control solutions
TERACOM

Locky-BF-v2 RFID Switch

Revision 1.0 / February 2024

USER MANUAL

Short description

Locky-BF-v2 is RFID controller designed for use as an electronic switch. It is intended to control the access to electronic and electrical devices. The product supports EM4102 compatible 125kHz RFID tags and can be easily installed on a panel due to its cylindrical construction.

Shaped like a button, the controller features a built-in reading antenna for efficient operation.

Features

- Relay output control when a valid RFID tag is approached;
- Possibility to add and group delete RFID tags with service tag;

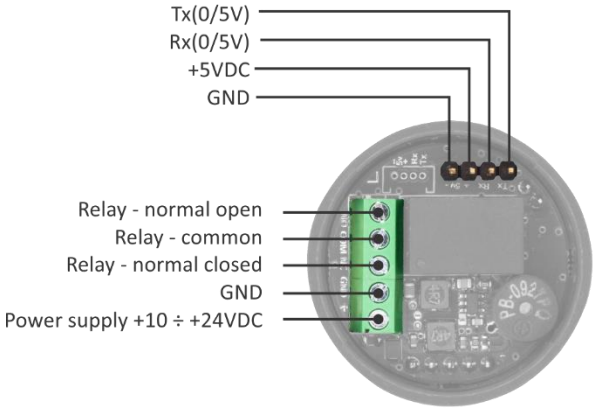
Specifications

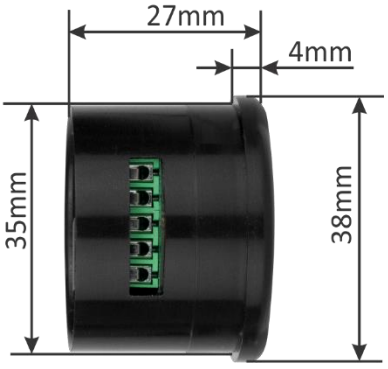
- Dimensions	Ø 38mm x 27mm;
- Mounting hole	Ø 35mm;
- Operating temperature range	-10 to +40°C;
- Operating voltage range	10 ÷ 24VDC +10%/-15%;
- Current consumption (with relay ON)	180mA @ 12VDC;
- Maximum switchable voltage/current	24VDC / 1A;
- Reading range	≤ 3cm;
- RFID tags	125kHz, EM4102 compatible;
- Nonvolatile memory for up to	1000 tags;
- Relay activation time	1 ÷ 240 s. (3s. by default);
- Connector	Screw terminals.

⚠ **Caution!** The device does not contain any internal overcurrent protection facilities on the relays' contact lines. External fuses or short circuit current limiting circuit breakers, rated to 0.63 Amps, are to be used for overcurrent protection of the connecting lines.

⚠ **Caution!** In case of switching an inductive load, an RC or diode snubber are to be used for relay contact protection (arc suppression).

Dimensions and pinout





Operating modes

Normal operating mode

In this mode, the device expects a valid RFID tag to toggle its relay output. When the relay output is ON, the LED will turn green. The LED indicator turns red when the relay output is OFF.

If an invalid tag is placed within the range of the antenna, the red LED flashes 6 times. The relay output will not change its output state.

Adding new identifiers

The controller enters into this mode when the service tag is put in the range of the antenna for a short time (less than 5 seconds). The LED turns yellow and the controller beeps once. In this mode, each new tag that is placed in the range of the antenna will be added as a valid one in the memory of the controller. On every added tag the controller will beep twice and the LED will blink once.

If the tag is already in the memory or the memory is full, the red LED blinks 3 times.

To return to the normal operating mode, the service tag should be placed again for a short time. The device will return automatically to the normal operation mode if there is no activity for 60 seconds.

Deleting all identifiers

Locky-BF-v2 enters in this mode when the service tag is put and hold within range of the antenna for more than 10 seconds. After this time the controller will start deleting all identifiers from its memory. During the deleting the yellow LEDs blink fast.

After erasing the memory, the device returns to normal operating mode. The service tag will not be deleted from the controller's memory.

Package content

- Locky-BF-v2 controller
- Snap ring
- Service tag
- Quick start guide