Number pad Fingerprint

Standard Fingerprint

High Security Fingerprint Reader

	Network Version	Standalone Version
Enrollment	Can use Configuration Card to change Fingerprint Scanner to Enrollment Device	Enable usage of a Function Card to perform offline enrollment
Finger Template Storage	Store in Fingerprint Scanner	Store in Mifare Card
Fingerprint Capacity	Support 2,000 users, maximum 4,000 templates	Based on the card capacity of the Access Control System
Finger Template Data Synchronization	Use software to upload and download via RS485	No synchronization required
Access Mode	Card Only; Fingerprint Only; Fingerprint + Card; Fingerprint or Card	Card Only; Fingerprint + Card

Friendly Installation

"Touch" number pad does not carry any moving parts, which implies more durable.

Universal back plate allows the reader be installed on different size of gang box.

Reverse power protection.

Metal back plate allows the reader install on metal surface and back-to back without affecting the read range.

All input and output signals are protected against static charges.

All inputs are 12Vdc protected.

FCC Caution.

§ 15.19 Labelling requirements.

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.

FCC Radiation Exposure Statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

Note: 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 or more 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.

§ 15.21 Information to user.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Model Number: MW 8 $N_2 N_3$ – 8 X_3

RF Technologies		Reader Appearance and Function	
$X_1 X_2$	MW = Mifare Technology	N_1	8 = Fingerprint Reader ;
		N_2	A = Standard Cover with Black Belt;
			B = Standard Cover with Sliver Belt
		N_3	2 = Read UID / Card Number; 3 = Reader Sector
		N_4	3 = Terminal (Default) ; 8 = Pigtail
		X_3	N = No Number pad; K = Number pad

Model / Functions	Standard Fingerprint Reader	Keypad Fingerprint Reader
Configurable Functions		
Re-configure Window	5 seconds (Default) or Half an hour after Power up	
Reader Output Format	CSN/UID 32bits, 34bits, 56bits (backward/forward), file content reading for programmed ID	
Wiegand Pulse Width	Different choices to fit with different Controller's requirements	
Keypad Output	N/A	Definable
Buzzer Control	Reader & Controller control (Default) or Controller control only	
LED/Back lit Control	Define different LED color response base on Green LED cable input	
Technical Specifications		
Typical Read range	3 – 5 cm	
Reader Standard Output	Wiegand (RS232 & RS485 optional)	
Standard Keypad output	N/A	Wiegand with 4 bits burst
Wiring Distance	150m (22 AWG with shielded cable)	
Fingerprint Scanner	Optical	
Fingerprint Capacity	4,000 templates，each user can enroll 2 fingerprints (Network Version) Based on the card capacity (Standalone Version)	
Template Size	193 Bytes	
Fingerprint Parameter	Verification Time: 1 s / 1000 fingerprints stored，FRR≤0.001%，FAR≤1%	
Access Mode	Network and Standalone Version: Card Only，Fingerprint + Card Network Version Only: Fingerprint or Card，Fingerprint Only	
Template Synchronization	Use software to upload and download via RS485 (Network Version) Templates store inside card (Standalone Version)	

Operating Specification:

Operating Voltage	10 - 15VDC
Operating Current	250mA (max)
Operating Temperature	-20℃-60℃
Exterior dimension	186 L * 85 W * 22 H (RFID Reader) / 31.5 H (Fingerprint Scanner) mm
Case material	PC+ABS
Standard Color	Black and White
Operating Humidity	20% - 85%
Weight	330g

Fingerprint Reader Installation and Operation Manual

● **Fingerprint Reader Package**

1. Fingerprint Reader x 1
2. Stainless Steel screw M4 X 25 X 2

● **Specification**

1. Operating Voltage（V）:5~16V DC
2. Operating Current (Normal)（mA）: ≤150　Operating Current (Card Present)（mA）: ≤150
3. Read Range（cm）: >6cm （When the fingerprint (FP) scanner is working, the read range will decreased to >5cm）。
4. Wiegand transfer distance（m）: >150
5. Operating Temperature（℃）: -20-60
6. Operating Humidity（%）: 20-85

● **Network Mode**

1) Max. supported 2000 user, 2 FP template for 1 user.
2) Configure Enrollment mode：normal reader；enroll device。
3) Configure access mode： Card + FP；Card only；FP only；Card or FP;
4) Supported Mifare, 125khz Prox and EM technologies.
5) Supported Mifare configuration card:
   1) Card Format
   2) Read Content
   3) Configure device to be enrollment or normal reader
   4) Changed access mode.

● **Mounting**

1) Connected all necessary wire correctly，mount metal plate (Fig.1) onto gang box using two Stainless Steel screw.
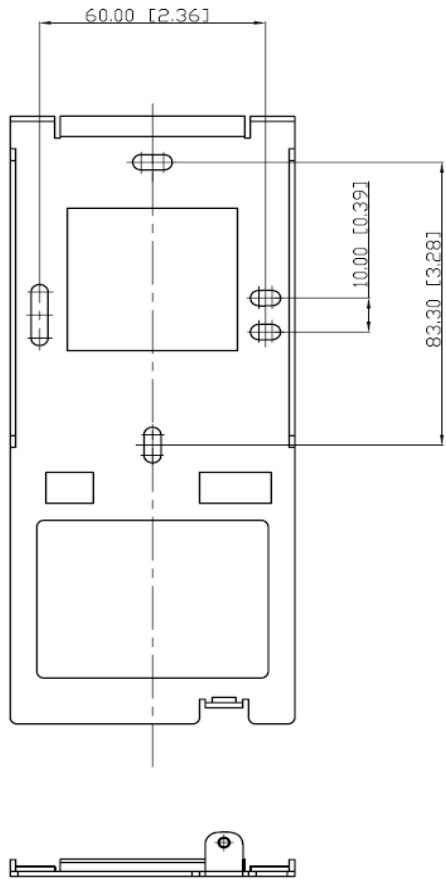2) After that, mount the FP reader onto the metal plate. (Fig.2)

60.00 [2.36]
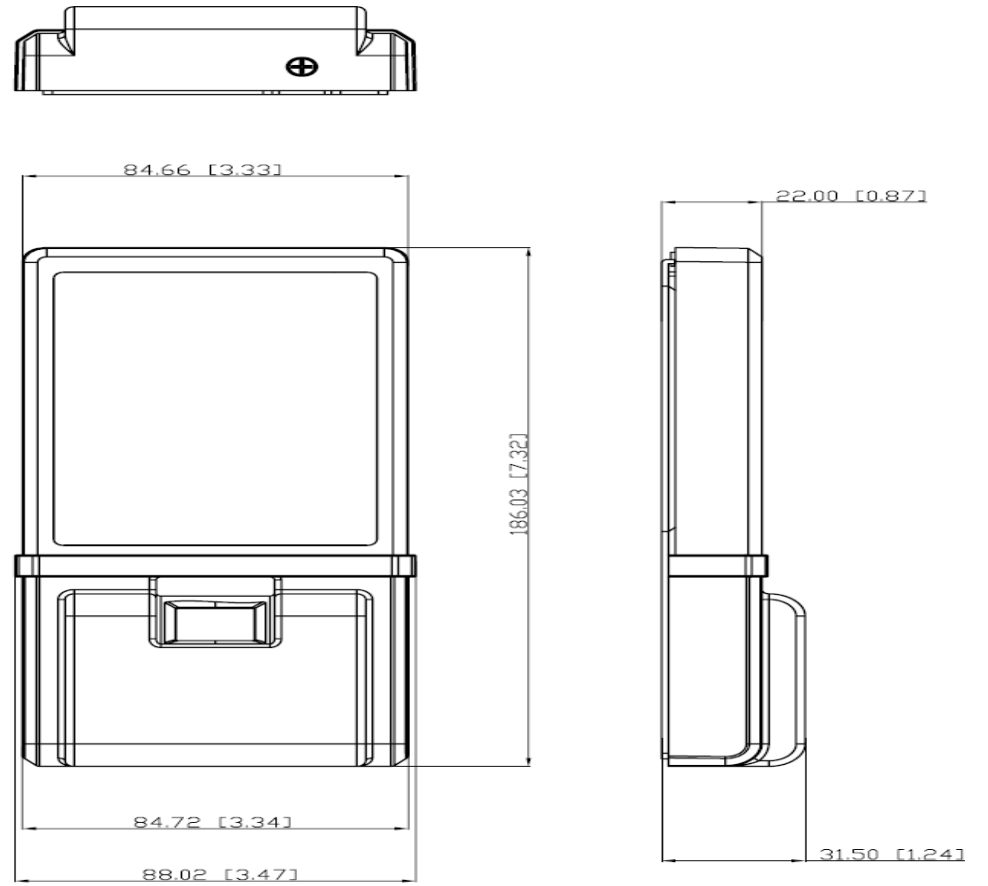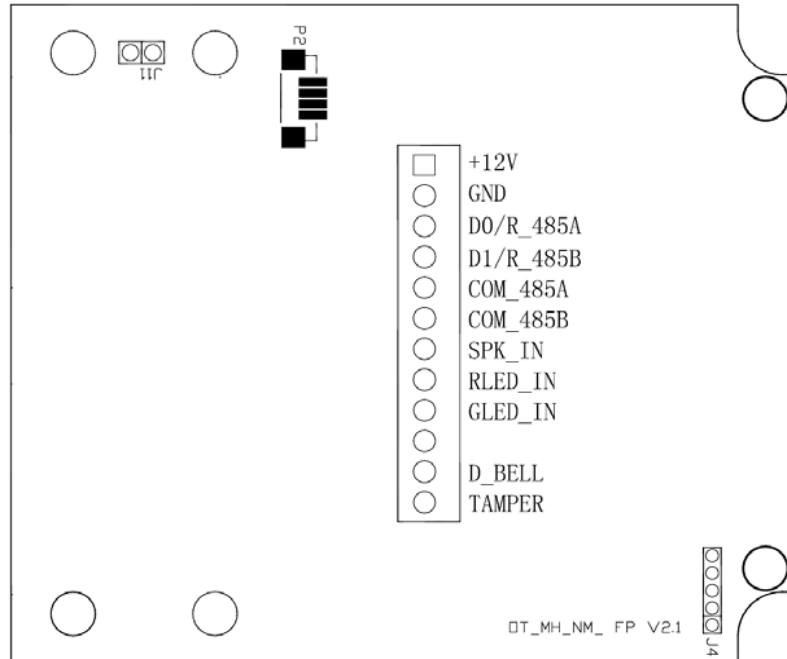
10.00 [0.39]

83.30 [3.28]

Fig. 1

84.66 [3.33]

186.03 [7.32]

84.72 [3.34]

88.02 [3.47]

22.00 [0.87]

31.50 [1.24]

Fig. 2

● Wiring

+12V	+12V
GND	0V
D0/R_485A	Weigand D0/RS232/485A Output
D1/R_485B	Weigand D1/RS232/485B Output
COM_485A	485A Output to PC（Network Mode）

COM_485B	485B Output to PC（Network Mode）
SPK_IN	Speaker Input
RLED_IN	Red LED Input
GLED_IN	Green LED Input
	N/A
D_BELL	Door Bell Output
TAMPER	Tamper Output

● System Connection Map

● Operation

Prepare Items：

- ● FP Enrollment Software
- ● 1 pc of Enrollment Device
- ● 1 or more than 1 pc of FP reader
- ● User Card
- ● RS485 to USB Convertor

1. Collect user FP (2 Fingerprint templates) and user card details to FP Enrollment Software Data Base via Enrollment device.

2. Download the user data from software to device.

- **FP Software**

1. Enroll the user information via "User Management" interface of Enrollment Software.

   a) "Read Card": Present card to get the card information; or enter direct

   b) "Enroll FP": Put user finger on scanner to collect FP template; each user should enroll 2 different FP templates

   c) Fill-in and save necessary information eg. user name.

Status	Enroll Card Success or Enroll FP Success	Orange LED light up，buzzer long beep once（100ms）；Blue backlit light up for 5s。
	Waiting for FP Scan	FP Scanner blue LED light up

3. Download the user information from main interface of FP software to FP reader.

   a）"Query Device": Check the online status of every device.

   b) Tick all users which will be downloaded, click "Download/Delete". User information will be downloaded into device.

   c) Right click reader manual under "device management". Click "Format" to clear all user information which store inside on that device.

Status	Downloading / deleting or formatting FP reader	Backlit will light and off in 1s continuously（Light 500ms off 500ms）

Card Reading

- FP reader able to set either of 4 types of access mode. They are Card only；Card + FP； FP only；Card or FP.

  - **Card Only:** Present card to get card data > output card data to controller

  - **Card + FP：** Present card to get card data > compare the card data and the data which store inside the FP reader and find out the corresponding user ID > scan FP and compare the corresponding FP template > If success, output card data to controller

  - **FP only：** FP scanner will always get ready to scan. Scan FP and compare all FP template which store inside device > If success, get the corresponding user ID and data > output card data to controller

  - **Card or FP：** Please refer to "Card Only" and "FP Only"

Card only	Read card success	Orange LED light up，buzzer long beep once（100ms）；Blue backlit light up for 5s.
		Output card data
FP only	Waiting for FP scanning	No LED light up normally. When user put finger on the scanner, FP Scanner blue LED light up
	Compare FP success	Orange LED light up，buzzer long beep once（100ms）；Blue backlit light up for 5s.
		Output card data
	Compare FP fail	Buzzer short beep twice（50ms/time）
Card or FP	Waiting for FP scanning	No LED light up normally. When user put finger on the scanner, FP Scanner blue LED light up
	Read card success or Compare FP success	Orange LED light up，buzzer long beep once（100ms）；Blue backlit light up for 5s。
		Output card data
	Compare FP fail	Buzzer short beep twice

		（50ms/time）
Card and FP	Read card success	Orange LED light up，buzzer long beep once（100ms）
	Waiting for FP scanning	FP Scanner blue LED light up
	Compare FP success	Orange LED light up，buzzer long beep once（100ms）；Blue backlit light up for 5s。
		Output card data
	Compare FP fail	Buzzer short beep twice（50ms/time）