



# PROXIMITY CARD READER CZ-EMM

cz\_emm\_e 10/05

The CZ-EMM proximity card reader - also referred to as the "SATEL reading head" - is a device used in access control systems. It is designed for reading the proximity card codes. The reader interfaces with the CA-64 SR expander of proximity card readers.

## 1. DESCRIPTION OF THE READER

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The reader transmits data (i.e. the read out card code) in the **EM-MARIN** format. It has a built-in two-color LED indicator (emitting red and green light) and a buzzer, which are used for signaling. The signaling mode as well as situations when the signaling is triggered depend on the control device the reader is connected to. Electronic circuits of the reader are coated with epoxy resin to protect them against moisture. A multicore cable for connecting the reader to the control device is led out from the reader housing (see **READER CONNECTION**).

## 2. SUPPORTED CARDS

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The reader supports **EMCARD** type cards, available from the reader manufacturer and designated by the **KT-STD-1** symbol in SATEL's offer.

## 3. READING THE CARD

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For the reader to be able to read the coded number of a card, the card must be brought near to a distance of approx. 14cm from the reader for at least 0.5s. When read out, the card number is sent to the control device (CA-64 SR expander) which indicates (with the reader LED / buzzer) that the card code has been read out and initiates appropriate actions. A next card code can be read immediately after moving the previous card away from the reader. If the card fails to be moved away from the reading zone, the card code will be repeatedly read and sent to the control device. The control device can take different actions, depending on whether the card has only been brought closer for 0.5s, or held still for approx. 3s.

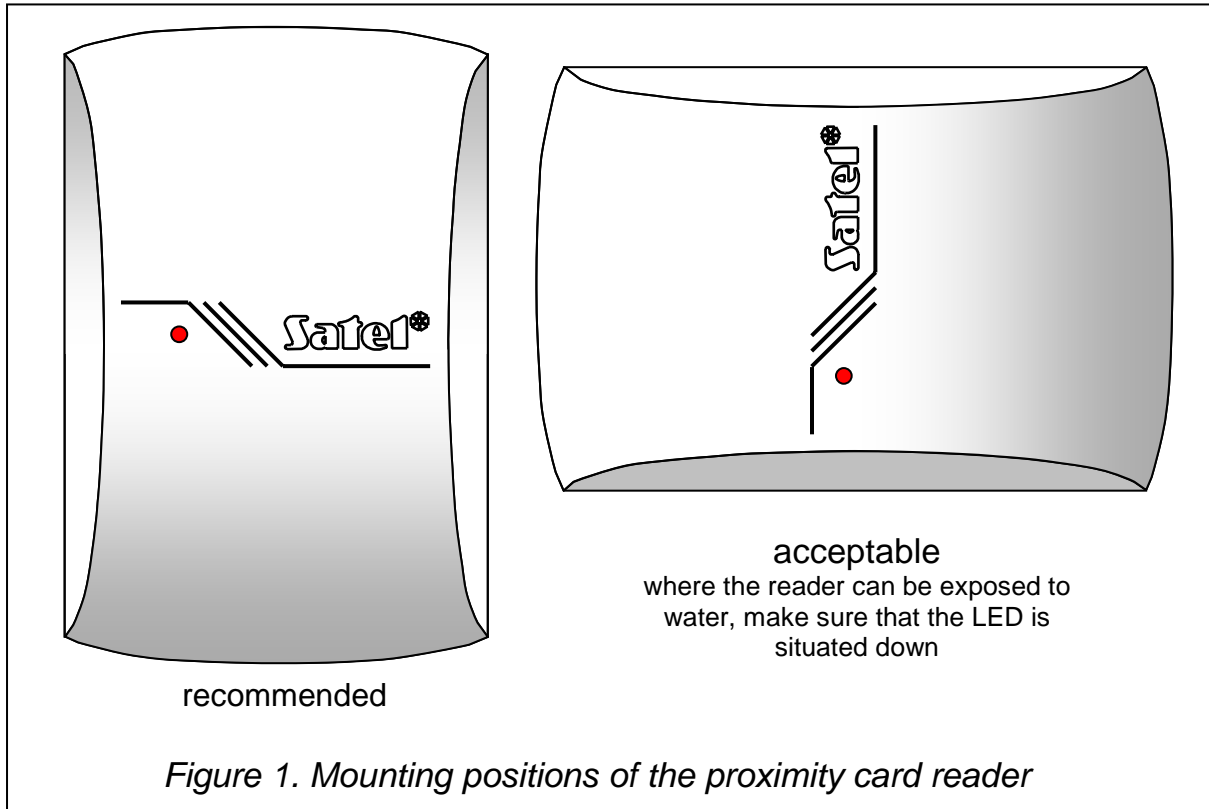
## 4. INSTALLATION

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The CZ-EMM proximity card reader is designed for indoor installation. The reader should be mounted straight on the wall, vertical installation being recommended. The reader should not be exposed to a direct contact with water.

Where several readers are used in the system, the distance between them should be at least 50cm.

**Note:** Do not mount the CZ-EMM reader directly on the metal surface. For installation on metal surfaces, use the special CZ-EMM-POD pads.



## 5. READER CONNECTION

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The reader should be connected with the use of a typical cable (e.g. DY 8x0,5) according to the table below. The length of the cable connecting the reader with the control device is not to exceed 30 meters.

Cable color	Function	Designation of control device terminals	
		Reader A	Reader A
red	reader power supply	+GA	+GB
blue	ground	COM	COM
green	data	SIGA	SIGB
brown	reader operation blocking (where the readers operate in close vicinity to each other, to eliminate mutual interference)	DISA	DISB
gray	red LED control	LD2A	LD2B
pink	green LED control	LD1A	LD1B
yellow	buzzer control	BPA	BPB
white	presence control	TMPA	TMPB

Table 1. Connection of CZ-EMM reader cables to control device terminals.

**Note:** The terminals designated TMPA and TMPB appear on the electronics board of the CA-64 SR expander in version 1.6. When connecting the readers to an older version of expander (1.5 or earlier), disable the *READER CONTROL* option in the expander settings. The white cable of the reader can be left unconnected, or connected to the common ground. You can also connect this cable directly to the control panel so as to monitor the reader presence. The cable is connected to the common ground in the reader via a 1.1kOhm resistor. Program the zone to which the cable is to be connected in the control panel as the "24H tamper" and match the detector configuration accordingly. Be careful to properly select the end-of-line resistance. If the zone is to be EOL type, connect a 1.1 kOhm resistor in series with the white cable so that the total resistance is 2.2 kOhm.

## 6. TECHNICAL DATA

Supply voltage .....	DC 10.5...14V
Maximum current consumption .....	50mA
Reader dimensions.....	120x80x16 mm
Reader operating temperature range.....	-20...+55 °C
Reader operating humidity range.....	0...95%
Reader operating frequency .....	125kHz
Data transmission standard .....	EM-MARIN

The latest EC declaration of conformity and certificates are available for downloading from our website **[www.satel.pl](http://www.satel.pl)**



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