# e-*ASK*

**electronic *A*ccess *S*ecurity *K*eyless-entry**

## Discrete e-*PAD*

## Instruction Manual

**(UM10 ~ 21067-01)**

TriMark®

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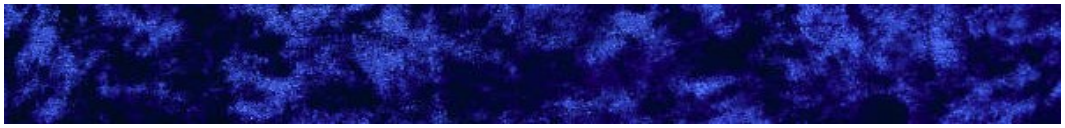


# Table of Contents

# Introduction

This manual provides the necessary information for the proper installation and use of Tri*Mark*'s discrete **e-*PAD* / e-*GRAB*** system.

**Note:** Some features discussed in this manual may not be available on your system.

**e-*PAD* keypad**


**e-*GRAB* keypad**

# Standard e-*PAD* Default Operation and Features

The **e-*PAD*** is shipped with default *Authority* and *Access Codes*. If the OEM or dealer has not changed the default codes, the *Authority* and *Access Codes* are:

*Default Access Code:*

| Digit 1 | Digit 2 | Digit 3 | Digit 4 | Digit 5 |
|---|---|---|---|---|
| 1 / 2 | 3 / 4 | 5 / 6 | 7 / 8 | 9 / 0 |

*Default Authority Code:*

| Digit 1 | Digit 2 | Digit 3 | Digit 4 | Digit 5 |
|---|---|---|---|---|
| 7 / 8 | 7 / 8 | 7 / 8 | 7 / 8 | 7 / 8 |

## Locking Doors With Keypad

Press and hold down the (1 / 2) button for 1-2 seconds. An *Access Code* is **NOT** needed to lock the doors.

## Secure Operations

Entering a valid 5-digit *Access Code* provides a double-beep and enables secure operations. After entering an *Access Code*, the keypad is enabled for 5 seconds and the next button pressed initiates a secure operation, such as unlocking the doors.

The table below shows the default secure operation assignments:

| | |
|---|---|
| 1 / 2 Button | Unlock entry doors |
| 3 / 4 Button | Unlocks cargo doors |
| 5 / 6 Button | No function |
| 7 / 8 Button | Unlocks entry and cargo doors sequentially |
| 9 / 0 Button | Activates light for 5 minutes. Repeating sequence while the light is on turns the light off. |

**Notes:**

- The *Authority Code* does not allow for secure operations. It is only used to assign *Access Codes* (see page 5 for information on setting *Authority* and *Access Codes*).
- If an unassigned button or no button is pressed within 5 seconds while the system is enabled, the keypad reverts back to the disabled state.
- The secure keypad operations are set depending on the system configuration (see page 8 for more information on configurations).

# Doorbell e-*PAD* Default Operation and Features

*Default Access Code:*

| Digit 1 | Digit 2 | Digit 3 | Digit 4 | Digit 5 |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 4 |

*Default Authority Code:*

| Digit 1 | Digit 2 | Digit 3 | Digit 4 | Digit 5 |
|---|---|---|---|---|
| 4 | 4 | 4 | 4 | 4 |

## Locking Doors With Keypad

Press and hold down the (1) button for 1-2 seconds. An *Access Code* is **NOT** needed to lock the doors.

## Doorbell Operation

The doorbell button provides a 0.5 second ground pulse from the doorbell output wire when pressed. An *Access Code* is not necessary for the doorbell.

## Secure Operations

Entering a valid 5-digit *Access Code* provides a double beep and enables a secure operation. After entering an *Access Code*, the keypad is enabled for 5 seconds and the next button pressed initiates a secure operation, such as unlocking doors. The Doorbell button is ignored for codes and operations.

The table below shows the default secure operation assignments:

| | |
|---|---|
| 1 Button | Unlock entry doors |
| 2 Button | Unlocks cargo doors |
| 3 Button | No function |
| 4 Button | Unlocks entry and cargo doors sequentially |

**Notes:**

- The authority code does not allow for secure operations. It is only used to assign access codes (see page 5 for information on setting authority and access codes).
- If an unassigned button or no button is pressed while the system is enabled, the keypad reverts back to disabled state.
- If keypad does not provide double beep, a valid access code has not been entered.

# Additional e-*PAD* Features

## Protective Deactivating Security Feature

If a correct code is not entered after 20 button presses, the keypad enters an inactive mode that disables button recognition for 1 minute. This helps prevent unauthorized access by entering random codes.

There is no button feedback while the system is disabled.

## Buzzer Operation

The keypad buzzer chirps once when power is first applied to the keypad and for each key press during regular use. When an authorized *Access Code* is entered, the system chirps twice to indicate readiness for a secure operation.

The keypad chirps twice for each button press while in learn mode. When a new *Access Code* is defined, the system chirps 3 times. If an incorrect code is entered during learn mode, there is a 1-2 second chirp.

## Grab Handle Lighting (e-*GRAB* Only)

The acrylic rod LED is powered separately from the keypad. The OEM wiring determines when the rod is lit. The **e-*PAD*** is lit with a button press and while training new *Access* and *Authority Codes*.

## Dome Light Activation (Standard Only)

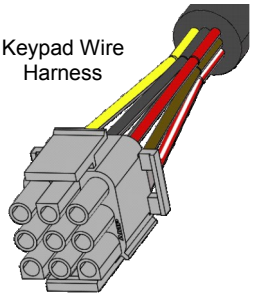
The dome light is toggled on for 5 minutes with a secure (9 / 0) operation, or for 30 seconds with a secure unlock operation. Repeating the (9 / 0) operation while the dome light is on will turn the light off.

## Keypad Backlight Operation

When the **e-*PAD*** is in the normal state, the backlighting is off. When a button is pressed, the keypad backlight flashes bright, and stays on at a low level for one minute.

# Teaching Keypad New *Authority/Access Codes*

**IMPORTANT:** READ ALL INSTRUCTIONS FOR EACH OPTION AND ALL NOTES **BEFORE BEGINNING** TO KNOW WHAT TO EXPECT DURING THE PROGRAMMING PROCESS. SOME STEPS ARE TIME SENSITIVE.




The *Authority Code* has only one purpose; it grants the owner the ability to set new *Access Codes*. The *Authority Code* must be **EXACTLY 5** digits long. There are two ways to set the A*uthority Code* with the Tri*Mark* Full Feature System. Changing the *Authority Code* erases all previous *Access Codes* and sets a new *Access Code* in memory bank 1 that is the same as the new *Authority Code*.

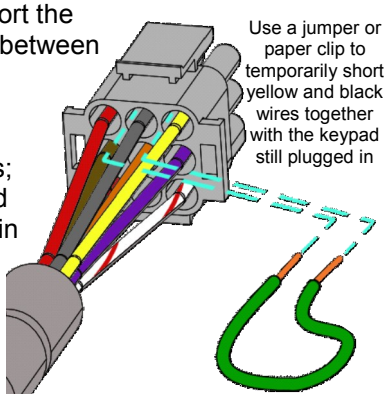
**Important:** *Authority* and *Access Codes* should be different for the greatest security.

## Assign New Authority Code

**Preparation:**

1. Find the wiring harness coming out of the back of the keypad. This is usually behind the passenger armrest next to the entrance door. You may need to remove the keypad from the side of the vehicle.

**Programming:**




2. With the keypad still plugged in, short the yellow wire to ground (a paper clip between the yellow and black wires in the connector works) until the keypad begins to beep.
3. The keypad will beep for 3 seconds; remove the short before the keypad stops beeping. The keypad is now in "Learn Mode."
4. Enter a new 5-digit *Authority Code* (double chirps after each button press). The keypad chirps 3 times after the 5th digit's entry.
5. Re-enter the new *Authority Code* for confirmation. The keypad will chirp FOUR times for successful confirmation. **A long beep indicates a failure to change the code.**
6. Test the new code to confirm it.

The user is given 2 minutes to complete this procedure. If it isn't completed in time, or an error is made, the system will exit learn mode and a long chirp will sound to indicate the error.

**Notes:**

- While in "Learn Mode," each button push provides a double-chirp and the backlight flashes.
- The authority code is to be controlled by individuals (owners of vehicle, fleet manager, etc.) who manage the distribution of access codes to vehicle users.
- The authority code should be changed when the vehicle is sold.
- The authority code does not enable secure functions (lock/unlock doors, etc.)—it is only used to assign access codes.
- Doorbell systems only allow codes using buttons 1-4 and provides for 4 unique access codes.
- The keypad automatically leaves "Learn Mode" when the new code is set.

The following area can be used to document the *Authority Code*:

| Authority Code | | | | |
|---|---|---|---|---|
| **Digit 1** | **Digit 2** | **Digit 3** | **Digit 4** | **Digit 5** |
| | | | | |

## Assign New Access Codes

The *Access Codes* are used for secure functions, such as unlocking doors. The *Access Codes* must be **EXACTLY 5** digits long. With a valid *Authority Code*, an *Access Code* can be programmed with the following instructions:

1. Press the (5 / 6) or (3) button for 5 seconds until the keypad beeps. The backlighting of the keypad will flash indicating the keypad is in "Learn Mode."
2. Enter the 5-digit *Authority Code* (see page 2, 3, or the table above for the code).
   - If you enter an INCORRECT *Authority Code*, the keypad will beep for 1 second, and leave "Learn Mode."
   - If you enter a CORRECT *Authority Cod*e, the keypad will provide a constant beep that will only stop after you have defined a **memory bank** to store the new *Access Code*.
3. Press and release the button that corresponds to the **memory bank**. For example, press (1 / 2) or (1) button for Memory #1 and press (3 / 4) or (2) button for Memory #2. During this activity you are choosing 1 of 5 (4) memory banks.
4. Enter a new 5-digit *Access Code*. The keypad chirps 3 times after the 5$^{th}$ digit's entry.

5. Re-enter the new *Access Code* for confirmation. The keypad will chirp 3 times after a successful confirmation. A long beep indicates a failure to change the code.
6. Test the new code to confirm a successful change.

Repeat process to assign additional *Access Codes.*

**Notes:**

- Up to 5 (4) different *Access Codes* can be assigned at any time. As additional *Access Codes* are defined, pre-existing *Access Codes* are overwritten. For example, if a new *Access Code* is assigned to Memory #3, the previous *Access Code* in Memory #3 is no longer valid.
- If an error is made at any point, or if time runs out, the keypad will exit "Learn Mode," provide a 1-2 second beep, and not change anything.

The following area can be used to document the access code assignments:

| Memory # | User Name | Digit 1 | Digit 2 | Digit 3 | Digit 4 | Digit 5 |
|---|---|---|---|---|---|---|
| 1/2 (1) | | | | | | |
| 3/4 (2) | | | | | | |
| 5/6 (3) | | | | | | |
| 7/8 (4) | | | | | | |
| 9/0 | | | | | | |

## ***Alternate Configurations:***

In addition to the configurations listed previously (Standard Mode and Doorbell Mode), other configurations can be made available if the application calls for it, as shown on the next pages.

# Sustained e-*PAD* Operation and Features

Sustained mode is designed for use in applications where a device being driving by the keypad needs a constant signal for the duration of its actuation. *Authority* and *Access Codes* are the defined and used in the same way as defined before.

## Closing Doors with Keypad

To close the doors with the keypad, press and hold the (1 / 2) button, the keypad will beep and the doors will begin to close after 2 seconds. The doors will continue to close until **EITHER** you release the button or the doors reach their fully closed position.

An *Access Code* is **NOT** needed to close the doors.

## Secure Operation

Entering a valid 5-digit *Access Code* provides a double-beep and enables secure operations. After entering an *Access Code*, the keypad is enabled for 5 seconds and the next button pressed initiates a secure operation.

The table below shows the default secure operation assignments:

| | |
|---|---|
| 1 / 2 Button | No function |
| 3 / 4 Button | No function |
| 5 / 6 Button | No function |
| 7 / 8 Button | No function |
| 9 / 0 button | Sends “Open Door” signal for the duration that the button is held. |

## Opening Doors with Keypad

When the keypad is enabled, the operator has 5 seconds to start to open the doors. If, once started, the operator releases the button before the doors are open, the operator has 3 seconds to press and hold the button again until the doors are fully opened.

**Notes:**

- The *Authority Code* does not allow for secure operations. It is only used to assign *Access Codes* (see page 5 for information on setting *Authority* and *Access Codes*).
- If an unassigned button or no button is pressed within 5 seconds while the system is enabled, the keypad reverts back to the disabled state.
- If keypad does not provide double beep, a valid access code has not been entered.

## Troubleshooting

| Problem Description | Possible Solution |
|---|---|
| **e-*PAD* Hints** | |
| No response with button press | Verify connection of keypad. |
| Access code is not recognized | Verify that code has not been changed. Reassign keypad with instructions on page 5. |
| | Confirm use of an access code, not the authority code. |
| Acrylic rod develops surface cracks (e-*GRAB* Only) | A petroleum or alcohol based product was used to clean rod. Only use mild soap and water on rod. |
| **e-*ASK* System Hints** | |
| Entrance door does not respond to lock/unlock commands | Clean the door contacts and make sure they are not bent, damaged, or improperly aligned. |
| | If your doorway has a wire harness instead of contact plates in the doorway, make sure the wires are not broken. |

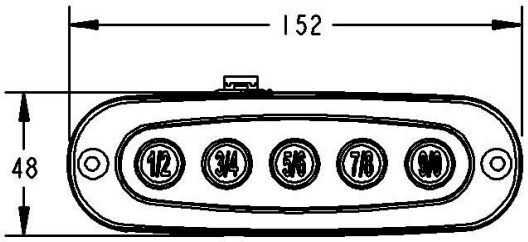
## Warranty Information

This product has been manufactured with methods to ensure high quality and to meet the high expectations of our customers. Tri*Mark* warrants this product to be free from workmanship defects and will remedy issues per Tri*Mark*'s warranty policy.

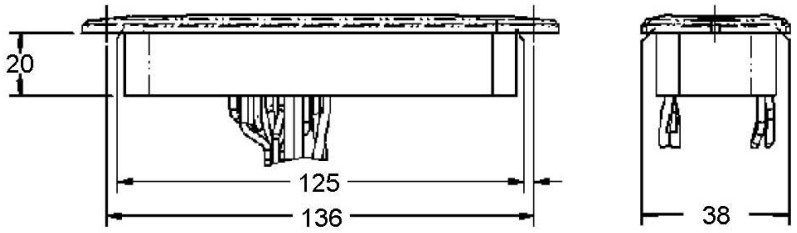
Remote transmitter FOBs, batteries, and other equipment subject to normal wear and deterioration may need to be replaced periodically by dealer and/or end user and are not covered by this warranty. Tri*Mark* will not be liable for indirect, special, incidental or consequential damages.

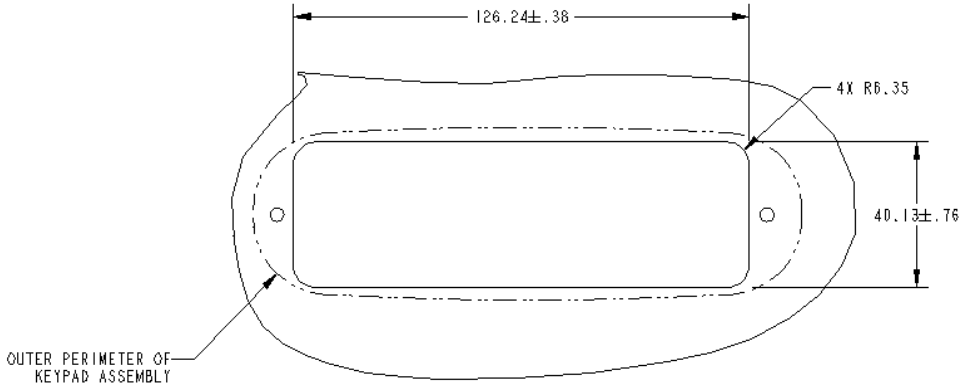
Contact Tri*Mark* for specific mounting details, such as drawings, placement suggestions, mounting hardware, etc.

# Appendix A: Mounting Information




**Units in millimeters**



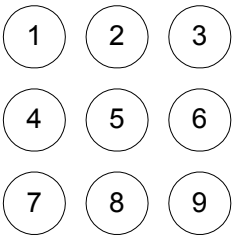




**Recommended Keypad Clearance Cutout**

# Appendix B: Wiring Information

**Wire Identification:**

**TERMINAL IDENTIFICATION**




**STANDARD MODE**

1. Red / White Wire – 12V output (relay coil)
2. White / Green Wire – lock all
3. White / Red Wire – unlock all with 1/2 secure operation (Entry Doors)
4. Brown Wire – unlock with 3/4 secure operation (Cargo Bays)
6. Purple Wire – output actuated with 9/0 secure operation (lights).
7. Red Wire – system power, 12-14V
8. Black Wire – system ground
9. Yellow Wire – ground to enter learn mode.

**DOORBELL MODE**

1. Red / White Wire – 12V output (relay coil)
2. White / Green Wire – lock all
3. White / Red Wire – unlock all with 1/2 secure operation (Entry Doors)
4. Brown Wire – unlock with 3/4 secure operation (Cargo Bays)
6. Purple Wire – output actuated with pressed DOORBELL button
7. Red Wire – system power, 12-14V
8. Black Wire – system ground
9. Yellow Wire – ground to enter learn mode

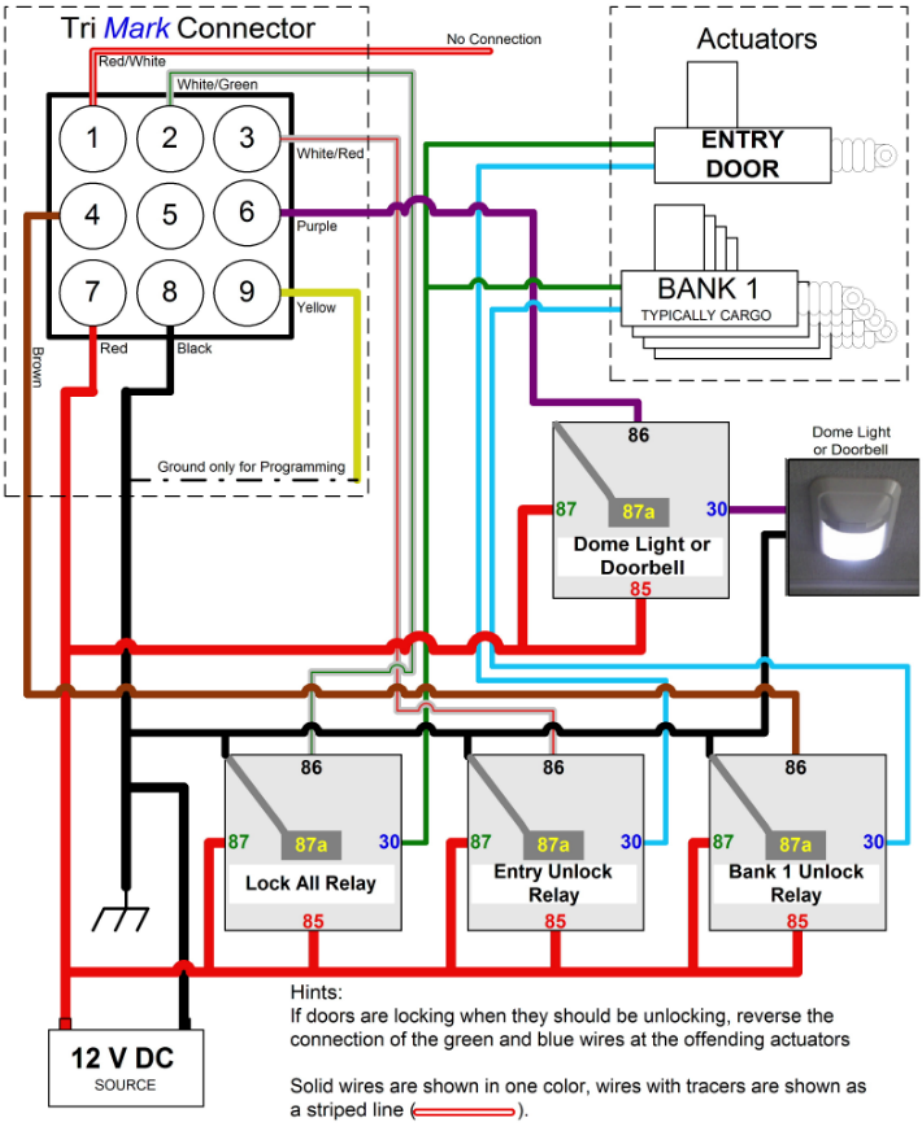
**SUSTAINED MODE**

1. Red / White Wire – 12V output (relay coil)
2. White / Green Wire – close door
3. White / Red Wire – not used
4. Brown Wire – not used
6. Purple Wire – open door
7. Red Wire – system power, 12-14V
8. Black Wire – system ground
9. Yellow Wire – ground to enter learn mode

# Wiring Diagram - Stand-Alone
# Standard or Doorbell Discrete Keypad

Notes:
Additional door actuators can be installed in parallel on each bank (i.e. connecting all blue wires together on every relay on the same bank) as appropriate based on amp draw from actuators and amp rating on relays

If amp draw from actuators exceeds the rating of the relay, add an additional relay in parallel (I.E. Connect Pin 2 and Pin 4 to the 86 terminals of an additional relay pair for more Bank 1 capacity)

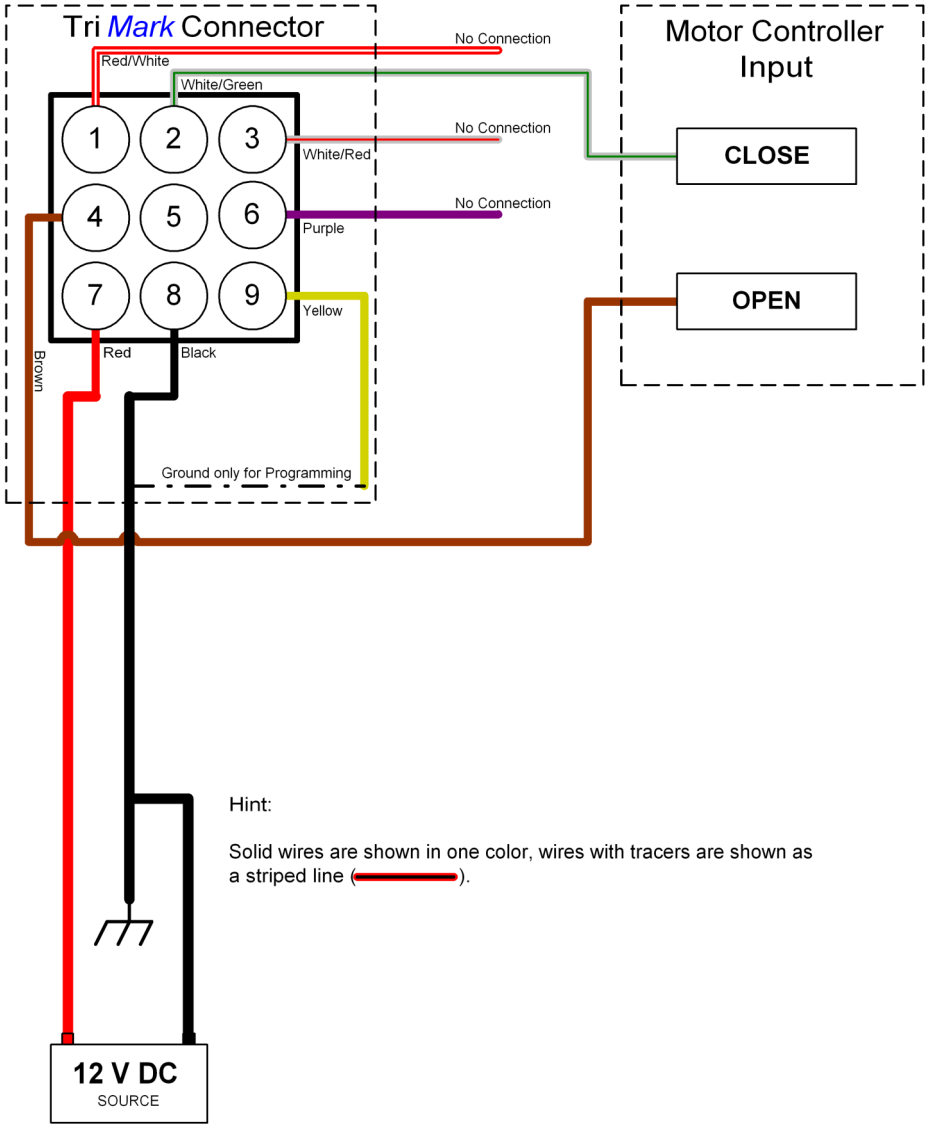



Hints:
If doors are locking when they should be unlocking, reverse the connection of the green and blue wires at the offending actuators

Solid wires are shown in one color, wires with tracers are shown as a striped line (═══).

# Wiring Diagram - Stand-Alone
# Sustained Output Keypad

Notes:
This keypad is setup to signal a motor controller, not drive a motor. Do not connect this keypad directly to a motor.

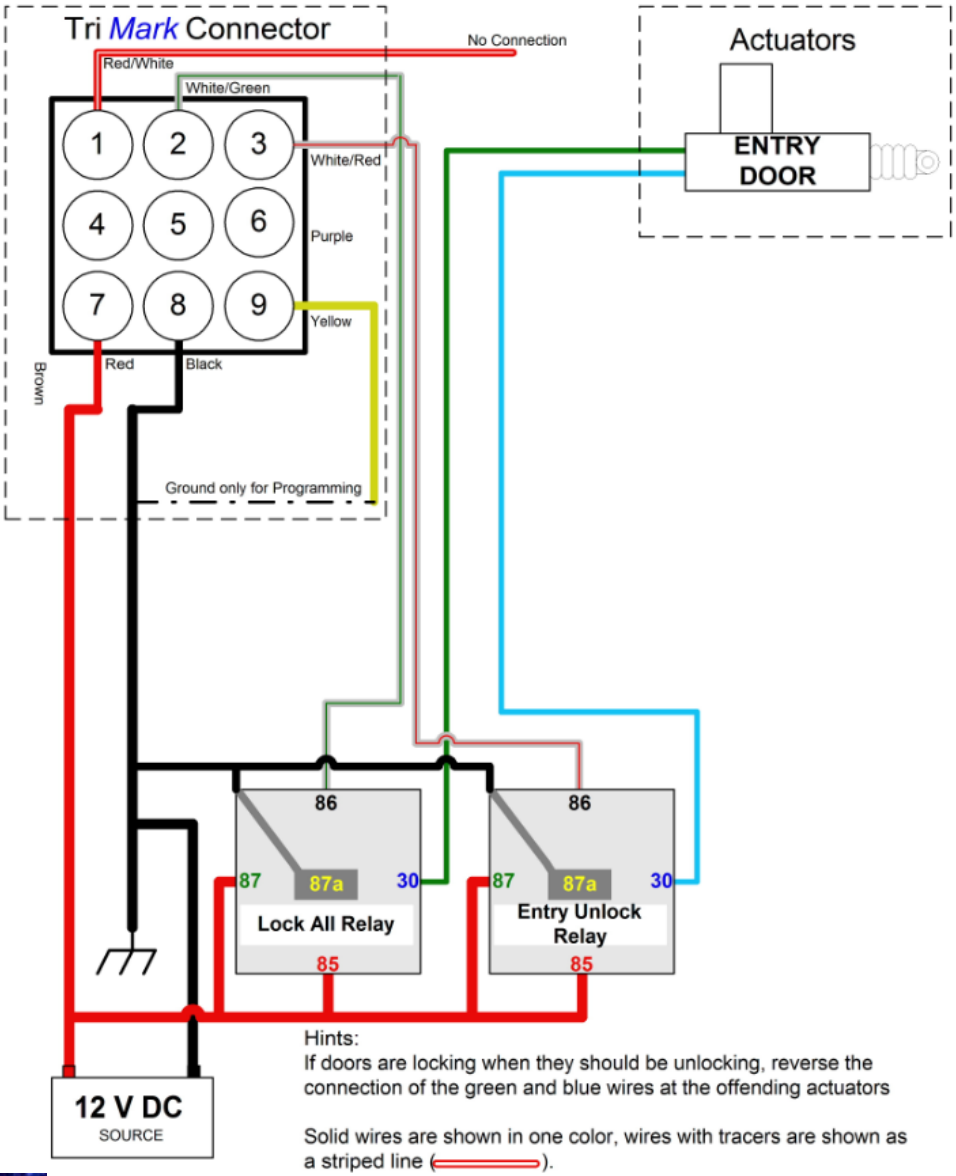



Hint:

Solid wires are shown in one color, wires with tracers are shown as a striped line ().

# Wiring Diagram - Stand-Alone
# Entry Only

If amp draw from actuators exceeds the rating of the relay, add an additional relay in parallel (I.E. Connect Pin 2 and Pin 4 to the 86 terminals of an additional relay pair for more Bank 1 capacity)




Hints:
If doors are locking when they should be unlocking, reverse the connection of the green and blue wires at the offending actuators

Solid wires are shown in one color, wires with tracers are shown as a striped line (═══).

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