



# IDTWALLMOUNT™ HARDWARE MANUAL

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# Part I

## Introduction

## 1. Introduction

IDT Wallmount™ - The only true Physical Access Control recognition terminal using the cutting edge of biometric authentication technologies – Multi Spectral Imaging (MSI) Finger reader.

The IDT Wallmount™ and the accommodating IdentityManage™ software offer an Identity Management solution including the managing of Zones, Groups, Time Zones, privileges, restrictions, anti-pass back, interlocks, alerts and more for a total site control.

### 1.1. Overview

IDT Wallmount™ is the perfect basis for a complete access and identity management solution performing identification in the harshest environments.

This Modular Physical Access Control Terminal allows for simple interoperability between hardware and software modules, different algorithms and biometric technologies and is offered in a rugged, elegant design, with the industry's required interfaces, enhanced security and convenience.

The IDT Wallmount™ operates as a standalone PAC or as part of a networked Access control solution, allowing for complete modularity and interoperability between all IdentityTech and third party software and hardware using our IDT-SDK.

Internal / External processing options using the IdentityTech Octopus™ controller for the only true Real-Time Operating system solution to market. Octopus™ allows a two door, four reader control using encrypted protocols for a total secured controlled environment.

### 1.2. General features

- Full stand-alone capabilities
- On board two sensor management – IN/OUT
- Internal SQLite db.
- Easy integration into third party hardware and software.
- Critical information is Secured and encrypted.
- Encrypted communications.
- IP65, Anti Vandal with Tamper alerts.
- Robust design- anti vandal casing.
- Full feature Capacitive Touch Screen
- Real Time Clock
- Function memory capabilities
- Easy installation kit
- 1 GHz processor
- TCP/IP
- 1 Gb NAND Flash
- Door status input
- 2 Gb DDR
- Exit push button interface
- POE

- Break glass interface
- Full Audio
- CMOS camera input
- Power LED interface for video capture
- On Board Modem
- Analog camera input
- Video out
- 3.5" capacitive touch screen support
- Support Finger Print, Facial & Palm Vein
- Wiegand IN/OUT (26-64 Bit)
- 2 power sources - power supply, POE
- USB host
- RS232/485
- On board relay unit
- Wiegand IN/OUT (26-64 bit formats)
- Operating temperature -30 to +70 C

### 1.3. Operational modes

- Multi Factor Authentication
- Identification and Verification.
- Integrated contactless smart cards reader (IClass or Mifare) or Integrated proximity card reader (HID ProxPoint or Roslare)
- 1:1 Verification – Smart card serial number, template on card, external reader.
- 1:N Identification - 10,000 users
- Custom database sizes available upon request.
- Server / Client software with unlimited users available.

### The IDTWallmount™ support also different Access Modes

- Fingerprint only
- Smart card only
- Proximity card only
- PIN Only
- Smart card or fingerprint
- Proximity card or fingerprint
- PIN or Fingerprint
- Smart card and fingerprint
- Proximity card and fingerprint
- PIN and Fingerprint
- Smart card or PIN or Fingerprint
- Proximity card or PIN or Fingerprint
- Smart card and PIN and Fingerprint
- Proximity card and PIN and Fingerprint

The IDT Wallmount™ also support a different controlled door states and statuses

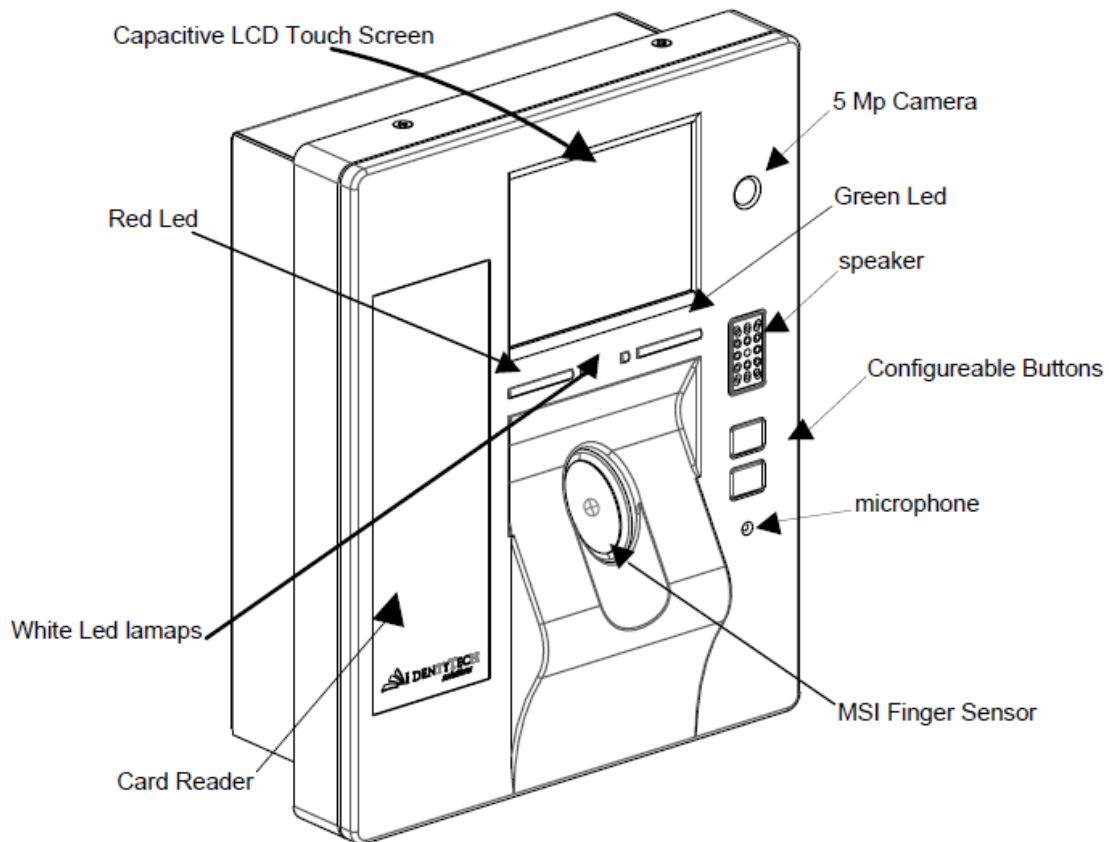
- **Strike Time** - the time duration that the strike relay will be energized for in the case of an access grant
- **Held Open Time** - after an access grant and a subsequent opening of the door contact, the time in which the door contact must be closed before an alarm state is reported
- **Forced Open Time** - the door status changed , without any access granted activity forced open alarm is generated

## Part II

# Hardware layout

## 2. Terminal layout

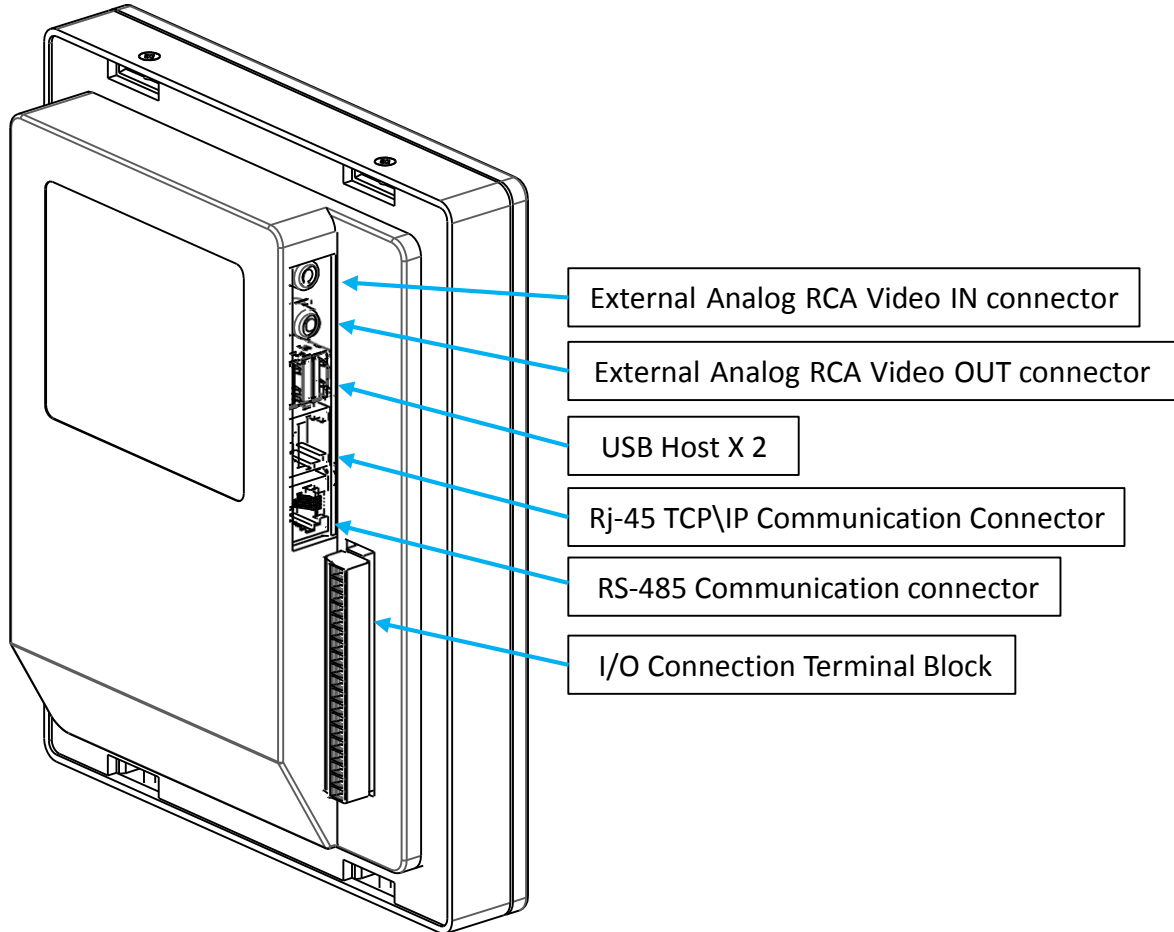
### 2.1. Terminal front view



#### Terminal Front Elements

- Multi-Spectral fingerprint sensor
- Build in 5 Mega Pixel Camera
- Capacitive LCD Touch Screen
- Configurable Buttons
- Microphone & Speaker
- Integrated card reader
- Red LED
- Green LED
- White LEDS

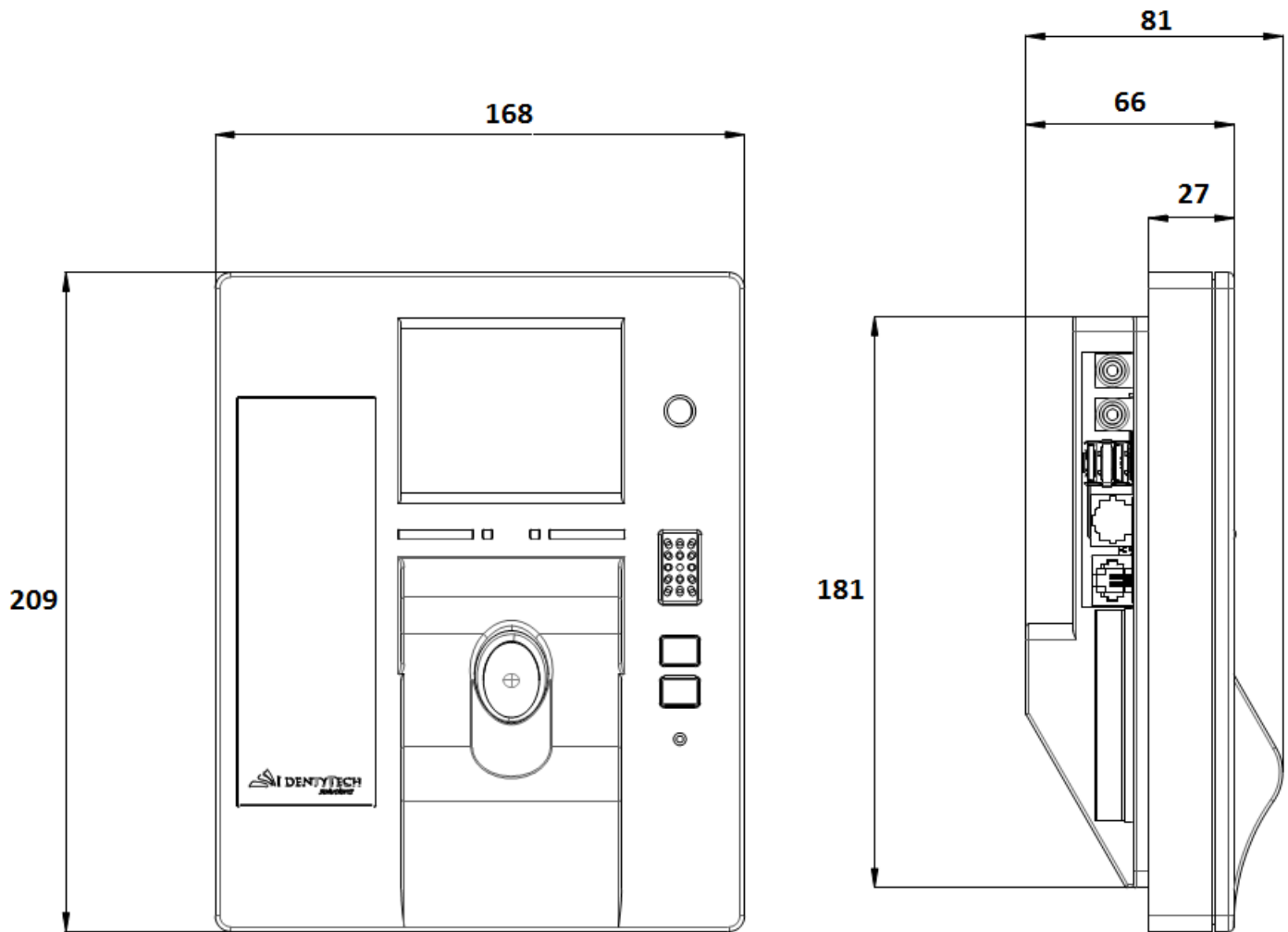
## 2.2. Terminal back view



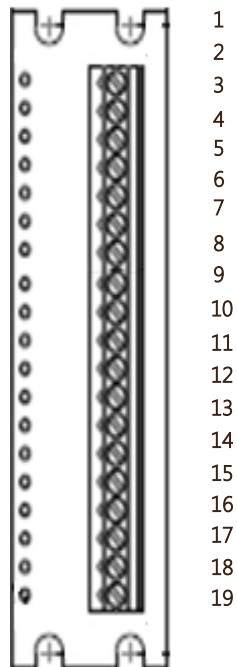
### Terminal Back Elements

- External Analog RCA Video IN connector
- External Analog RCA Video OUT connector
- USB Host X 2
- Rj-45 TCP\IP Communication Connector
- RS-485 Communication connector
- I/O Connection Terminal Block

### 2.3. Terminal dimensions



## 2.4. I/O Connection Terminal Board



### I/O Terminal Board Connectors

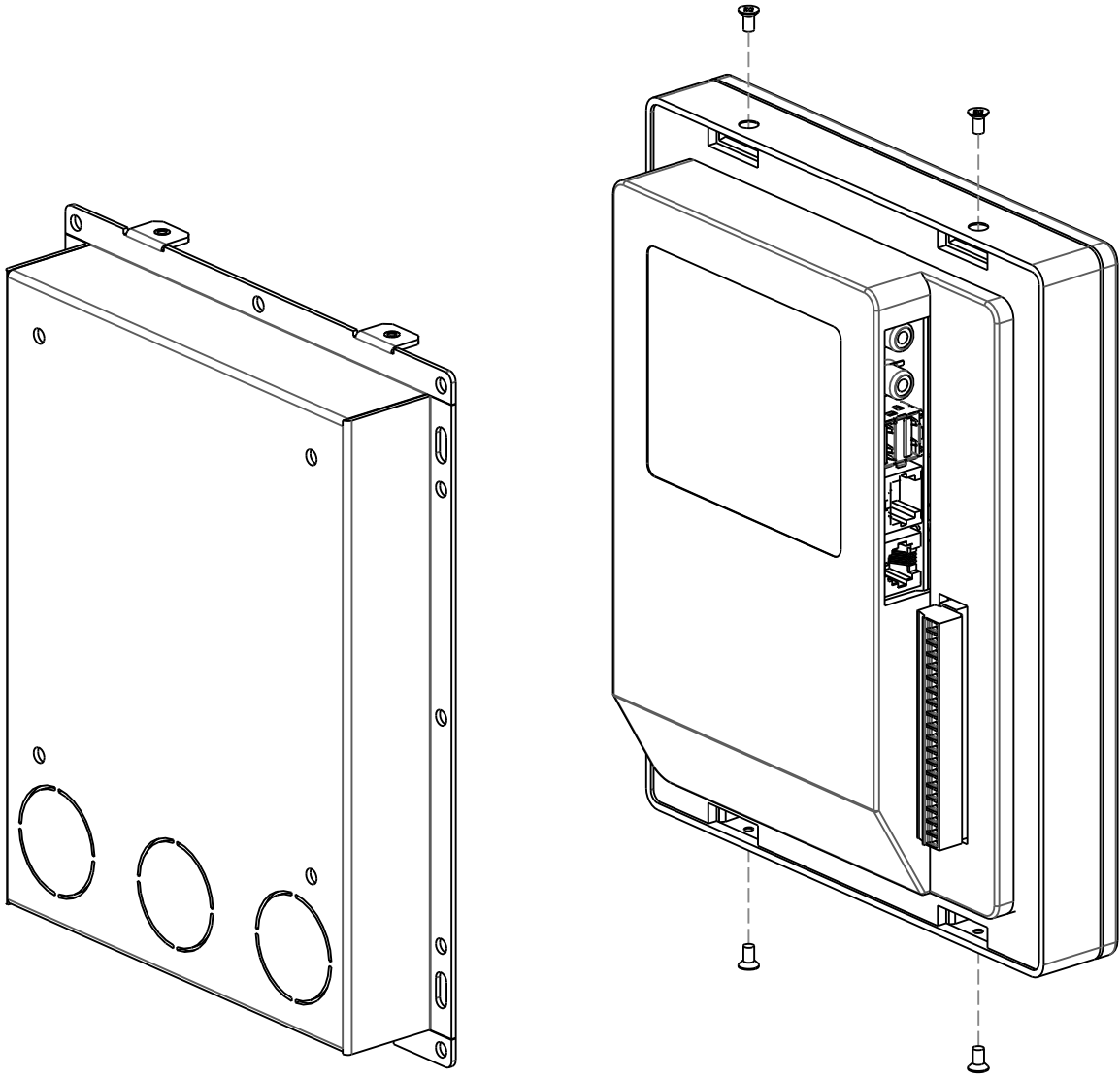
- Terminal Main Power 12 v DC power Supply.
- Door Strike Relay Connectors (NO, C, NC).
- Door Status Connector.
- Door Exit Push Button Connector.
- Door Breaking Glass Box Connector.
- External Analog RCA Video IN Connector.
- External Analog RCA Video IN Connector.
- Wiegand Communication to 3rd Party Equipment Connector.

IDT Wallmount I/O Terminal Connections Table

I/O Connection Terminal Block

Function	Label	Type	Position
Wiegand OUT Communication to 3rd Party Controller	DO 1	Wiegand Data OUT 1	1
	DO 0	Wiegand Data OUT 0	2
Wiegand IN Communication to 3rd Party Reader	DI 1	Wiegand Data IN 1	3
	DI 0	Wiegand Data IN 0	4
PSTN Line	NC	PSTN Tip	5
	NO	PSTN Ring	6
3rd Party Fire Alarm System Input (Normally Closed)	FA	Fire Alarm Input Return (GND)	7
	FAR	Fire Alarm Input	8
Door Breaking Glass Box (Normally Closed)	BGR	Breaking Glass Box Return (GND)	9
	BG	Breaking Glass Box	10
Door Exit Push Button (Normally Open)	EPBR	Exit Push Button Return (GND)	11
	EPB	Exit Push Button	12
Door Status Connection (Normally Closed)	DSR	Door Status Return (GND)	13
	DS	Door Status	14
Door Strike Relay Connection	NC	Relay NC (Normally Close)	15
	C	Relay C (Common)	16
	NO	Relay NO (Normally Open)	17
12 v DC power Supply	GND	Ground (Terminal Power)	18
	VDC	VDC (Terminal Power)	19

## 2.5. In Wall \ Wall Mounting



## Part III

### Relay wiring

### 3. Output Relay Wiring

The Secure I/O has two output relays onboard, both relays are dedicated strike relay, The Secure I/O can support a mixture of uses of onboard and on external relay modules.

Typically, doors are held closed and released by one of two methods (Fail Safe or Fail secure). Failsafe – Locked when powered; Fail-secure – Unlocked when Powered.

A. Failsafe locks and strikes require power to lock. When power is interrupted by an access control unit or power outage, the door will unlock. Failsafe locks are often used for life safety applications such as the access control of perimeter fire rated exit doors and high rise building stairwell doors where the locks are automatically released by a signal from the building fire life safety command center during an emergency or building power outage. When used on interior doors that do not require connection to the life safety command center, a battery back-up power supply may be used to provide continuous power to electric locks and strikes during a power outage.

B. Fail secure locks and strikes require power to unlock. When powered by use of an access control controller, the door unlocks. The door will lock or stay locked during a building power outage. A battery back-up power supply may be provided to ensure continued operation during loss of building power. This architecture is typically used for high security applications where fail- secure locks are not permitted on fire rated doors because they do not unlock during an emergency or power loss.

C. An electric door strike is installed in the door frame, replacing the mechanical strike plate. This type of strike has a "gate" that is normally held closed and is released by command from the terminal. This allows the door to be opened.

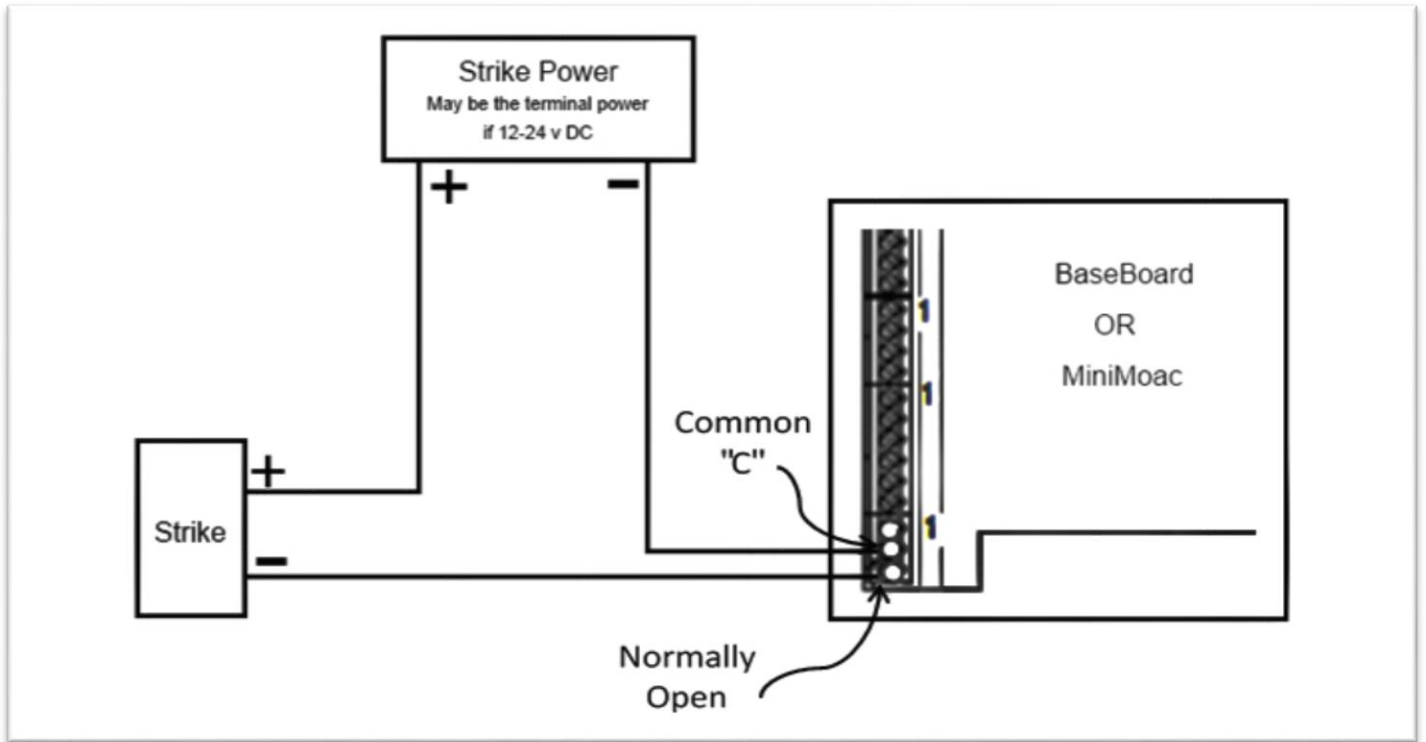
D. A second type of lock is an electro-magnetic lock which is a two piece device mounted on the perimeter of the door. A solid plate is mounted to the door and an electro-magnetic lock is mounted adjacent to the plate on the frame of the door. The electro-magnetic lock firmly holds the plate mounted to the door, holding it closed until the power is removed by the Terminal, allowing the door to be opened.

Most electric locks are available in two configurations, Fail-Safe and Fail-Secure. Fail-Safe locks require Power to hold the door closed and will release the door when power is removed. This type of lock will Open the door if a power outage occurs. This is desirable for doors used as emergency exits.

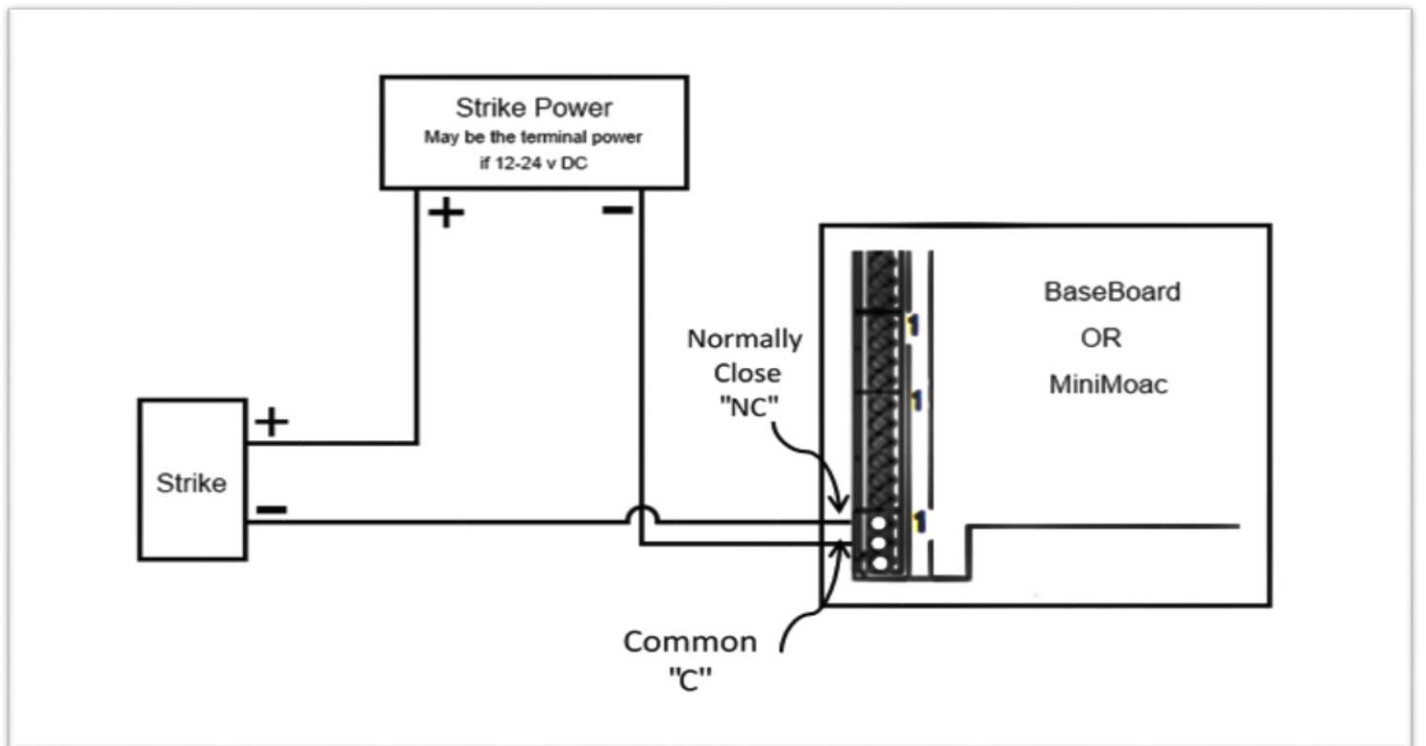
Fail-Secure locks hold the door closed automatically and require power to release the door. This type of lock is desirable for securing doors in high security applications.

Electro-Magnetic locks are typically only available in the Fail-Safe configuration. Electric locks are also available in a range of operating voltages. 12 volts DC or 24 volts DC are the most common.

AC power strikes are also available but are not widely used because of the difficulty in connecting.



Fail-secure strike wiring configuration



Fail-safe strike wiring configuration

## Part IV

# Terminal IP configuration

## 4. Terminal IP configuration

### 4.1. Default IP settings

All of IDTWallmount™ terminals are shipped with the default IP settings as follows:

- IP address: **192.168.1.1**
- Subnet mask: **255.0.0.0**
- Default gateway: **192.168.1.1**

### 4.2 Resetting terminal to default IP settings

To reset IP address please do the following:

1. Disconnect the Power supply from the device
2. Short circuit between PINs 3, 4, 7 on the Terminal Block connector
3. Re-power the unit while the pins are still shortened, then wait until the Green & Red LED will flash, and wait for the device to reboot itself
4. Power off the unit and remove wiring from PINs 3, 4, 7
5. IP address is now set to default settings

