# frogblue™

## frogblue heating controller

### frogHeatBar-10/2-24V
B-HeatB-10/2-24V.01

## Multi-channel heating controller

### Intended use
This is a heating controller supplied with 110–240 V AC for controlling up to 10 heating circuits/rooms with 10 relay outputs (24 V DC) for direct connection of thermal actuators. It has additional virtual outputs for controlling removed frogs via the frogblue Bluetooth® mesh network, 2 integrated buttons for manual operation, 2 floating inputs for connection of switches/buttons and 2 floating relay outputs for controlling circulating pumps and burner requirements. There is a 1-wire bus for connecting enabled temperature sensors and a frogblue fBUS for connecting frogblue fBUS devices.
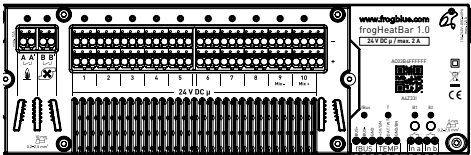
## Safety instructions

Non-observance of the instructions may cause damage to the device, fire or other hazards!

Risk of electric shock. Always disconnect the mains voltage before working on the device!

Country-specific regulations must be observed.

These instructions are part of the product and must remain with the customer.

## Device configuration



| | |
|---|---|
| Output A & A′: | floating output 1 (burner requirement) |
| Output B & B′: | floating output 2 (pump control) |
| Output 1–10 (+/-): | 24 V DC output for connecting actuators |
| fBUS BUS+: | frogblue fBUS + |
| fBUS BUS-: | frogblue fBUS - |
| fBUS GND: | frogblue fBUS shield |
| TEMP +5 V: | 1-wire 5 V output |
| TEMP DAT: | 1-wire data |
| TEMP GND: | 1-wire ground |
| In a: | floating input 1 |
| In b: | floating input 2 |

## Function

### System information
This device is a frogblue system product. Detailed expertise gained from frogblue training is required.

The function of the device depends on the software. Detailed information about software versions and the respective scope of functions can be found on the frogblue website.

Technical descriptions, more detailed instructions and information on proper disposal are contained in the manual, which is available on the frogblue website.

Start-up and configuration are carried out with the frogblue app.

### Product features:
- 16 RGB LED
- 2 inputs (floating)
- 2 outputs (floating)
- 10 outputs (24 V DC/max. 30 W total) with connections for 3 actuators per output
- 1 1-wire bus connection for enabled temperature sensors
- 1 fBUS connection
- Actuators opened and closed in de-energised state can be controlled
- Outputs manually operable, site operation
- Bluetooth interface
- Time buffer

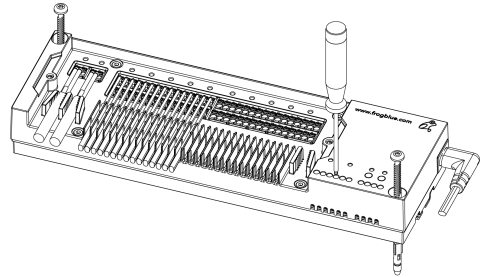## Installation and electrical connection

⚠️ **DANGER!**
**Electric shock from touching live parts.**

**Electric shock can be fatal.**

**Before working on the device, disconnect it from the mains and cover any live parts in the vicinity!**

### Mounting the device on the wall
Hold it against the wall and mark the holes to be drilled. Observe the existing line layout in the wall.



Drill the holes with an 8 mm drill bit and insert a wall plug (Ø 8 mm).
After mounting, connect the supplied connection cable to the side of the frogHeatBar.
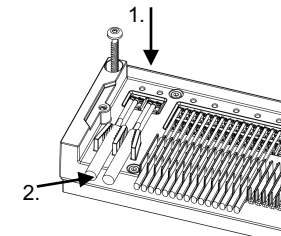
### Mounting the device on a top hat rail



Align the housing on the top-hat rail; attach the upper part of the housing to the top hat rail.

Then press the lower side of the housing until it clicks into place on the top hat rail.

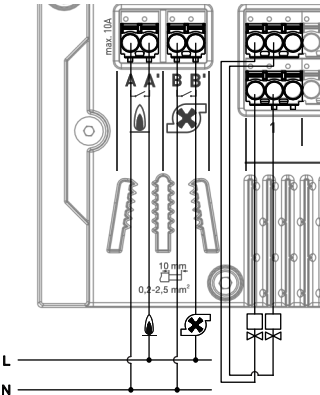After mounting, connect the supplied connection cable to the side of the frogHeatBar.

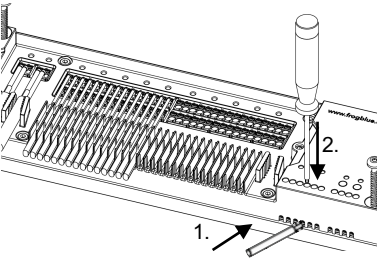### Connecting wires – plug-in screw terminals A, B, 1–10



1. Unlock the terminal with a slotted screwdriver 3.5 x 0.6.

2. Insert the stripped conductor into the terminal.

3. Clamp the NYM cable in the cable clamp.



### Connecting wires – screw-type terminals



1. Insert the stripped conductor into the terminal.

2. Tighten with a Philips screwdriver size 3 x 0.5. (*Repeat the process for each wire.*)
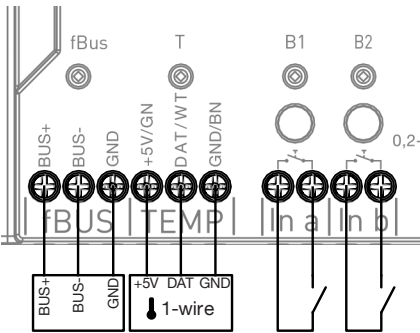
### Stripping length/wire cross-section
Plug-in screw terminals: 10 mm (0.2–2.5 mm²)
Screw-type terminals:     5 mm (0.2–2.5 mm²)

### Disconnecting wires
1. Release by unscrewing with a Philips screwdriver size 3 x 0.5.

2. Remove the wires.
(*Repeat the process for each wire.*)



## Technical data

| | |
|---|---|
| Mains voltage | 110–240 V AC |
| Power frequency | 50/60 Hz |
| Inputs | 2, floating |
| Outputs | 2, floating |
| | 10, 24 V DC/max. 30 W total max. 10 actuators |
| Contact type | μ, N/O contact |
| Bluetooth | Bluetooth 4.2 Low Energy |
| Frequency range | 2400–2483.5 MHz, max. 3.56 dBm |
| Ambient temperature | -25 to +55 °C |
| Storage/transportation temperature | -25 to +70 °C |
| IP degree of protection | IP20 |
| Dimensions (L x W x H) | 305 x 94 x 43 mm |
| Connection type | Screw-type terminal/plug-in screw terminal |
| Conductor cross-section | 0.2 to 2.5 mm² |

Subject to technical changes.

## Warranty

The warranty is provided by specialist dealers within the framework of the statutory provisions.

## Declaration of Conformity

frogblue AG, Luxemburger 6, 67657 Kaiserslautern, Germany, hereby declares that this product complies with the fundamental requirements and other relevant conditions of the Directives.

| | |
|---|---|
| 2014/53/EU | RED Directive |
| 2011/65/EU | RoHS Directive |

A copy of the Declaration of Conformity is available at: www.frogblue.com