



RFID CONTROLLER

Locky-BT



Short description:

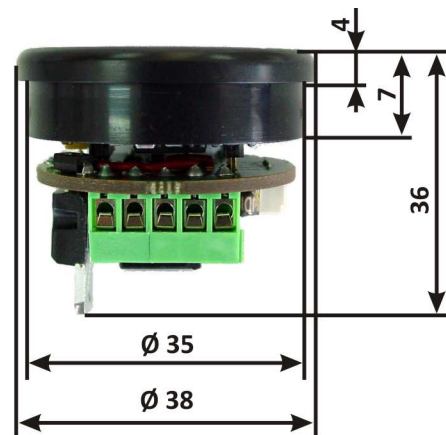
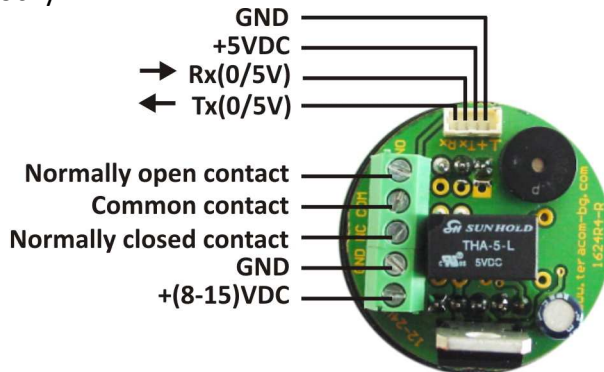
Locky-BT is an electronic device intended for construction of access control systems, managed by computer or specialized devices. The controller works with RFID tags in the form of cards, key fobs and stickers. It is formed as a button, in which are embedded controller and the reading antenna.

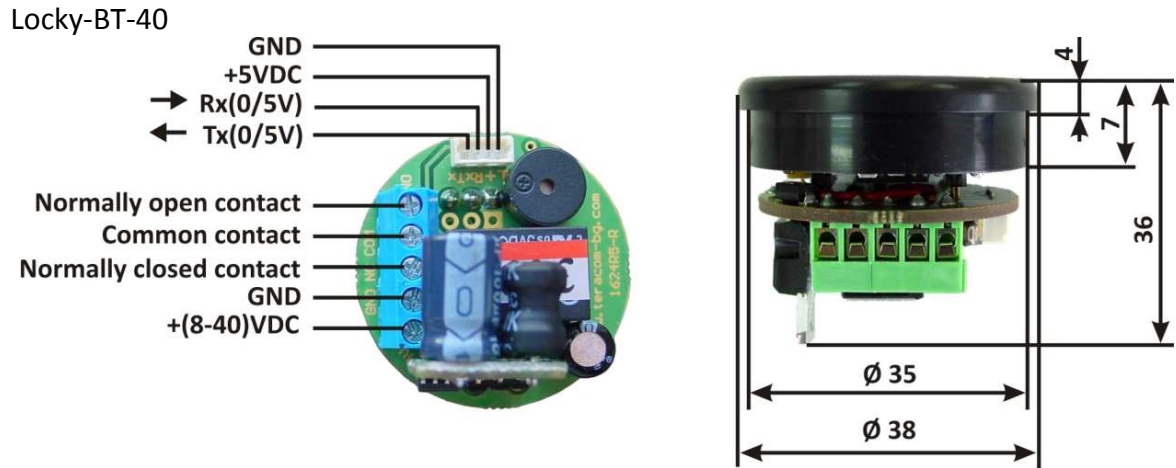
Specifications:

- Operating temperature range	-10 to +40°C;
- Power supply	
Locky-BT	8-15VDC;
Locky-BT-40	8-40VDC;
- Maximum consumption /with switched on relay/	180 mA;
- Contact rating	60V / 0.3A;
- Reading range	≤ 3cm;
- Dimensions	
Locky-BT	Ø 38mm x 36mm;
Locky-BT-40	Ø 38mm x 38mm;
- RFID tags	125kHz, EM4102 compatible;
- Memory	non volatile for up to 500 tags.

Pin outs and dimensions:

Locky-BT





Working mode:

The LED indicator shines in red.

If a tag is put in the range of antenna, LED flashes ones. If external buzzer is used, it will gives out a short beep. Information about number of tag is sent through the interface.

EXAMPLE 1:

Through the interface (in series) the number of the tag is sent:

[F5][08][0B][01][07][DB][7C][73][7B]

Where:

- [F5] – start byte (constant);
- [08] – length of packet, sum of all bytes without start byte (constant);
- [0B] – command (constant);
- [01][07][DB][7C][73]– tag’s number;
- [7B] – CRC, calculated over all 7 bytes between start and CRC.

EXAMPLE 2:

Through the interface (in series) the number of tag is sent:

[F5][08][0B][01][07][41][92][39][A8]

Where:

- [F5] – start byte (constant);
- [08] – length of packet, sum of all bytes without start byte (constant);
- [0B] – command (constant);
- [01][07][41][92][39]– tag’s number;
- [A8] – CRC, calculated over all 7 bytes between start and CRC.

The open drain output of controller can be activated by a command. The controller confirms it.

EXAMPLE:

Command:

[F5][04][16][05][E7]

Where:

- [F5] – start byte (constant);
- [04] – length of packet, sum of all bytes without start byte (constant);
- [16] – command(constant);
- [05] – time, in seconds (from 1 to 240) for activating open drain output. In this example 5 sec.;
- [E7] – CRC, calculated over all 3 bytes between start and CRC. In case of wrong CRC, the controller will not execute the command.

Answer:

[F5][03][96][99] – always same.

All CRC bytes are calculated by a polynomial of $X^8 + X^5 + X^4 + X^0$. For more details see [AN27 of Maxim-IC](#). On line calculator can be found [here](#).

Attention: The interface of controller is TTL compatible (0/5V). To use it with PC or similar devices, cable converter should be used.

Firmware update can be made by LockyMonitor2 software. It can be downloaded from www.teracom.cc.

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