



IDTGATE™ HARDWARE MANUAL

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Part I

Introduction

1. Introduction

The IDT Gate™ terminal is an embedded fingerprint recognition terminal. Specially designed for harsh environment conditions. IP65 rated, this terminal is the perfect outdoor authentication unit

The IDT Gate™ and the accommodating IdentityManage™ software solutions offer a complete Identity Management solution both for indoor / outdoor environments.

1.1. Overview

IDT Gate™ incorporates precision Multi Spectral imaging Fingerprint technology into an ergonomic embedded peripheral that delivers unparalleled performance, reliability and convenience. Available in a modular manner, the IDT Gate™ provides a price sensitive solution for small to medium access control deployments.

With its integrated Proximity reader, the IDT Gate™ provides a true two method Identification / Verification PAC.

The IDT Gate™ operates as a Stand Alone 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.

Available with two multi spectral finger print sensors:

- Lumidigm Venus
- Lumidigm Mercury

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.
- Integrated Proximity card Reader.
- Critical information is Secured and encrypted
- Encrypted communications
- Robust design- anti vandal casing, IP65.
- Easy installation kit
- ARM9 microprocessor
- TCP/IP
- Request Exit button interface
- Door status input
- 2 USB host
- 1 USB Client (Device)
- RS232/485
- On board 2 relay unit
- Real Time Clock
- Wiegand IN/OUT (26-512 Bit)

- 2 functional buttons
- 2 input switches interface (tamper and door status)
- 4 functional LED's interface and 4 display LEDs interface
- two relay outputs for dry contacts
- protected power input
- smart card reader interface (RS232)
- LCD interface (not supported by the software at this stage)
- Operating temperature -10 to +70 C

1.3. Modes of Operation

- Multi Factor Authentication
- Integrated Proximity or smart card readers
- 1:1 Verification – with external PIN Keyboard or integrated card reader
- 1: N (5,000 templates)
- PC authentication mode
- Standalone mode

The Gate™ support also different Access Modes:

- Fingerprint Only
- Card Only
- Card or Fingerprint
- Card and Fingerprint

The IDT Gate™ support also different controlled Door States and status:

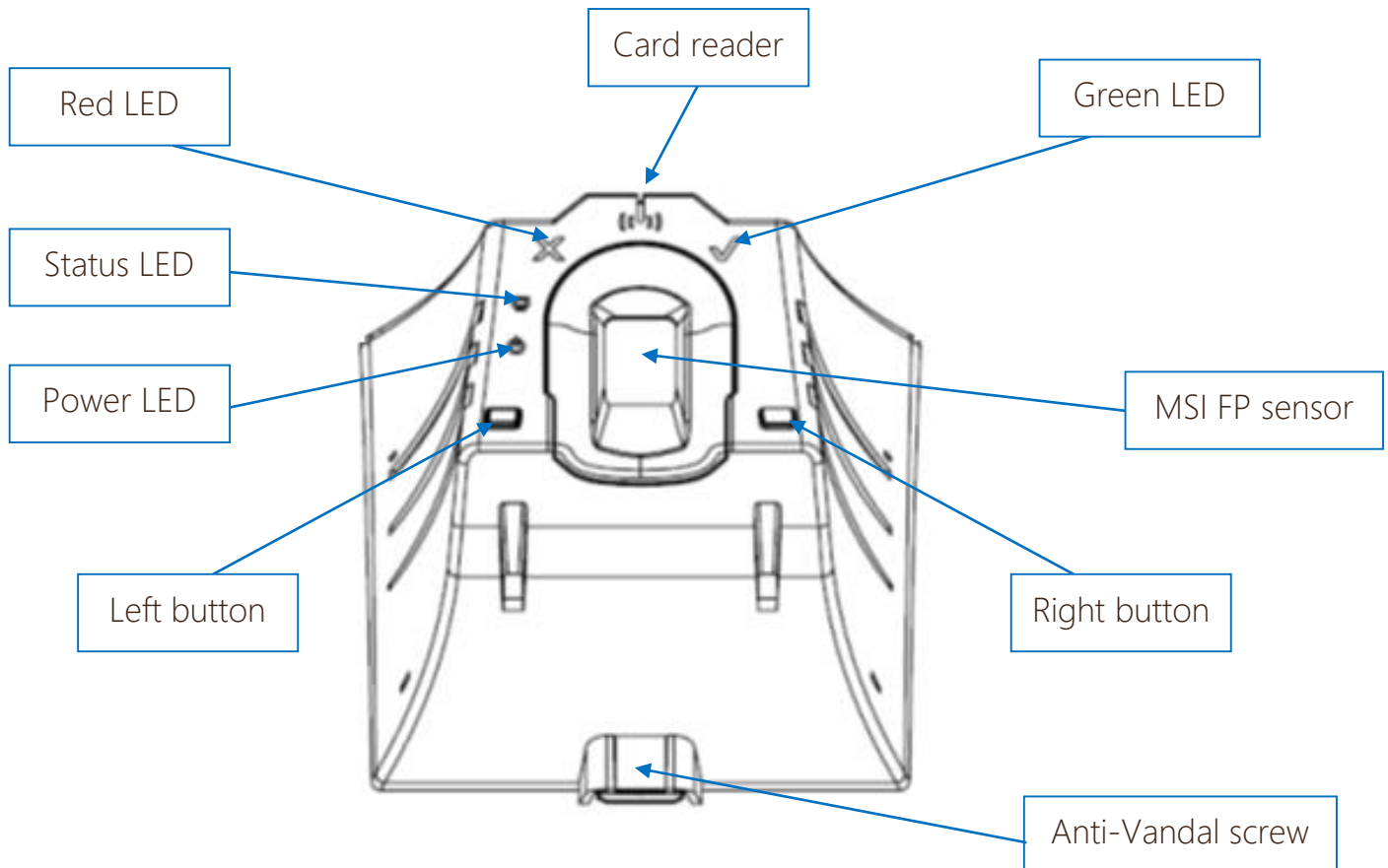
- Strike Time—the time duration that the strike relay will be energized for in the case of an access grant
- Held Open Time—after an access grant and a subsequent opening of the door contact, the time in which the door contact must be closed before an alarm state is reported
- Forced Open Time - the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

Part II

Hardware layout

2. Terminal layout

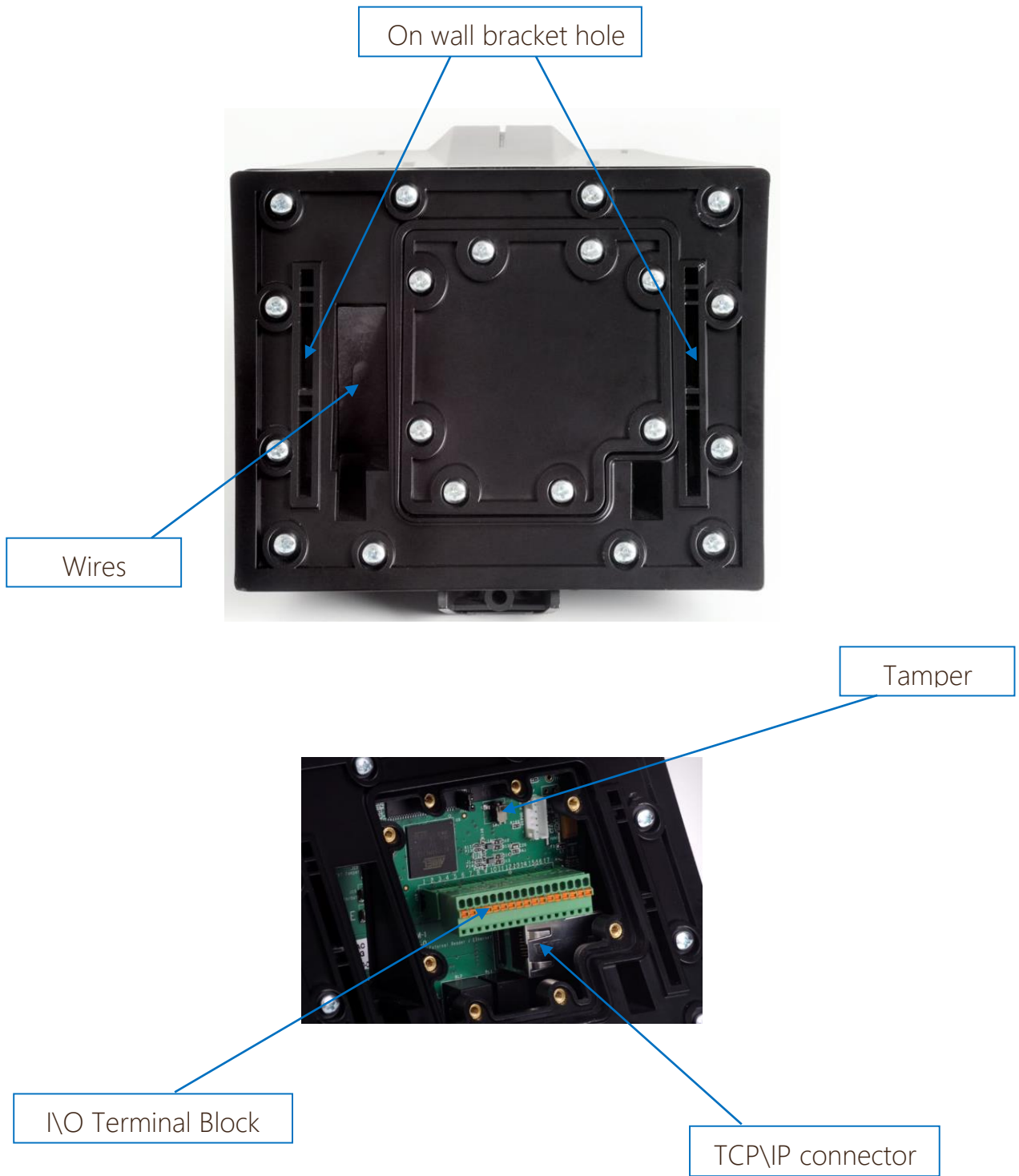
2.1. Terminal front view



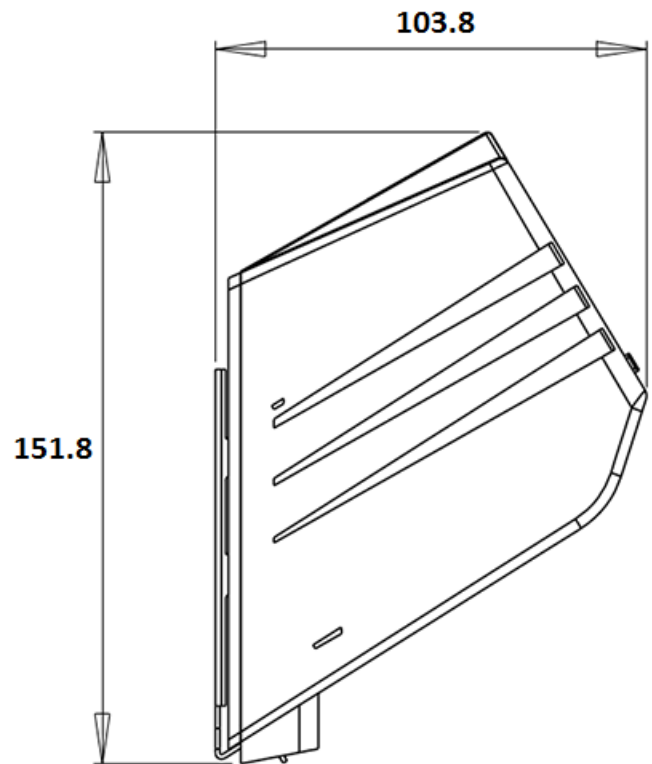
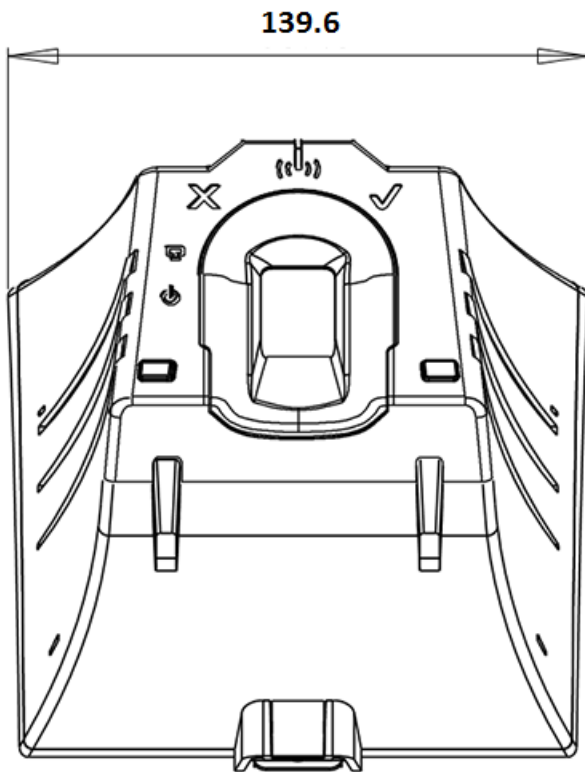
Terminal front view components:

- Multi Spectral finger Sensor
- Proximity Card Reader (optional)
- Red Led ('X' Sign)
- Green Led ('V' Sign)
- TCP\IP Communication Led
- Power Led
- Left & Right Buttons
- Ant vandal Screw

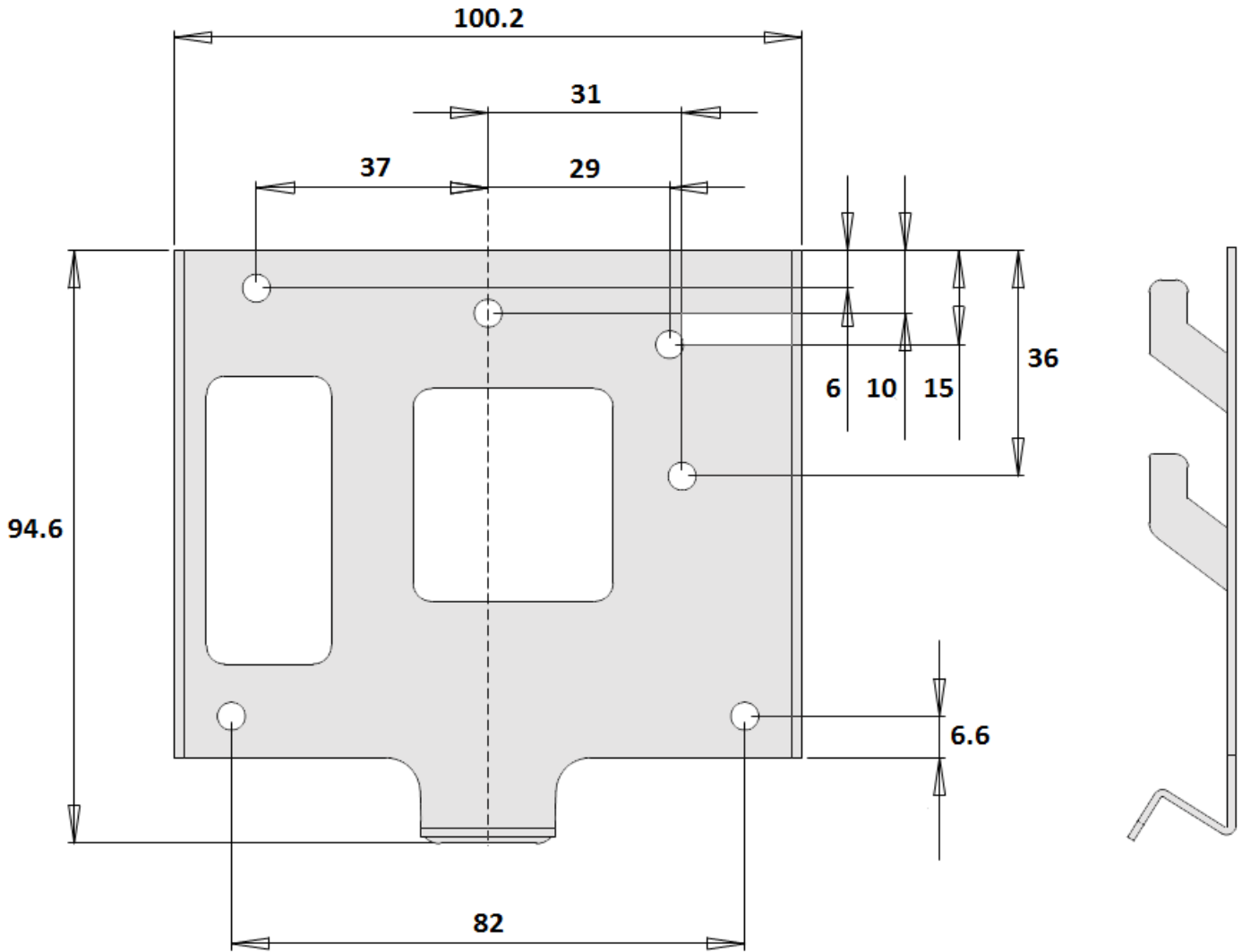
2.2. Terminal back view



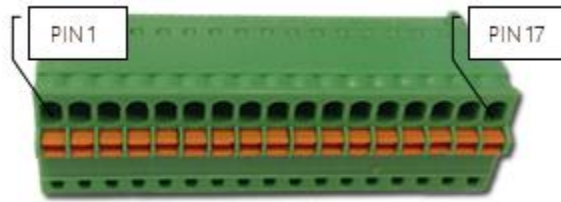
2.3. Terminal dimensions



2.4. Wall Mounting



2.5. I/O Connection Terminal Block



I/O Terminal Block Connectors Table

PIN number	Function
1	12V DC Power
2	GND
3	Relay 2 Common line
4	Relay 2 Normally close
5	Relay 2 Normally open
6	Relay 1 Common line
7	Relay 1 Normally close
8	Relay 1 Normally open
9	Wiegand OUT Data 0
10	Wiegand OUT Data 1
11	Wiegand IN Data 1
12	Wiegand IN Data 0
13	5V + DC OUT
14	GND
15	Door status
16	Exit push button
17	GND

IDT Gate I/O Terminal Connections Table

I/O Connection Terminal Block			
Function	Label	Type	Position
12 v Dc Power	VDC	VDC (Terminal	1
Ground	GND	Ground (Terminal	2
Relay 2	C	Relay C (Common)	3
	NO	Relay NO (Normally	4
	NC	Relay NC (Normally	5
Relay 1	C	Relay C (Common)	6
	NO	Relay NO (Normally	7
	NC	Relay NC (Normally	8
Wiegand Communication to 3rd Party Controller	D0	Wiegand Data 0 OUT	9
	D1	Wiegand Data 1 OUT	10
Wiegand Communication to 3rd Party Reader	D1	Wiegand Data 1 IN	11
	D0	Wiegand Data 0 IN	12
5 v DC External Reader power supply	VDC		13
Input return	GND	Ground	14
Door Status Connection (Normally	DS		15
Door Exit Push Button (Normally Open)	EPB		16
Input return	GND	Ground	17

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.

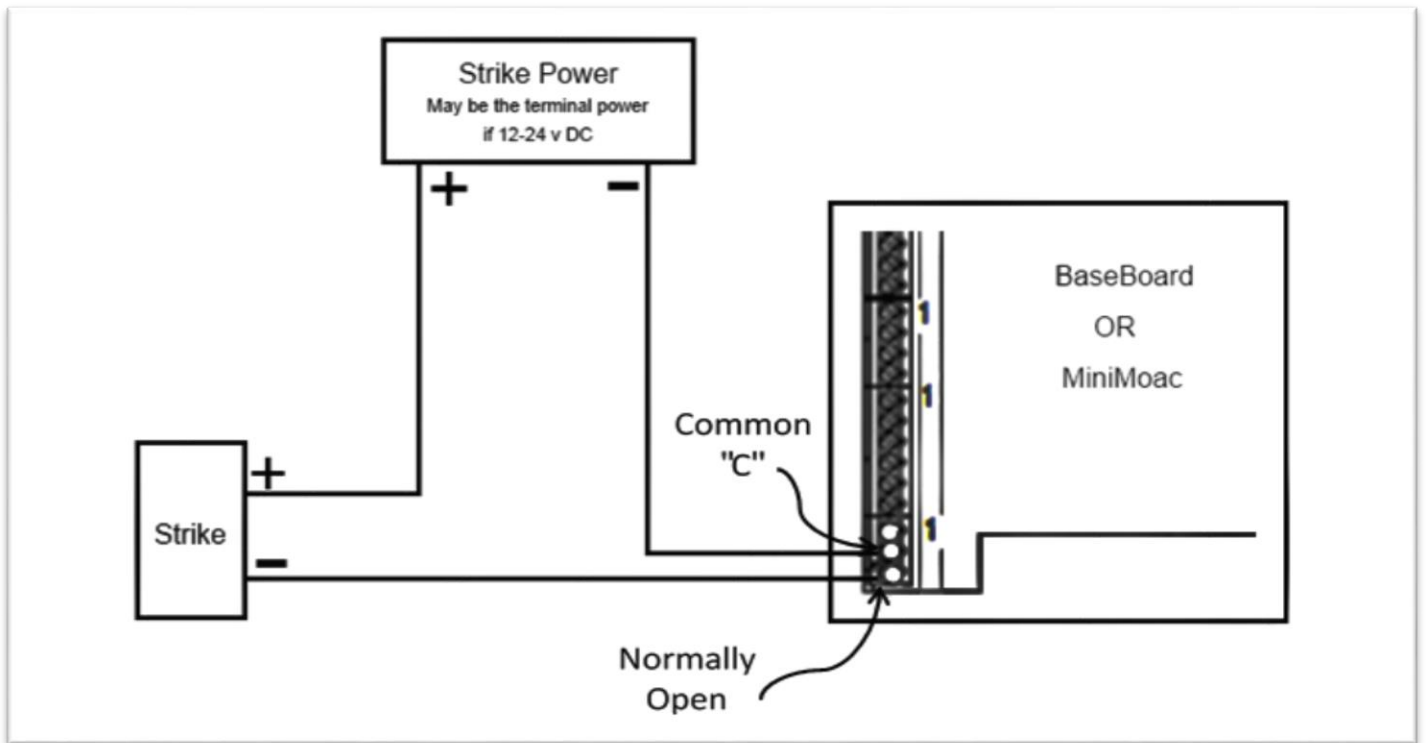
D. A second type of lock is an electro-magnetic lock which is a two piece device mounted on the perimeter of the door. A solid plate is mounted to the door and an electro-magnetic lock is mounted adjacent to the plate on the frame of the door. The electro-magnetic lock firmly holds the plate mounted 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.

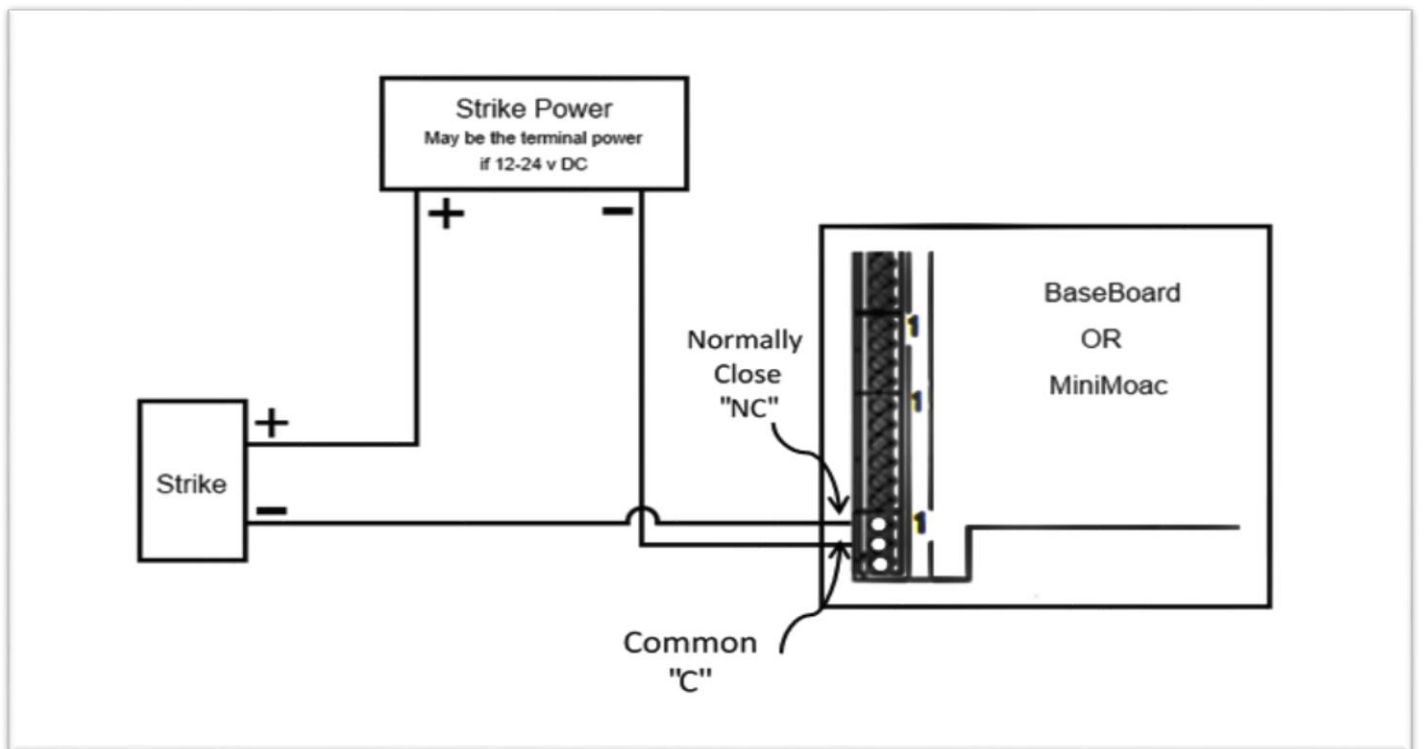
Fail-Secure locks hold the door closed automatically and require power to release the door. This type of lock is desirable for securing doors in high security applications.

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 IDTAccess™ 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 11, 12, 14 on the block connector
3. Re-power the unit and 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 11, 12, 14
5. IP address is now set to default settings

