INSTRUCTION MANUAL

R2
Waterproof Card Reader

1. Packing List

Name	Quantity	Remark
Card Reader R2	1	
User Manual	1	
Rubber Bungs	2	6*24mm, used for fixing
Self Tapping Screws	2	KA4*25mm, used for fixing

2. Description

The R2 is a Wiegand 26 bits proximity card reader , fully waterproof, with 4 card interface options: EM or HID or EM&HID or Mifare.
R2-EM supports 125KHz EM card;
R2-H supports 125KHz HID card;
R2-H&EM supports 125KHz HID card &125KHz EM card;
R2-M supports 13.56MHz Mifare card.
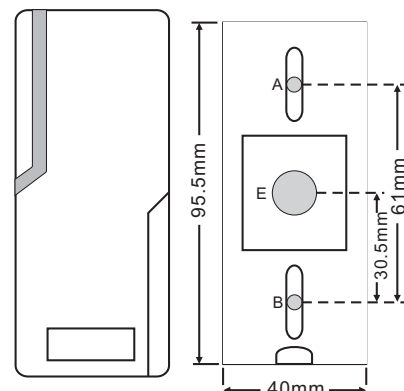It is easy to be operated wi th fashion design.

3. Wiring Diagram

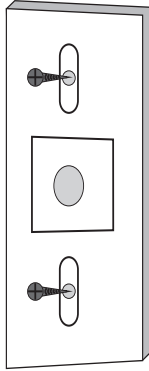| Wire	(* Optional connections)
Red	+12V DC
Black	GND
Green	D0
White	D1
* Brown	Green light-emitting diodes
* Yellow	Buzzer

4. Install Diagram

① Preparing
  * Positioning "A" "B" "E", then drill the holes and foist the rubber bungs into the holes.

② Connecting & Installation
  * Fix the back cover and thread the cable through the cable hole.

5. Technical Specifications

Model No	R2-EM	R2-H	R2-H&EM	R2-M
Card type	EM	HID	HID&EM	IC/CPU
Frequency	125KHz	125KHz	125KHz	13.56MHz
Max proximity card read range	3~6cm	3~6cm	3~6cm	2~6cm
Operating voltage	DC 12V			
Static current	≤30mA	≤30mA	≤30mA	≤20mA
Operating temperature range	-40~60℃	-40~60℃	-40~60℃	-20~60℃
Operating humidity range	0~95%			
IP	IP65			
Dimensions	128X82X28mm			

Output Format	
R2-EM	Wiegand 26-37, 26 bit is factory default setting (Wiegand 26-37 can be customized to manufacturer)
R2-H	Wiegand 26-37,Wiegand 26 card reader. It will output Wiegand 26-37 bit according to HID card's format automatically)
R2-H&EM	Wiegand 26-37,Wiegand 26 card reader. It will output wiegand 26-37 bit according to HID card's format automatically)
R2-M	Wiegand 26-37,Wiegand 26 bit is factory default setting (Wiegand 26-37 can be customized to manufacturer)

Note:
1. The factory default output for this machine is Wiegand 26 format. Wiegand 27～37 can be customized to the manufacturer.
2. Ask ISO14443 Astandard I Cor CPU card.

6. Features

> After reading a card, the Color of the LED will turn Green, the buzzer sounds a long beep. Then, the Color of the LED will turn Red, at the same time, the reader outputs the Wiegand signal.
> The color of the LED will turn Green when the input voltage for LED is low, and will turn Red when the input voltage for LED is . high.
> The buzzer will sound when the input voltage for the Bell is low, and it will turn normal after 30 seconds or the input voltage go high.
> When this reader is disassembled illegally, the buzzer will alarm. And it will turn off the sound of alarm automatically after one minute.

7. Instruction for the Wiegand Data

The buyers can customize the Wiegand bit of this reader, Range: Wiegand 26~37.Wiegand 26 card reader, HID card can output Wiegand 26~37 automatically, other cards are output Wiegand 26 compulsively.
Wiegand 27~37 card reader,all cards are forced output Wiegand 27~37.
The wire in green(D0) is the wire for Wiegand 0, and the wire in white is the wire for Wiegand 1. The input voltage is high at ordinary time, and when it is low, there is data output from the reader. The pulse width for low voltage is 40uS; and the time interval is 2mS。Below is the data for "0101" oscillogram.