1. Equipment Installation

(1) Post the mounting template on the wall. Drill the holes according to the marks on the template (holes for screw and wiring).

(2) Remove the screw on the bottom of device.

(3) Take away the back cover.

(4) Fix the back cover on the wall according to the mounting paper.

(5) Fix the device to the back cover.

(6) Fix the screw.

2. Structure and Function

Access Control System Function:

(1) If a registered user verified, the device will export the signal to unlock the door.

(2) Door sensor will detect the on-off state. If the door is unexpected opened or improperly closed, the alarm signal (digital value) will be triggered.

(3) If the device being illegally removed, the device will export alarm signal.

(4) External card reader is supported.

(5) External exit button is supported; it is convenient to open the door inside.

(6) Supports RS485, TCP/IP modes to connect with PC. One PC can manage multiple devices.
E-FACS Fingerprint Access Control System

3 Wiring

**E-FACS Wiring Harness**

- **SEN** (White)
- **COM2** (Orange)
- **BUT** (Gray)
- **NO2** (Green)
- **GND** (Black)
- **NC1** (Yellow)
- **485+** (Purple)
- **485-** (Brown)
- **NO1** (Blue)

**VIEW OF REAR OF E-16D**

- **DIGITAL IN**
  - 5: +12V
  - 6: +12V
  - 7: +12V
  - 8: +12V

- **AUX PWR**
  - +12V

**Use min. 26AWG stranded wire up to 1000 Ft. for DIGITAL IN connections only**

- **GND** (Black)
- **12V** (Red)

**Power source options:**

1. 12V and Gnd of Digital In 8 (not 1-7)
2. 12V and Gnd of Aux Pwr terminals
3. External 12V 1A power supply

**VIEW OF TERMINALS ON E-5D**

- **COM1**
- **N.O. 1**
- **COM2**
- **SEN**

**Authorized entry switch closure**

- **Alarm contacts for unauthorized access attempt**

**E-FACS Wiring Harness**

**VIEW OF TERMINALS ON E-2D**

- **COM1**
- **N.O. 1**
- **COM2**
- **SEN**

**Authorized entry switch closure**

- **Alarm contacts for unauthorized access attempt**

**E-FACS Wiring Harness**

**Door Lock**

**Power Wire Gauge Recommendations**

<table>
<thead>
<tr>
<th>Max. Length (Ft)</th>
<th>AWG</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>26</td>
</tr>
<tr>
<td>400</td>
<td>24</td>
</tr>
<tr>
<td>700</td>
<td>22</td>
</tr>
<tr>
<td>1000</td>
<td>20</td>
</tr>
</tbody>
</table>

For best performance, use stranded wire.

The E-FACS requires 200mA @ 12VDC to operate.

The E-FACS RFID frequency is 125KHz and the standard transmission power is 72dBµA/m maximum.
E-FACS APPLICATION WITH E-ACK KEYPAD ADDED.

This wiring method utilizes an E-ACK Keypad to activate the "Exit Button" feature of the E-FACS for door lock control.

E-ACK TERMINALS

VIEW OF REAR OF E-16D

E-16D Power source options:
1. 12V and Gnd of Digital In 8 (not 1-7)
2. 12V and Gnd of Aux Pwr terminals
3. External 12V 1A power supply

Digital In

Use min. 26AWG stranded wire up to 1000 Ft. for DIGITAL IN connections only

E-FACS Wiring Harness

Authorized entry switch closure

Alarm contacts for unauthorized access attempt

NO2 (Green)
NC1 (Yellow) 485+ (Purple) 485- (Brown)
COM2 (Orange)
BUT (Gray)
GND (Black)
COM1 (Red)
NO1 (Blue)

Power Source

Output Relays

Not Used

Power Source

Door Lock

12V (Red)