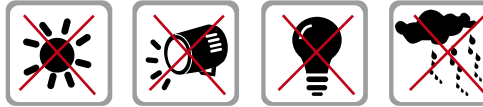# FING€RTEC

Installation Guide

Kadex

Card Reader for Time Attendance & Door Access Control System

---

Step 1
Determine the Location and Positioning of the Installation

- Avoid installing the terminals in locations that has contact with a strong light source (e.g direct sunlight, spotlight, fluorescent light, etc)

- Avoid installing the terminals in locations prone to high moisture or condensation levels in the air

- The recommended installation height of the terminal from the ground is 1.2 meter.
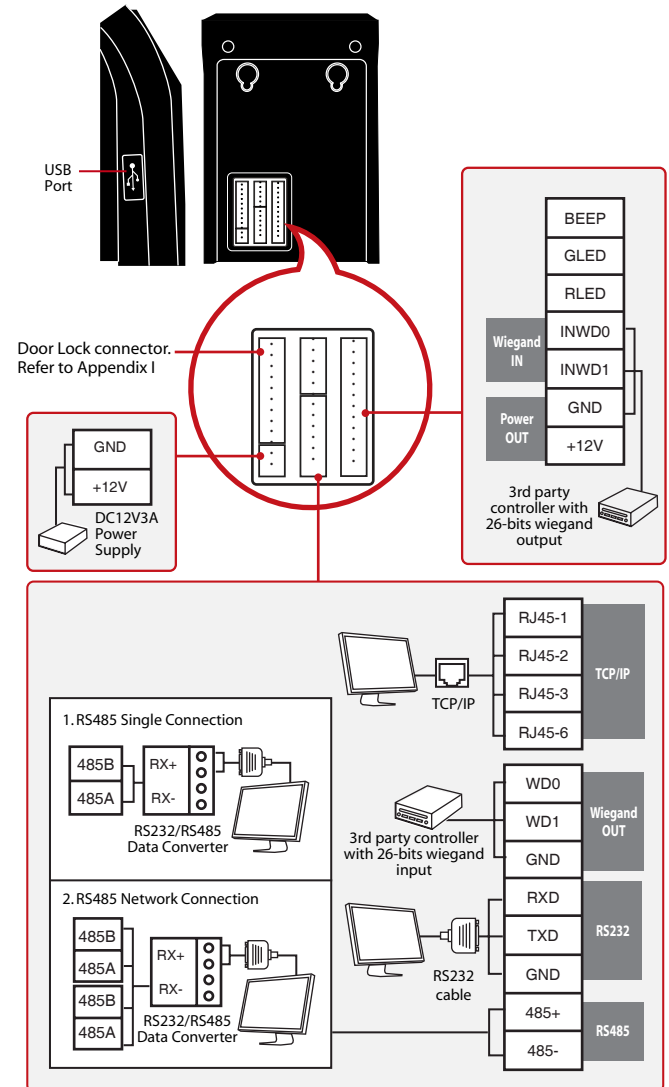
Step 2
Mounting Terminals

4 feet / 1.2 meter (recommended)
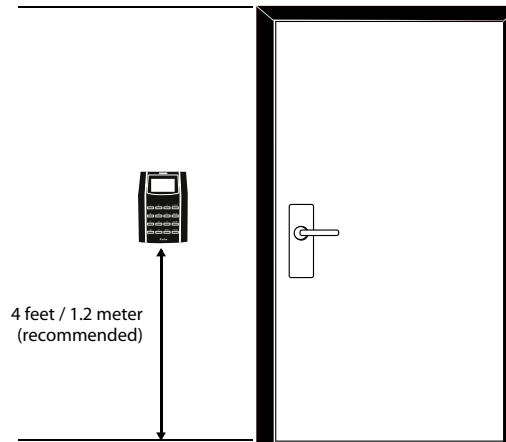
- After measuring the height accordingly and make relevant marking on the wall, drill the screws into the wall to secure the back plate.

- Attach the terminal to the back plate and tighten the screws. Refer to Appendix II for dimensions and measurements of installation.

Step 3
Wiring for Power Supply

The power input ports for these models are located at the rear of the terminals. There is no adapter plug supplied with the models, instead you need to source for power cable (red and black cables) to connect the power from the terminal to the AdapTec.

USB Port

Door Lock connector. Refer to Appendix I

GND
+12V
DC12V3A Power Supply

BEEP
GLED
RLED
Wiegand IN — INWD0
INWD1
Power OUT — GND
+12V

3rd party controller with 26-bits wiegand output

1. RS485 Single Connection

485B — RX+
485A — RX-
RS232/RS485 Data Converter

2. RS485 Network Connection

485B
485A — RX+
485B — RX-
485A
RS232/RS485 Data Converter

TCP/IP

RJ45-1
RJ45-2
RJ45-3
RJ45-6
TCP/IP

3rd party controller with 26-bits wiegand input

RS232 cable

WD0
WD1
GND
Wiegand OUT

RXD
TXD
GND
RS232

485+
485-
RS485

Step 4
Setting Up Data Communication
(Skip this step if you are using USB flash disk to transfer data)

The data communication ports are positioned at the rear of the terminals, please refer to the diagrams shown on Step 3 to determine the wiring. Plug the communication jacks (TCP/IP, RS232 or RS485) to the corresponding ports.

TCP/IP – LAN Connection
For TCP/IP connection, plug the special RJ45 jack into the TCP/IP (LAN) Port of the terminal. Connect the other end (normal RJ45 jack) to the local area network hub or a PC. Configure the device ID, IP address, subnet mask and Gateway in the terminal (refer to the hardware user manual for details).

RS232 – Serial Port Connection
Plug the communication jack that is provided in the package to connect to the communication port of the terminal. Select wires with label RX, TX and GND, and connect the other end of these wires to a DB9 female connector. Configure the device ID and baudrate of the terminal (refer to the hardware user manual for details). Use the normal RS232 cable to plug into the RS232 port of the terminal.

Step 5
Finalizing the Installation

1. Check that all cable connections are done correctly.

2. Attach the terminal to the corresponding back plates and tighten the screws to secure the terminal on the wall.

3. Switch on the power to the terminal.

4. Start using the terminal.

Other Accessories
FingerTec offers complementing accessories which can be used with your terminals. These optional accessories are available at
http://accessory.fingertec.com
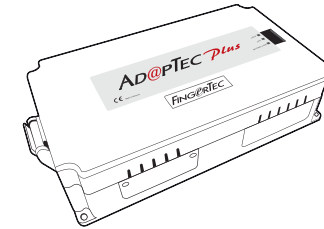
AdapTec Plus

The AdapTec Plus is a 12VDC power supply inclusive of a 110~ 240VAC switching linear power. The AdapTec Plus supplies 12VDC power to the FingerTec terminal and door lock system as well as charges a 12VDC 7.0Ah backup battery simultaneously. During an event of a power failure, the back up battery automati-cally provides power to the terminal and maintains the door lock system. The AdapTec Plus also prevents a secured door from being opened if it has been tampered with.
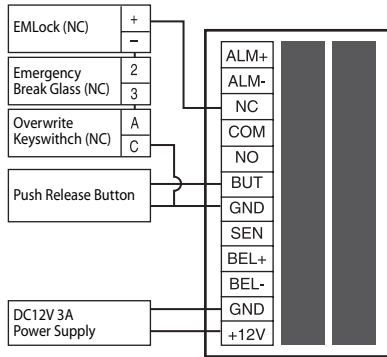
Enclosures
An acrylic-made enclosure that protects your terminal from the risk of meddling by unauthorized individuals. Our custom made enclosure are specially designed to fit your terminal perfectly with specific openings for fingerprint scanner and buttons. Our enclosure can be used to mitigate surrounding mild environmental hazards and help lengthen the lifespan of the terminals. However, do note that the enclosure is not dust-resistant and waterproof if subjected to extreme weather conditions.
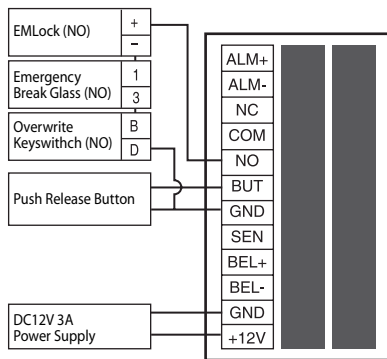
Door Lock Accessories
FingerTec offers various door locks accessories to complement FingerTec door access product range.

Appendix I
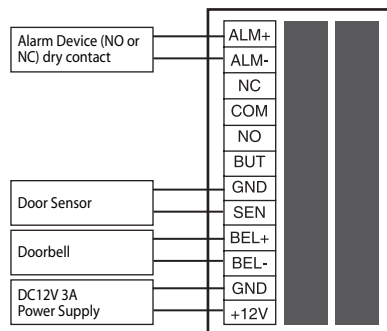## Power Supply & Door Lock System Wiring Diagrams

▶ Diagram 1 • Normally Close (NC)

EMLock (NC) — +, −	ALM+
Emergency Break Glass (NC) — 2, 3	ALM-
Overwrite Keyswitch (NC) — A, C	NC
	COM
Push Release Button	NO
	BUT
	GND
	SEN
	BEL+
	BEL-
DC12V 3A Power Supply	GND
	+12V

▶ Diagram 2 • Normally Open (NO)

EMLock (NO) — +, −	ALM+
Emergency Break Glass (NO) — 1, 3	ALM-
Overwrite Keyswitch (NO) — B, D	NC
	COM
Push Release Button	NO
	BUT
	GND
	SEN
	BEL+
	BEL-
DC12V 3A Power Supply	GND
	+12V

▶ Diagram 3 • Other Accessories

Alarm Device (NO or NC) dry contact	ALM+
	ALM-
	NC
	COM
	NO
	BUT
	GND
Door Sensor	SEN
	BEL+
Doorbell	BEL-
DC12V 3A Power Supply	GND
	+12V

Door Lock Connectors

WIRING PORT	USAGE
ALM+ ALM-	**Alarm System** (NO or NC Type – Check in Advance Options)
NC NO	**Dry Contact** (independ-ent power supply for door lock) • NO type door lock (NO-COM) • NC type door lock (NC-COM) **Power Contact** (using power from terminal to power on door lock) • NO type door lock (NO-GND) • NC type door lock (NC-GND)
COM	**Dry Contact** (independ-ent power supply for door lock) • NO type door lock (NO-COM) • NC type door lock (NC-COM) **Power Contact** (using power from terminal to power on door lock) • COM1 - +12V
BUT GND SEN	**Door Sensor** (SEN-GND) **Release button** (BUT-GND)
BEL- BEL+	**Door Bell**

The terminal will trigger the alarm output (NO or NC) for the follow-ing situations:

• Door forced open (A door sen-sor must first be installed)

• Door open time out (A door sen-sor must first be installed)

• Terminal has been illegally dismantled

Appendix II
Terminal Dimensions and Measurements

Front View of Back Plate