

CZ-EMM3 / CZ-EMM4

PROXIMITY CARD READER

cz-emm34_en 12/19

CZ-EMM3 / CZ-EMM4 reader is designed to read the unique codes of the users' proximity cards. The reader can be connected to:

- INT-R universal expander for card / iButton readers (if used as the CA-64 SR expander),
- ACCO-KP / ACCO-KP-PS / ACCO-KPWG / ACCO-KPWG-PS access control module,
- another access control device that supports the EM-Marin / Wiegand 26 / Clock & Data format.

1. Features

- Support for cards, tags and other 125 kHz passive transponders.
- Data format: EM-Marin / Wiegand 26 / Clock & Data.
- Two LEDs.
- Built-in sounder
- Bell key for control of the reader OC type output (BELL). [CZ-EMM4]
- Suitable for indoor or outdoor installation.

2. Description



Design

The electronic circuit is potted in epoxy resin for protection against moisture and dust. The multi-conductor cable is led-out of the reader enclosure.

Data format

The reader can transmit data using one of the formats below:

- EM-Marin (used for communication with the SATEL devices)
- Wiegand 26
- Clock & Data

You can select the data format during configuration of the reader.

Signaling

The LED indicators and audible signal are controlled by the device the reader is connected to. When configuring the reader, you can define whether the signaling control inputs are to be high level (5...12 V) or low level (0 V) sensitive.

The reader has two LEDs: red and green.

Bell key [CZ-EMM4]

The bell key controls directly the BELL output of the reader. The BELL output is an OC type low-current output. Pressing the key will short the output to the common ground.

3. Installation



The device should be installed by qualified personnel.

Disconnect power before making any electrical connections.

The reader can be installed indoors as well as outdoors.













If the reader is installed on a metal surface, the card reading range will be reduced.

Two readers connected to the same device can work when situated a short distance from each other. However, the distance from a reader connected to another device or a device with built-in reader (e.g. a keypad with reader) should be at least 50 centimeters.

If you need an extra cable to make the connections, use an unshielded non-twisted cable. The total length of the cable connecting the reader to the device should not exceed 30 meters.

1. Open the reader enclosure.
2. Place the enclosure base against the wall and mark the location of mounting holes.
3. Drill holes for wall plugs (anchors) in the wall.
4. Make a hole in the wall for the reader cable and run the cable through it.
5. Using wall plugs (anchors) and screws, secure the enclosure base to the wall. Select wall plugs specifically intended for the mounting surface (different for concrete or brick wall, different for plaster wall, etc.).
6. Close the enclosure and secure it with the screw.
7. If the reader is NOT to be connected to a SATEL device, configure the reader settings (see "Configuring" p. 3).

8. Connect the wires to the device screw terminals according to the table below. The purple wire (BELL output) you can connect e.g. to the control panel zone / access control module input.

Wire	Description	SATEL device terminal		Designation for Wiegand 26 / Clock & Data
		Reader A	Reader B	
 red	power	+GA	+GB	+12V
 green	data (0)	SIGA / SIG1A	SIGB / SIG1B	OUT0/DATA
 black	data (1)	<i>do not connect</i>		OUT1/CLOCK
 blue	common ground	COM	COM	COM
 yellow	sounder	BPA	BPB	BEEP
 pink	green LED	LD1A	LD1B	LED-G
 gray	red LED	LD2A	LD2B	LED-R
 brown	disabling reader operation	DISA	DISB	HOLD
 white	presence control	TMPA	TMPB	TMP
 purple	OC type output (BELL) [CZ-EMM4]	<i>do not connect</i>		BELL

4. Configuring

The reader having the factory default settings is ready to work together with SATEL devices and requires no configuration. The default settings are as follows:

- data format: EM-Marin,
- reader inputs are high level (5...12 V) sensitive. This setting applies to all inputs of the reader (sounder, green LED, red LED and blocking reader operation).

If a change in these settings is required by the device to which you want to connect the reader, you must follow the procedure below.

1. Disconnect all the reader wires from the device (if the reader is connected to the device).
2. If you want to change the settings of reader inputs:
 - the inputs are to be low level (0 V) sensitive – connect the pink wire to the common ground terminal of the device,
 - the inputs are to be high level (5...12 V) sensitive – leave the pink wire disconnected.
3. Connect the brown and green wires together.
4. Connect the power to the red (+12V) and blue (COM) wires. After power on:
 - you will hear 4 short beeps and 1 long beep,
 - settings of the reader inputs will be saved,
 - LEDs will indicate the currently selected data format:
 - red LED flashing – EM-Marin,
 - green LED flashing – Wiegand 26,
 - both LEDs flashing – Clock & Data.

5. If you want to change the data format, use the proximity card. Presenting the card to the reader will each time change the data format, which will be indicated by the LEDs.
6. Power the reader off to finish the configuration procedure.

5. Using

Present the card to the reader so that the reader can read the card code. The card code will be sent to the device to which the reader is connected. That device will decide what function to run.

In case of EM-Marin format, the device to which the reader is connected can distinguish between presenting the card (one-time reading the card code) and holding the card (the card must be held in front of the reader for about 3 seconds, and its code will be read repeatedly during that time). Another function can be activated by presenting the card, and another by holding it.

The way the visual (LED) and audible (sounder) signaling works depends on the device to which the reader is connected.

6. Specifications

Supply voltage	12 VDC \pm 15%
Maximum current consumption	80 mA
Reader transmit frequency	125 kHz
BELL output, OC type [CZ-EMM4]	30 mA / 12 VDC
Operating temperature range	-20°C...+55°C
Maximum humidity	93 \pm 3%
Dimensions	47 x 158 x 24 mm
Weight	
CZ-EMM3	315 g
CZ-EMM4	287 g

The declaration of conformity may be consulted at www.satel.eu/ce