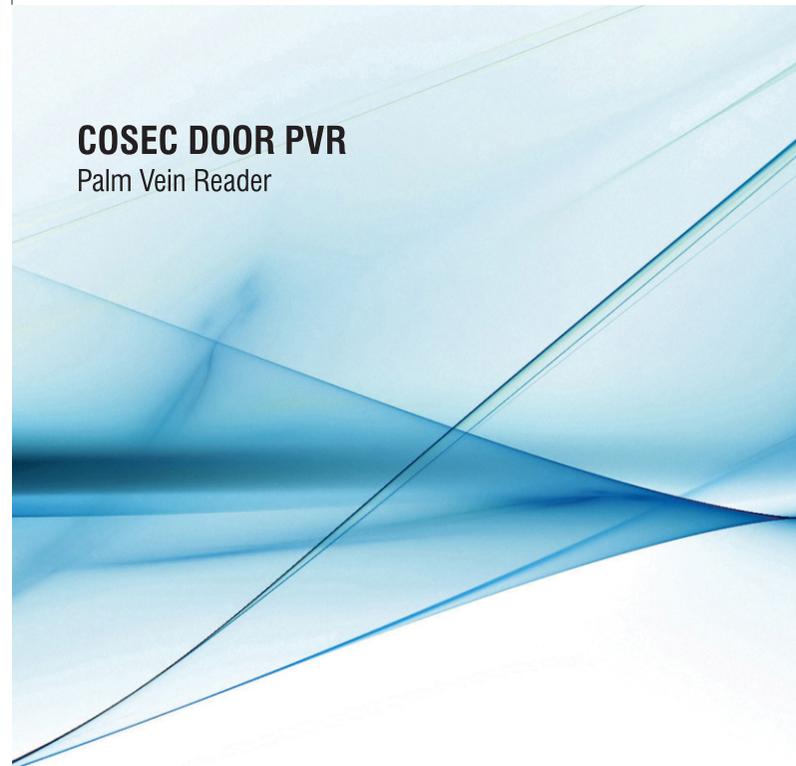




MATRIX COMSEC

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COSEC DOOR PVR
Palm Vein Reader

Quick Installation Guide

V.3.0, February '15



Technical Specifications

Credential Support	Card, Palm and PIN
User Capacity	10,000
Templates per User	Up to 2
Cards per User	2 (Any Type)
Palm Template Capacity	20,000 templates
Authentication Rate	FRR: 0.01%, FAR: 0.00008%
LCD	128 x 64 Dot-Matrix
Touch-Sense Keys	16
Verification Method	1:1, 1:N and 1:G
Type of Card	Smart and Proximity
USB	2 ports (1 for Data Transfer, 1 for 3G/2G)
Communication	Ethernet/Wi-Fi/Mobile Broadband
Events Buffer	1,00,000
Communication Speed	10/100Mbps on Ethernet
External Reader	1 Port for Card Reader
External Reader Interfaces	RS-232 and Wiegand
Exit Switch Port	Yes
Door Status Sense	Programmable NO, NC, Supervised
Door Lock Relay	Relay SPDT, Form C, 1A@30VDC
Door Lock Power	Internal 12VDC@0.5A or External
Auxiliary Input Port	Programmable NO, NC, Supervised
Auxiliary Output Relay	Relay SPDT, Form C, 1A@30VDC
Tamper Detection	Yes
Buzzer	Yes
LED Indication	4 LEDs (Status, Alarm, Allowed and Denied)
CPU	1 GHz ARM Cortex A8 based processor
Memory	256 MB Flash + 512 MB DDR3 RAM
Input Power	12VDC@2A
Dimensions (WxHxD)	100 × 220 × 55mm (3.9" × 8.7" × 2.2")
Weight	0.49Kg (1.07Lbs)
Environment	0° C to +50°C (32°F to 122°F), 5% to 95% RH Non-Condensing

Please read this guide first for correct installation and retain it for future reference. The information in this guide was current at the time of publication. However, Matrix Comsec reserves the right to make changes in product design and specifications without prior notice.

Trademarks

COSEC DOOR PVR is a product of Matrix Comsec Pvt. Ltd. The brand name PalmSecure™ referred to in this document is a registered trademark of Fujitsu and is hereby acknowledged.

Warranty

Limited Warranty. Valid only if primary protection is provided, mains supply is within limit and protected, and environment conditions maintained within product specifications.

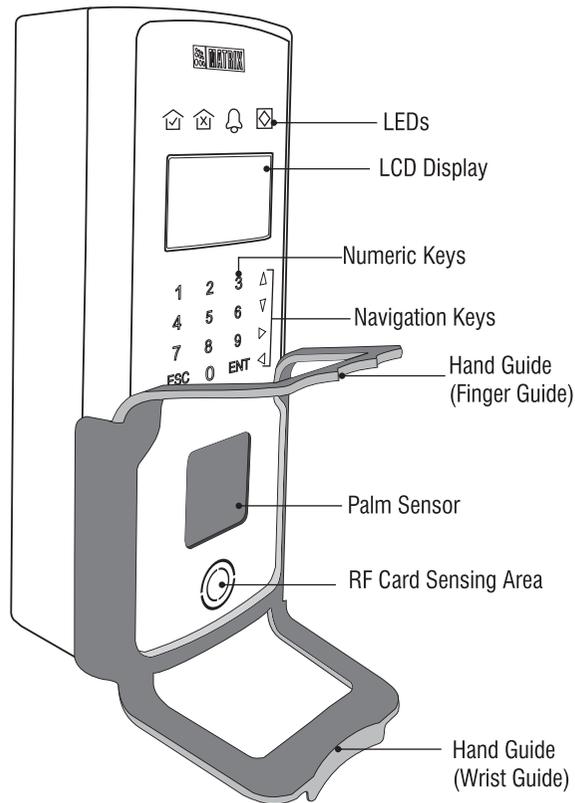
Complete warranty statement is available on our website:

www.MatrixSecuSol.com

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COSEC DOOR PVR - Front View



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- On the **PVR Door Parameters** page that will open, go to **Configuration Parameters**, enter the **MAC Address** of the DOOR.

For detailed instructions read the topic 'Network Options' in the COSEC System Manual or use the **Help** provided on the COSEC Application user interface.

After you have successfully added the door, the door will go online. The Network LED will turn green to indicate that the door is online, connected to the monitor.

Step 7 Enroll Users

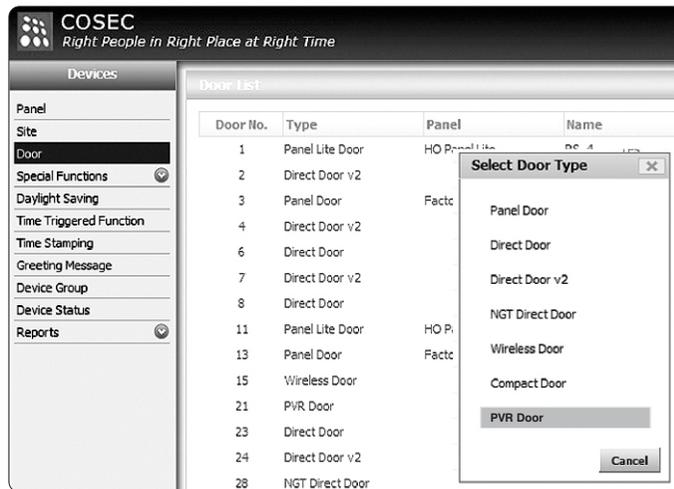
- Create Users on the COSEC Server.
- Assign Users to COSEC DOOR PVR.
- Enroll Users' Palm templates, from the COSEC DOOR PVR display or Webpage or the COSEC Server.

Refer the **COSEC DOOR PVR Palm Enrollment Guide** for instructions on how to enroll users and their palms.

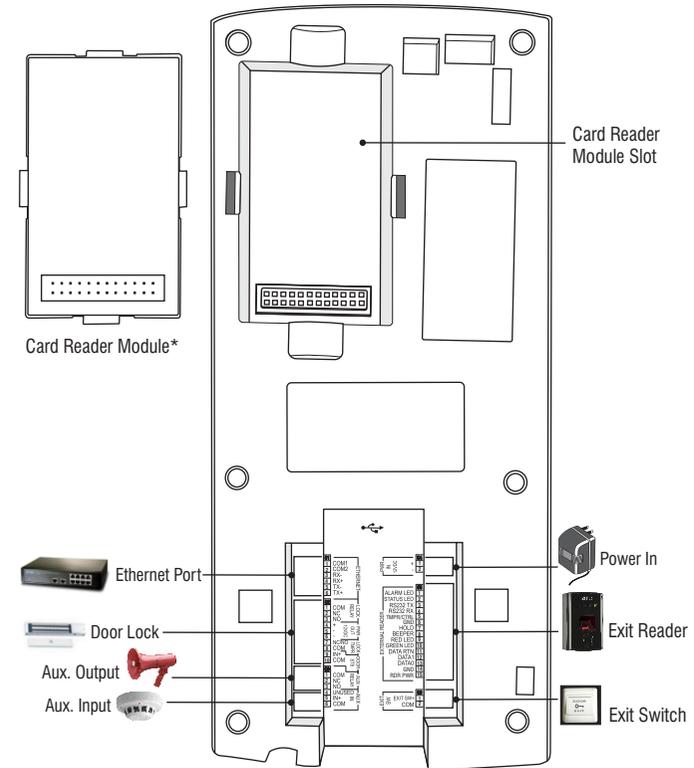
25

Configuring the COSEC DOOR on the COSEC Server

- Open the COSEC Server application on a browser.
- Go to **Devices > Door > Add Door**
- In the **Select Door Type** list, select **PVR Door**.

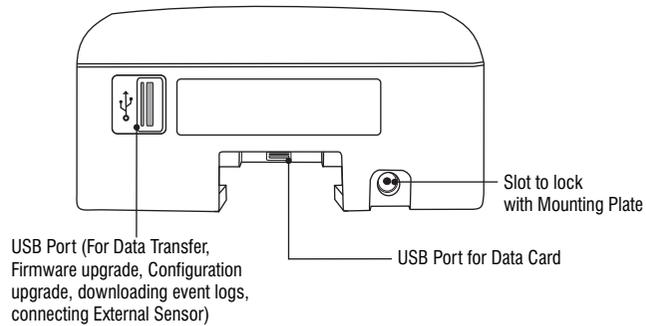


COSEC DOOR PVR - Back View



*Not included in package.

COSEC DOOR PVR - Bottom View



What Your Package Contains

- COSEC PVR Unit
- Mounting Plate
- Hand Guide
- Power Adapter 12V DC, 2 Amp
- Four Screws M 7/30
- Four Screw Grips
- A Threaded Screw M 3x5
- Power Supply Cable with DC jack
- Ethernet Port Cable with RJ45 plug

- Auxiliary Port Cable
- Electromagnetic Lock Cable
- Exit Switch Cable
- External Sensor*
- USB Cable*
- Quick Installation Guide
- Palm Enrollment Guide
- Warranty Card

*Available only with COSEC Door PVR ES variant.

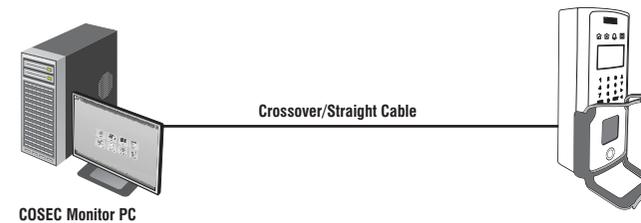
Things You Will Need

- A power hand drill
- A wire stripper
- A screw driver set
- Insulation tape
- Access to the COSEC Server Application to configure COSEC DOOR PVR on the Server.
- A stand-alone computer with a Web-browser to change the network settings of COSEC DOOR PVR.

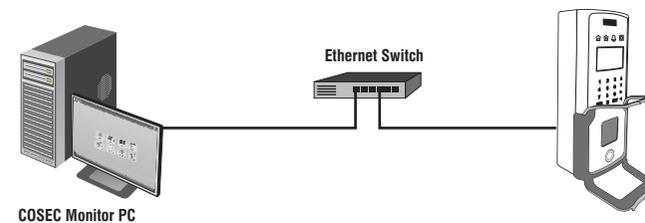
- If you are using Wi-Fi as communication interface, configure **Wi-Fi Network Settings** and **Wi-Fi Access Point Settings**.
- If you are using Mobile Broadband, configure **Mobile Broadband** settings.
- Click the **Submit** button to save your settings.

Connecting to the Monitoring Computer

You can connect the COSEC DOOR PVR either directly to the monitoring computer using an Ethernet Crossover/Straight cable.



You can connect the COSEC DOOR PVR and the monitoring computer to an Ethernet Switch or hub using standard straight-through Ethernet cables.



- On the welcome page, under **Settings** on the left navigation bar, click **Network Settings > LAN Settings**.
- In **LAN Settings**, note down the MAC address of the COSEC DOOR.
- Enter the **IP Address** of the DOOR.

MATRIX COSEC DOOR PVR	
Settings	Network Settings
Network Settings	LAN Settings
Date-Time Settings	IP Address: 192.168.102.157
Users	Subnet Mask: 255.255.255.0
Manage	Default Gateway: 192.168.102.1
View	Preferred DNS: _____
	Alternate DNS: _____
	MAC Address: 00:1b:09:ab:dd:09

- If required, change the **Subnet Mask**, configure the **Gateway IP Address**, the **Preferred** and **Alternate DNS**.
- Click **Submit** to save your settings.
- Under **Network Settings**, click **Server Communication**.
- In **Network**, select the appropriate network communication interface for the door: **Ethernet, Wi-Fi or Mobile Broadband**.

MATRIX COSEC DOOR PVR	
Settings	Network Settings
Network Settings	LAN Settings
Date-Time Settings	Wi-Fi Network Settings
Users	Wi-Fi Access Point Settings
Manage	Mobile Broadband
View	Server Communication
	Connectivity: Offline
	IP Address: 192.168.102.78
	Host Name: _____
	Port: 11000
	Network: Ethernet

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WARNING

- Installation and servicing should be done only by a qualified technician.
- There are no user-serviceable parts inside.
- Opening or removing the device cover may result in electric shock or exposure to other hazards.
- Use this product only for the purpose for which it was designed.

Step 1 Prepare for Installation

- Unpack COSEC DOOR PVR and check your package contents.
- Select a Location. It must be a flat surface such as a wall, close to the access point (door).
- You can mount the COSEC DOOR PVR directly to the wall or to an electrical box recessed in the wall (recommended).
- Recommended height from ground level: 4.5 to 5 feet.



CAUTION

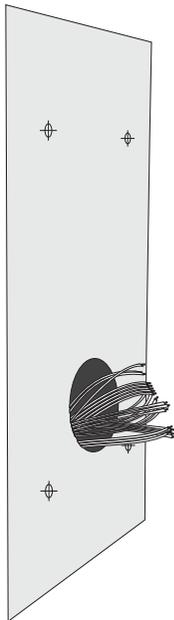
Do not install the device:

- On unstable surfaces
- In very hot, cold and humid environment temperatures
- Near heating/air conditioning equipment
- In dusty environment
- In direct sunlight
- Under direct light of incandescent or halogen lamps
- Near infra-red radiation emitting equipment
- Where ferromagnetic field or noise is induced
- Where static is created, such as desks made of plastic, carpets
- Near volatile inflammable materials or inflammable goods such as drapes
- Where volatile gas and/or inflammable gas is created

- Decide what connections you need to make to the COSEC PVR door controller. Make sure all the necessary cabling is in place. Concealed wiring recommended.

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- Place the Mounting Plate on the installation surface.
- Trace out the screw holes on the wall along the holes on the Mounting Plate (figure 1).
- If required, trace out the rectangular hole of the Mounting Plate.
- Remove the Mounting Plate.
- Drill four screw holes along the markings you traced on the wall. Cut out the rectangular hole on the wall.
- Insert the screw grips into the holes you drilled.
- Fix the Mounting Plate on the installation surface with the four supplied screws (figure 2 and 3).



8 **Figure 1**

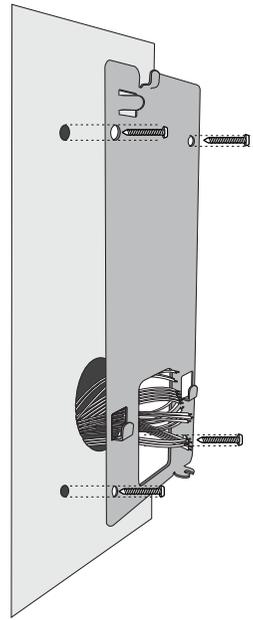


Figure 2

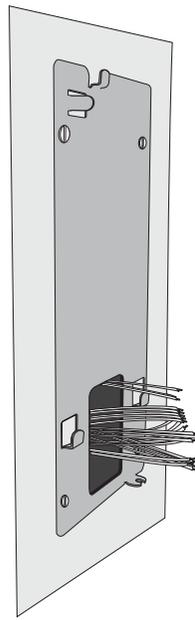
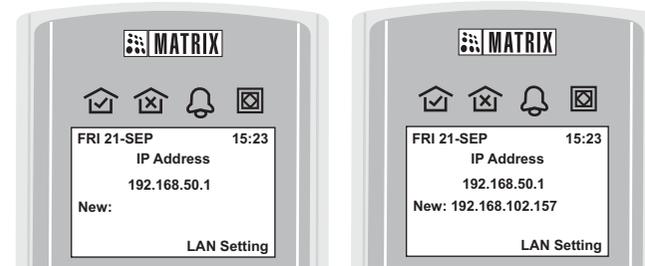


Figure 3

- Enter IP Address using the numeric keys

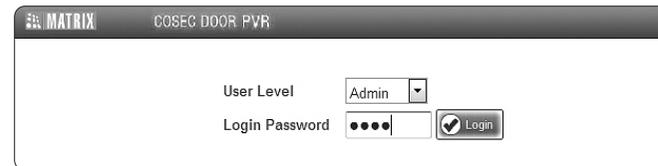


- Similarly, if required, you may change the **Subnet Mask** and enter the **Gateway IP Address**, configure the **DNS**.

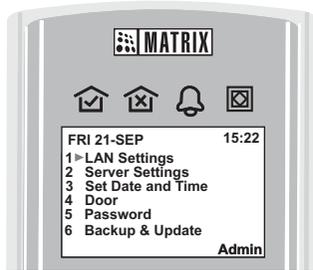
Configuring Network Settings from the DOOR Webpage

Connect a stand-alone computer/laptop to the Ethernet port of COSEC PVR.

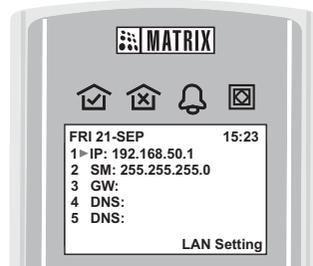
- Open the Web-browser on your computer/laptop.
- Enter the default IP Address of the Door, **http://192.168.50.1** in the address bar of the browser and press the Enter key on your computer keyboard.
- The Door Web-page will open.
- In **User Level**, select **Admin**.
- In **Login Password**, type the default admin password **1234**, and then click **Login**.



- Press **ENT**.
- Scroll with the ▼ navigation key to **LAN Settings**.
- Press **ENT**.



- Move the cursor to **IP Address** and press **ENT**.



Step 2 Connect the Cables

- If your wiring is from behind the surface/through an electrical box, first draw out sufficient length of the cables from rectangular hole you have cut on the mounting surface.
- Make the electrical connections.
- Refer the wire color code mapping for the terminals (figure 4).

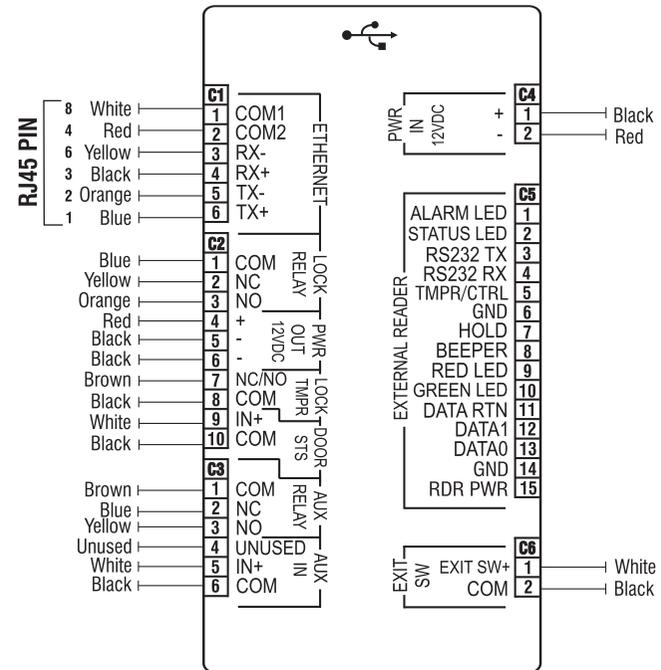


Figure 4

Power

- Insert the power supply cable (2-pin connector with a DC jack on one end) into the power terminal 'PWR In (C6)'. Care must be taken to maintain the correct polarity.
- Connect the power adapter to the DC jack. Plug the adaptor into a power outlet.

If connecting Matrix PSBB-Universal Mains Power Supply (13.8 VDC@2A) with battery backup to the PWR In terminal, be sure to maintain correct polarity.



CAUTION

Do not apply Power to the unit until you have completed all the connections.

Ethernet

- Connect the Ethernet cable (with RJ45 plug at one end) into the 'ETHERNET' terminal (C1).

Door Lock

- Use the electromagnetic door lock cable (10-pin connector at one end and free at the other) to connect a Door Lock to the Door Lock terminal (C5).



NOTE

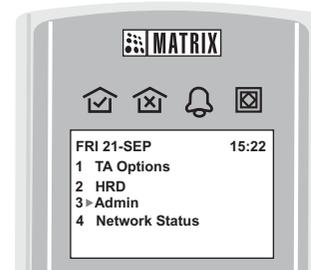
- Always use a standard hydraulic door closer to ensure that the door closes automatically after an entry or exit. This is to prevent "door open too long" or "door left open" alarms.
- The NO or NC output can operate DC-powered locking devices like electro-mechanical strikes and magnetic locks. The maximum permitted current is 500 mA @ 12VDC per output.
- If you are using a lock of higher capacity, you must use an external 12/24 VDC power supply, according to the technical specifications of the magnetic lock.

Configuring Network Settings from the DOOR Display

★ It is recommended to use DOOR display to configure the Network settings.

To access network settings from the door display menu,

- Press **ENT**.
- Scroll with the ▼ navigation key to **Admin**.



- Press **ENT**.
- Enter the default Admin Password **1234**.



NOTE

You can also select menu options by entering the numbers corresponding to each option.

The Matrix Comsec Logo will appear on the display, with a long beep. The following information will appear on the LCD of the device

- The Software Version-Revision
- The MAC Address
- The IP Address (default)
- The Current Date

Make note of the MAC Address. You will need it to connect it to the COSEC monitoring computer.

Step 6 Connect the COSEC DOOR PVR to the Network/COSEC Server

The COSEC DOOR PVR can be connected to the network over Ethernet, Wi-Fi, and Mobile Broadband.

The COSEC DOOR PVR is pre-configured with a default IP address and Subnet Mask.

Default IP Address: 192.168.50.1

Default Subnet Mask: 255.255.255.0

You need to change the IP Address to connect the Door to the network. You can do this in one of the following ways:

1. From the DOOR display
2. From the DOOR Webpage

Ask your network administrator for an IP Address for the door. Also ask your network administrator, if you will need to change the Subnet Mask, or configure Gateway IP Address and DNS.

- To use the 12VDC of the Door, short the terminals COM (C5-1) and +ve (C5-4) as shown in figure 5, before connecting the NC/NO and the -ve terminal (C5-5) to the Door lock.

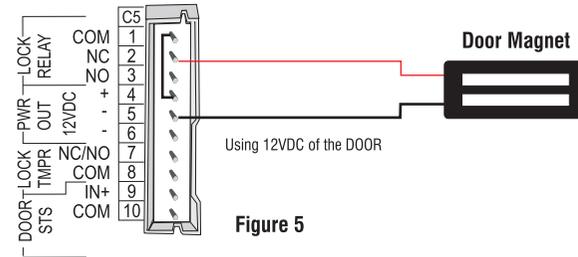


Figure 5

- To connect a lock of higher capacity using external power supply, connect the wires as shown in the figure below, considering the technical specifications of the magnetic lock.

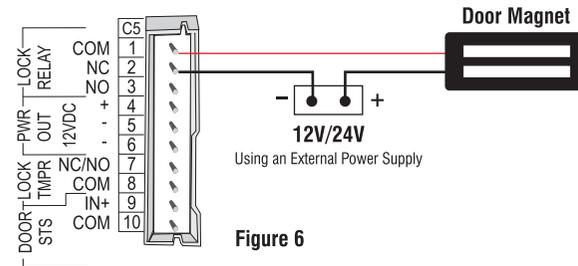


Figure 6

Exit Switch

- If you are using an exit switch to open the door lock, connect the exit switch cable (2-pin connector on one end and free on the other) in the 'EXT SW' terminal (C3).

Auxiliary Input

- If you are connecting a sensor for detecting alarm conditions, connect the wire pair from the sensor device to the auxiliary input port 'AUX' (C4).

Auxiliary Output

- The Auxiliary output port can be used for activating alarm devices like hooter; energize some devices; control annunciation devices.
- If you are connecting an alarm device like a hooter or an annunciation device, connect the wires from the alarm devices to the 'AUX RELAY' (C4).

Exit Reader

- COSEC DOOR PVR supports external Serial and Wiegand reader. The maximum recommended length of wiring for exit readers is 500 feet.
- Connect a Serial or a Wiegand reader to the 'EXTERNAL READER' terminal (C2).

RF Reader

- If you have ordered an RF Reader module, insert the module, matching the connector pins on the module with those provided on the Card Reader slot.



WARNING

Do not leave unused wires with stripped ends free. Seal them with insulation tape.

Step 3 Mount COSEC DOOR PVR

- After you have completed all the electrical connections, lead all the cables through the rectangular hole into the electrical box recessed in the wall (figure 7).
- Attach the COSEC DOOR PVR to the mounting plate you fixed on the wall.

[If your wiring is not concealed, lead all the cables through the bottom of the device before you attach it to the Mounting Plate.]

Step 5 Power On Device/COSEC DOOR PVR

- Apply power to COSEC Door PVR and wait for the reboot cycle to complete.

LEDs



Allowed



Denied



Alarm



Network

LED Indications at Power On

- At power on, all four LEDs will glow and will be turned off.
- At the end of reboot cycle, they will flash once and then will be turned off.
- The 'Network' LED will start blinking with regular cadence indicating the current network connection status as shown in the table below.

LED	Color	Cadence	Meaning
Network	Red	Blinking	No Ethernet connection
	Orange	Blinking	Ethernet connection on, but not connected to COSEC Server
	Green	Blinking	Door is connected to the COSEC Server

LED Indications for Events in Normal State

LED	Color	Cadence	Meaning
Allowed	Green	Continuous ON	User Authenticated, allowed. Accompanied by a long beep.
Denied	Red	Blinking 200ms on - 200ms off	User Authentication failed, denied. Accompanied by three short beeps.
Alarm	Red	Blinking 200ms on - 200ms off	Major Alarm
	Red	Continuous ON	Critical Alarm

- Install the hand guide in a vertical or horizontal position, in the required location (figure 12).

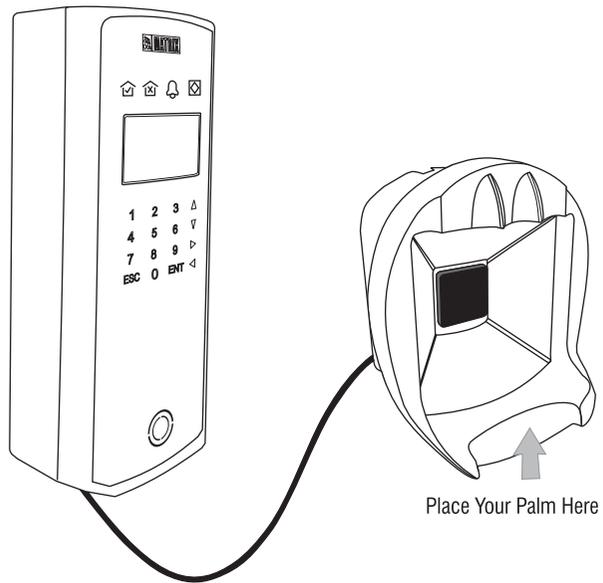


Figure 12

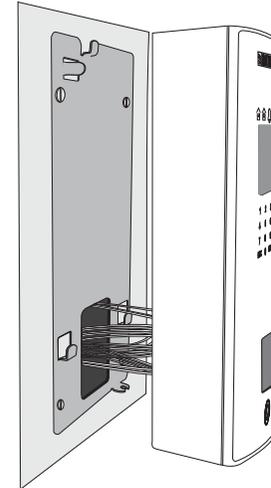


Figure 7

- Match the mounting hooks (A, B, C, D, E) on the plate with the respective mounting slots (1, 2, 3, 4, 5) at the back of the device. Refer figure 8.
- Tilt the device to allow mounting hook A into slot 1. Straighten the device and then slide it down on the plate (figure 9).
- Use the M 3x6 screw provided to you to secure the bottom mounting slot on the plate. Match E to 5 as in figure 8.

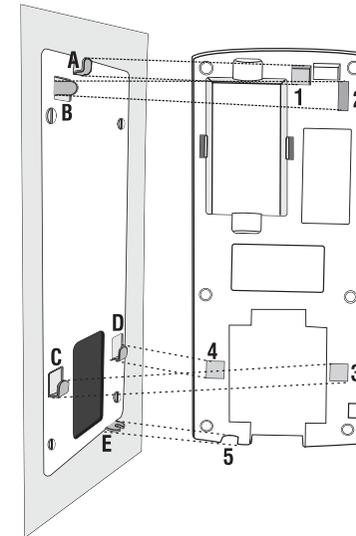


Figure 8

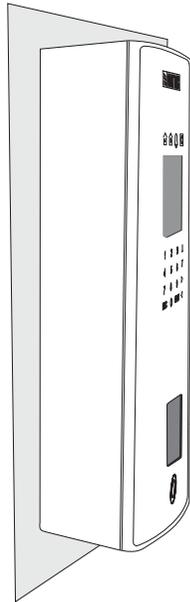


Figure 9

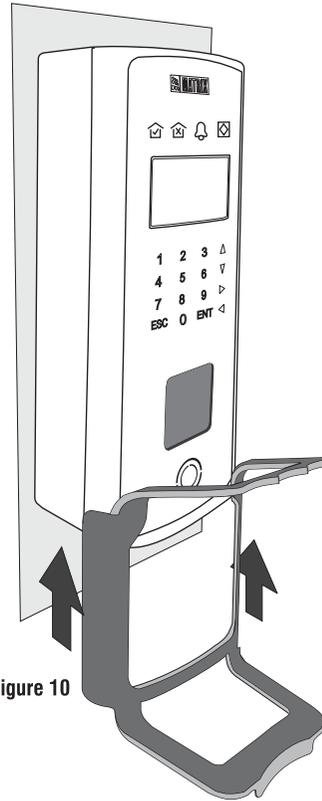


Figure 10

Step 4 Fix the Hand Guide

- Grasp the hand guide, with the finger guide and wrist guide facing you.
- Press to align the hand guide to the sides of the enclosure (figure 10).
- Slide the hand guide from bottom up (figure 10). The notches on the hand guide will get locked at the appropriate location.

Fixing External Sensor & Hand Guide (For COSEC Door PVR ES only)

- Connect the external sensor to the COSEC Door PVR ES using the USB cable provided in the package contents (figure 11).
- With the finger and wrist guides facing you, insert the sensor into the square slot provided on the reverse side of the hand guide (figure 11).
- Press lightly to lock the sensor in its position.

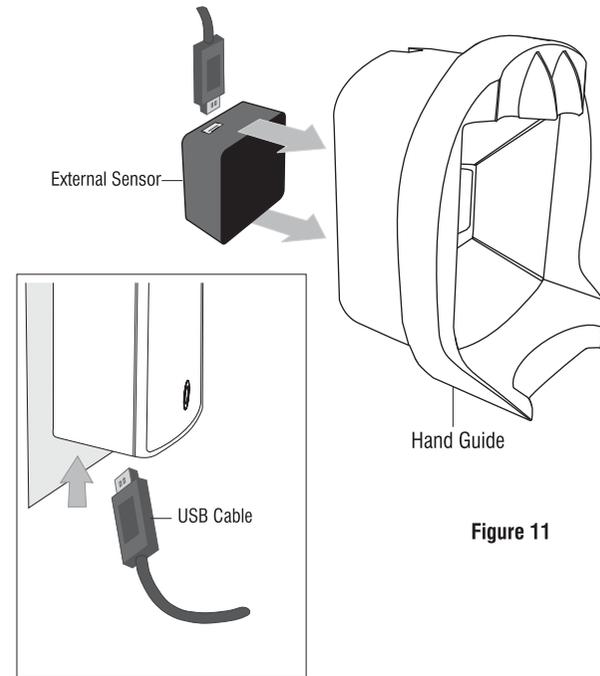


Figure 11