switching, Setpoint Control or Operating Mode Switching.
- All thermostat functions are controlled from the touch screen.

Mounting

A. Mounting the BCU (Basic Control Unit)

Install the device on a standard round or square wall flush-mounting box, after the wall painting is complete.



1	Place the BCU in the flush-mounting box with the **"TOP"** label facing up.
2	Insert the screws through the holes marked **"1"** and **"2"**.
3	Align the BCU using the scales, then tighten the screws.

B. Mounting the Application Board onto the BCU

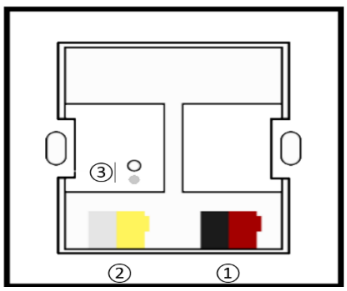
1	After connecting, bring the Application Board close to the BCU.
2	Hold it at a 45-degree angle and insert its top notches into the BCU's hidden mounting clips.
3	Gently press the lower notches into the slot on the side of the BCU.

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Connection to KNX Bus & Programming

The KNX bus line is connected with the black/red terminal block supplied with the device, and the auxiliary power with the yellow/white terminal block. Both blocks plug into the slots of the housing.

Press the individual address button: the red programming LED turns on and the device is ready for programming.



1	KNX Bus (black/red terminal block)
2	Auxiliary Power 12–30 VDC (yellow/white terminal block)
3	Individual Address Button

Safety Instructions

- The device should only be installed and put into operation by a qualified electrician or authorized person.
- Do not connect mains voltage (230 VAC) or any other external voltage to any point of the KNX bus.
- Install only in dry indoor locations, in a wall flush-mounting box. Do not expose the device to direct sunlight, rain or high humidity.
- Ensure adequate insulation and separation between 230 VAC cables and the KNX bus.
- Do not use aerosol sprays, solvents or abrasives.

Technical Data

Electrical Parameters	Specification
Device Name	iBK412XX-C
Display	4-inch touch LCD
Programmable Pages	12
Power Supply	KNX bus voltage + auxiliary power
Bus Current Consumption	< 12 mA
Auxiliary Voltage	12–30 VDC
Auxiliary Power Consumption	< 5 W
Programming	Button to assign the physical address; red LED on while in programming mode

Environmental Parameters

Parameter	Specification
Operating Humidity	< 90% RH
Storage Humidity	Up to 90%
Operating Temperature	-10 °C to +45 °C
Storage Temperature	-15 °C to +55 °C
Transport Temperature	-15 °C to +70 °C
Sensors	Temperature sensor (±0.2 °C) Humidity sensor

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Device Parameters

Parameter	Specification
Protection Type	IP20
Mode of Communication	S-Mode
Mounting	Wall flush-mounting box (round or square)
Flammability	Non-flammable product
Dimensions (W × H × D)	86 × 86 × 10.82 mm
KNX Bus Connector	0.6–0.8 mm Ø, solid
Connectors	Screw terminal, 2.5 mm² stranded to 4 mm² solid
Tightening Torque	Maximum 0.5 Nm
Available Colors	Gold, Red, Black & Gray
Password Protection	Available
Warranty Period	18 months

EU Main Office:

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