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R380 Series Reader
User Manual

Document History

Description
Aug 2017 Revision 1

Federal Communication Commission Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

. Reorient or relocate the receiving antenna.

. Increase the separation between the equipment and receiver.

. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

. Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

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1.1 R380 Series NFC Reader Overview

The R380 Series Reader is a weather proof, high heat ABS NFC card reader. The R380 Series NFC reader can read a wide range of contactless smart card covering single size UID card to double size UID card. Card ID data can be output via industry standard Wiegand or Asis Proprietary RS485.

1.2 Reader Wiring and Color Code

Terminal Point Label	Description	Recommended Cable Color
Dev+	RS485+	Blue
Dev-	RS485-	Grey
+V	+12VDC	Red
GND	DC Ground	Black
D0	Wiegand Data 0	Green
D1	Wiegand Data 1	White
ERL	Red LED	Brown
OKL	Green LED	Orange
BUZ	Buzzer	Yellow
	Hold	Purple

Table 2 Wiring and Cable Color code

1.3 DIP Switch Setting (See table 3,4 for detail)

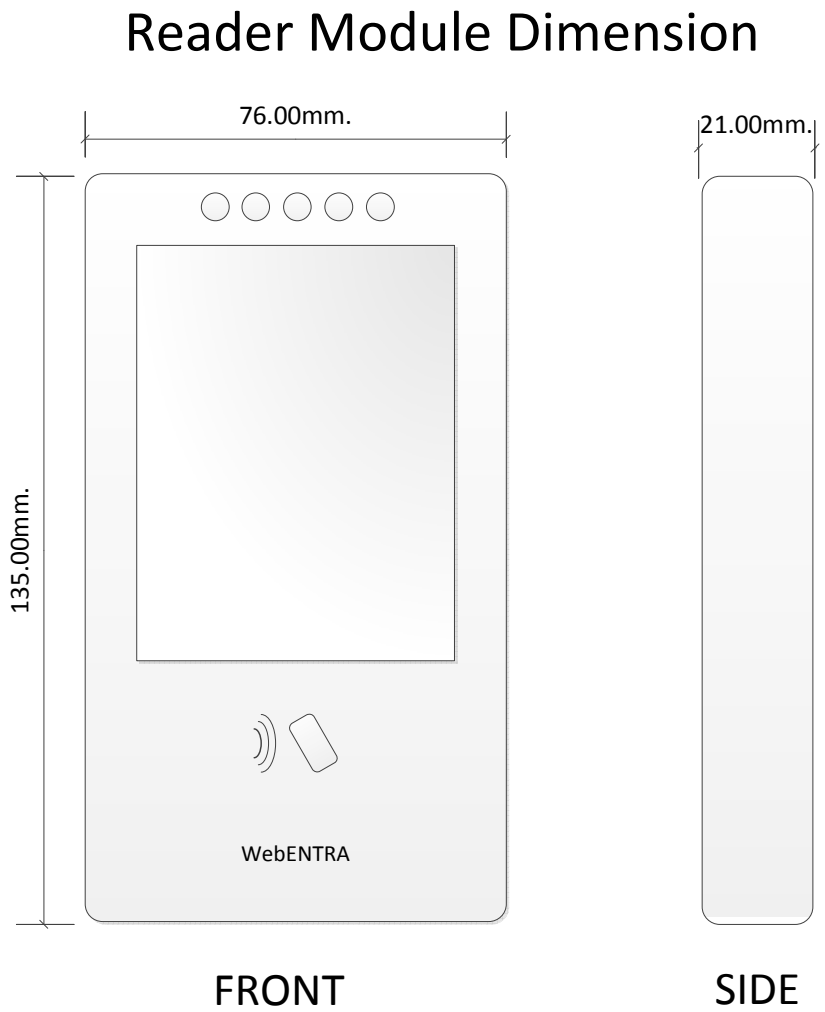
<table>
<tr><td>BIT</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td><td>7</td><td>8</td></tr>
<tr><td rowspan="2">Function (RS485)</td><td colspan="4">ADDRESS BIT</td><td colspan="3">MODE and Data Out BIT</td><td>TEST BIT</td></tr>
<tr><td>bit 0</td><td>bit 1</td><td>bit 2</td><td>bit 3</td><td rowspan="2">Off-Wiegand
On- RS485</td><td rowspan="2">Off- 8 byte
On -4 byte</td><td rowspan="2">Off – CSN
On - CAN</td><td rowspan="2">Off – Run
On - Testing</td></tr>
<tr><td>Function (Wiegand)</td><td colspan="4">Card format Setting</td></tr>
</table>

Table 3 Dip Switch function explain

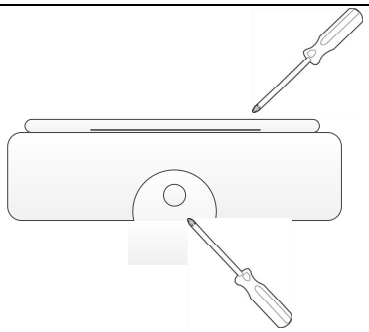
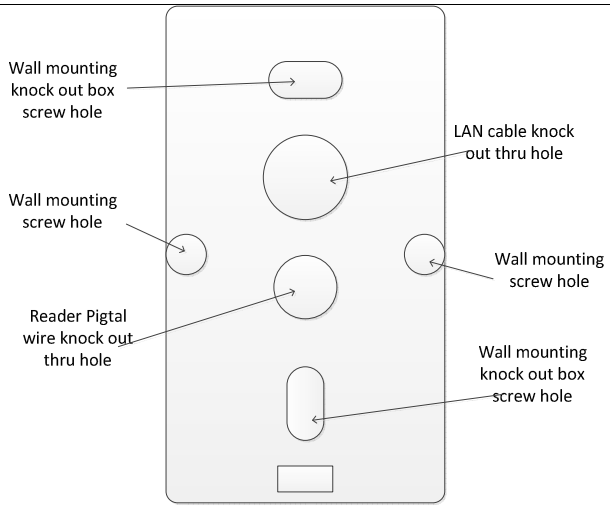
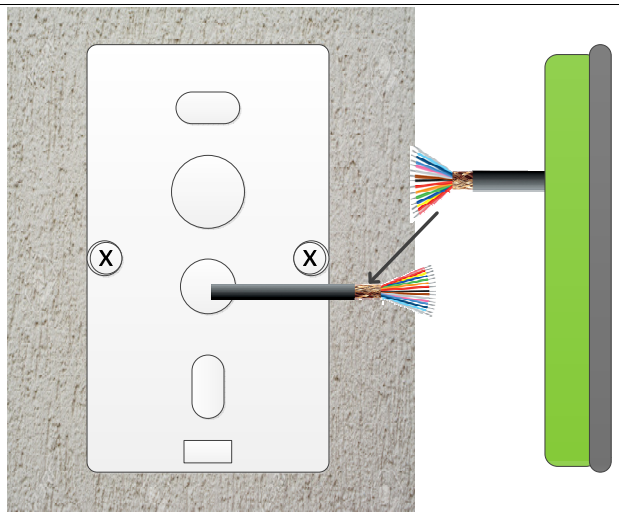
			BIT				
	Reader	Hex address	1	2	3	4	5 ~ 8
Function (RS485) BIT Address	1	80	Off	Off	Off	Off	Refer to above table
	2	81	On	Off	Off	Off	
	3	82	Off	On	Off	Off	
	4	83	On	On	Off	Off	
	5	84	Off	Off	On	Off	
	6	85	On	Off	On	Off	
	7	86	Off	On	On	Off	
	8	87	On	On	On	Off	

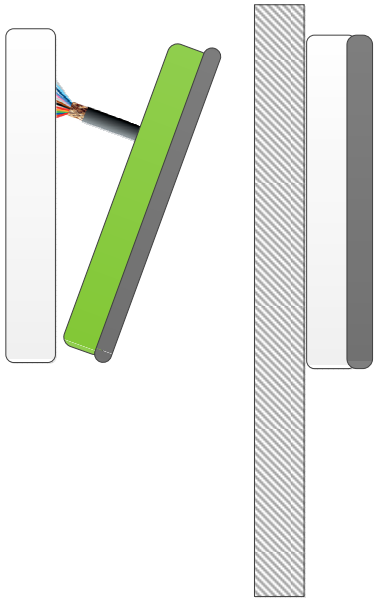
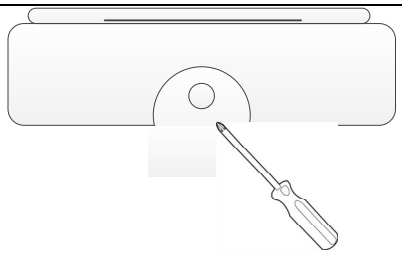
Table 4 RS485 Readers Address Dip Switch Setting

1.4 Dimension



1.5 Installation And Mounting Instruction

Remove Bottom Screw **Ply open the front cover using flat head screw driver remove the front of the unit.** **Remove the front of unit**	
Mark out reader base (reader wire pigtail) and (wall mounting hole) drill hole on the wall for mounting reader.	
Half tighten wall mount screw. **Terminate reader pigtail cable to cable from controller. Tighten wall mount screw**	

Reinsert reader front to base by set the bottom. Align reader pigtail cable accordingly. Push to front top to snap into the base.	
Tighten bottom screw	

1.6 Operation Guide

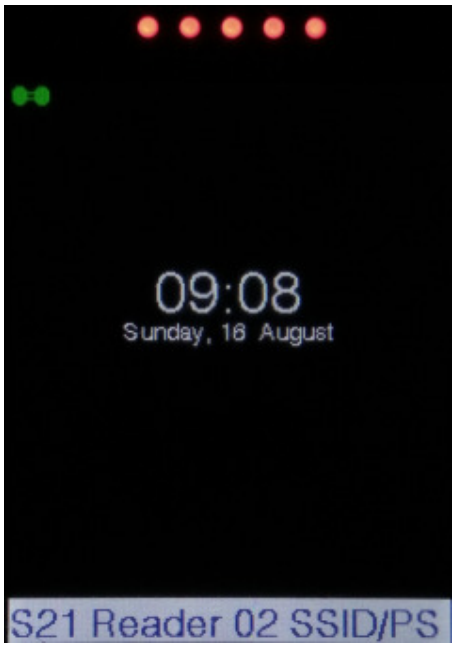
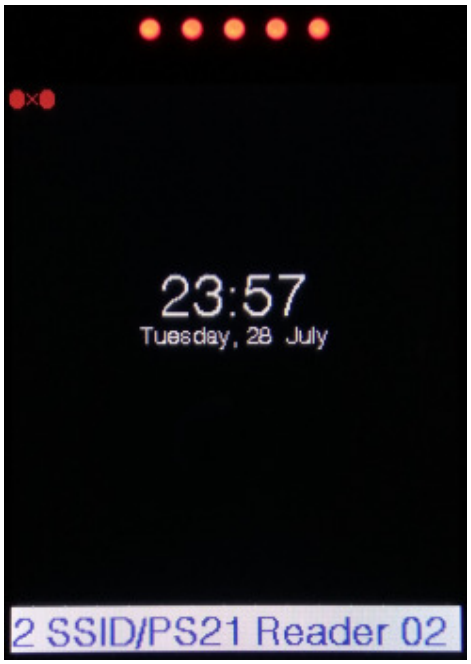
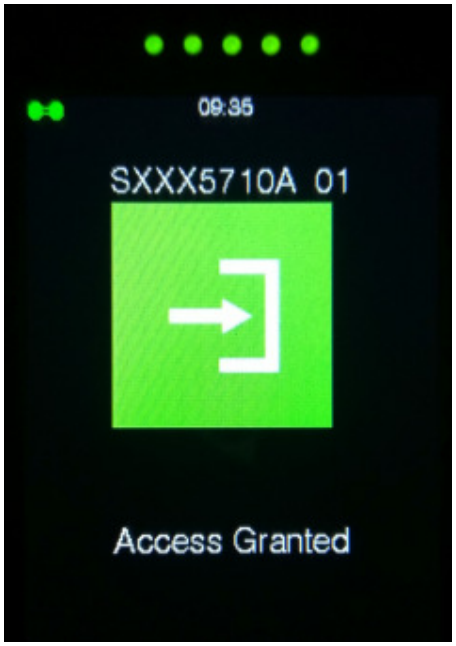
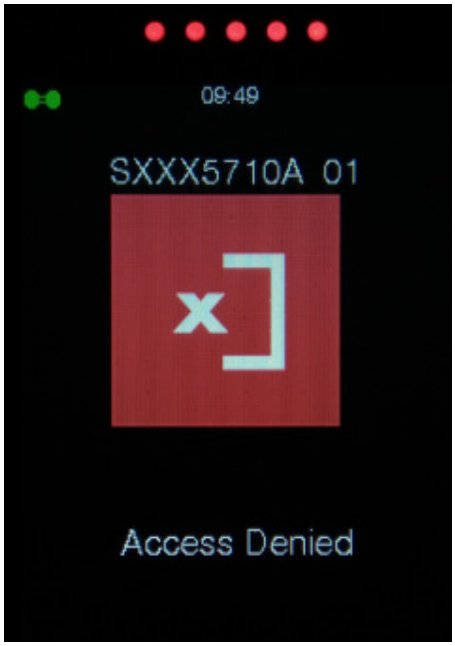
Keeping the card in parallel to the R380 reader a maximum read range can be obtained. The Reader will still be able to read Card when the card is presented at an angle but this will result in the reducing of read range.

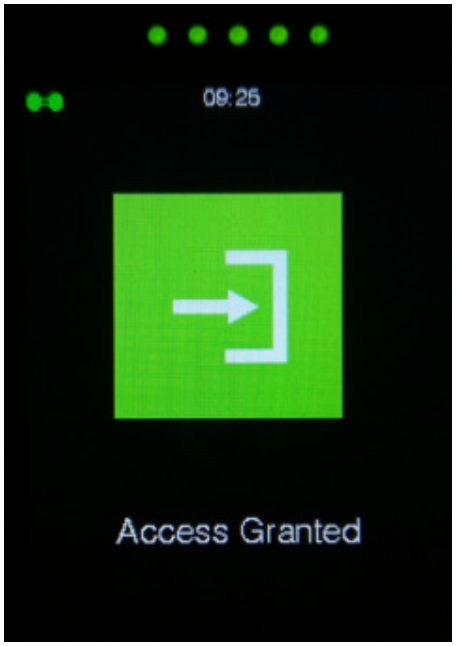
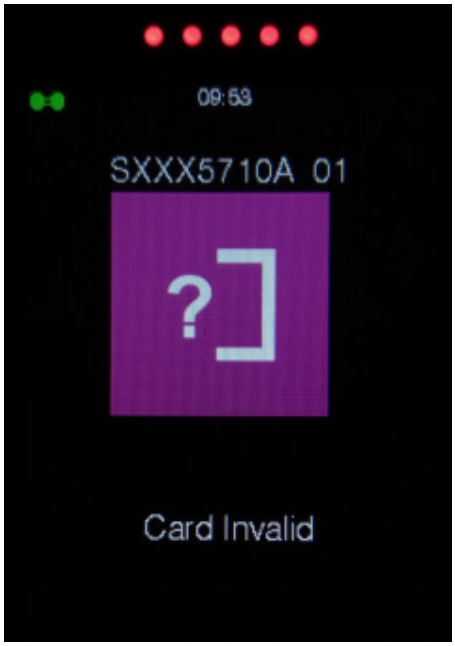
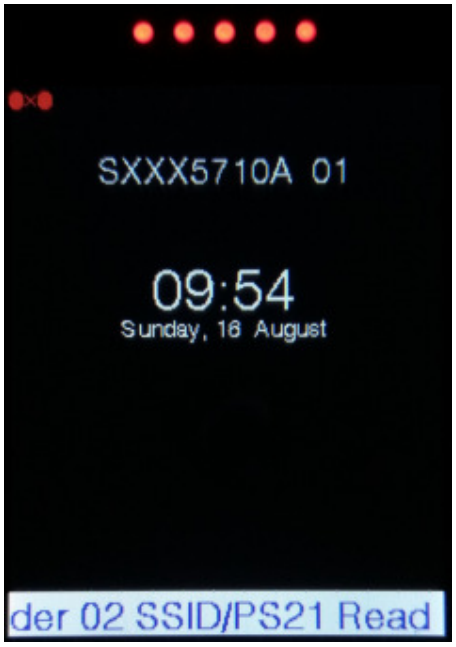
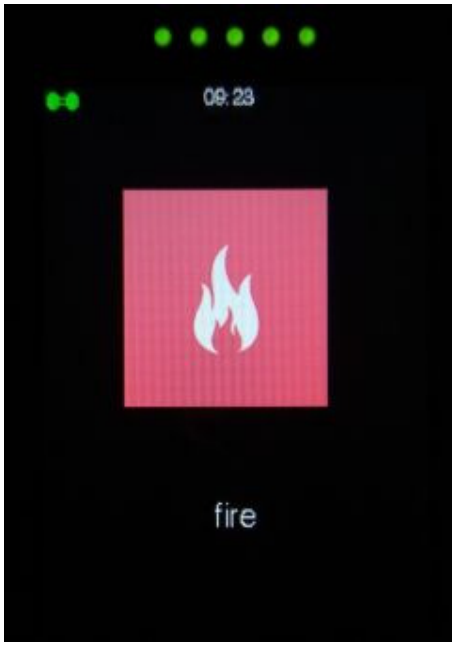
Card and PIN operation

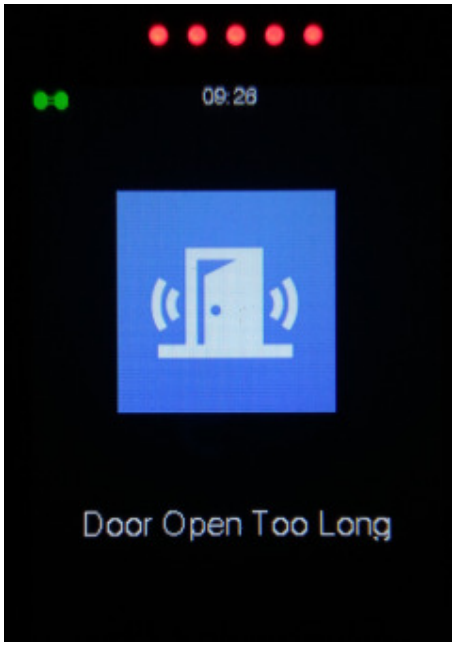
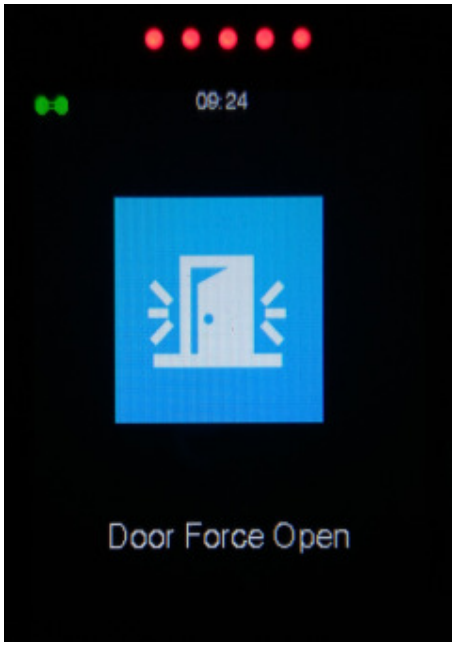
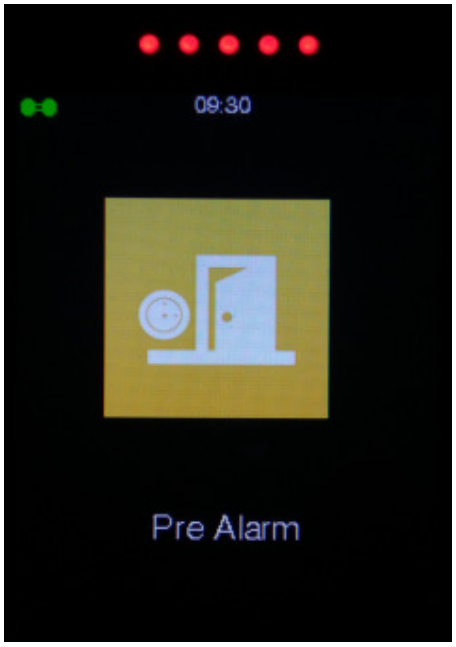
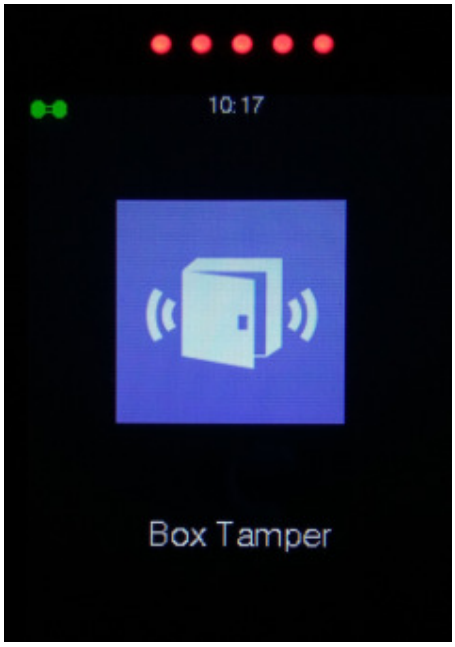
a) In Card & Pin mode LCD screen prompt to Enter Pin, enter PIN follows by “#” key

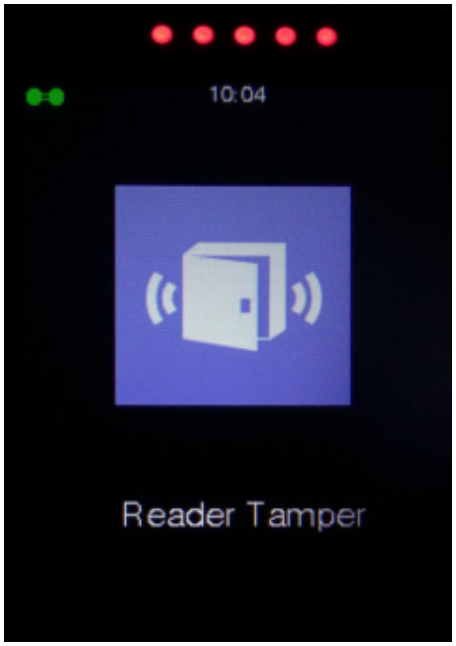
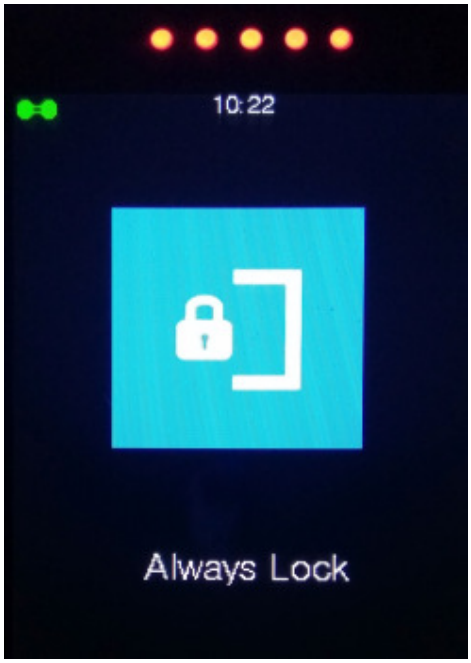
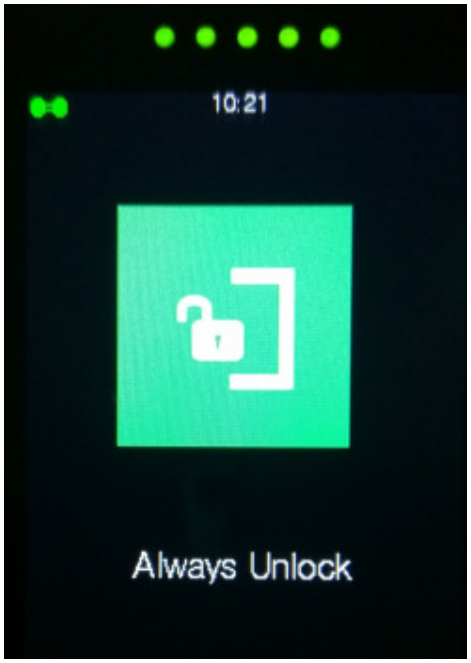
b) Key in PIN + 1 for PIN DURESS (Example PIN is 1234, for duress activation, key pin 1235) Note that the maximum PIN is up to 6 digit.

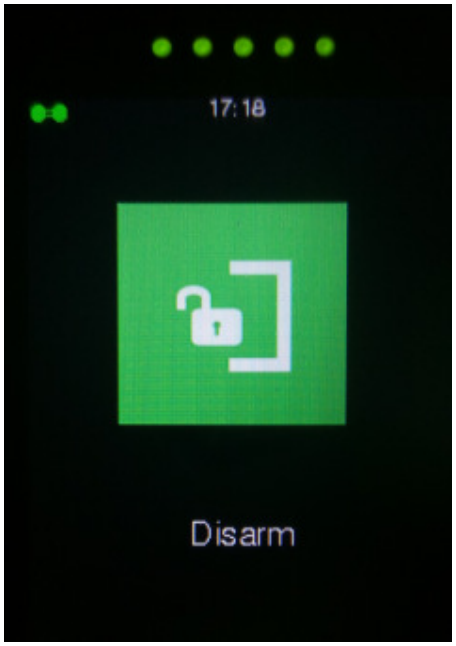
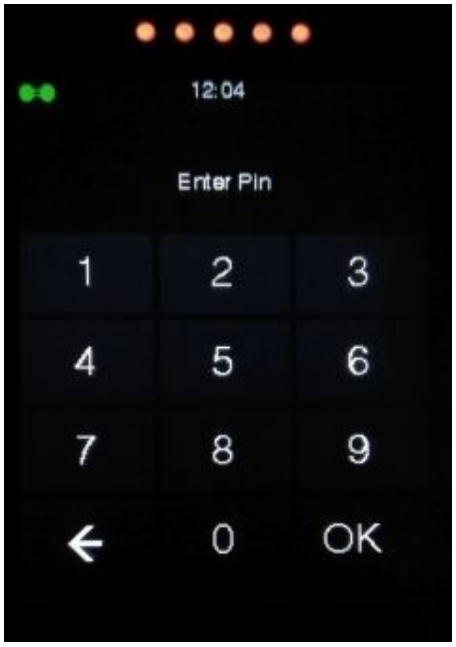
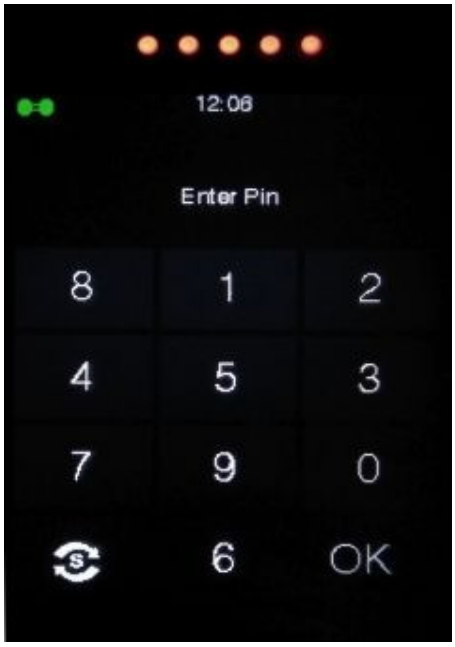
1.7 R380 LCD screen message

	
Reader Ready Screen	Reader Comm Fail
	
Access Granted Card Flash	Access Denied

	
Access Granted	Card Invalid
	
Card Read Comm Fail	Fire

	
DOTL	Door Force Open
	
Pre Alarm	Box Tamper

	
Reader Tamper	
	
Always Lock	Always Unlock

	
Disarm	
	
Pin Mode	Scrambled Keypad

1.8 Package List – **R380 Reader**

Item Description: Complete with snap on cover. 1 x Mounting cover security screw [M3], 1 x security screw driver, and this document.

Radio Frequency Interference

Devices generate RF noise that may interfere with the reception of the signal from the access card. This will result in the reduction of read range. Examples of devices are radios, televisions, and cellular phones. The read range is affected by the amount of interference (noise) in the area. The reader should mount more than 1.5m away from the any devices that emits RF that may interfere with the signal received from the access control cards.

1.9 Product Electrical Specification

Power Supply (Recommend)	Regulated linear power supply, +12VDC, 300mA
Operating Voltage Range	+9VDC - + 24VDC
Operating Current at +12VDC	85mA (average) –250mA (peak)
Maximum Cable Distance	150meters (500feet) (base on Belden 9538 24AWG 0.6mm, 8 core cable foilshield) (for wiegand interface) (base on Belden 9534 24 AWG 0.6mm, 4 core cable foilshield) (for RS485 interface)
Read Range	<=50mm (2”) (Read Range is dependent on local installation conditions)
Transmit Frequency	13.56MHz
LED	Tri Color – Red, Green, Amber
Buzzer	Multi-tone
Operating temperature Range	-20℃ to 50℃
Colour	Black
Material	High Heat ABS
Weight	250 grams
Dimension	135mm (Height) X 76mm (Width) X 21mm (Thickness)
Wire Termination	9 conducting wire at length approx. 300mm
Reader Mode	Card Only, Card and PIN.
PIN Input	1 – 6 Digits
Keypad	3 x 4 Keys
Communication Interface	RS485 or Wiegand (Selectable)
Wiegand interface Output bit format	26, 32, 37, 40, 56, 80, 168(Asis) bits format and 8-digit 32, 37, 40 bits format
Support Card Type	Mifare (ISO 14443-A, ISO 14443-B)
EZ-Link	Output CAN or CSN (Selectable)
Mounting	Reader back casing mount