

### SPECIFICATIONS

**Input Voltage:** 12-24 Volt DC or 12 Volt AC

**Power Consumption:** 120mA max @ 24 VDC, 20mA idle

**NOTE:** 3A Power Supply is recommended for use with door strike or magnetic lock

**Programmable Relay:** Form C, dry contacts rated at 2A @ 30VDC (inductive load)

**Operating Temperature:**  
-40°C to 125°C (-40°F to 257°F)

**Available Models with Installed Dimensions:**

7510: Single-Gang Style Keypad  
3.20" W X 5.10" H x 0.75" D

7520: Mullion Surface-Mount Keypad  
1.75" W X 7.125" H x 1.00" D

7530: Mullion Mortise-Mount Keypad  
1.75" W X 7.125" H x 0.25" D

**User Codes:** Up to 200 unique codes including 1 master code. Codes will be between 4 and 8 digits in length. Codes are stored in nonvolatile EEPROM memory.

**Lockout Feature:** Keypad will lock out all functions for 30 seconds after three consecutive invalid codes.

**Factory Default Settings:**

Master code 1 2 3 4

User code 5 6 7 8 9 0

Relay Time 5 seconds (Momentary)

### PHYSICAL DESCRIPTIONS

**LED Explanation:**

**Green LED:**

Steady off = Door relay deactivated

Steady on = Door relay activated

**Red LED:**

Normal Operation:

- i) Three seconds on = Invalid code entered.
- ii) Slow flash = 30 second delay due to three consecutive invalid codes entered.

Programming Mode:

- i) Slow flash = Program standby, ready to accept new function.
- ii) Fast flash = Program in progress, awaiting input.
- iii) Very fast flash = Erasing all user codes.

### AVAILABLE MODELS

Model 7510  
(Front)



Model 7520  
(Front)



Model 7530  
(Side)



### PROGRAMMING QUICKGUIDE

**Enter Programming Mode** \*\* (master code) \*\*  
Example: \*\* 1234 \*\*

**Programming Functions:**

**Set Relay to Momentary** 1 (time in seconds) #  
Example: 1 05 # (Sets to 5 secs)

**Set Relay to Latch** 1 00 #

**Add New User** 2 (user n number) # (user code) # (user code) #  
Example: 2 002 # 22222 # 22222 #

**Change Existing User** 2 (user n number) # (user code) # (user code) #  
Example: 2 002 # 23456 # 23456 #

**Change Master Code** 2 0 # (new master code) # (new master code) #  
Example: 2 0 # 382436 # 382436 #

**Erase a User Code** 3 (user code) #  
Example: 3 23456 #

**Erase All Users** 4 (master code) #  
Example: 4 382436 #

**Note:** New Master Code must be between 4 & 8 digits. Option 4 erases all User Codes, but not the Master Code.

### Wire Connections:

**Power** - Connect either a 12 - 24 volt direct current (DC) or a 12 volt alternating current (AC) power supply to these terminals. Polarity does not matter, as the keypad has been designed to work in both directions. Power supplies outside this range may cause permanent damage to the keypad.

**Common** - This terminal is the Common output of the relay and is used in conjunction with the N.O. or N.C. Terminals (see below) to control a door lock.

**N.O.** - This terminal is the Normally Open output of the relay. In a normal locked state, this terminal is disconnected from the Common terminal. In an unlocked state, this terminal is connected to the Common terminal.

**N.C.** - This terminal is the Normally Closed output of the relay. In a normal locked state, this terminal is connected to the Common terminal. In an unlocked state, this terminal disconnects from the Common terminal.

**Reset Button** - This button is used to reset the master code back to its factory default. Follow the instructions outlined in the **Programming** section, under **Factory Reset Function**.

## BENCH TESTING THE KEYPAD

This bench test assumes the keypad is unprogrammed. If it has been programmed, follow the *Factory Reset Function* found in the **Programming** section.)

**Step 1.** Enter default master code [1-2-3-4], followed by the pound sign [#]. The Green LED will light up and the door relay will energize for 5 seconds.

**Step 2.** Enter default user code [5-6-7-8-9-0], followed by the pound sign [#]. The Green LED will light up and the door relay will energize for 5 seconds.

**Step 3.** Go to the next section, **Installing & Wiring the Keypad**.

If the master code or user code is incorrectly entered, the Red LED will light up for 3 seconds. Re-enter the master or user code.

If the master code or user code still does not work, reset the keypad to factory default using the *Factory Reset Function* found in the **Programming** section.

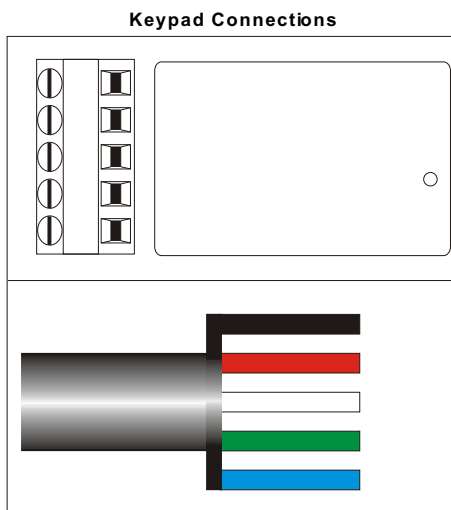
## INSTALLING AND WIRING THE KEYPAD

**Step 1.** After choosing the mounting location for the keypad, drill the mounting holes using the enclosed template or mount to an electrical back box or low voltage wiring device if appropriate. **DO NOT insert the Security Plugs into the screw holes at this time. THE SECURITY PLUGS ARE DESIGNED TO BE TAMPER RESISTANT AND MUST BE DRILLED OUT TO BE REMOVED.**

**Step 2.** Using the diagram at right, connect the power and door relay wires to the keypad. See **Application Examples Section** for ideas on how to connect the keypad in your application. **If you use this product to operate a DC door strike, magnetic lock, relay or any device that has a coil (inductive load) that is powered from a DC source, you MUST install a varistor in parallel across the coil terminals.** The varistor provided with this keypad is designed to be used with a 12 VDC door lock. If you are using a 24 VDC lock, do not use the varistor that came with your keypad. The varistor should prevent the high voltage spike that occurs when the lock coil is de-energized. **If you do not use a varistor, you will have erratic operations and eventually damage the keypad and any other electronic device in the system.**

**Step 3.** Turn on the power supply. The following will happen:

- i) The keypad's buzzer will beep briefly.
- ii) The keypad's Red LED will illuminate briefly.
- iii) The keypad is ready for use. Go to the next section, **Programming the Keypad**.



## PROGRAMMING THE KEYPAD

All programming is performed using the Keypad. Here are some tips to help you program your keypad:

WHEN PROGRAMMING, YOU MUST WAIT WHILE THE RED LED IS ON SOLID. CONTINUE ENTERING DATA WHEN THE RED LED BEGINS FLASHING.

**IMPORTANT!** CHANGE THE FACTORY-SET MASTER CODE (1234) USING FUNCTION 2 AFTER PROGRAMMING THE KEYPAD. It may be easier to do all the necessary programming before you change the master code. Be sure to keep a copy of the new master code in a secure and accessible location.

**IMPORTANT!** BEFORE YOU INSTALL THE KEYPAD, MAKE SURE YOU ERASE THE FACTORY-SET USER CODE (567890) USING FUNCTION 4.

### Entering Program Mode

To enter program mode, enter the asterisk twice (\*\*), then the Master Code, and then the asterisk twice(\*\*) again.

*Example:*   \*\* 1 2 3 4 \*\*

The Red LED will turn on solid for three seconds, and then will flash slow, indicating that you are in program mode. You must wait until the Red LED flashes to continue, as the keypad is processing information and will not accept new input. Once the Red LED is flashing, you may enter any of the four program options, or you may enter the pound sign (#) to exit program mode. If you do not enter a program option within 15 seconds, the keypad will automatically exit program mode. If this happens, you will need to re-enter the Master Code to continue programming.

### Program the Relay for Momentary Time

Enter 1 and the Red LED will light for three seconds and then flash fast. Then enter the elapsed time, in seconds, for the door to be unlocked. You must use two digits, i.e., enter a number between 01 and 99. Enter the pound sign (#) to confirm this entry. The Red LED will light for three seconds (to acknowledge the entry), then the Red LED will begin to flash slow. You are now back at the main program menu.

*Examples:*

*To set relay to 15 seconds, enter: 1 15 #*

### Program the Relay for Latching

Enter 1 and the Red LED will light for three seconds and then flash fast. Then enter two zeros (00) to set the relay to latching mode. Enter the pound sign (#) to confirm this entry. The Red LED will light for three seconds (to acknowledge the entry) then the Red LED will begin to flash slow. You are now back at the main program menu.

*Examples:*

*To set relay to latching, enter: 1 00 #*

### Change the Master Code

Enter 2 and the Red LED will light for three seconds and then flash fast. Enter the Master Code slot number (00), and then enter the pound sign (#). The Red LED will light for three seconds (to allow time to acknowledge the entry) and then it will resume flashing. Enter your new Master Code, followed by the pound sign (#). The Master Code must be between 4 and 8 digits, and must be numbers only (\* and # are not valid code numbers). The Red

LED will light for three seconds (to acknowledge the entry) and then it will resume flashing fast. **Re-enter your new master code followed by the pound sign (#).** The Red LED will light for three seconds (to acknowledge the entry), and then it will flash slow. Your new Master Code is now valid. **Be sure to make note of it and keep it in a secure place.** You are now back at the main program menu.

*Example:*

*To set Master Code to 382436, enter:*

*2 00 # 382436 # 382436 #*

### **Add or Change a User Code**

Enter 2 and the Red LED will light for three seconds and then flash fast. Enter the three-digit User Number (001 - 200) to be added or changed followed by the pound sign (#). Preceding zeros are optional and may be omitted here. Enter the 4 to 8 digit User Code followed by the pound sign (#). The Red LED will light for three seconds (to acknowledge the entry), then the Red LED will continue to flash fast. Re-enter the new User Code followed by the pound sign (#). The Red LED will light for three seconds, and then it will flash slow. The new User Number and User Code have been accepted. You are now back at the main programming menu. To add more users enter [2] and repeat the above procedure for all desired User Codes.

*Examples:*

*To add code 2468 in User Sbt 1, Enter:*

*2 001 # 2468 # 2468 #*

*To add code 55555555 in User Sbt 55, Enter:*

*2 55 # 55555555 # 55555555 #*

*To change code for User 1 to 24680, Enter:*

*2 1 # 24680 # 24680 #*

### **Erase an Individual User Code**

Only the User Codes are erasable. The Master Code may be changed but not erased. Enter 3 and the Red LED will light for three seconds and then it will begin to flash fast. Enter the User Code you wish to erase, not the User slot number, followed by the pound sign (#). The Red LED will light for three seconds (to acknowledge the entry), then it will begin to flash slow. You are now back at the main program menu.

*Example:*

*To erase User 1 from previous example, enter:*

*3 24680 #*

### **Erase all User Codes**

Enter 4 and the Red LED will light for three seconds and then it will flash fast. Enter the Master Code, followed by the pound sign (#). The Red LED will light for three seconds (to acknowledge the entry), then it will flash very fast for 35 seconds while erasure is taking place. When the Red LED flashes slow again it indicates that the erasure is completed. You are now back at the main program menu.

*Example:*

*To erase all users, enter: 4 382436 #*

Note: Erasing all User Codes will not affect the Master Code, which may be changed but not erased.)

### **Factory Reset Function**

Press the RESET button on the back of the keypad. The Red LED will light steady for 3 seconds and then continue to flash

slow. Enter **1234 #**. The Red LED will light steady for 3 seconds and then continue to flash slow while a continuous tone will be heard. Press the RESET button on the back of the keypad once again. The factory-set master is restored to **1234**, the factory-set user code is restored to **567890**, and the door unlock time reverts back to **5 seconds**.

## **Troubleshooting**

Here are some common problems you may find when using the keypad, along with solutions to those problems.

**1. Symptom:** The Red LED is not displaying the proper sequence while programming.

**Solution:** Most likely, a step or key stroke was missed while programming. There are two ways to recover if you end up in this situation:

- Wait approximately 3 seconds until Red LED goes out, then enter an asterisk (\*) to remain in program mode. The Red LED will flash slow signifying that you are still in program mode. Repeat desired programming.
- Wait approximately 21 seconds for the keypad to reset itself. During this time the keypad will beep for three seconds. The Red LED will go out for 15 seconds, and the keypad will beep again. After the Red LED lights up again for three seconds you will be out of the program mode. Enter program mode by entering \*\*, then your Master Code, then \*\* again. Repeat desired programming.

**2. Symptom:** The keypad does not respond when pressing the keys.

**Solution:** Make sure the keypad and all electronic devices have been properly wired to the power supply and the power has not been turned off (See **Installation and Wiring the Keypad** section).

**3. Symptom:** The keypad responds but the door does not open.

**Solution:** There are two common causes for this type of problem; one is related to programming and the other is related to wiring. Here are two things to check to eliminate or remedy these causes:

- Make sure the Green LED goes on and remains solid when the code is entered. If not, the code that was entered has not been programmed yet. Try programming this code into the keypad again (See **Add or Change a User Code** in the **Programming the Keypad** section).
- Enter the Master Code and make sure the door opens correctly. If not, re-check the keypad wiring and the strike s integrity (See **Installation and Wiring the Keypad** section).

**4. Symptom:** A User Code was deleted but it still works.

**Solution:** There was more than one user with the same code. The keypad does not prevent someone from entering duplicate codes, but it is a good idea to limit the use of duplicate codes. For instance, let's say that User 2 and User 4 both had a User Code of 8888. When User 4 leaves the company and his User Code is deleted using Function 3, it is really the code for User 2 that is deleted (the first 8888 that the program comes across) and the code for User 4 is still there. All codes should be assigned. Otherwise, if a user selected 5678 as a code, it may already be in use.

## *Application Examples*



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