



PROXIMITY CARD READER CZ-WGCD



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The CZ-WGCD Proximity Card Reader is a device used in access control systems, capable of reading the data from proximity card. The data received from proximity card can be sent out of CZ-WGCD using either **WIEGAND26** or **CLOCK&DATA** protocol, making the reader compatible with any device capable of receiving one of these formats.

READER DESCRIPTION

The CZ-WGCD reader is equipped with dual-colour red/green LED and a buzzer for both visual and sound signalling. Simultaneous triggering the LED in red and green produces additional, third yellow-orange colour. The electronics components of the reader are epoxy resin coated for protection against moisture. Connection between the reader and controlling device is provided by means of multi-wire cable led out of reader's enclosure. Detailed information about the connections, as well as unit controlling is given in "READER CONNECTION" section later in this manual.

USING THE CARD READER

In order to use the reader, the proximity card should be placed within the distance of 14cm from the reader for at least 0.5sec. The reader detects the presence of proper card in EMF generated by the reader itself, and tries to scan encrypted card's number. If the encryption method is recognized by the reader, the number will be decrypted and sent out to controlling device.

Correct code reading will be confirmed by brief beep combined with a single flash of LED. Any further signalization will depend on the settings of reader's controlling unit.

Reading the following card can be made instantly after removing previous one from the range of EMF. If the proximity card will be left within scan range, it's code will be transmitted once and the reader will be waiting for getting the card outside of the reading range. For the same card to be read again, one have to be removed away from the scan range for at least 2 sec, and then the following attempt to read the card can be made.

CARD TYPE

The reader is compatible with EMCARD standard proximity cards, using 64 bit Manchester data encryption, available in reader's manufacturer, SATEL (listed as KT-STD1).

INSTALLATION

Before installing the reader, data transmission protocol used in communication between the reader and it's controlling unit have to be selected. The choice can be made using wire loop present in the inner part of the reader. By default, the reader is set to WIEGAND26 format. For CLOCK&DATA protocol, the loop have to be cut-off (open).

- loop closed: WIEGAND26
- loop open: CLOCK&DATA

The reader should be installed directly on the wall. If there are couple of readers connected to the system simultaneously, the distance between them may not be less than 50cm.

IMPORTANT: *Mounting the reader on metal surface may prevent the reader from operating correctly.*

READER CONNECTION

The connection between the reader and its controlling unit should be made using typical cable (e.g. DY 8x0.5) according to following table. The distance between these two cannot exceed 30 meters.

CZ-WGD type head cable designation	CZ-WGD head cable color	Function	HID standard head cable color
+12V	red	reader power supply	red
COM	blue	ground	black
OUT0 / DATA	yellow	data 0	green
OUT1 / CLOCK	gray	data 1	white
LED-G	pink	LED green color control	orange
LED-R	green	LED red color control	brown
BEEP	brown	buzzer control	yellow
HOLD	white	reader operation blocking	blue

SIGNALS DESCRIPTION.

+12V - Power supply, voltage should be within the range of 10.5...14V DC

COM - Power ground.

OUT0 - WIEGAND26 data output, TTL levels (loop closed).

OUT1

DATA - CLOCK&DATA format data output, TTL levels (loop open).

CLOCK

LED-G - GREEN led controlling input; shorting of input to ground (0V) causes lighting.

LED-R - RED led controlling input; shorting of input to ground (0V) causes lighting.

BEEP - buzzer controlling input; shorting of input to ground (0V) generates audible signal.

HOLD - reader blocking input. Can be optionally used in case of two readers working at a close distance between each other, to avoid interference. shorting of input to ground (0V) suppresses EMF generated by the reader used to read the card.

All inactive control inputs can be either left floating (not connected) or connected to voltage of +5V to +12 V.

TECHNICAL DATA

Power supply voltage.....DC 10.5...14V
Maximum current consumption..... 50mA
Reader dimensions..... 120x80x16 mm
Operating temperature range..... -20...+55 °C
Operating humidity range..... 0...95%
Reader EMF frequency..... 125kHz
Data transmission protocol WIEGAND 26 or CLOCK&DATA

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