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Klever
by Kblue

+ Product Data-sheet

LIGHT EXPANSION MODULE

ETH-S64RB

V. 03_21.01.20

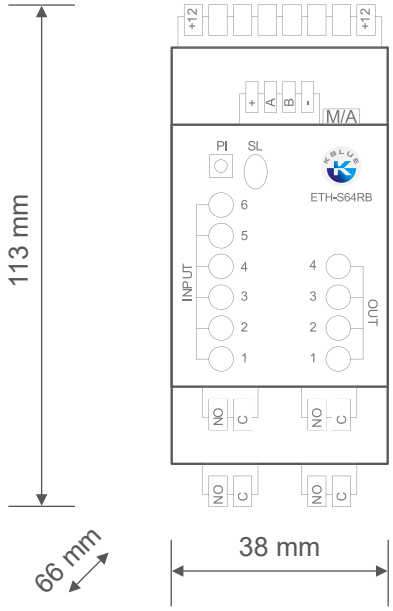
1. Description

ETH-S64RB is a compact slave module for DIN rail installations which allow expanding the number of inputs and outputs of the KLEVER system.

6 Inputs (digital)
They allow you to acquire and transmit, through the BUS, digital ON/OFF signals (clean contacts, pushbuttons, switches)

4 Outputs (digital)
ETH-S64RB has 4 bistable relay outputs (16A res.) with NO contacts.

2. Dimensions



3. Technical specifications

- Voltage: 12V⎓ ±15%
- Absorption: 33 mA nominal (120 mA impulsive)
- Connections: removable screw terminals
- Operating temperature: from +5 to +50°C
- Protection class: IP20
- Class of equipment: ⧈
- Configurable inputs:
  > Digital voltage 12V⎓ Impedance 12KΩ
- Configurable outputs:
  > Bistable relays 230VAC max.
  > 16A (resistive loads cosφ=1), 8A (loads cosφ=0.5) per relay
  > 40A total MAX on the relays outputs
- Dimensions: 113 x 66 x 38 mm (HxDxL)
- Weight: 150 g.

4. Warnings

- The installation and maintenance must be performed only by qualified personnel.
- Before every maintenance operation and before accessing the internal parts of the unit, cut the power supply.
- Properly protect the outputs against overloads and shortcircuits.
- Check the absorption of the loads connected to the outputs within the limits indicated in section "tecnhincal specifications".
- Separate the power circuit cables (category I circuits) from the signal circuit cables (category 0 circuits).
- The relays of the **ETH-S64RB** module are bistable; in order to be certain that they are in rest condition (N.O.), the module must be powered.

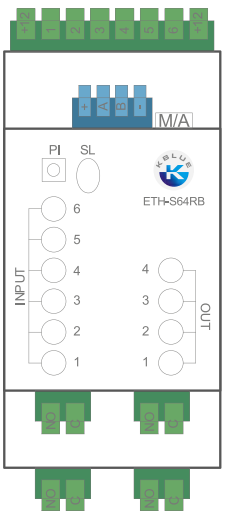
5. Module connection

BUS
Use 4 conductor signal cable (e.g. 2x0.75 + 2x0.22) to connect the device to the BUS.
In ideal conditions, the maximum lenght of the BUS is of 1 km. In case of power failures along the 12V⎓ line of the BUS, it is necessary to add an additional feeder.

INPUTS/OUTPUTS
For the connection of inputs, it is enough to use a cable with the section of 0.5 mm^2, while for the outputs, a cable proper to the load should be used (max. section 2.5 mm^2).
In case of routes higher than 5 m or in disturbed environments, use a screened cable for the connection of inputs, connecting the screen to the GND terminal from the module.
Do not exceed the 25 m distances between the cleaned control contact and the module input.

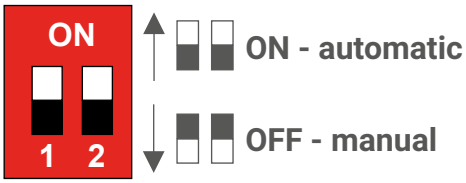
6. IN/OUT terminal details

The green 8-pole terminal is reserved for connecting the inputs.
The blue terminal is dedicated to the BUS connection.
At the side of this connector there is the selector for automatic/manual operation.
At the bottom there are the 4 outputs.



7. Module configuration

Lifting the front side of the module, there is an addressing button (PI). For information on the procedure, please refer to the installer manual of the programming software.
ETH-S64RB can be configured for a manual/automatic operation by means of the front selector installed near the BUS terminal.



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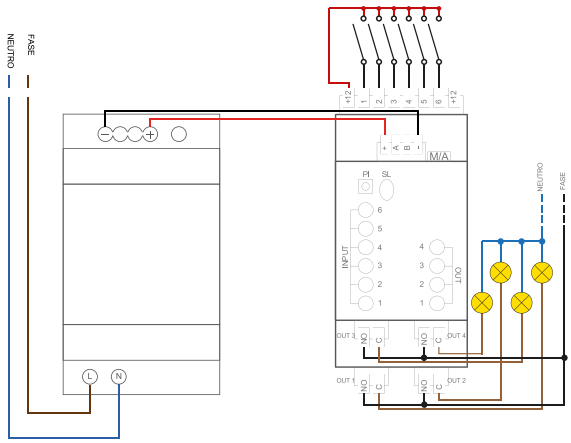
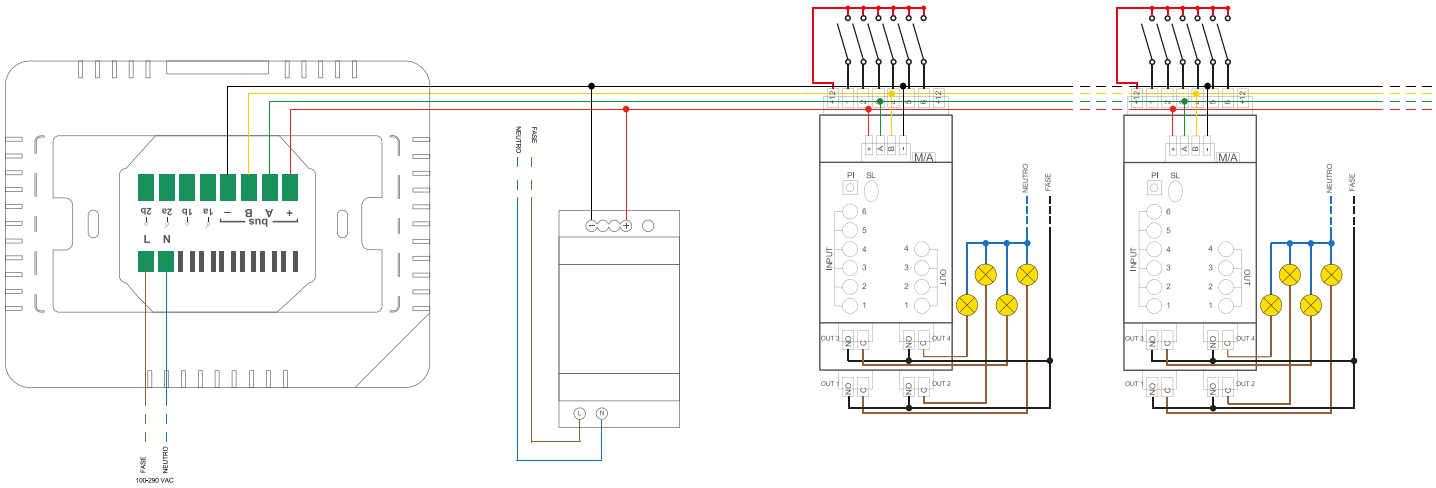
AUTOMATIC
The input and output functions are defined by the **ETHprog** programme.

MANUAL
The operation is dedicated to the ON/OFF light control by means of the local pre-programming or within the Klever system.
OUT1 controlled in step by step mode from impulse IN1.
OUT2 controlled in step by step mode from impulse IN2.
OUT3 controlled in step by step mode from impulse IN3.
OUT4 controlled in step by step mode from impulse IN4.
ON total BUS scenario from impulse IN5.
OFF total BUS scenario from impulse IN6.
The scenario controls can be enabled directly from the Kblue My Therm application.
In this mode the module can work autonomously, requiring only the connection of the power supply voltage; if you wish to connect several modules, in order to use the scenario functions, simply interconnect the various modules with the BUS cable, and therefore with signals 12V, GND, A and B.

8. Manual connection diagram

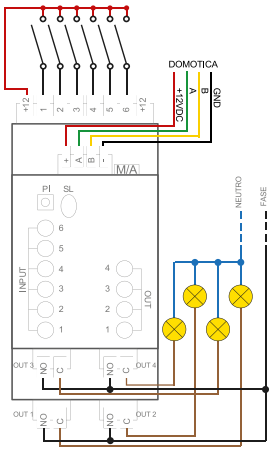
An example of a single manual connection of **ETH-S64RB** is shown in the figure.
In manual mode, the buttons connected to inputs 1, 2, 3 and 4 can control outputs 1, 2, 3 and 4 (light line) in step mode





An example of a multiple manual connection of **ETH-S64RB** is shown in the figure
In this mode, the scenarios can be controlled not only by the individual modules, but also by the WiFi programmable thermostat (**ETH-WI-THTERM-RR/RA**) and the Kblue MyTherm app.

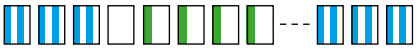
9. Automatic connection diagram



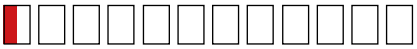
An example of an automatic connection of **ETH-S64RB** is shown in the figure.
In this mode the control of the outputs and the management of the outputs is delegated to the home automation programing.

10. LED indicators

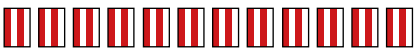
To reduce consumption during normal operation, the LEDs are off. In case of anomalies or pressure from the PI the indicators are activated for 5 minutes.
In the front part a multicolour LED (SL) is installed to indicate the various status listed below.



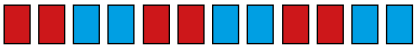
MANUAL ADDRESSING
Keep pressing the addressing button and power the device.
The process begins with a sequence of 1/4s blue flashes. Count the number of 1/4s green flashes and release the button when you reach a number equal to the address you want to set. The process is successful with a new sequence of 1/4 s blue flashes.



BOOT PHASE START UP
A single 1/s flash indicated the presence of correct firmware.



BOOT PHASE START UP
A fast 1/4s red flash indicates the presence of incorrest firmware.



BOOT PHASE START UP
Red and blue alternating flashing for 2s indicates no firmware present.

INTERNAL MEMORY ERROR
A blue/red flash of 1/2s indicates an error in the internal memory of the device.

Safety warning
The installation, commissioning and the regular maintenance of the product must be made by professionally qualified personnel, in compliance with national regulations and/or local requirements.
The qualified installer must take all necessary measures, including the use of personal protection equipment, in order to ensure his/her own protection and the protection of third parties.
The incorrect installation can cause damages to persons, animals or things for which Kblue s.r.l. cannot be held liable.

Packaging disposal
Cardboard boxes: selective collection of paper. Plastic and bubble-wrap bags: selective collection of plastic.

Product disposal
At the end of its lifespan, the product must be collected separately from other waste. However, the user should hand over the device, at the end of its lifespan, to proper selective electronic and electric waste collection centres or s/he should hand it over to the reseller upon the purchase of a new equivalent device, at a one to one ratio.
The abusive disposal of the product by the user entails the application of sanctions pursuant to the Legislative decree 152/2006.

Other information
For further information, please refer to the website www.kblue.it or contact the technical service: +39 0445 315055 int. 2 | assistenza@kblue.it
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