



# C Prox Ltd (Inc Quantek)

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## CP5-RX

### User Manual

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# 1. Introduction

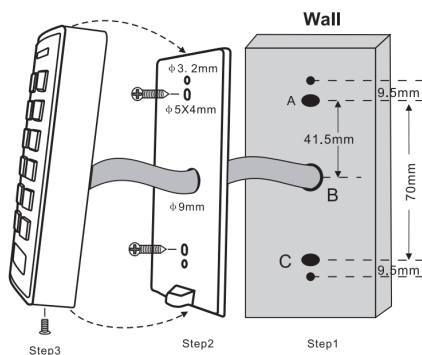
The CP5-RX is a Wiegand output keypad with integrated proximity reader. It can read 125KHz EM & HID cards and 13.56MHz Mifare cards. Because of its IP66 waterproof rating, it can be mounted either indoors or outdoors in harsh environments.

# 2. Specification

|                            |                                                                                                                                               |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Frequency                  | 125KHz & 13.56MHz                                                                                                                             |
| Card type                  | 125KHz – EM & HID cards/fobs<br>13.56MHz - XP Mifare, Mifare Plus, DesFire, Mifare Pro, Mifare UltraLight, Mifare Class 4K, NFC and CPU cards |
| Read range                 | 3-6cm                                                                                                                                         |
| Standby current            | <35mA                                                                                                                                         |
| Operating voltage          | 9-18Vdc                                                                                                                                       |
| Wiegand output format      | Wiegand 26-44, 56, 58                                                                                                                         |
| Keypad transmission format | 4 bits (default), 8 bits or virtual card number                                                                                               |
| Operating temperature      | -40 to +60°C                                                                                                                                  |
| Operating humidity         | 0% RH – 95% RH                                                                                                                                |
| Housing material           | Zinc-alloy                                                                                                                                    |
| Waterproof rating          | IP66                                                                                                                                          |
| Dimensions                 | 148 x 56 x 22.5mm                                                                                                                             |
| Net weight                 | 275g                                                                                                                                          |

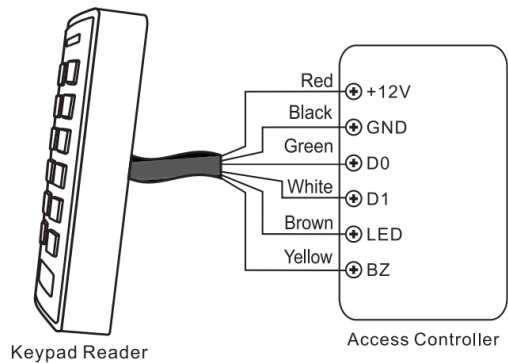
# 3. Installation

- Drill 2 holes (A, C) for the screws and a larger hole (B) for the cable.
- Knock the wall plugs into the holes A & C.
- Attached the back plate to the wall with the two screws.
- Thread the cable through the cable hole.
- Attach the unit to the back plate using the bottom retaining screw.



## 4. Wiring

| Colour | Function | Notes                   |
|--------|----------|-------------------------|
| Red    | Power +V | 9-18Vdc                 |
| Black  | GND      | Ground                  |
| Green  | D0       | Wiegand data 0 output   |
| White  | D1       | Wiegand data 1 output   |
| Brown  | LED      | Green LED light control |
| Yellow | BUZZER   | Buzzer control          |



## 5. Programming

You can change the configuration settings according to your application if required.

### Set master code

The 4-6 digit master code is used to prevent unauthorised access to the system. We highly recommend changing the master code and keeping a record of it. Default master code is 123456.

**When entering programming mode, press \* for 5 seconds (until red LED starts flashing), then enter master code #**

|                           |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|
| 1. Enter programming mode | <b>*(5 seconds) Master code #</b><br>123456 is default master code                |
| 2. Change master code     | <b>0 New Master code # New Master code #</b><br>The master code is any 4-6 digits |
| 3. Exit programming mode  | <b>*</b>                                                                          |

## Set Wiegand output format for EM card

|                           |                                                                    |
|---------------------------|--------------------------------------------------------------------|
| 1. Enter programming mode | <b>*(5 seconds) Master code #</b><br>123456 is default master code |
| 2. Wiegand output bits    | <b>1 26-44 #</b> (Factory default is 26 bits)                      |
| 3. Exit programming mode  | <b>*</b>                                                           |

## Set Wiegand output format for HID card

|                           |                                                                       |
|---------------------------|-----------------------------------------------------------------------|
| 1. Enter programming mode | <b>*(5 seconds) Master code #</b><br>123456 is default master code    |
| 2. Wiegand output bits    | <b>2 0 #</b> (Auto output, factory default)<br>Or<br><b>2 26-37 #</b> |
| 3. Exit programming mode  | <b>*</b>                                                              |

## Set Wiegand output format for Mifare card

|                           |                                                                                           |
|---------------------------|-------------------------------------------------------------------------------------------|
| 1. Enter programming mode | <b>*(5 seconds) Master code #</b><br>123456 is default master code                        |
| 2. Wiegand output bits    | <b>3 0 #</b> (Auto output)<br>Or<br><b>3 26-44, 56, 58 #</b> (Factory default is 34 bits) |
| 3. Exit programming mode  | <b>*</b>                                                                                  |

## Set PIN output format

|                           |                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------|
| 1. Enter programming mode | <b>*(5 seconds) Master code #</b><br>123456 is default master code                                 |
| 2. Wiegand output bits    | <b>4 0-8 #</b><br>0 = Virtual card number output<br>4 = 4 bit output (default)<br>8 = 8 bit output |
| 3. Exit programming mode  | <b>*</b>                                                                                           |

Set audio and visual response

|                                                                                                                                                       |                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1. Enter programming mode                                                                                                                             | *(5 seconds) Master code #<br>123456 is default master code                              |
| 2. Red LED always ON<br>Red LED always OFF<br>OR<br>Enable Sound<br>Disable Sound<br>OR<br>Keys always backlit<br>Keys backlight off after 20 seconds | 5 1 # (default)<br>5 2 #<br><br>5 3 # (default)<br>5 4 #<br><br>5 5 # (default)<br>5 6 # |
| 3. Exit programming mode                                                                                                                              | *                                                                                        |

Reset to factory default

Method 1: \*(5 seconds) Master code # 5 0 #

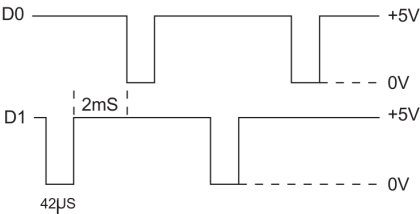
Method 2: Power off, connect yellow and black wires, power on and hold for 5 seconds. There will be a long beep.

6. Data Signal

The below table shows the wave form of pulse width time (the duration of a pulse) and pulse interval time (the time between pulses) of the Wiegand data output from the reader.

(Example 1010)

| Pulse Times         |              |
|---------------------|--------------|
| Description         | Typical Time |
| Pulse Width Time    | 42 $\mu$ s   |
| Pulse Interval Time | 2 ms         |



## 7. Keypad transmission format

### Virtual card number

The reader will transmit the PIN data when it receives the last key (#) after PIN code.

Example PIN code: 999999

Press 999999#, then the output format will be: 0000999999

### 4 bits

The reader will transmit the PIN data after every key is pressed:

1 (0001), 2 (0010), 3 (0011), 4 (0100), 5 (0101), 6 (0110), 7 (0111),  
8 (1000), 9 (1001), \* (1010), 0 (0000), # (1011)

### 8 bits

The reader will transmit the PIN data after every key is pressed:

1 (1110 0001), 2 (1101 0010), 3 (1100 0011), 4 (1011 0100),  
5 (1010 0101), 6 (1001 0110), 7 (1000 0111), 8 (0111 1000),  
9 (0110 1001), \* (0101 1010), 0 (1111 0000), # (0100 1011)