

Fingerprint Reader——F10

User Guide



F10 description






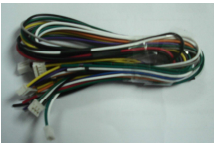
Pass/Fail Indicator & Activate Button: The indicator glow green which the flash interval is 1sec. in normal ready working state, and constantly glow green for 3 sec as the identification is positive, if the authentications fail it will constantly glow red light for 3 sec. When the sliding ID card or Mifare Card nearby RF sense area of the reader, if the card to be verified is valid, the indicator displays rapidly green flash it interval time is 1 sec. press this button to activate the reader while it in normal working state, and wait for 3 sec. switch the reader into idle state.



Fingerprint Sensor: Enroll or match fingerprint

Power Indicator: It constantly glow green in the normal supply or idle state.

F10 Package

Checklist on unpackaged:

Product	Picture	Amount	Purpose
F10 Reader		1unit	
Fast Screw		2 Screw	Fix back plate cover
		4 Screw	Fix mounting plate
Pin-in-hex Screwdriver		1	Use for Turning screw between reader and mounting plate
Extension Wire		1 set of	

Ethernet Comm. cable		1 piece	TCP/IP connect assistant comm. Prot
RS232 comm. connector		1 piece	RS232 Adjust comm. Prot .
Manual etc		1 set of	Contain Manuel and CD with software

Other required equipment

The following equipment is not included in the standard package.

Name	Picture	Name	Picture
PC		Door Lock	
Extension Reader		Exit-Button	
Alarm		RS485/RS232 converter	
Door Controller		Network Cable	

Configuring Reader

Preparing Wiring

We recommend Wiring connections to be made:

Wiegand – should be 18-22 AWG (10-7 MWG) wire, between 3 and 6 conductors depending on which signals will be carried, shielded cable is recommended, and typically the conductors are made of stranded wire. Minimum connections: Data0, Data1, Wiegand Ground

RS-485 – use category 5 shielded cable.

Ethernet – use category 5 shielded cable

Power – should be 18 – 22 AWG (10 – 7 MWG) wire, 2 conductors.

Earth Ground – use a single wire with heaviest gauge reasonable.

Warning: Do not use Power Ground as a substitute for Earth Ground.

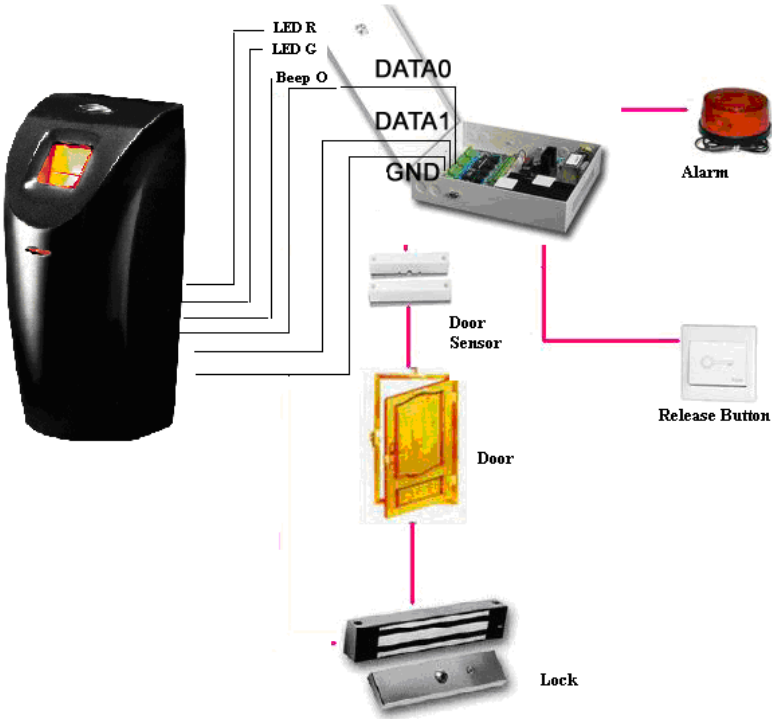
Connect to the Access Controller

As a fingerprint reader, F10 isn't able to work alone, only after being linked to the access controller, it offers a fingerprint identification front-end for the system, provides the controller with a standard or self-defined Wiegand signal, such as other Proxy Card Reader, adopts the standard signal (D0,D1,GND) connection method.(see standard connection illustration).

These extension wires, LED Red, LED Green, Beep Out are used to get signals from the Access Controller. Depending on the Access controller settings to control the red /green Indicator, beep, which produce the corresponding action, for linking way, please refer to the reader connection with alarm

Notice : Whatever the power of F10 supplied by the access controller, or

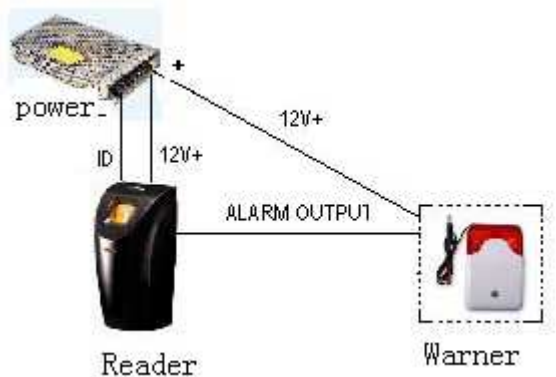
doesn't it, the two equipment's GND must be in common connection, to ensure transfer the wiegand signal steady.



F10 power

F10 is powered by 12 VDC, which the idle current is 50mA, and the working current is about 400mA, as well as F10 offer a 12VDC/300mA power output which apply to meet the external reader supply (see standard connection Illustration)

Notice: F10 is powered not only by the access controller, but also can depend on external power



External Reader

F10 utilize the function of wiegand input to support a external reader, at the same time F10 connect external reader via standard way, and the pin of reader (D0,D1,12V) according to the pin of F10(Wiegand In D0, Wiegand In D1, GND, 12VOUT) one by one to connect(see standard connection Illustration)

Special Notice: when there is a Mifare module in the F10, the Wiegand input is invalid, if there is no external reader; don't need to do this connection.

Connect to Alarm

F10 can connect a signal (alarm) to system, which mainly use to remind that the F10 has been dismantled ,no matter what condition, when it is removed F10 will trigger alarm output (brown wire) in the power on state, in normal condition, the wire doesn't send any signal., F10 will link GND through the wire if the system be trigger, follow this principle we can achieve the remind function of dismantled alarm, connect the

cathode of alarm power to alarm output(brown wire), the positive of alarm power link to the positive of F10 power (see right Figure), F10 alarm output only support 12VDC alarm.

Notice: There is a button to prevent to dismantle in the bottom of F10, realize function is to utilize the cylinder on the mounting plate to keep press the button

Create Network Configuration

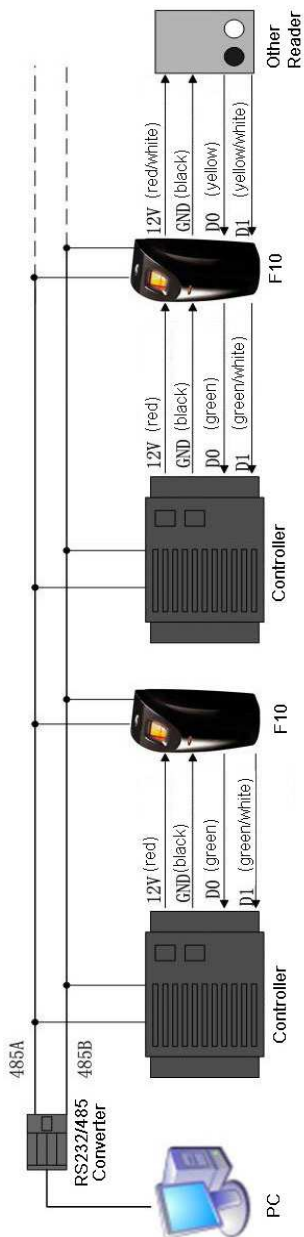
There are two ways, RS 485, Ethernet, to create network for F10,(see standard connection illustration).

[RS-485 network only]: Set up network using 9600 baud rate. Only increase this data rate after the system is operating properly at 9600.

[Ethernet network only]: Typically a star network topology is used with a network switch or hub, but a bus topology may be used. Be sure to connect all devices using straight-thru (as apposed to cross-over) cables. The exception to this is when connecting a single device directly to the computer Ethernet adaptor.

[Ethernet network only]: Up to 254 readers can reside on a single Ethernet bus, although repeaters may be required to boost the signal over longer distances. The V-Station supports 10base-T Ethernet (10 Mbps)*. A 10 Mbps Ethernet network supports distances up to 100 meters (328 ft.) between readers (2,500m with repeaters). We recommends isolating your network of readers from computers (other than the admin PC) and other devices to maximize security. A firewall is highly recommended if the network will include other devices or PCs. For obvious reasons, it is not a good idea to expose your network of readers to the outside world (i.e., the Internet).

*Ethernet communication is supported in firmware versions 7.10 and higher. VeriAdmin 5.10 or higher is required for administration over Ethernet.



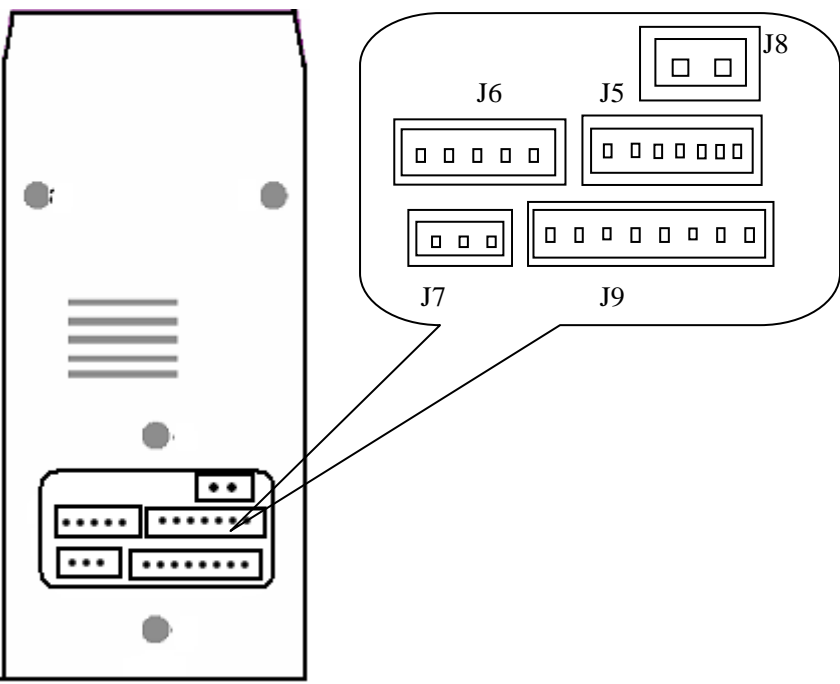
standard connection illustration

F10 are connected to the access controller, the external reader, the

power supply and to create RS485 network through the pig-tail wire bundle that protrudes from the rear of the unit (See connection illustration).

Notice: The all black wire in the DB 15 bundle is GND, which does not differentiate type. The RS232 may be used in the future. This communications is invalids at exit factory

DB15 Connector is a 15 core pig-tail cable, which defined by color, like as the follow chart



J5 Above 7PIN pin: in right side middle

Pin	Colour	Signal	Connect to
1	Black	GND	GND of door controller
2	White	WD0	D0 of door controller
3	Green	WD1	D1 of door controller

4		BEEP OUT	Door Controller
5		LED RED	Door Controller
6		LED GREEN	Door Controller
7		Alarm out	Alarm

J6 Above 5PIN connector: Left side

Pin	Colour	Signal	Connect to
1	Gray	RS485A	RS-485 (+)
2	Green	RS485B	RS-485 (-)
3	Black	GND	GND-Signal
4	Yellow	RS232TXD	Spare
5	Violet	RS232RXD	Spare

J7 Below 3 P I N : Below Left side

Pin	Colour	Signal	Connect to
1	Black	GND	Reader GND
2	White	WD0 in	Reader WD0
3	Green	WD1 in	Reader WD1

J8 Above 2PIN, up-side

Pin	Colour	Signal	Connect to
1	Red	+12V	12V Supply (+)
2	Black	GND	12V Supply (GND)

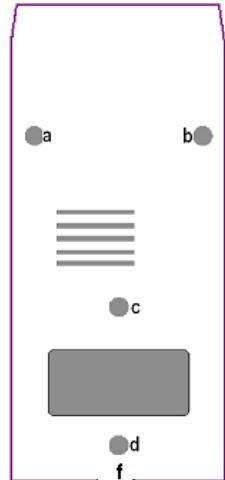
J9 Below 9 PIN, Below Right-side

Pin	Colour	Signal	Connect to
1	White/Orange	TXO—	RJ45—1
2	Orange	TXO+	RJ45—2
3	White/Green	RXI+	RJ45—3
4	Blue	MAXRXD	RS232
5	White/Blue	GND	Spare
6	Green	RXI-	RJ45—6

7	白棕	MAXTXD	RS232
8	棕	+12V	备用

Installation Notice Item

This product is designed for indoor installation, if it has to be installed outdoor , please place the equipment in proper surroundings, you must beware of not exposing it to water or harsh condition , we remind to cover up the cable into the wall, if it isn't capable to do, you must obtain the user's permission before to install. Locate a comfortable height for finger place, firstly use the screwdriver along with the unit to turn off the screw in the bottom of the unit, and take away mountingplate, there are four fix-hole in the mountingplate (**see right illustration a, b, c, d**),



keep secure it on the wall using supplied screw, and fix the F10 reader body on the mountingplate. please strictly complied with the wire definition and colour, after finish the hookup, cut the expose part of the unwanted wire, especially red/white wire, and use the insulating tape to wrap it, because the red/white wire provide a output 12VDC voltage, when there is no external reader, No mater what, you must cut this wire and wrap it to keep away short circuit, **You must ensure that hookup is correct follow the above table before power up and use.**

Version, Model and Corresponding Name

Model	Version	Name	Name
F10	Standard	Standard fingerprint reader	Fingerprint capacity 600,support 1:1 or 1:N
F10-ID600	Build-in ID module	Build-in ID module fingerprint reader	Build-in ID module , Fingerprint capacity 600,support 1:1 or 1:N
F10-ID5000		Build-in ID module fingerprint reader	Build-in ID module Fingerprint capacity 5000, only support 1:1.
F10-ID8000		Build-in ID module fingerprint reader	Fingerprint capacity 600,support 1:1 or 1:N
F10-SMART	Build-in Mifare module	Build-in IC module fingerprint reader	Build-in Mifare module, Fingerprint capacity immensity 6

The shape or parameter of the above products are subject to change without notice, please read this user guide carefully before mount and use.

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