



## ST1 Installation Manual



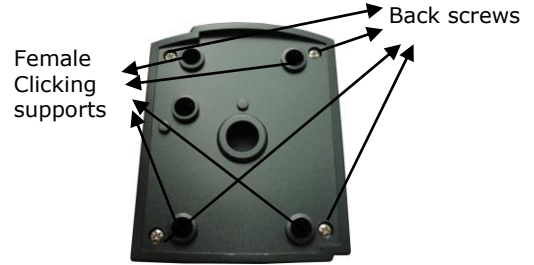
Keyless Access System Solutions

## ST1 Access System - Parts Description

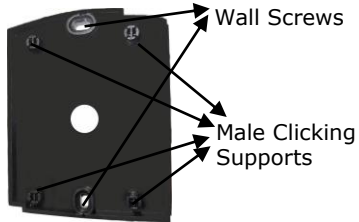
### Door Controller - Front View



### Door Controller - Back View



### Door Controller - Wall Supporting Plate



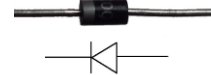
### Proximity Reader



### Proximity Keyfobs



### Locking Device Protection Diode



### Power Supply



## ST1 Keyless Access System

### Main Features:

ST1 utilizes the latest technology in keyless entry systems. It is reliable, scalable and offers a smart management system that allows for easy operation.

The ST1 keypad controller supports up to two proximity readers and doors. The system supports electric strikes and magnetic locks with independent operating voltages.

The ST1 system provides inputs for momentary door release and magnetic contact for door monitoring.

### Memory and Autonomy:

The ST1 system keeps settings information and users credentials on an onboard, non-volatile memory that keeps the data in the case of power loss.

### Door Monitoring feature:

The ST1 system allows the connection of a door contact to monitor the door status. Provides a warning beeping sound when a door remains open.

### Smart Enrolling System:

The ST1 system provides an easy and fast way to activate credentials. Each credential contains a number printed on it that is automatically stored in the controller without the need of manual registration.

### Security features:

The ST1 system provides security features that protect the system against unauthorized management attempts. If the system password is entered wrongly more than 3 times, the system will be blocked for 5 minutes.

### Tracking software:

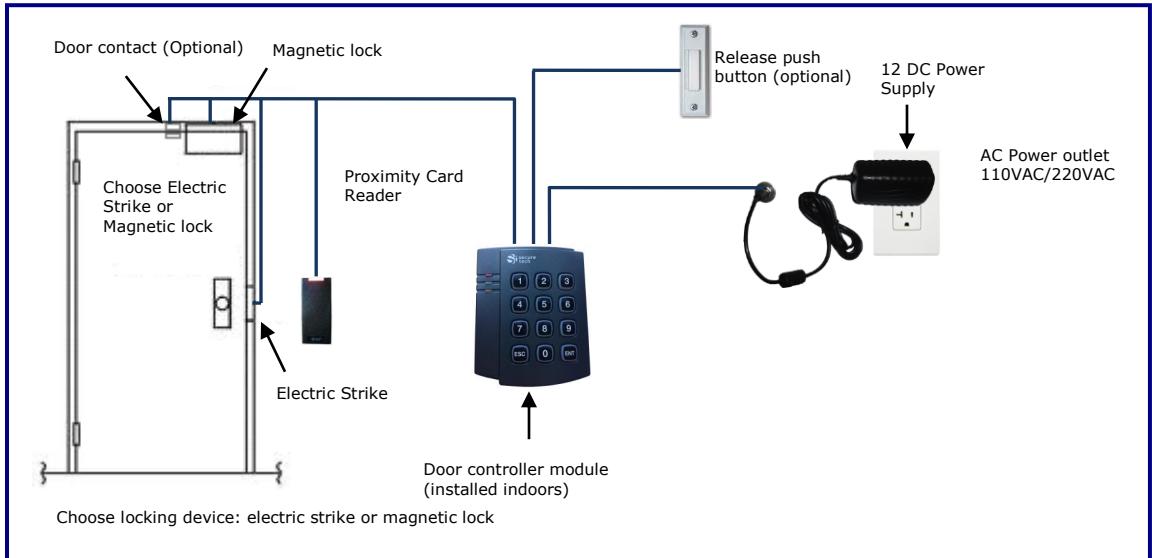
Tracking software is provided to keep records of user names and credentials assigned. If a credential is lost or stolen, it can be removed in seconds.

## ST1 Technical Specifications

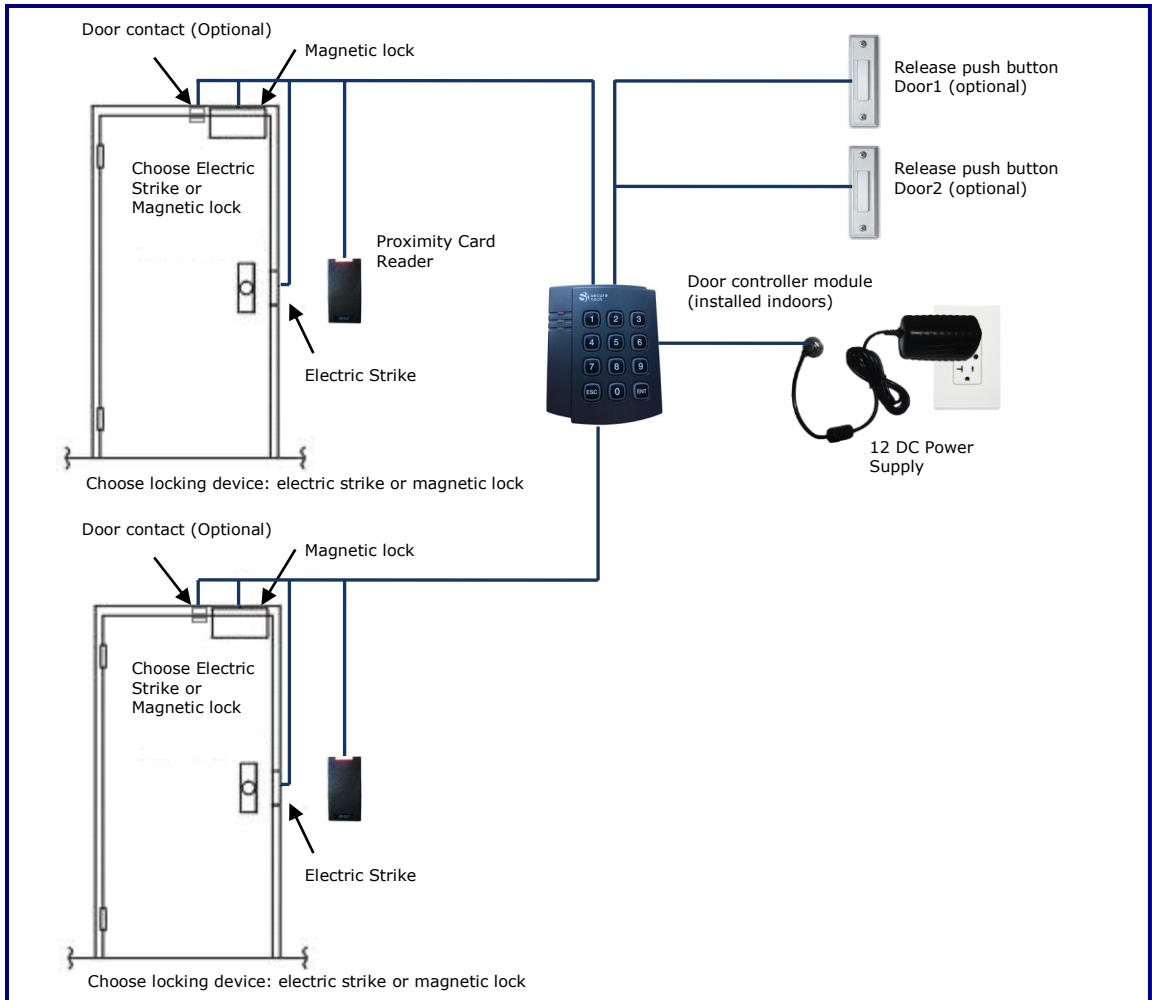
Operating Voltage	12VDC to 14VDC
Current Consumption	17 mA
Proximity Reader Interface	Wiegand 26 bits
Proximity Reader Voltage	12VDC to 14VDC
Proximity Reader Current Consumption	28 mA
Credentials Capacity	1,350
Input for door release	2
Input for door contact	1 (can be connected in loop to more doors)
Relay Max operating current and voltage	30 VDC, 2A
Non- Volatile Memory Type	Eeprom
Interface	Keypad
Max. controllers per/site	unlimited

## Installation diagrams

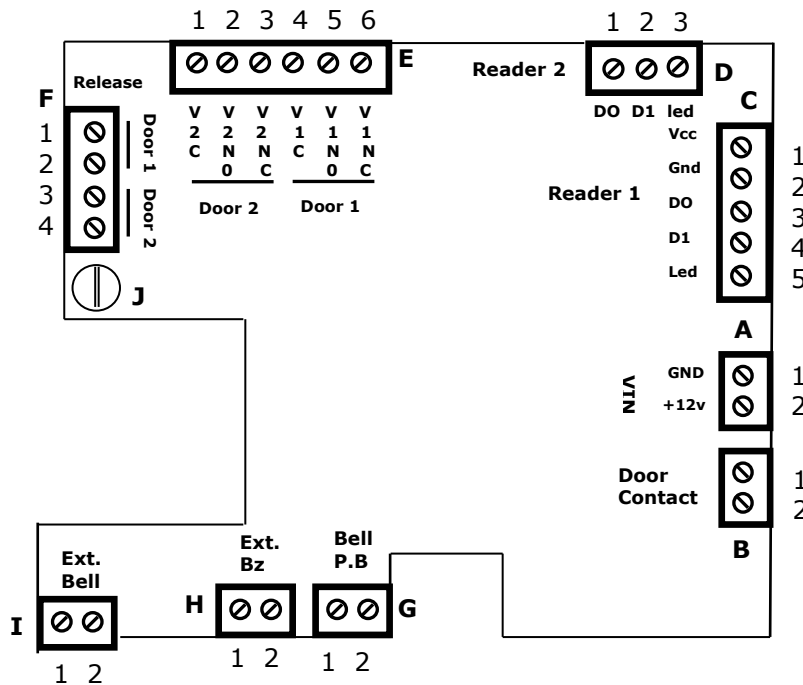
### Access Control One (1) Door



### Access Control Two (2) Doors



## Door Controller Module: Board connectors description and recommended cables



### Recommended Cables:

#### Proximity Reader:

- 6 Conductors x 22 awg - Shielded (5 cables used). Maximum distance: 300 feet (100 meters)

#### Electric Strike:

- Option 1:** 2 Conductors x 18 awg
- Option 2:** Quad cable: 4 conductors x 22 awg

#### Power supply:

- Option 1:** 2 Conductors x 18 awg
- Option 2:** Quad cable: 4 Conductors x 22 awg

**Door Contact:** 2 Conductors x 22awg

**Door Release (REX):** 2 Conductors x 22awg

**External Buzzer** – (optional): 2 Conductors x 24awg

#### A: Power

- Gnd
- 12VDC

#### B: Door Contact (optional)

- Input
  - Gnd
- \* Normally open door contact required

#### C: Proximity Reader 1

- Vcc (red)
- Gnd (black)
- Data0 (green)
- Data1 (white)
- LED (blue)

#### D: Proximity Reader 2

- Data0 (green)
- Data1 (white)
- LED (blue)

#### E: Relays Output - Locking Devices Control

- V2 input (C) - Common contact 2
- V2 Out (N.O) - Normally open contact 2
- V2 Out (N.C) - Normally close contact 2
- V1 input (C) - Common contact 1
- V2 Out (N.O) - Normally open contact 1
- V2 Out (N.C) - Normally close contact 1

#### F: Door Release-Request to exit (Rex) - Required for magnet locks

- Gnd - Door 2
- Input - Door 2
- Gnd - Door 1
- Input - Door 1

#### G: Doorbell push button (optional)

- Gnd
- input

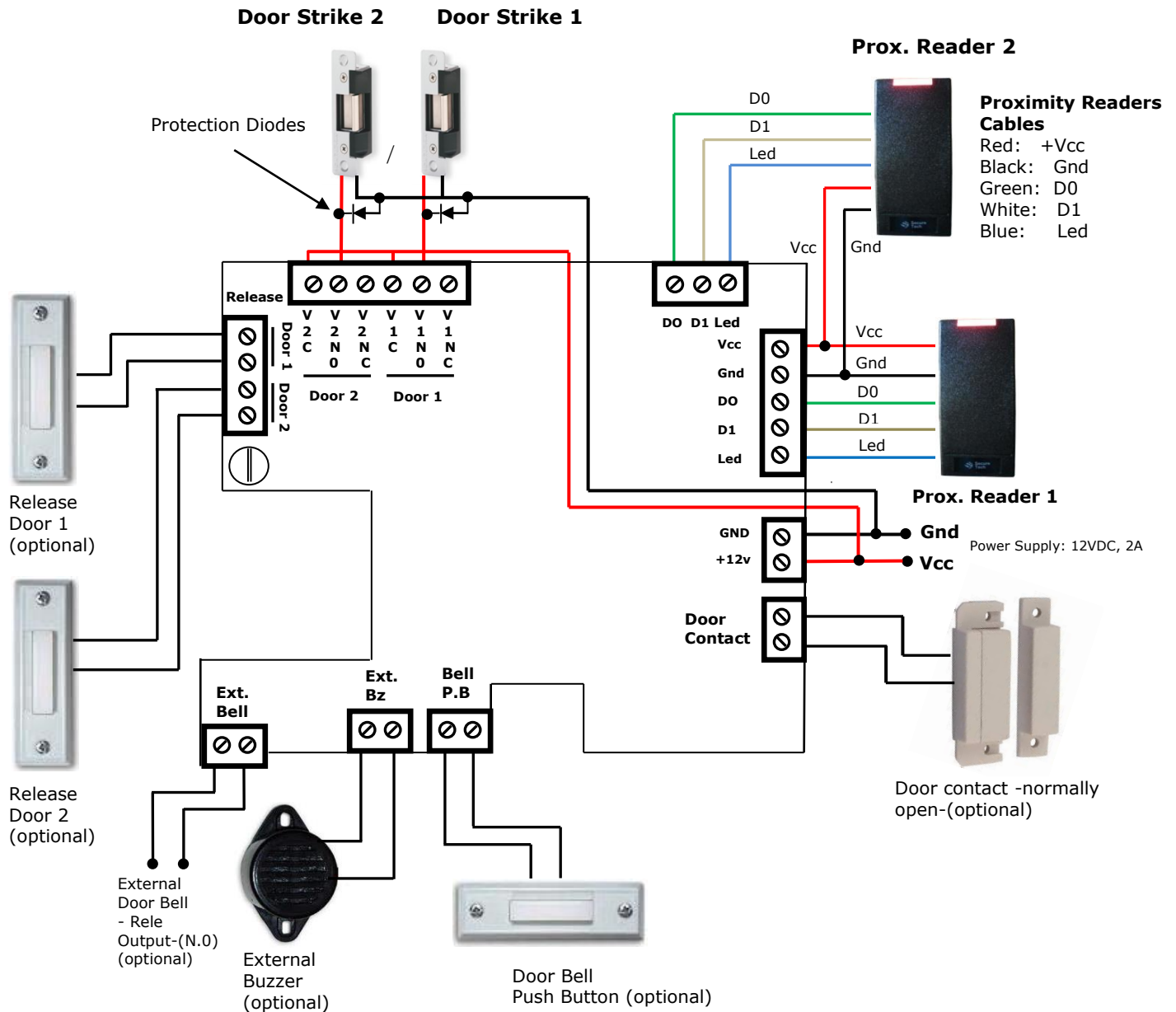
#### H: External Buzzer (optional)

- Buzzer (+Gnd)
- Buzzer (+V)

#### I: Rele out normally open - external secondary door bell

#### J: Door bell volume control

### Typical connection with 12VDC Electric Strikes

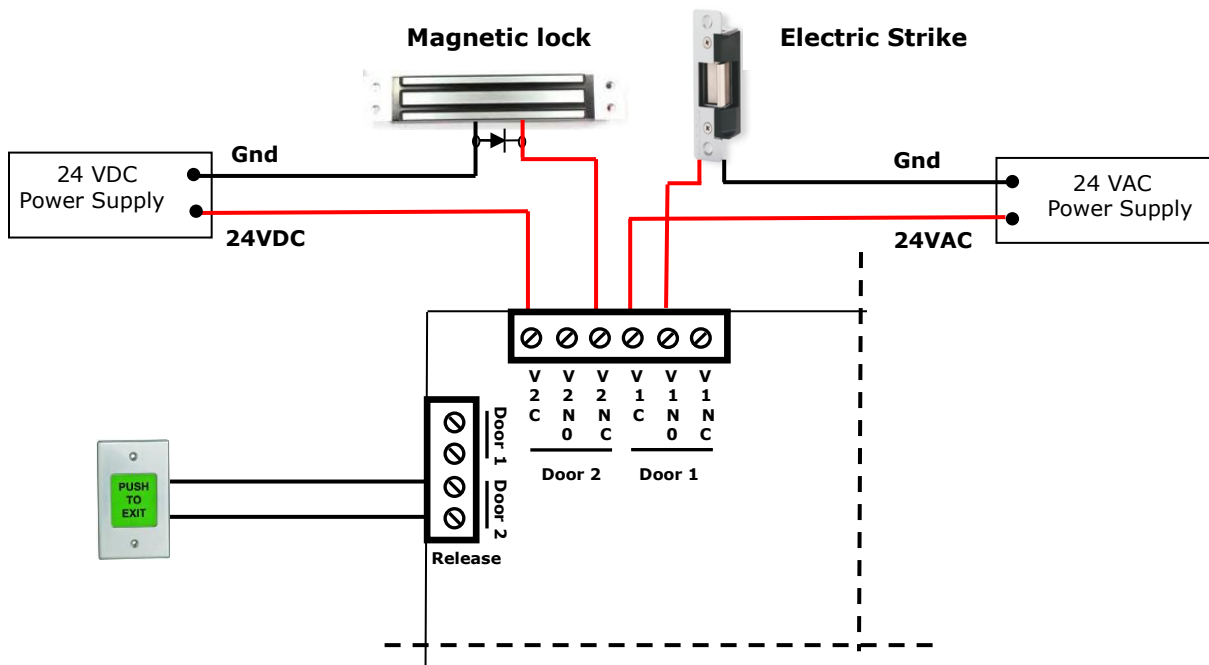


**Important Note:** When locking devices are utilized with power supply provided (12VDC, 2A), select electric strike and magnetic lock with maximum current draw: 0,5A

## Locking Devices - Connection Options

The system supports locking devices with different operating voltages and operative functioning (fail-locked, fail open). Two independent voltages inputs V1 (pin#1) input and V2 (pin#4) can be used to power different locking devices on door1 and door2 rele output connectors. The system also provides a normal open contact (N.O) and normal close contact (N.C) outputs allowing the connection of a variety of locking devices.

Reles maximum ratings: **30 volts (ac/dc), 2A**



### Release Door 2(required for magnetic locks)

Push button or exit motion detector (request to exit for magnetic lock)

## Installation Instructions:

- 1) Make the necessary holes in the wall for: Door controller, proximity reader, prepare the door frame to install the locking device
- 2) Run cables for proximity reader, electric lock, DC power supply and door contact(optional)
- 3) Install the proximity reader, Electric Lock or Magnet Lock
- 4) Unscrew the four screws on the back of the door controller
- 5) Connect and screw the cables(electric lock, proximity reader, DC power, door contact, door release) to the controller connectors
- 6) Push the controller aligning the clicking supports females(door controller) and the clicking supports males (wall supporting plate)
- 7) Plug the power supply to the AC power outlet(110AC or 220 AC)

## User tracking Software:

This software allows to keep track of user name and assigned credential number. Available for download at [www.setech.ca](http://www.setech.ca)