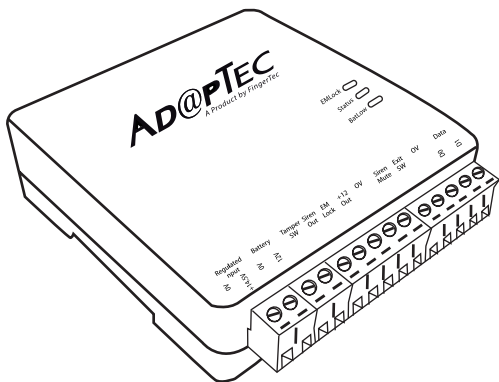


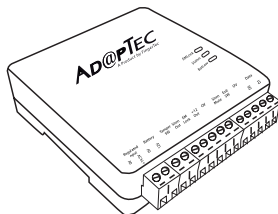
FINGERTEC



AD@PTEC-X

Installer Guide

Enhanced Security with **AD@PTEC-X**



AdapTec-X is a basic accessory suggested for FingerTec access control systems. It enhances access control functionalities as well as eases the installation process with its encrypted communication and secure I/O expansion features and all these features are compressed into a sleek casing to deliver a cost effective solution.

HOW ADAPTEC-X ENHANCES SECURITY

To provide you enhanced security, AdapTec-X will only recognize encrypted Wiegand signals from FingerTec terminals in order to unlock its doors. The code of the encrypted signals is written into the firmware of FingerTec terminals, which cannot be duplicated into other devices. This prevents hackers from bypassing this by simply providing the relay signal to AdapTec-X. Furthermore, separate power outputs for the door lock system and FingerTec terminals will keep the door locked even during any failures (i.e.: vandalism to terminals, etc.). For added security, a siren output port is ready to be linked up to alarms or sirens to produce alert sounds in case of forced door openings.

UNDERSTANDING ADAPTEC-X FUNCTIONS

Enhanced Security with Encrypted Signals

It supports FingerTec encrypted 26-bit Wiegand communication output; providing enhanced security level for extra protection.

Power Up Terminals & Door Lock Systems

A single AdapTec-X can support a maximum of 2 units of FingerTec terminals and 2 sets of door lock accessories such as the EM lock and drop bolt in one single system installation.

Prolonged Life Span of Hardware

With data encryption, the life span of the terminals can be prolonged without the risk of short-circuiting when using AdapTec-X.

Control IN/OUT Terminals at an Entrance

AdapTec-X is a perfect choice for an IN/OUT installation, where a door is controlled both at the entrance and the exit.

Supports Rechargeable Backup Battery

Connects well to any 12VDC rechargeable backup battery, providing power to ensure protection of access during any events of power failure.

Emergency Alerts with Siren

Compatible with an NC siren type with a maximum of 0.5A load for an emergency event e.g. if the terminal is being dismantled without authorization.

Seamless Integration with FingerTec Terminals

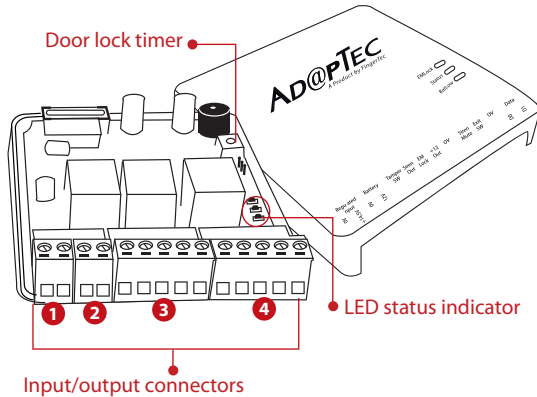
Mix and match the FingerTec terminals via AdapTec-X for a cost effective access control system suitable for small and medium sized offices.

UNDERSTANDING THE TECHNICAL SPECIFICATIONS

PHYSICAL APPEARANCE	
Surface finishing	Acrylonitrile Butadiene Styrene (ABS)
Dimension, mm	85 x 96 x 33
Weight, kg	0.1
CPU	High Performance RISC CPU
POWER SUPPLY	
Power input	12VDC 3A
Power output	12VDC 3A
Backup Power system	UPS or 12VDC Rechargeable battery
INPUT – OUTPUT SIGNAL	
Input signal	26-bit FingerTec encrypted Weigand signal
Output signal	12VDC 0.5A Siren 12VDC 3A EM output (NO/NC Type door locks)
ALERTS & NOTIFICATIONS	
Over input voltage	Yes, 3 long beeps
Door release	Yes, 2 short beeps
Door forced open	Yes, continuous beeps (May opt to output external siren system)
Illegal dismantling of FingerTec terminals	Yes, continuous beeps (May opt to output external siren system)
Door unlock timer	VR type, LED blinks to indicate unlock time in Seconds
On-Board LED indicators	EM LED lit up – Door lock output is working Status LED lit up – CPU is working Battery low LED lit up – Battery is low and cut-off
ON BOARD PROTECTION	
Over voltage alarm	>15 VDC
Fuses	PTC type
Battery cut-off	8.5 ~ 9.5 VDC

NOTE: Specifications are subject to change. Check <http://product.fingertec.com> for latest product information.

UNDERSTANDING THE DESIGN

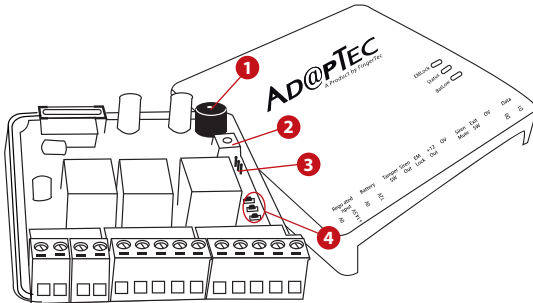


Input/output connectors

- 1 These cables connect to the DC12V power from the power supply.
- 2 These cables connect to a DC12V rechargeable backup battery. During a power failure, the backup battery will power up AdapTec-X.
- 3 These are the power output ports for AdapTec-X. Refer to the wiring diagram for details.
- 4 These are the Wiegand data input ports for the FingerTec terminals. Refer to the wiring diagram for details.

OTHER FEATURES

You will find a buzzer, 3 LED indicators, and a door lock timer on the board. Check and set each of them accordingly after powering up the system.



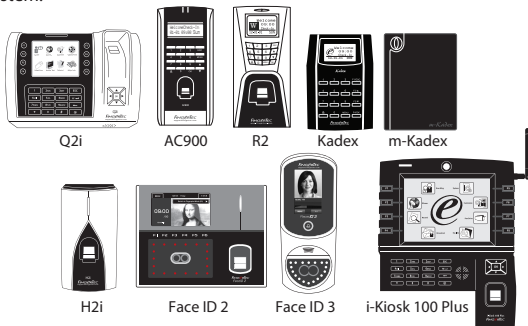
- 1** You will hear the buzzer beep to indicate
 - **Unlocked Door**
Door is unlocked and access is granted (during verification or pressing push release button).
 - **Over Voltage (After startup)**
Over voltage of power input (Stop the power supply to the system immediately and check the input voltage, consult support@fingertec.com)
- 2** Adjust the door lock timer for a longer or shorter unlocking time period by turning the screw clockwise. Count the LED blinks after turning it. Each blink represents 1 second and the recommended time period is 5 seconds (5 blinks).
- 3** A switch to select the type of door lock to use, NO type or NC type.
- 4** The LED lights up to indicate the following:
 - **EM lock LED** - The EM lock system is charged up and working properly.
 - **Status LED** - The overall system is working properly.
(Note: Contact support@fingertec.com if either of the above LED lights are not lit up.)
 - **Bat Low LED** - The battery is weak and needs to be charged or replaced.

DETAILS OF WIRING

AdapTec-X supports 2 types of installations, Convenient or Secure. You can select between modes by applying different wiring arrangements during installation. Under Convenient mode, AdapTec-X will unlock doors immediately after receiving responses from FingerTec devices. This feature is supported by all FingerTec models.

For installations using Secure mode, there will be a 1s time delay when unlocking the door after verification at FingerTec devices. This delay is due to the 26-bit Wiegand transmission of encrypted password from device to AdapTec-X. This is an optional security feature provided by AdapTec-X for users who favor more security (slight delay) over convenience (no delays).

AdapTec-X works with FingerTec terminals via an encrypted Wiegand signal to control the door open-close mechanism. Please make sure you are using the following FingerTec models that support the encrypted 26-bit Wiegand signal to work with the AdapTec-X to setup a door lock system:



Step 1 Look for the power input port on the FingerTec terminal. Normally the connection ports on the terminals are marked as PWR/+12V (red wire) and GND (black wire).

Step 2
Convenient Installation: Look for the door lock output port NO and GND from the terminal. Secure Installation: Look for the Wiegand output port, WDO (green), WD1 (white) and GND (black) from the terminal.

Step 3
Connect the wires from the terminals to AdapTec Plus.

Convenient Installation: See diagram 1, page 8 for details. Secure Installation: See diagram 2, page 8 for details.

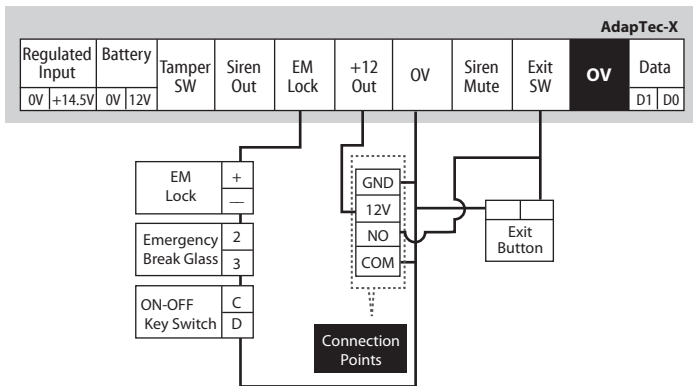
Step 4 Connect the wires from AdapTec-X to the door lock system. (See diagram 1, page 8 for details). (Ignore this if you only want to use the system for time attendance purposes)

Step 5 Connect AdapTec-X to a 12VDC rechargeable backup battery. (See diagram 1, page 8 for details). (This is optional. Ignore this if you do not need any backup power).

Step 6 Connect AdapTec-X to a power source (12VDC 3A).

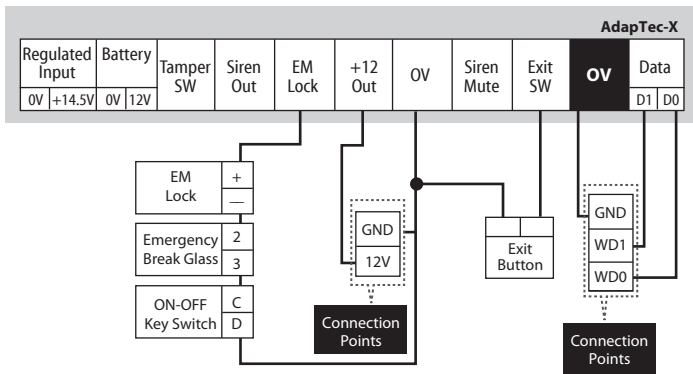
WIRING DIAGRAMS 1

CONVENIENT INSTALLATION



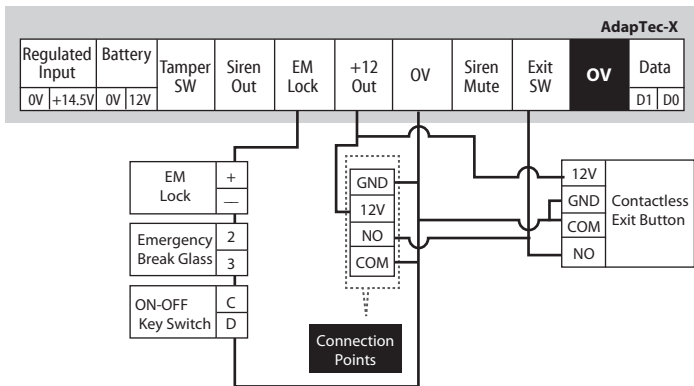
WIRING DIAGRAMS 2

SECURE INSTALLATION



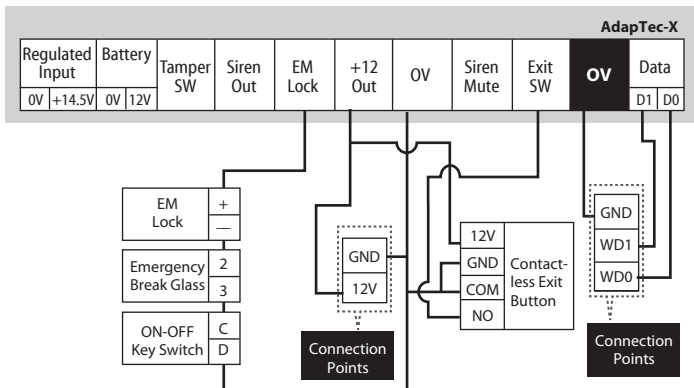
WIRING DIAGRAMS 1

CONVENIENT INSTALLATION FOR CONTACTLESS EXIT BUTTON



WIRING DIAGRAMS 2

CONVENIENT INSTALLATION FOR CONTACTLESS EXIT BUTTON



CONNECTING ADAPTEC-X TO AN ALARM SIREN



For all FingerTec door access control models, there is a security button behind the terminal. During normal operation, the security button is compressed and once the terminal is dismantled, the button will be released and a “System broken” message will appear onscreen.

During the release of the button, the terminal will output an alarm signal. However, no alarm sound will be emitted if the terminal is not equipped with an external siren. To use the siren feature, we recommend that you install an additional alarm siren and connect it to the FingerTec terminals.

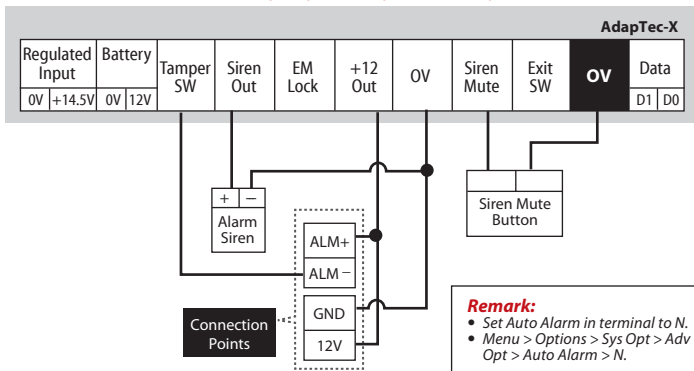
Benefits of Using AdapTec-X with Alarm Siren

We recommend that you install a terminal along with AdapTec-X if you plan to use the alarm siren. In AdapTec-X, an additional port is readily built to receive the alarm signal from the FingerTec terminals. AdapTec-X has an output of DC12V and it is suitable for use with an alarm siren that has the same power input. You do not need to source an additional DC12V power supply for this purpose. Furthermore, AdapTec-X comes with a “Siren Mute” button where you can press the button to deactivate the alarm siren when required.

WIRING DIAGRAMS

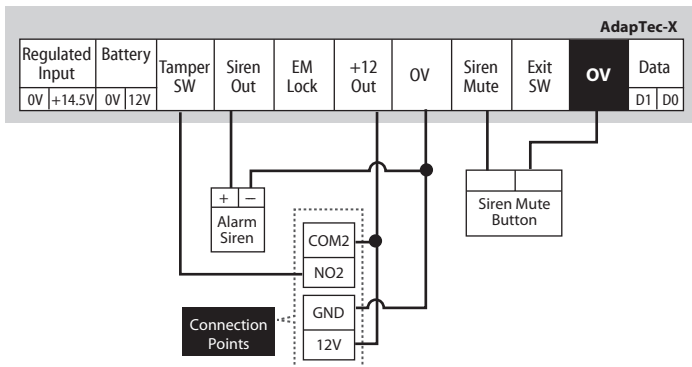
3

ALARM SIREN • AC900, R2, Kadex, m-Kadex, H2i and Face ID 3



WIRING DIAGRAMS **4**

ALARM SIREN • *Face ID 2, Q2i and i-Kiosk 100 Plus*



Deactivating the Alarm Siren:

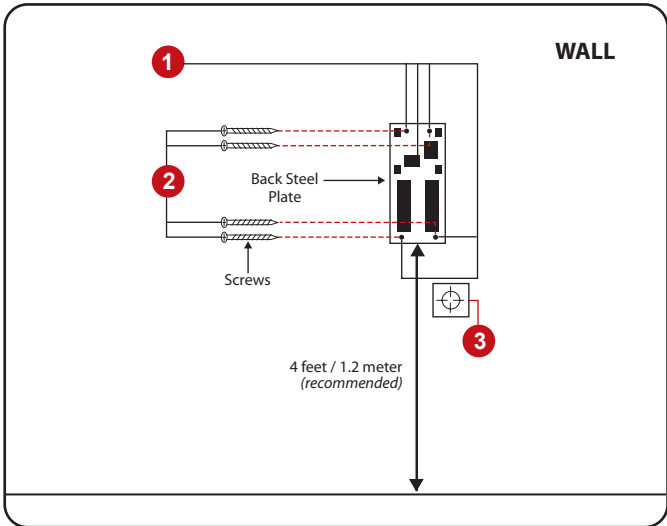
1. At the terminal, press Menu and select Turn Off Alarm to turn off the alarm siren.
2. To deactivate the alarm siren of AdapTec-X, press the Siren Mute Button that is connected to AdapTec-X.

This will turn off the alarm siren function in AdapTec-X.

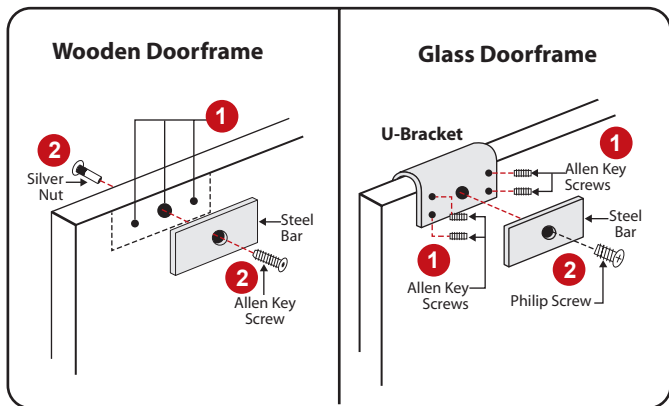
UNDERSTANDING ADAPTEC-X INSTALLATION FOR

- *Wooden Door or Glass Door*

The diagrams below only highlights the use of an EM lock during installation. You may opt to use a dropbolt/deadbolt/door strike instead. Please consult a qualified technician/installer before proceeding with the installation.



- 1 To install FingerTec AC900/R2 on a wall, drill 5 holes as shown. 4 small holes are for the screws and the bigger hole is for the network cable.
- 2 Tighten the 4 screws to fix the **Back Steel Plate** on the wall.
- 3 Install the keyswitch as per instructions given in the box. The keyswitch is an override key in case of a system failure or breakdown.

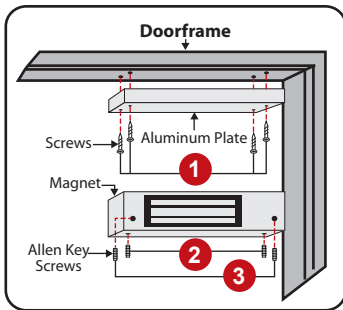


Wooden Door

- 1 Drill 3 holes on the wooden door.
- 2 Place the **Steel Bar** on the door. Insert the **Silver Nut** on one side and the **Allen Key Screw** on the other side. Tighten the screw to lock the **Steel Bar** onto its position.

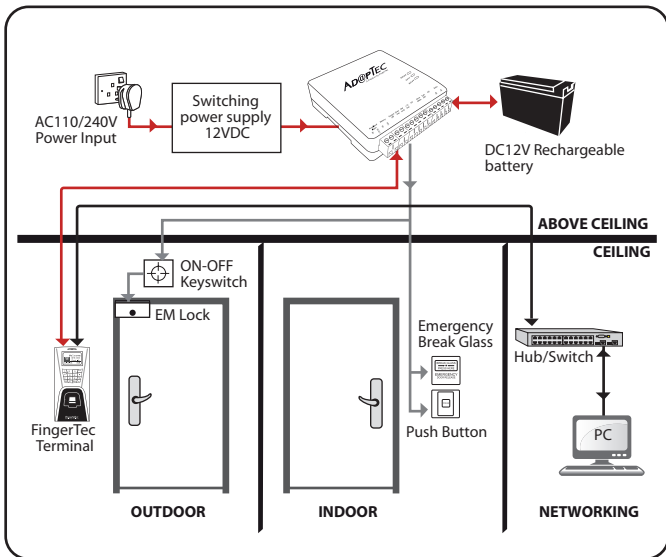
Glass Door

- 1 Lodge the **U-Bracket** into the upper edge of the glass doorframe. Tighten the 4 **Allen Key Screws** to hold the **U-Bracket** into position.
- 2 Place the **Steel Bar** on the side of the **U-Bracket**. Tighten the **Philip Screws** to lock the **Steel Bar** onto position.



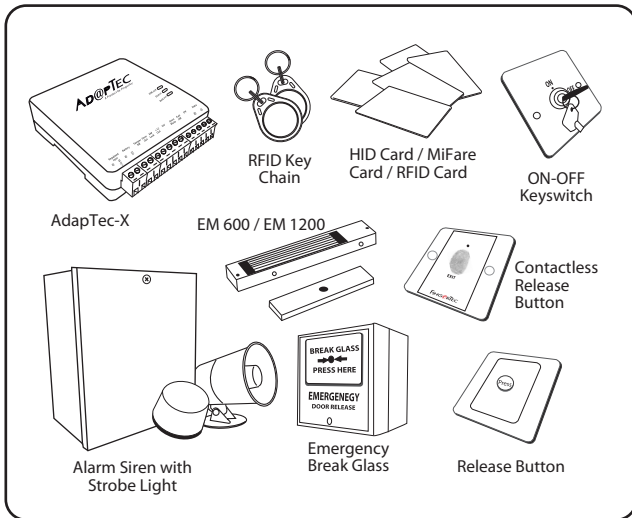
- 1 Drill 4 holes on the wooden frame. Tighten the 4 screws to fix the **Aluminum Plate** properly on the doorframe.
- 2 Use the Allen Key to tighten the 2 screws at the bottom of the **Magnet**. The **Magnet** will stick to the **Aluminum Plate** when the screws are tightened.
- 3 Use the Allen Key to tighten the other 2 screws on the sides of the **Magnet**.

OVERVIEW OF THE WHOLE SYSTEM INSTALLATION

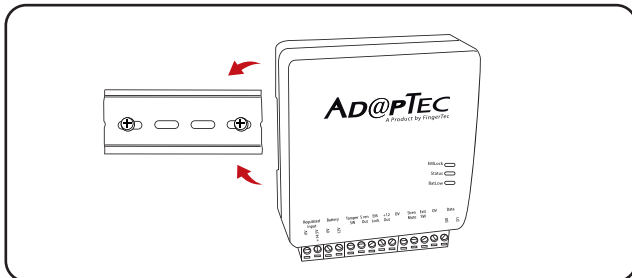


FINGERTEC ACCESSORIES

For more accessories, go to accessory.fingertec.com.



MOUNTING AN ADAPTEC-X ONTO A WALL



NOTE: Details in this manual are subject to change. Check <http://product.fingertec.com> for latest product information.

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