BC0810FC2Pi

WIRELESS FCU CONTROLLER

MQTT over Wi-Fi | 2- & 4-Pipe FCU | 8 / 16 / 32 Relays



DESCRIPTION

The BC0810FC2Pi is an MQTT-based Wi-Fi controller with 8 switching relays and 2 dry-contact inputs, designed to control 2-pipe and 4-pipe fan-coil units (FCU) together with any conventional FCU thermostat.

The BCXX10FCXPi series is available with 8, 16 or 32 relays to control up to 4 FCUs. All controllers are powered from 12 VDC and integrate with the BeeControls IoT platform through MQTT.

Applications

- **2-pipe and 4-pipe FCU control** through the BeeControls server, with any conventional thermostat.
- **Lighting:** any output can switch a lighting circuit.
- **Heating:** any output can switch heating on/off, from the platform or from sensors wired to the inputs.
- **Pumps, valves, parking barriers and e-locks** can be driven from any output.
- **Shutters and blinds:** two consecutive outputs work together as one shutter/blind channel.
- Per-output timing functions, input monitoring, working-hours schedules and status feedback for each channel.
- Last-state memory: outputs return to their previous state after a power failure.

Configuration

The complete configuration is done from the controller's built-in web interface.

Default IP addresses: LAN 192.168.1.125, Wi-Fi 192.168.1.126, access-point mode 192.168.1.127. Subnet mask 255.255.255.0, gateway 192.168.1.1.

Manual control & status LEDs

Each output has a push button for manual testing and control of the connected load. Manual control has priority over commands from the MQTT server. The green LED of each button is on while that output relay is closed.

Mounting & Safety Instructions

- The device should only be installed and put into operation by a qualified electrician or authorized person.
- Failure to observe these instructions may damage the device and may result in fire or other hazards.
- Do not connect the digital inputs to any external voltage source.
- Mount on a 35 mm DIN rail.
- Ensure adequate insulation and separation between 230 VAC cables and the input/communication cables.
- Install only in dry indoor locations. Do not expose the device to direct sunlight, rain or high humidity.
- Do not use aerosol sprays, solvents or abrasives that may damage the device.
- The device must remain accessible for operation and visual inspection.

Technical Data

Electrical Parameters	BC0810FC2Pi	BC1610FC4Pi	BC3210FC8Pi
Relay Outputs	8	16	32

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Electrical Parameters	BC0810FC2Pi	BC1610FC4Pi	BC3210FC8Pi
FCUs Controlled	1	2	4
Digital Inputs (dry contact)	2	4	8
Analog Inputs	0	0	0

Parameter (all models)	Specification
Power Supply	12 VDC
Current Consumption	> 40 mA
Output Current	10 A at 240 VAC
Contact Resistance	100 mΩ (at 1 A, 6 VDC)
Max. Switching Power per Channel	210 W
Interfaces	Wi-Fi; Ethernet and RS485 (optional)
Protocols	MQTT, Modbus, TCP, HTTP & ASCII

Environmental & Device Parameters

Parameter	Specification
Operating Humidity	< 90% RH
Storage Humidity	Up to 92%
Operating Temperature	-10 °C to +60 °C
Storage Temperature	-15 °C to +70 °C
Transport Temperature	-15 °C to +85 °C
Protection Type	IP20
Wireless Communication	Wi-Fi
Mounting	35 mm DIN rail
Flammability	Non-flammable product
Height	90 mm
I/O Connector	0.6–0.8 mm Ø, solid
Output Connectors	Screw terminal, 2.5 mm² stranded to 3 mm² solid
Tightening Torque	Maximum 0.5 Nm

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