

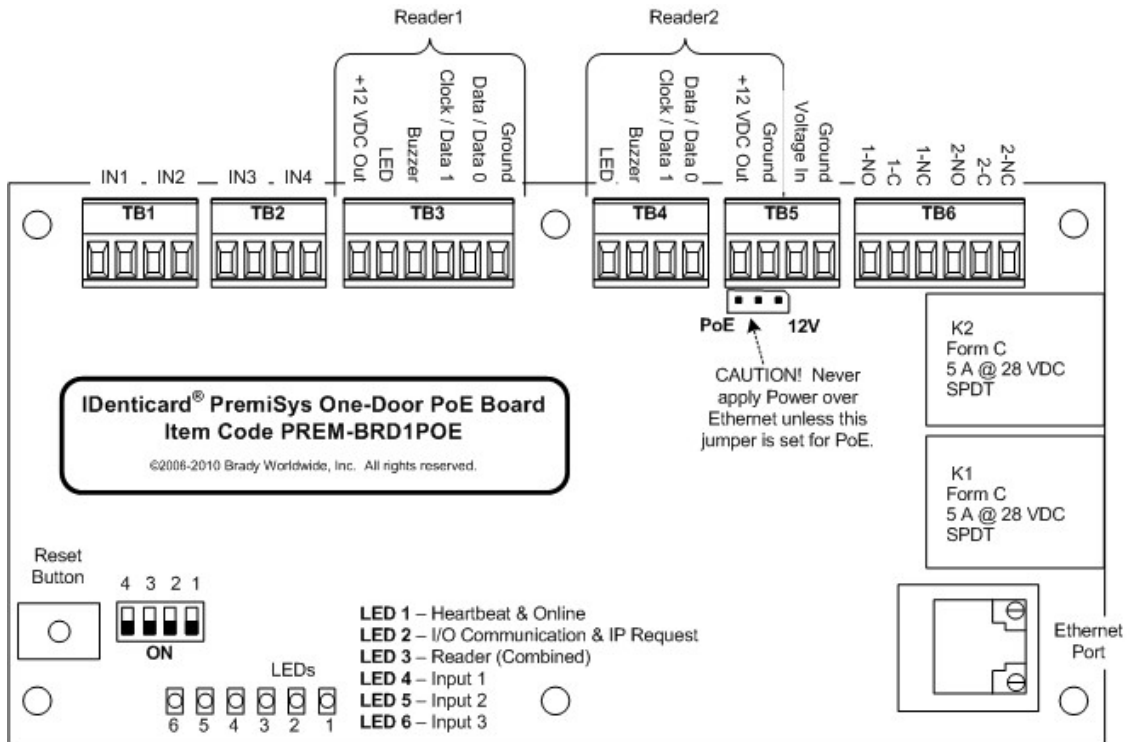
| | |
|--------|----------|
| TB10-2 | TR- |
| TB10-3 | Not Used |
| TB10-4 | Not Used |
| TB10-5 | Ground |

Compact Controller LEDs

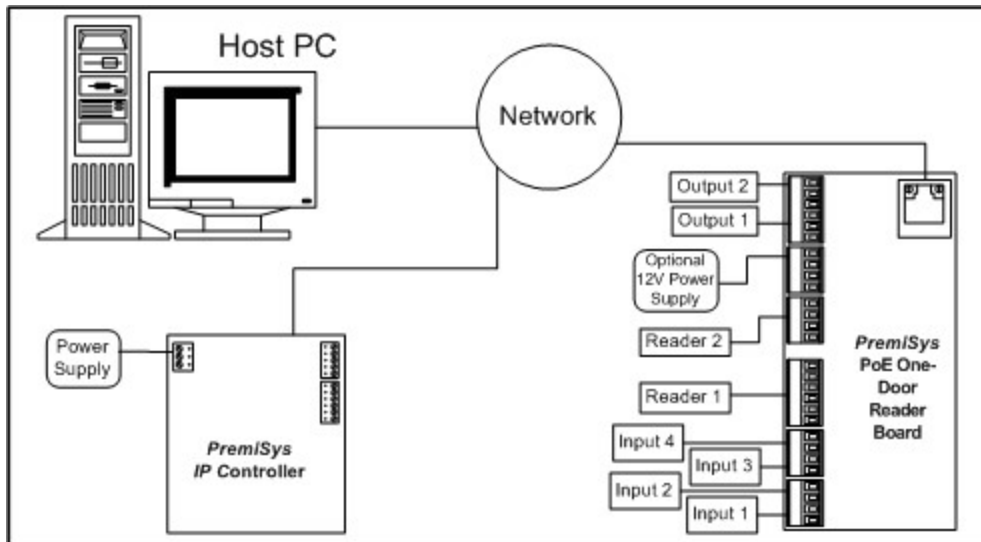
| LED | On During Initialization | On During Operation |
|-----|--------------------------|---|
| A | Initialization start | Task indicator |
| B | RAM test | Host communication indicator |
| C | RAM cleared | Auxiliary board communication indicator |

PremiSys I/O Boards

PremiSys PoE One-Door Reader Board



Sample General Configuration for a PremiSys PoE One-Door Reader Board Connected to a PremiSys Controller, a Reader and Auxiliary Equipment



PoE One-Door Reader Board Specifications

Certifications for the PoE One-Door Reader Board

UL: recognized to UL 294: Access Control System Units - component

Dimensions and Weight of the PoE One-Door Reader Board

| | Without Bracket | With Bracket |
|--------------|------------------------------|---------------------------------|
| Board Width | 5.5 inches (140 mm) | 5.5 inches (140 mm) |
| Board Height | 2.75 inches (70 mm) | 3.63 inches (92 mm) |
| Board Depth | .75 inch (19 mm) | 1.25 inch (32 mm) |
| Board Weight | 4.2 ounces (119 g) (nominal) | 5.3 ounces (150.25 g) (nominal) |

Environmental Specifications for the PoE One-Door Reader Board

| | |
|-------------------|---|
| Temperature | -40°F to 167°F (-40°C to 75°C) operating 67°F to 185°F (-55°C to 85°C) storage |
| Relative Humidity | 10% to 95% RH noncondensing |

Power Specifications for the PoE One-Door Reader Board



CAUTION! The processor in this component is intended for use only in a Class 2, low-voltage circuit!

| | |
|---------------|---|
| Input Voltage | 12 – 24 VDC \pm 10%, 500 mA maximum (reader current not included) 12 VDC @ 250mA (plus reader current) nominal 24 VDC @ 150mA (plus reader current) nominal |
| Memory Backup | Lithium coin cell, 3.0 V, type BR2325, BR2330, CR2330 |



IMPORTANT! The Altronix® Power Supply Control panel contains 8 individual power outputs. Each output can supply up to 2.5 A @ 12 VDC. However, the total output amperage on all 8 ports cannot exceed 10 A. You must determine the load of each board in the loop to ensure that the current draw does not exceed 2.5 A per output port and that the total current draw on the power supply does not exceed 10 A.

Wiring Requirements for the PoE One-Door Reader Board

| | |
|--|--|
| Power to PoE One-Door Reader Board | Category 5 cable to Ethernet port OR Twisted pair, 18 AWG (0.823 mm ²) |
| Primary Port – Ethernet to Host | Category 5 cable |
| Connection to Relay-Controlled Devices | Use wire and gauge as required by load |
| Connection to Input Point Devices | One twisted pair per input, 30 ohms maximum |
| Connection to Readers | TTL - Six-conductor, 18 AWG. Maximum cable length: 500 feet (150 m), total copper, including drops |

Communications Specifications for the PoE One-Door Reader Board

| | |
|---------------|----------------------------------|
| To Controller | Ethernet, 10/100Base-T interface |
|---------------|----------------------------------|

Access-Control Specifications for the PoE One-Door Reader Board

| | |
|------------------------------|--------------------------------------|
| Relay Pulse Time | 1 to 255 seconds |
| Door-Position Held-Open Time | 1 to 32,767 two-second units of time |

Indicators on the PoE One-Door Reader Board

| | |
|---------|---|
| Visible | 7 red, single-color LEDs, 1 green and 1 yellow Ethernet port LEDs |
|---------|---|

PoE One-Door Reader Board Jumper Settings

Jumper J5 on the PoE One-Door Reader Board is used to indicate the power source for the board.

| <u>Jumper</u> | <u>Setting</u> | <u>Selection</u> |
|---------------|----------------|--|
| J5 | 1-2 On [PoE] | PoE Power Input 12.95W, compliant to IEEE 802.3af. Reader voltage is regulated to 12V. |

| | | |
|--|-----------------|---|
| | 2-3 On [12V] | Optional Power Input from 12 VDC power supply. Reader voltage is passed through. |
|--|-----------------|---|



IMPORTANT! You cannot address the PoE One-Door Reader Board using jumpers; you must assign a range of IP addresses to the Ethernet controller. The controller then assigns one of those IP addresses to the PoE One-Door Reader Board. Enter the MAC address of the PoE One-Door Reader Board when you add the board to your Ethernet controller through your PremiSys™ software. The controller links the MAC address to an IP address from the range of reserved IP address.

Wiring a PoE One-Door Reader Board to a Power Supply



IMPORTANT! The Altronix® Power Supply Control panel contains 8 individual power outputs. Each output can supply up to 2.5 A @ 12 VDC. However, the total output amperage on all 8 ports cannot exceed 10 A. You must determine the load of each board in the loop to ensure that the current draw does not exceed 2.5 A per output port and that the total current draw on the power supply does not exceed 10 A.

The PremiSys™ PoE One-Door Reader Board can be powered via the Ethernet or via either of the PremiSys 12-VDC power supplies.

Power to the readers via the PoE connection to the board is regulated at 12 VDC.

Power to the readers via a 12-VDC power supply connected to the board is passthrough voltage.

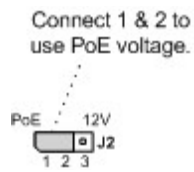
Exercise caution to be sure that the voltage supplied to the PoE One-Door Reader Board is not too great for the reader to handle. If you are connecting the PoE One-Door Reader Board to a reader that requires a voltage lower than 12 volts, you must use a resistor to lower the voltage going out of the reader port.

If you are connecting the PoE One-Door Reader Board to a reader that requires a voltage higher than 12 volts, use a separate power source wired directly to the reader to power it.



IMPORTANT! If your readers require less than 12 VDC you must use a resistor to reduce the power output to match the power requirements of your readers or use a separate power supply for the readers.

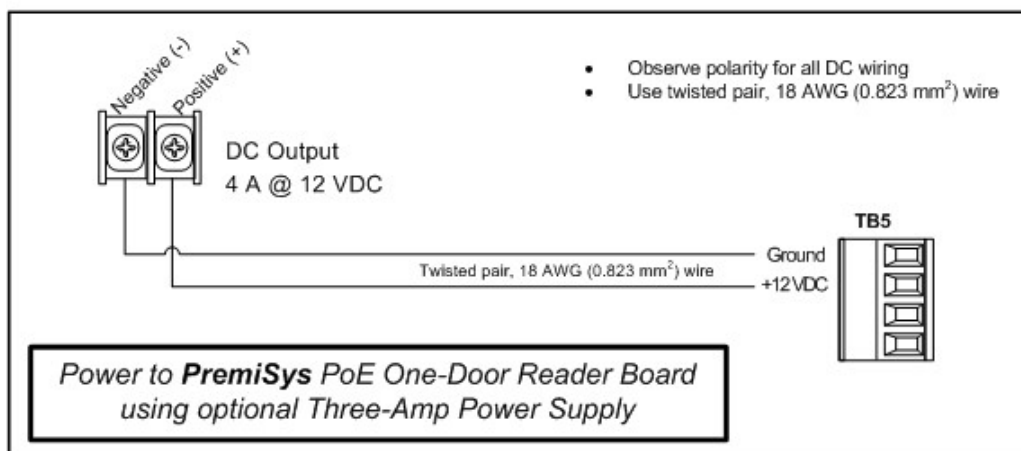
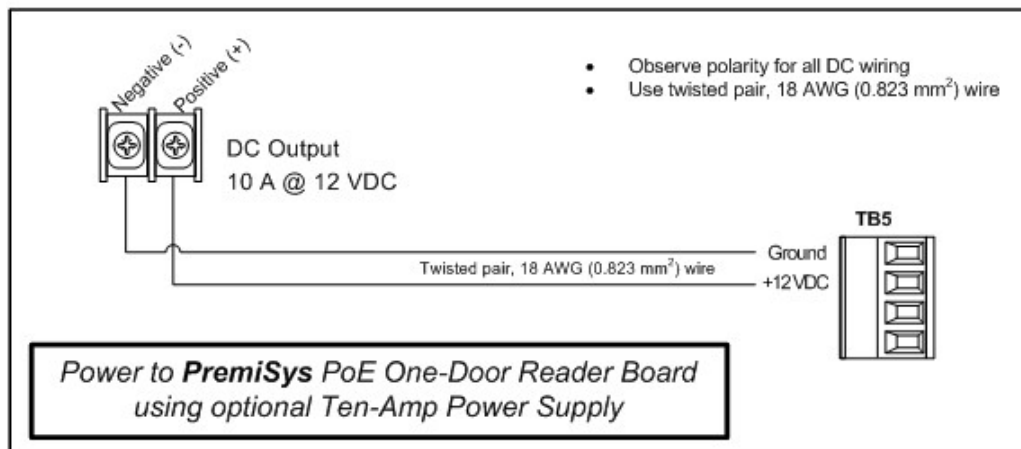
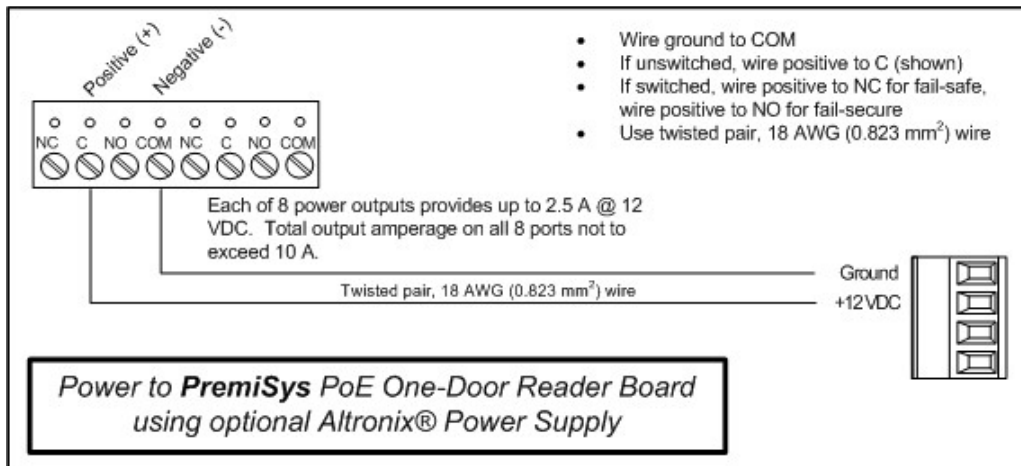
The voltage selection for power to the **board** is made using jumper J5 on the PoE One-Door Reader Board, as shown below (PoE selected):



Connect the PoE One-Door Reader Board to your network using a category 5 cable to a PoE switch or a PoE injector on a regular switch. The power supplied to the board will be 48 VDC in either case.

Refer to the documentation enclosed with individual readers to determine if the readers must have their own separate power source and not be powered from the PoE One-Door Reader Board.

You may optionally power the PoE One-Door Reader Board using a separate 12 VDC power supply. If you choose this method wire the board as shown in the image below corresponding to the power supply you use.



The PoE One-Door Reader Board has 6 LEDs:

- **LED 1** indicates the heartbeat
- **LED 2** indicates communication activity and IP address request
- **LED 3** indicates activity on either of the two readers
- **LEDs 4, 5 and 6** indicate activity of the inputs 1, 2 and 3, respectively

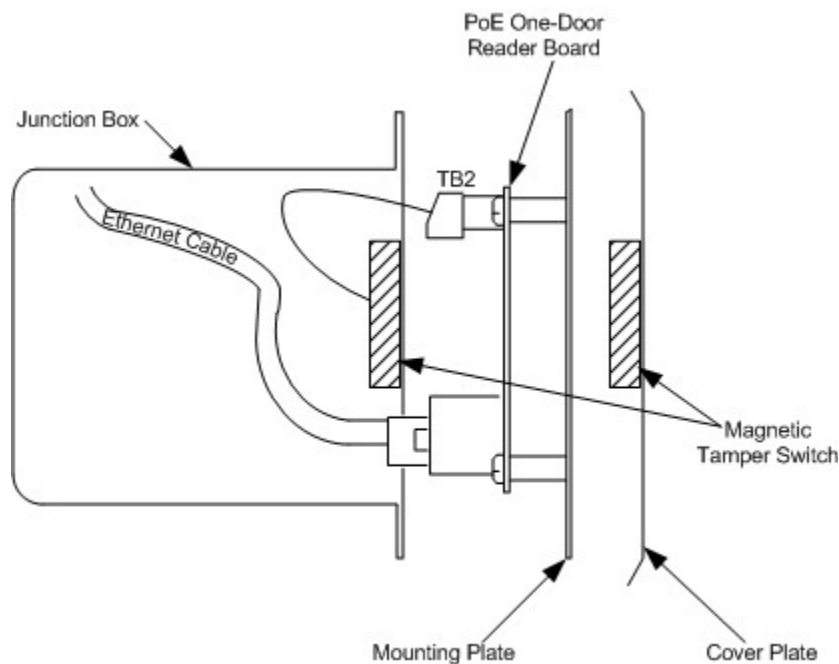


Note: The PremiSys One-Door Reader Board does not have a dedicated power alarm input.

Wiring a PoE One-Door Reader Board Tamper Switch

You can wire a magnetic tamper switch to the PremiSys™ PoE One-Door Reader Board, as shown below, to activate an input point if the cover is removed. We recommend that you use input point 4 for this purpose.

Note that if you choose to use this board to control two separate doors (not recommended) you will not have an available input for use with the tamper switch.



Wiring a PoE One-Door Reader Board to a Controller

Communication to the PremiSys™ PoE One-Door Reader Board is handled via the Ethernet, while power to the board can be handled via the Ethernet or via a separate power supply.

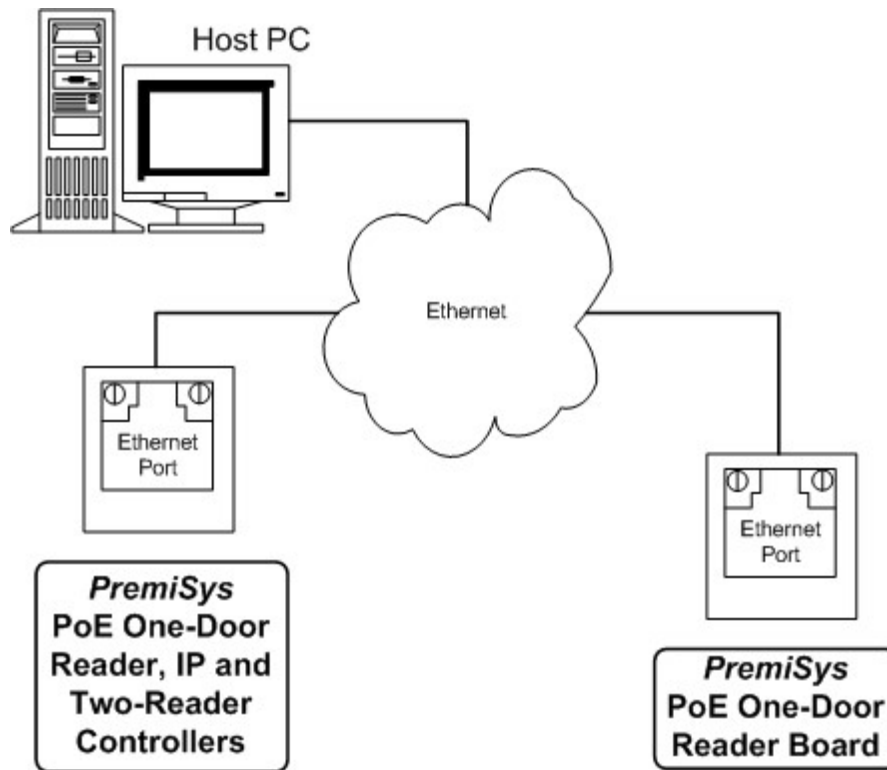


Note: Listed below are the maximum numbers of PoE One-Door Reader Boards you can connect to each of the named controllers. In parentheses are the maximum numbers of allowable doors (readers) on each controller:

IP Controller - 32 (64)

Two-Reader Controller - 32 (64)

PoE One-Door Reader Controller - 16 (17)

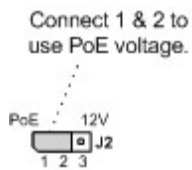


IMPORTANT! You cannot address the PoE One-Door Reader Board using jumpers; you must assign a range of IP addresses to the Ethernet controller. The controller then assigns one of those IP addresses to the PoE One-Door Reader Board. Enter the MAC address of the PoE One-Door Reader Board when you add the board to your Ethernet controller through your PremiSys™ software. The controller links the MAC address to an IP address from the range of reserved IP address.

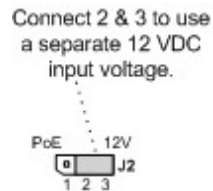
Wiring a PoE One-Door Reader Board to Wiegand and ABA Readers

The PremiSys™ PoE One-Door Reader Board can be powered through the Ethernet connection or by the 12 VDC supplied by any PremiSys power supply. The voltage selection is made using jumper J2 on the PoE One-Door Reader Board.

Since PoE voltage on the board is regulated to 12 V, selecting the jumper settings as shown below results in output of a nominal 12 V to the reader ports.



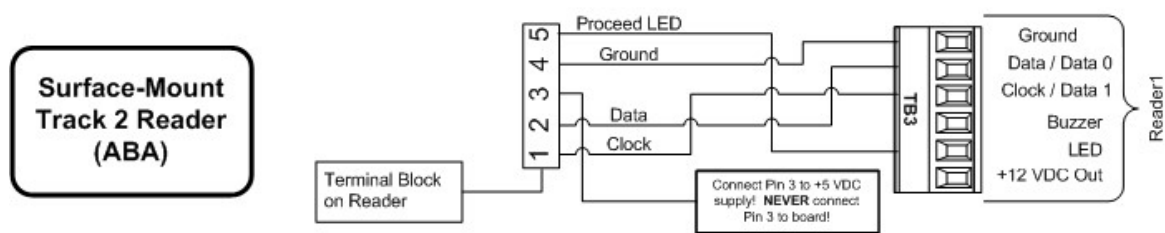
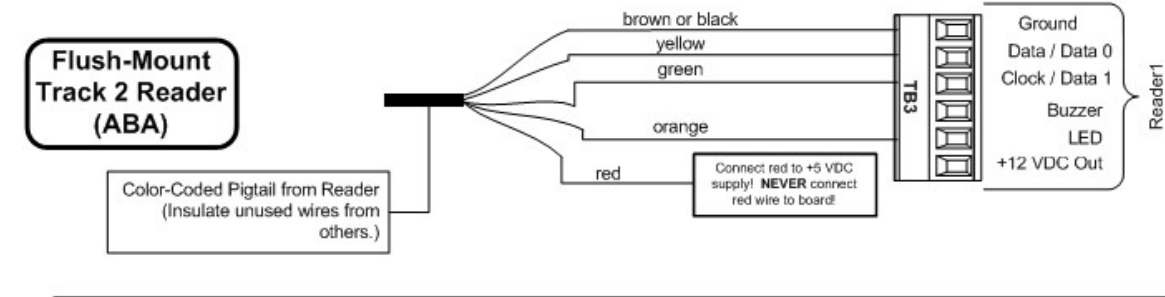
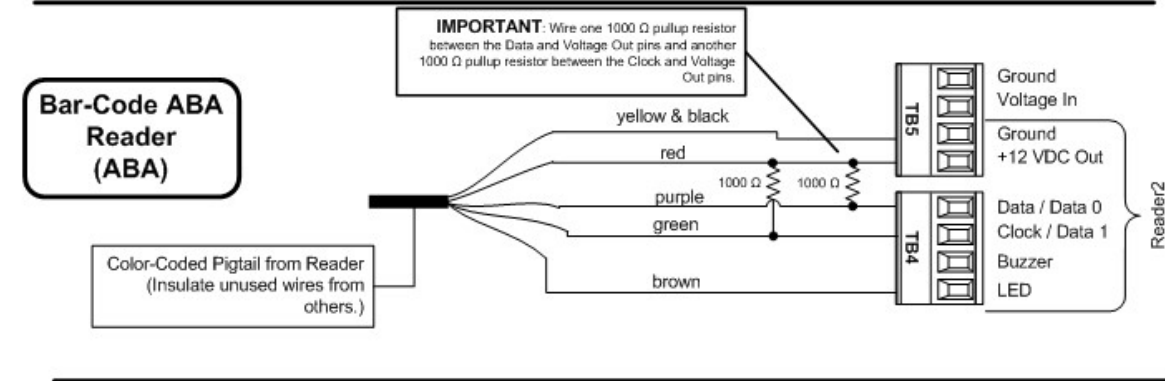
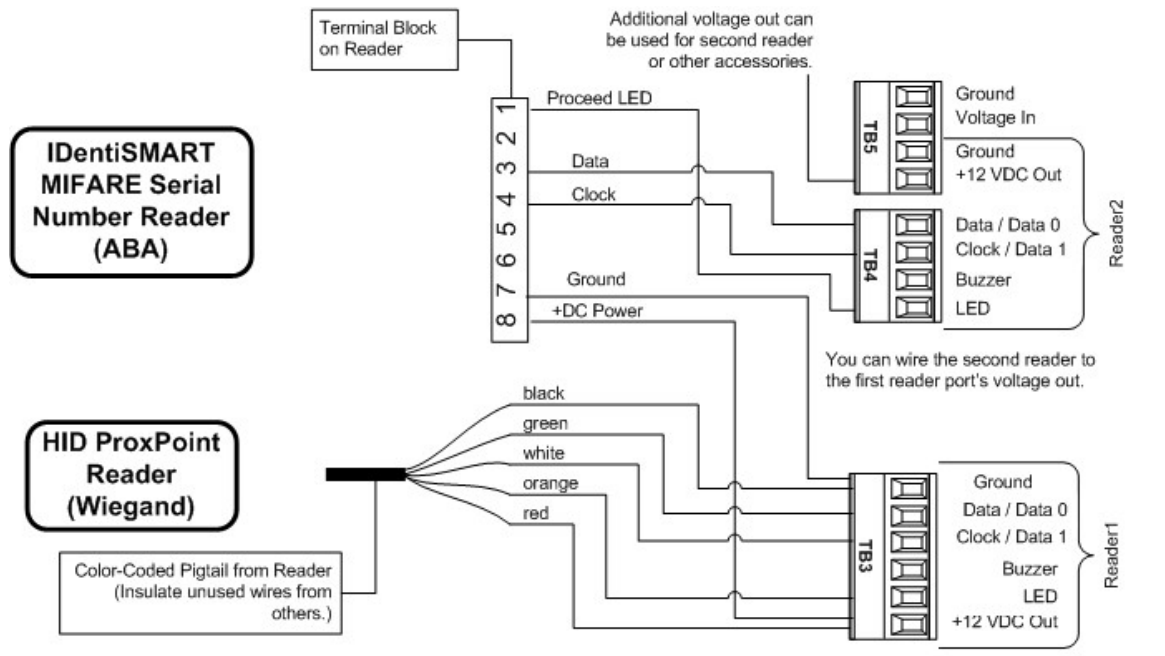
To power the readers from the board using a 12 VDC power supply to the board, select the jumper settings as shown below for passthrough voltage to the reader ports



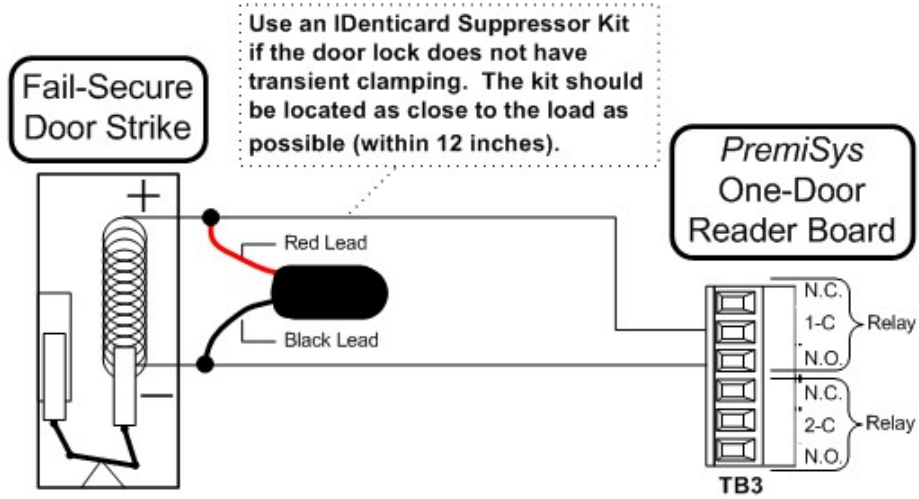
Exercise caution to be sure that the voltage supplied to the PoE One-Door Reader Board is not too great for the reader to handle.

Refer to the documentation enclosed with individual readers if the readers:

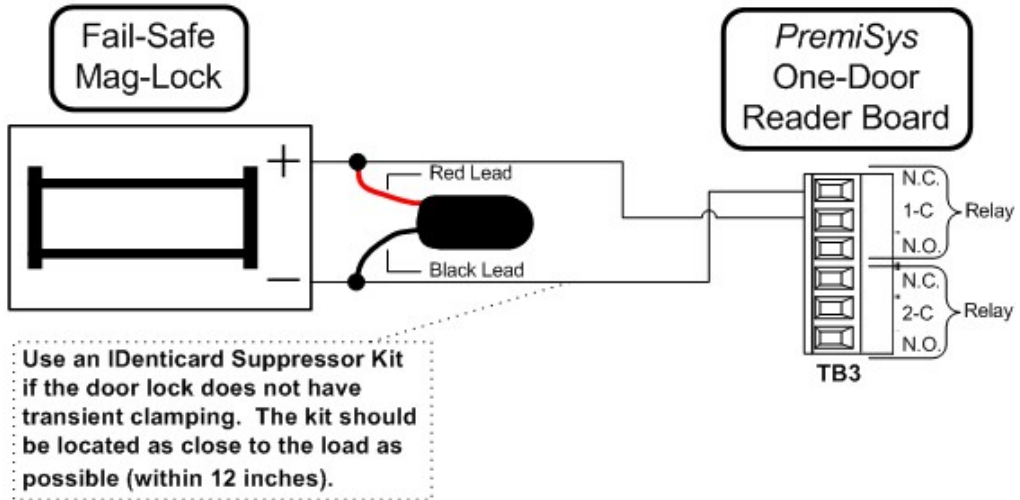
- Uses a “pigtail” cable as shown below. Always double-check the color-coding scheme of any reader using a pigtail. The scheme depicted in this illustration is a very common standard, but may not necessarily be universal.
- Must have their own separate power source and not be powered from the PoE One-Door Reader Board.



Wiring a PoE One-Door Reader Board to a Door Strike and Magnetic Lock



CAUTION! Make sure that lock equipment does not exceed relay contact ratings: 5A @ 28 VDC



Wiring a PremiSys PoE One-Door Reader Board to Door Strike and Magnetic Lock (continued)

| TB 3 (Output = Relay) | |
|------------------------------|--------------------------|
| TB3-1 | Relay 1: Normally open |
| TB3-2 | Relay 1: Common |
| TB3-3 | Relay 1: Normally closed |
| TB3-4 | Relay 2: Normally open |
| TB3-5 | Relay 2: Common |
| TB3-6 | Relay 2: Normally closed |

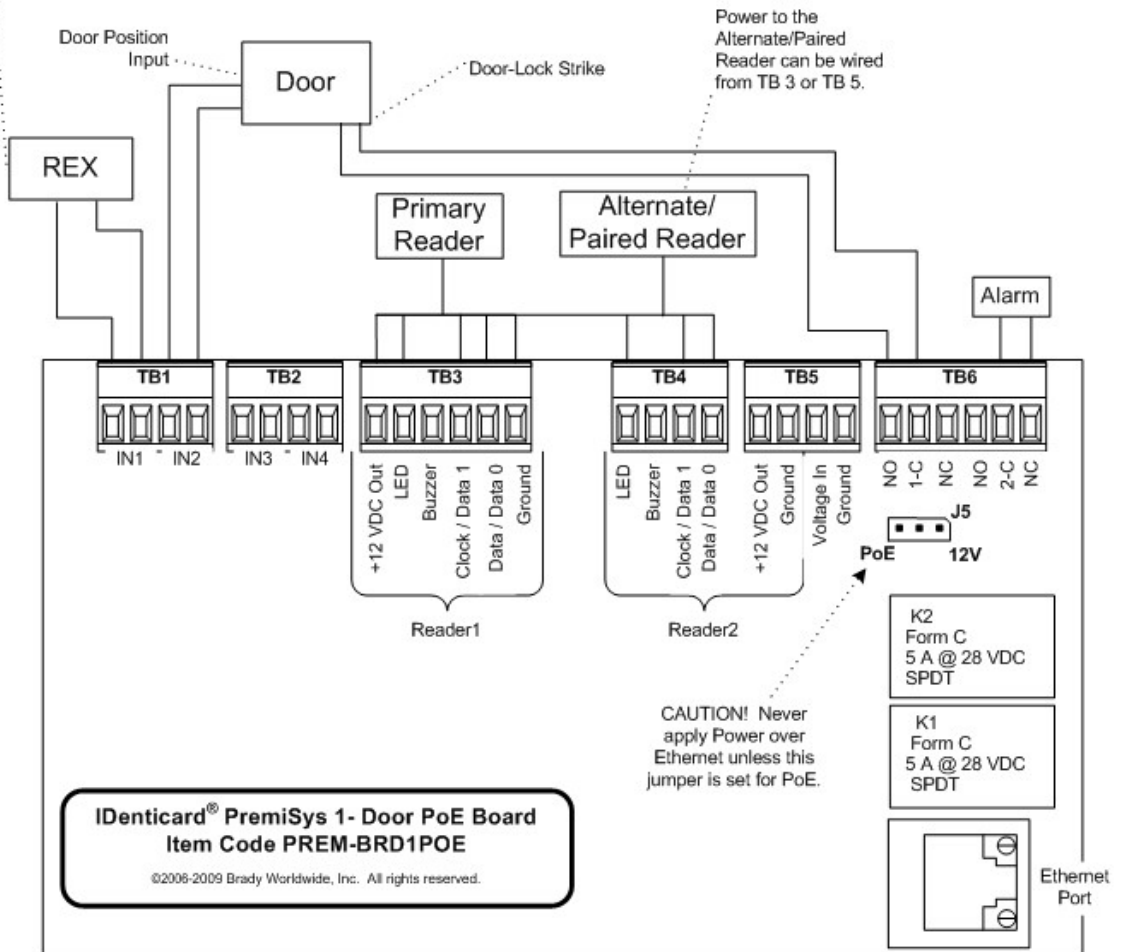
Connecting Inputs and Relays on the PoE One-Door Reader Board

Relays may be wired normally open or normally closed, depending on the needs of the devices they are controlling.

You must specify the output configuration (normal action, inverted action) when you set up each relay in the software. See the PremiSys™ Online Help for details.

Sample Door Hardware and Connections

Note: When wiring a REX and a DPIIP as a pair, always wire the REX to the input point with the lower number.



IDenticard® PremiSys 1- Door PoE Board
 Item Code PREM-BRD1POE
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IMPORTANT! Inputs on a single board are normally processed in ascending numeric sequence when they change state simultaneously or nearly simultaneously. Consequently, if wiring a REX input point and a door-position input point in a pair, make sure that the door-position input point has a higher input number than the REX point paired with it.

In the example illustrated above, the REX is wired to Input 1 and the door-position input point to Input 2. In this way, if the state changes on these points appear nearly simultaneously, the system will process the REX before the door-open state, and therefore prevent a false door-forced alarm, which would result if the points were processed in the reverse order.

If you cannot wire the points in the proper order, a means exists in the PremiSys software to override this processing. See the PremiSys Online Help for details.

Wiring Supervised Input Points on the PoE One-Door Reader Board

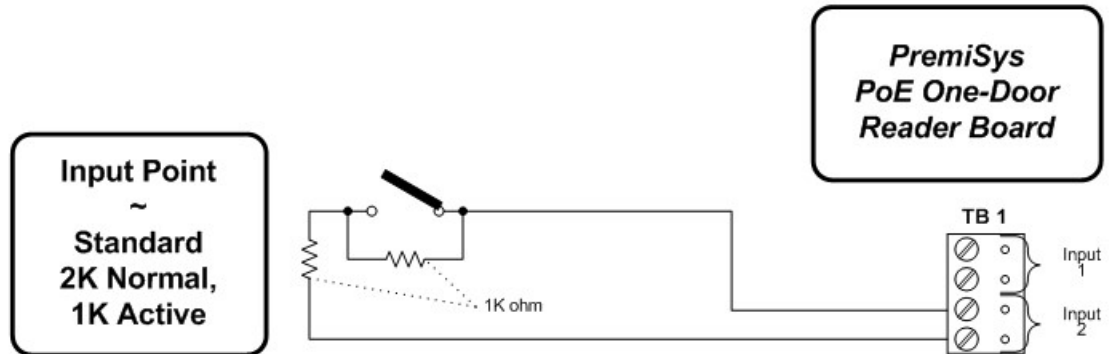
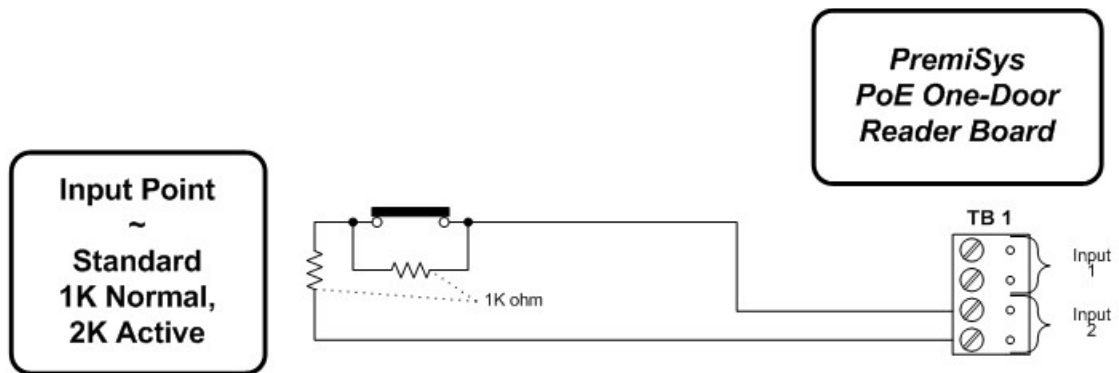
Supervised inputs such as these can be used for door-position input points or any other input that requires supervision. See the topic "[Wiring Unsupervised Input Points on the PremiSys PoE One-Door Reader Board](#)" to wire inputs that do not require supervision.

PremiSys™ supports only the standard “1 K normal, 2 K active” and “2 K normal, 1 K active” supervision modes depicted here.

Input circuits require one twisted pair per input and are rated at 30 ohms maximum.



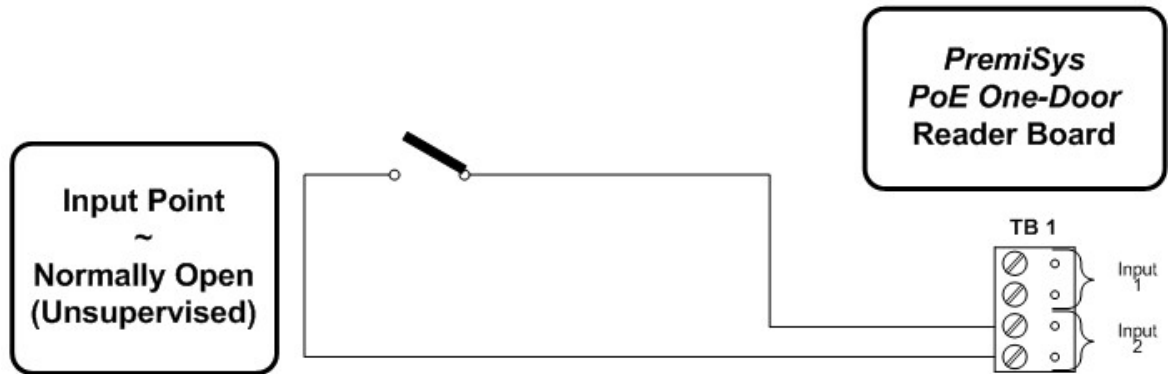
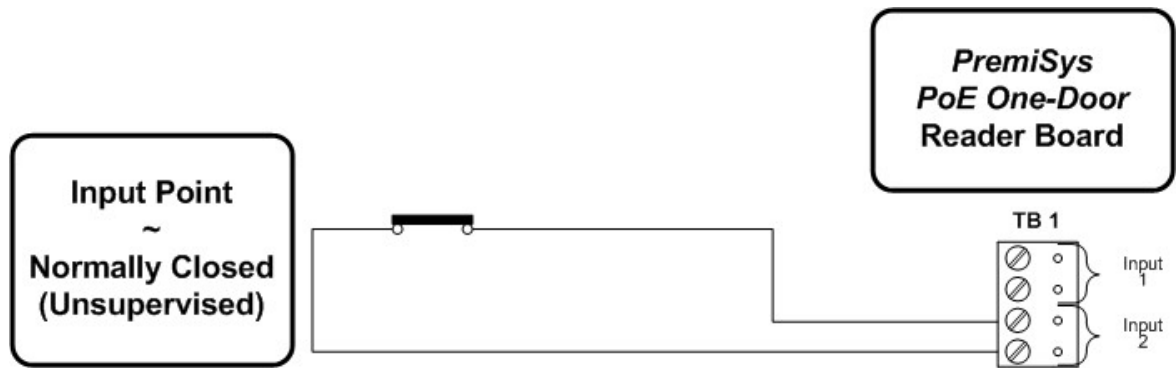
IMPORTANT! Inputs on a single board are normally processed in ascending numeric sequence when they change state simultaneously or nearly simultaneously. Consequently, if wiring a REX input point and a door-position input point in a pair on a PoE One-Door Reader Board, make sure that the door-position input point has a higher input number than the REX point paired with it.



Wiring Unsupervised Input Points on the PoE One-Door Reader Board

Unsupervised inputs such as these can be used for REXes, general-purpose input points or any other input that does not require supervision. See the topic "[Wiring Supervised Input Points on the PremiSys PoE One-Door Reader Board](#)"^[176] to wire inputs that require supervision.

Input circuits require one twisted pair per input and are rated at 30 ohms maximum.



PoE One-Door Reader Board LEDs

The PremiSys™ PoE One-Door Reader Board has 6 LEDs:

| <u>LED</u> | |
|------------|--|
| 1 | Heartbeat and online status indicator |
| 2 | "On" indicates I/O communication or IP address request |
| 3 | "On" indicates reader activity on either reader |
| 4 | "On" indicates Input Point 1 in Alarm |
| 5 | "On" indicates Input Point 2 in Alarm |
| 6 | "On" indicates Input Point 3 in Alarm |



Note: Input Point 4 does not have a corresponding LED.