

INTERNATIONAL



ELECTRONICS, INC

# prox.pad™ plus Access System Installer Guide

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This equipment is designed to be installed and serviced by security and lock industry professionals. More comprehensive information is supplied in the *prox.pad plus Installation/Programming Manual* (located on the CD-ROM).

**Service Company, Put Contact Information Here:**

**Company Name:** \_\_\_\_\_

**Service Number:** \_\_\_\_\_

**Access system programming:** This access system possesses serial communications capability and can be managed as part of an overall access control system with Hub Manager Professional™ software. See the inside cover for system requirements.

**Optional Keypad Programming:** The prox.pad plus unit can be programmed manually using the keypad on each unit and without the use of a personal computer (PC) and software. This manual contains the optional keypad programming instructions. Keypad programming can be helpful to get a door or doors up and running prior to having the availability of the host computer. In all cases, the personal computer programming options supersede the keypad programming options.

#### 15.21 Information to User

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**Access system programming - System Requirements**

- Hub Manager Professional™ access control software version 5 or higher (part number HUBSWR includes software installation instructions)

**PC Hardware Requirements**

- IBM-compatible Pentium-class computer
- 30MB available hard disk space
- VGA monitor or better, 800 x 600 resolution recommended
- CD-ROM or DVD-ROM drive
- Mouse

**Operating System List**

- Windows 98; Windows 2000; Windows XP

**Technical Support**

**Service Company:** To contact IEI's Technical Support department, call 1-800-343-9502 between 8:00 a.m. - 7:00 p.m. (Eastern Standard Time), Monday through Friday. Questions can also be submitted through our website at [www.ieib.com](http://www.ieib.com).

**End User:** Contact your service company.

## **Description**

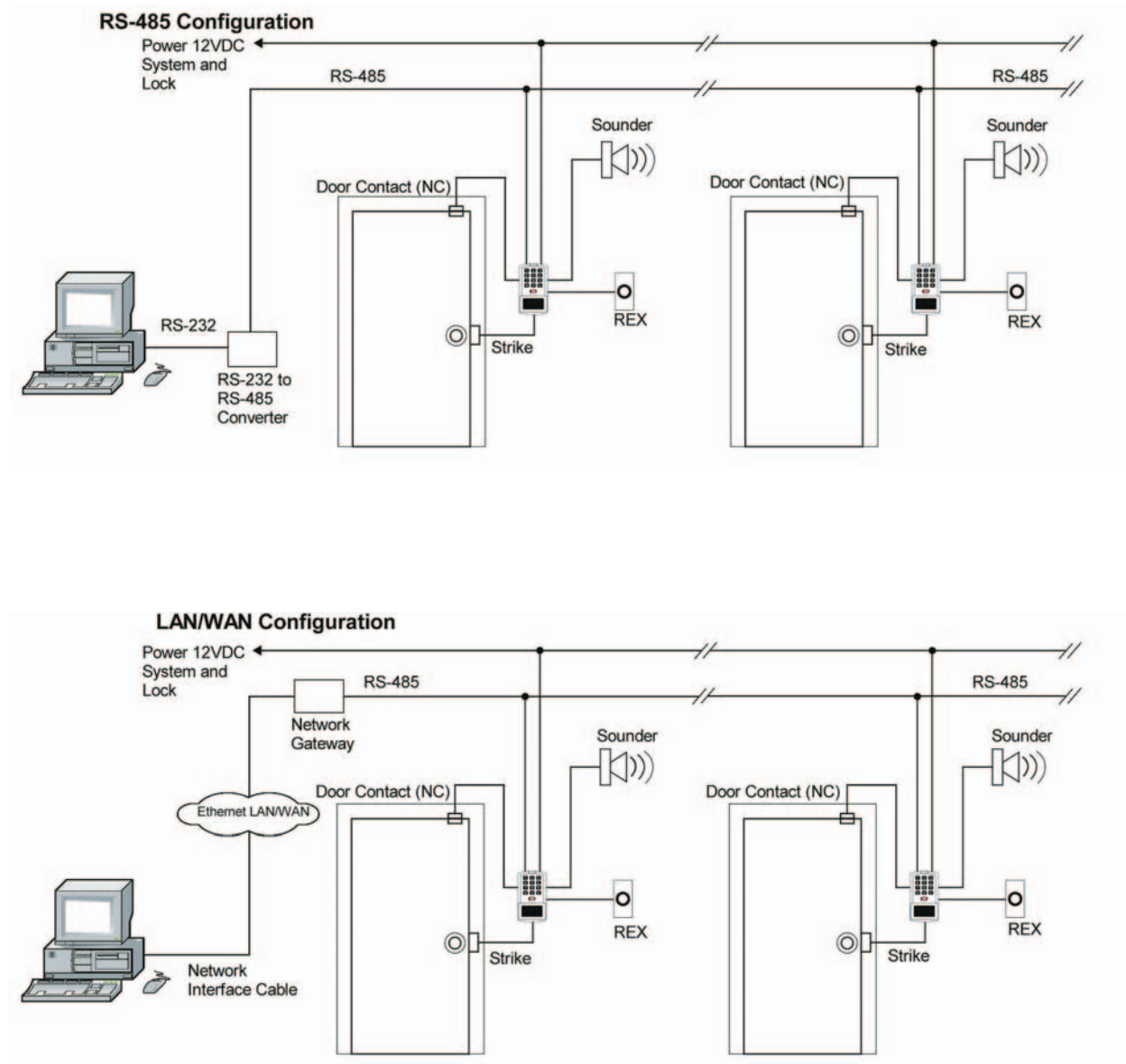
The prox.pad plus unit is a single door access system that is programmed and managed from a personal computer using Hub Manager Professional software (version 5 or higher). The prox.pad plus unit is equipped with RS-485 communications which allow up to 32 prox.pad plus doors to be networked together. Connectivity options include direct connection to a personal computer (PC) com port using the IEI 232 to 485 converter as well as LAN/WAN connectivity using the network gateway for IEI access systems.

The prox.pad plus unit is unique in that no separate controller is needed and there is no need to run cables from a reader to a control. The unit is self-contained and includes built in HID proximity and IEI keypad readers as well as the controller.

Separate options include the prox.pad plus power supply, which provides additional security with a tamper circuit that prevents lock release should the case be pried open. In addition, the prox.pad plus unit can be programmed manually with the unit's keypad.

Important features include:

- Managed with Hub Manager™ Professional access software
- 32 doors per site
- No separate control to install
- Eliminate costly reader wiring
- 2000 users per door
- 2000 event audit trail
- Integrated-HID proximity
- Card, code, card and/or code
- Locate proximity 10 ft from control
- Indoor and outdoor
- Glass mount kit
- RS-485 network
- LAN/WAN connectivity option
- Option for data collection with PDA
- Door monitor
- Main relay for lock
- Programmable auxiliary relay
- Local sounder for alerts



**NOTE: prox.pad plus RS 485 communications**—The prox.pad plus unit communicates with the host computer via the IEI RS232-RS485 interface (part number IEI232-485). For additional details see pages 16 and 17. For wire specifications, see page 23.

**NOTE: Use with IEI Secured Series™ (Hub, Hub Max, Hub MiniMax) Networks**—The RS 485 network characteristics for the prox.pad plus unit are different than those of IEI's Secured Series access systems. This means the prox.pad plus unit can operate in the same system as Secured Series controllers but not on the same physical network. Hub Manager Professional software (v5 or higher) can manage Secured Series doors and prox.pad plus doors (and LS doors as well), but these door controllers cannot be “connected” to the same network and network wires. Secured Series communication is RS-232; prox.pad plus communication is RS-485. These communication protocols are different. However, the ability of the Hub Manager Professional software to set up multiple local and LAN/WAN sites makes this an advantage rather than a problem.

## prox.pad plus Wiring Connection Overview

Figure 1 below illustrates the Pin connectors on the prox.pad plus main circuit board; the table on page 7 describes the four Pin connectors (P1, P2, P4, and P5) in detail. **Specifications are listed on page 23.**

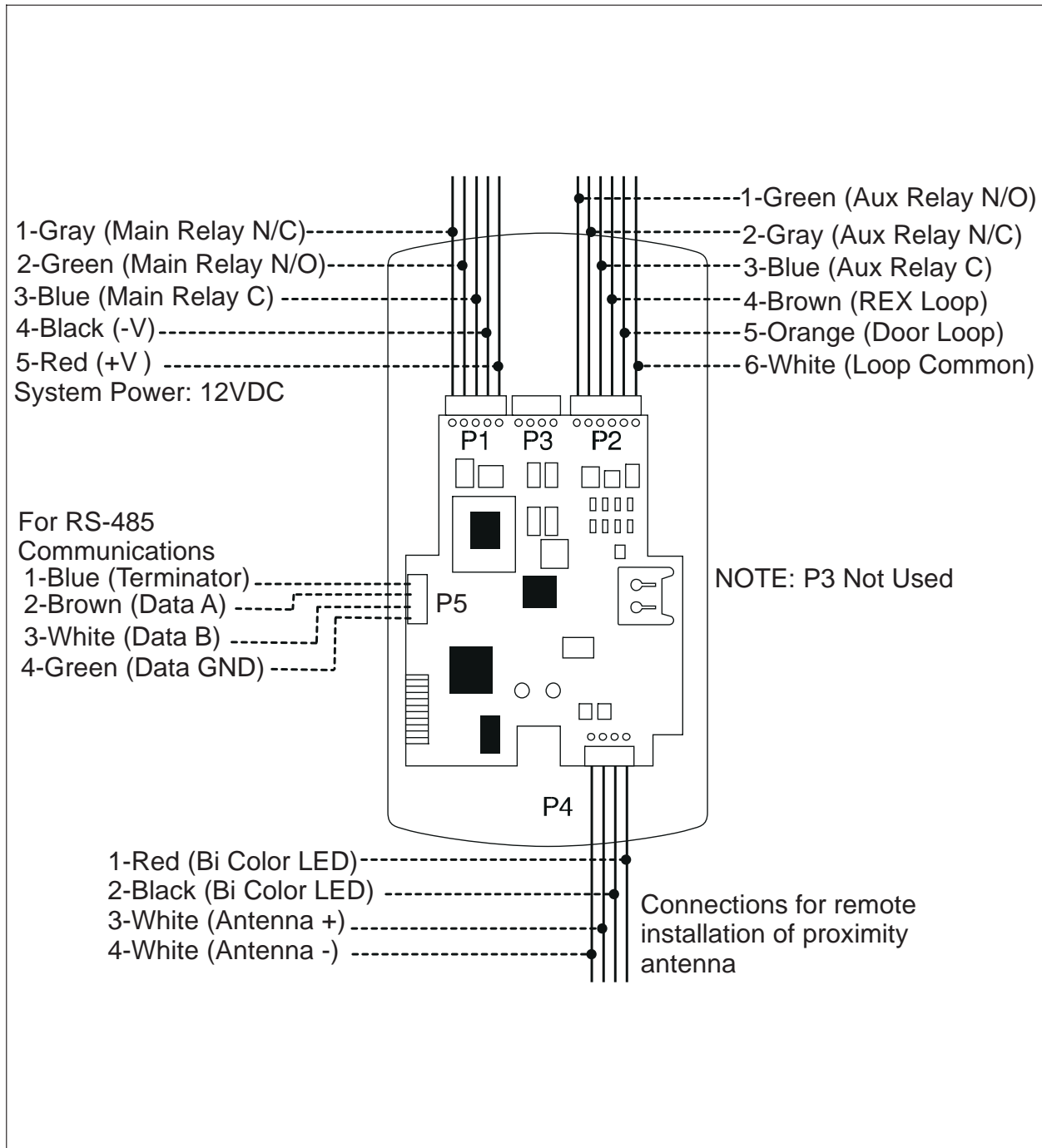


Figure 1 Identifying Pin Connectors

## IEI-Supplied Parts/Optional Items

Quantity	Description
1	Keypad/control unit assembly, with Prox Sensor, Backplate, hex socket screw
1	Filler Piece/REX Button
1	Press to Exit Label
4	Wall Anchors
4	Mounting Screws
1	Antenna Backplate for remote mounting
1	Silicone Rubber “dogbone”
4	Self-Adhering Pads (for glass mounting)
1	Installer Guide
4	Cable Assemblies
1	Tamper Screw
	<b>Optional Items</b>
1	Replacement Battery: Panasonic BR1225 or equivalent
lots of 25 only	ProxKey Keytags (IEI part number 0297301)
lots of 25 only	ProxCard II Cards (IEI part number 0297401)
1	Hub Manager™ Professional PC software (version 5 or higher)
1	IEI Data Collection Device (DCD) PDA software

## Default Settings

Parameter	Default Setting
Main Relay	Lock Output
Auxiliary Relay	Alarm shunt function
Audio Alert #1	Forced Door
Audio Alert #2	Propped Door
Master Code (user one)	1234*
Main Relay energizes for	Five (5) seconds
Audible Keypress Feedback	ON
Propped Door Output activates after	Thirty (30) seconds
Forced Door Output activates for	Ten (10) seconds

## prox.pad plus Pin Connectors

Pin Connector (on main circuit board)	Description/Use		
P1 (5-pin connector, top left-most location)	<b>Pin</b>	<b>Wire Color</b>	<b>Use</b>
	1	GRAY	Main Relay, Normally Closed (N.C.)
	2	GREEN	Main Relay, Normally Open (N.O.)
	3	BLUE	Main Relay, Common
	4	BLACK	Ground
	5	RED	Power In, +12 VDC
P2 (6-pin connector, top right-most location)	<b>Pin</b>	<b>Wire Color</b>	<b>Use</b>
	1	GREEN	Aux Relay N.O.
	2	GRAY	Aux Relay N.C.
	3	BLUE	Aux Relay Common
	4	BROWN	REX Loop (if used) (NO contact)
	5	ORANGE	Door Loop Contact (NC contact)
	6	WHITE	Loop Common (shared by REX and door loop)
	NOTE: Pins 1 and 2 can be wired at the installer's option for one of the following alarm outputs, Alarm Shunt, Forced Door, or Propped Door. Mandatory: If you do not wish to install door contacts per Figure 7, twist the white and orange wires together. <b>If not done, REX input will not work.</b>		
P4 (4-pin connector, bottom location)	<b>Pin</b>	<b>Wire Color</b>	<b>Use</b>
	1	RED	Bi-Color LED (Red +)
	2	BLACK	Bi-Color LED (Green +)
	3	WHITE	Antenna (+)
	4	WHITE	Antenna (-)
P-5 (4-pin connector, left-hand side location)	<b>Pin</b>	<b>Wire Color</b>	<b>Use</b>
	1	Blue	Terminator
	2	Brown	Data A
	3	White	Data B
	4	Green	Data GND

## Performing a Secure Installation (keypad/controller away from antenna)

In this configuration, the prox.pad plus keypad/controller antenna housing is removed from the keypad/controller and located a maximum of 10 feet away. The controller/keypad is located inside a secure area.

1. Remove the antenna from the prox.pad plus keypad/controller as described below:
  - Disconnect the backplate of the prox.pad plus unit from the front keypad/controller.
  - **When handling the main printed circuit board, to guard against possible static discharges, touch a grounded object BEFORE touching the prox.pad plus unit.** Remove the main printed circuit board by pressing the two spring tabs in the direction of the arrows as shown in Figure 3. Be careful with the wires.
  - Pull up the main circuit board and remove Pin connector P4 (a 4-pin connector) from the bottom of the main board. A ribbon cable now holds the main board to the keypad board. **DO NOT pull this ribbon cable out of its connector!** Once the main board is removed, you can access the interior of the antenna.
  - Remove the antenna housing from the keypad/controller by pressing the labeled four secure tabs inward until the sensor housing “pops out.”
2. Prepare the wiring and extension wiring as follows:
  - Cut off the plastic end of the prox.pad plus sensor housing harness.
  - Splice the recommended remote antenna cable Alpha 1174C (22AWG), 10-foot maximum length, to the properly cut antenna cable using standard electrical techniques.

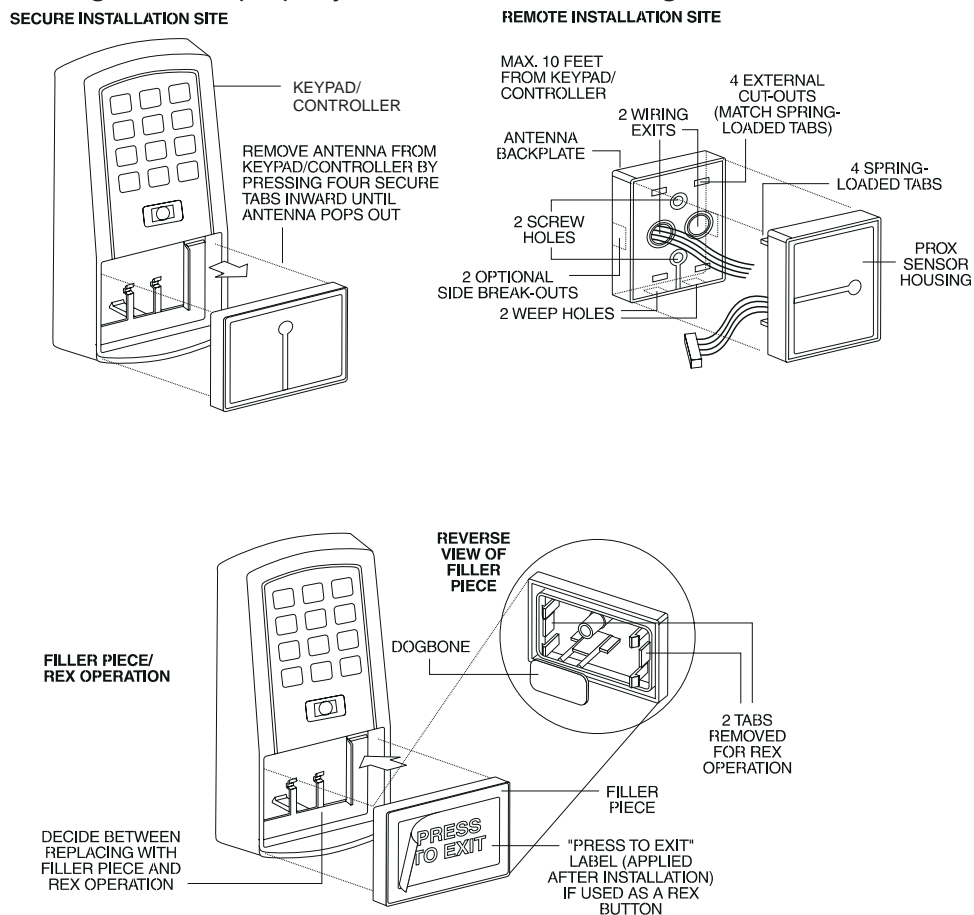


Figure 2 Performing a Secure Installation



3. Mount the antenna backplate in a vertical orientation and secure it to the wall through the two screw holes using two IEI-provided screws. Ensure that the two “weep holes” (drainage holes), provided to remove possible moisture, are positioned on the bottom. Pull the antenna wire through the wiring exits in the antenna backplate as required. (Four external cut-outs on the antenna backplate match the four spring-loaded tabs on the antenna.)

**NOTE:** Two side cut-outs are furnished on the antenna backplate for the wiring, if the installation does not permit the wiring to run through the wall. These must be “cut out” to be used.

- Once the antenna backplate is mounted properly, align the antenna to the backplate and connect the antenna to the antenna backplate. The large tab in the center of the antenna assembly must be broken off before being attached to the antenna backplate.
4. Run the antenna wiring back to the secure keypad/controller and connect it to the main circuit board, using the 10-inch 4-wire harness (red, black, white, and white) that you plug into connector P4 on the controller board. Connect the red wire of the antenna to the red wire of the P4 harness, etc. Seal the wire holes with silicone.
  5. Select “Filler” or “Request to Exit” (REX) operation as follows:
    - If you elect to use the filler piece as a REX switch, return to the keypad/controller and break off two tabs on the filler piece as illustrated in Figure 2. The filler piece replaces the antenna on the front of the keypad/controller for secure installations.
    - **If the filler piece is not be used as a REX switch, DO NOT remove the two tabs.**
    - Select “Filler or “REX” operation and affix the appropriate IEI-provided label to the filler piece.  
**For Filler operation**, no tabs are broken off the filler piece, which merely sits in place of the remotely located antenna, once the main circuit board and cabling are re-placed.  
**For REX operation**, break off the labeled tabs, which allows a spring-loaded tab to engage the REX switch on the main circuit board and open the door.
    - Replace the main circuit board into the keypad/controller and Pin connector P4 to the main circuit board.
    - Connect the front keypad/controller of the unit to the back housing.
    - Secure with a hex socket screw using the supplied hex wrench, or secure with a tamper screw (optional tool required).

## Removing/Inserting Circuit Boards

If it proves necessary to remove or insert the main circuit board from/into the prox.pad plus controller/keypad, follow the steps below.

1. Disconnect the back housing of the prox.pad plus unit from the front keypad/controller.
2. **(When handling the main printed circuit board, to guard against possible static discharges, touch a grounded object BEFORE touching the prox.pad plus unit.)**  
Remove the main printed circuit board by pressing the two spring tabs in the direction of the arrows as shown in Figure 3. Be careful with the wires.

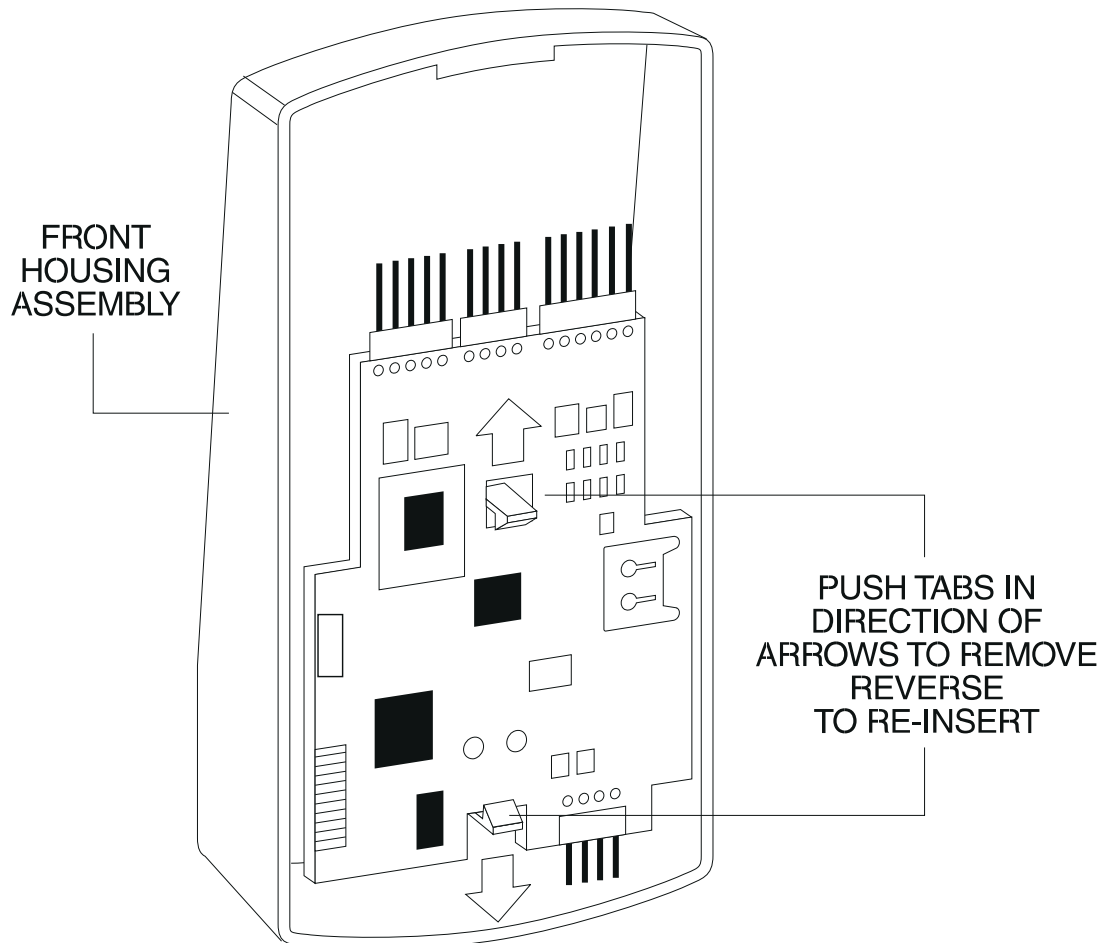


Figure 3 Removing/Inserting Printed Circuit Board

3. Fold up the main circuit board and remove the P4 connector (a 4-conductor harness) from the bottom of the board.
4. To re-insert, replace the main circuit board into the keypad/controller and the P4 connector to the main circuit board.
5. Connect the keypad/controller to the back housing.

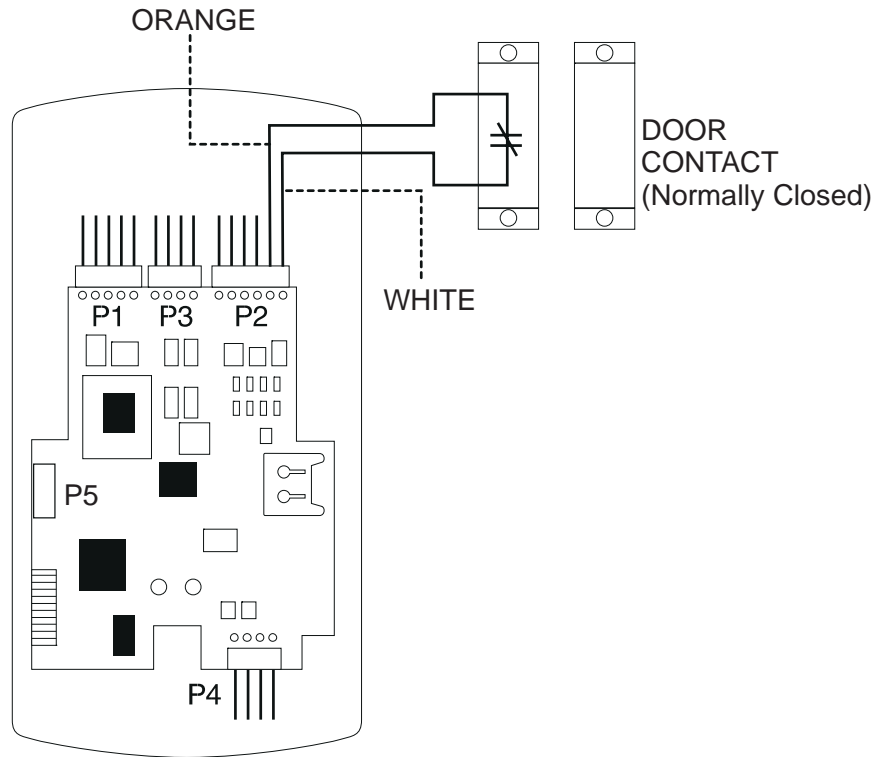


Figure 4 Wiring the Door Contact Input

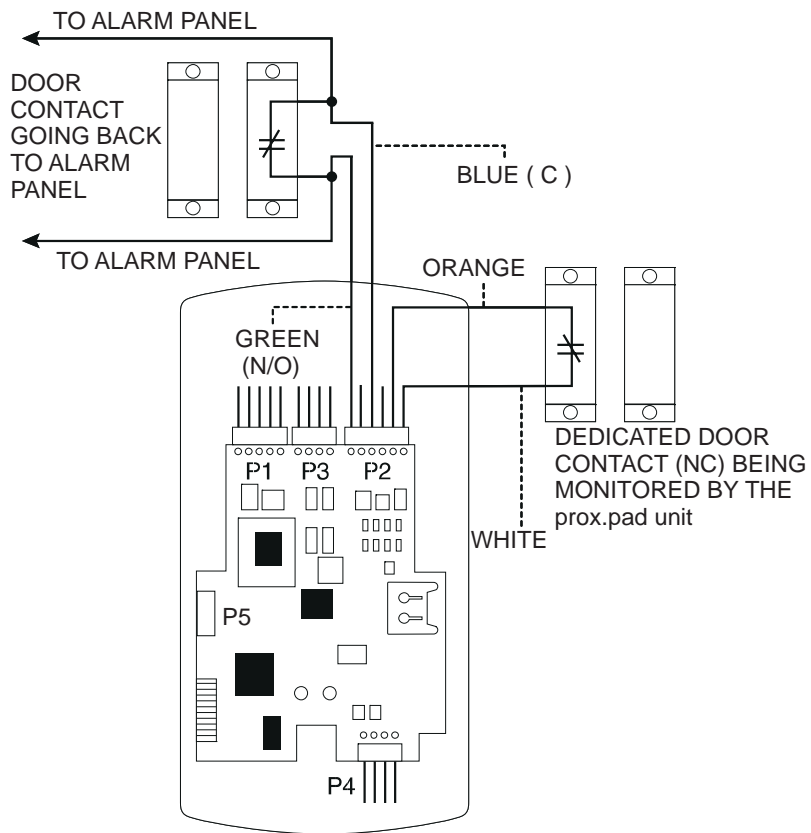


Figure 5 Wiring the Aux Relay for Alarm Shunt Relay

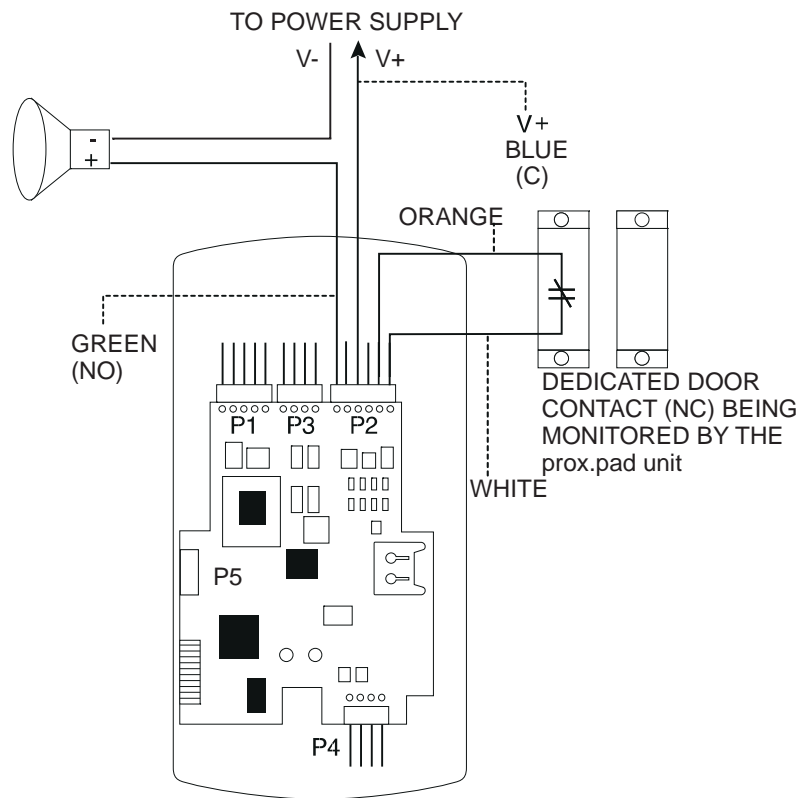


Figure 6 Wiring the Aux Relay for Forced Door Alarm

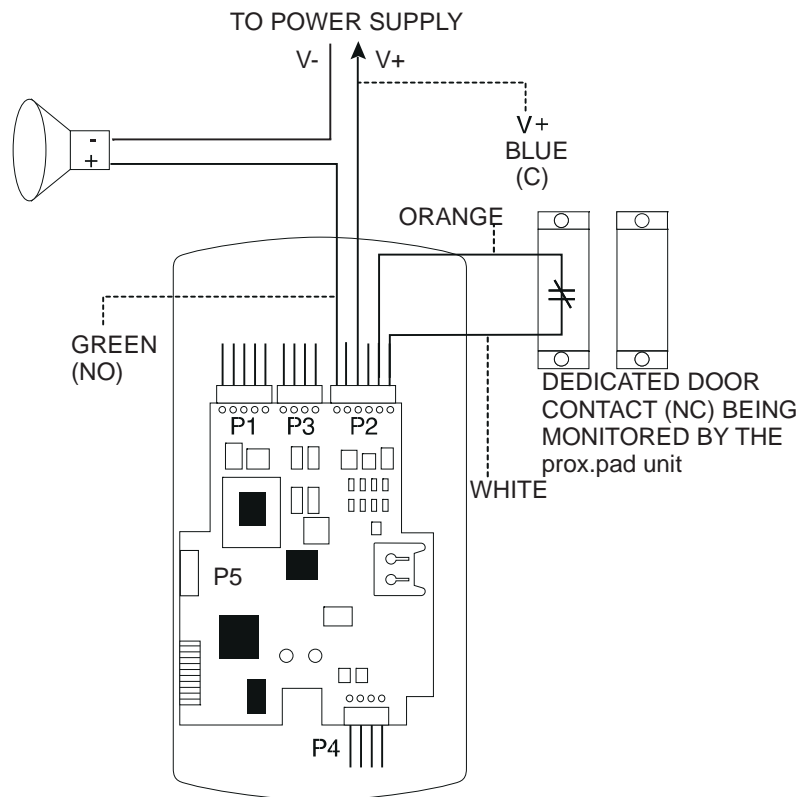


Figure 7 Wiring the Aux Relay for Propped Door Alarm

## Wiring the REX Switch (Request to Exit)

The prox.pad plus unit can be wired to monitor a remote switching device, which is intended to be installed on the “safe” side of a door. The Request to Exit (REX) switch is a momentary input closure that engages the main relay for the same length of time for which the main relay is programmed. This feature can be stored in the Transaction Log for viewing.

If you elect to perform a secure installation where the controller is mounted on the secure side of the door, you can use the filler piece as a REX switch.

Other REX devices can be used to include a remote button placed at a receptionist’s desk, a press-to-exit switch on the inside of a door, or a passive infrared detector, allowing free and convenient egress. The REX feature requires no programming; simply wire the unit as illustrated in Figure 8. To incorporate this feature, follow the steps below:

1. Turn OFF power to the prox.pad plus unit, and then remove the front keypad/controller from the backplate.
2. Locate connector P2 on the main circuit board.
3. Plug the 6-conductor harness into connector P2. (The 2-pin jumper on pins 5 and 6 of connector P2 must be removed first.)
4. **If you do not wish to install the door contacts per Figure 8, twist the white wire and the orange wires together; this is mandatory. If this is not done, the REX input will not function.**

**NOTE:** The door contact **MUST** be closed for the REX feature to work properly.

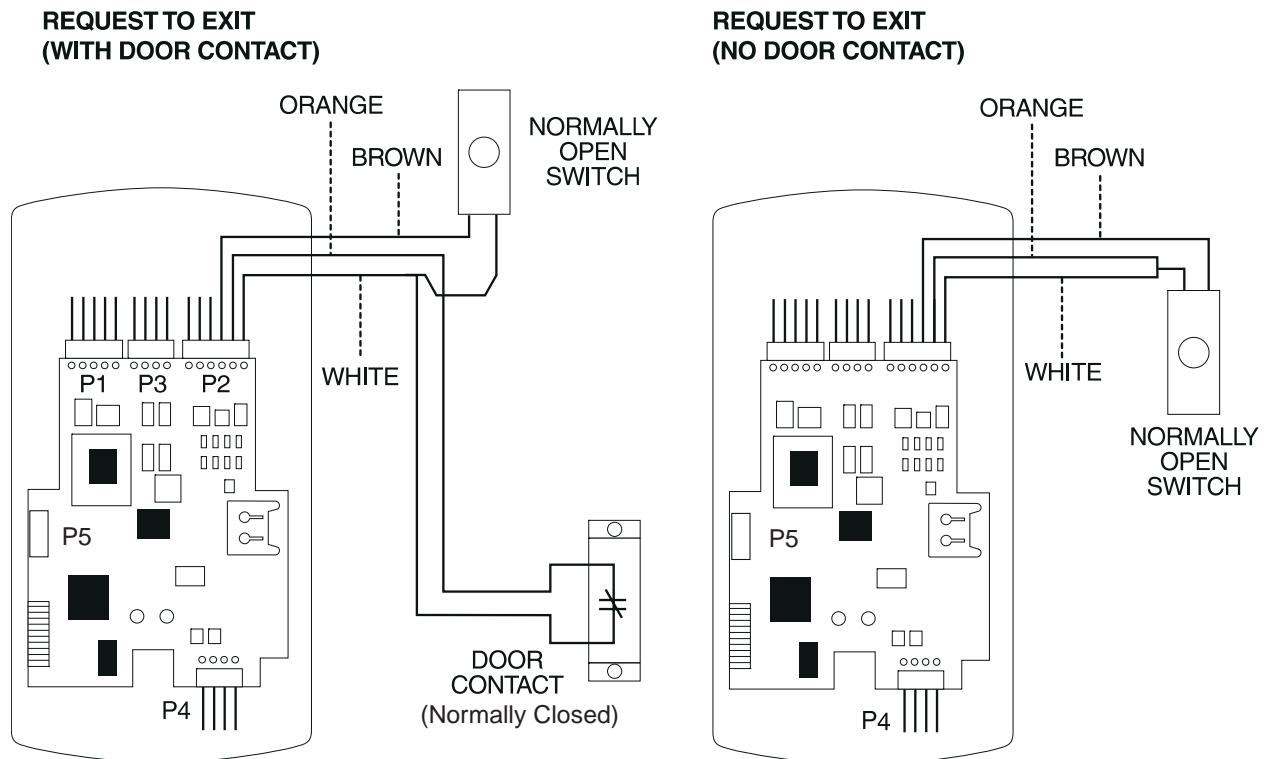


Figure 8 Wiring the REX Switch

## Wiring the Main Relay

The door lock is wired to connector P1 on the prox.pad plus main circuit board.

Wiring for this 5-pin connector is described in the first table on page 7. Figure 9 provides an Electric Strike (Fail Secure) wiring diagram, Figure 10 a MagLock (Fail Safe) wiring diagram.

Power for the prox.pad plus unit **must** be from a minimum 10-15 volt DC linear, filtered and regulated power supply. It is typical for the chosen power supply to power BOTH the prox.pad plus unit and the selected locking device. When using one power supply for both the prox.pad plus unit and locking device, be sure to include both devices in your current requirements calculations.

**NOTE:** IEI recommends that you ground the power supply to earth ground.

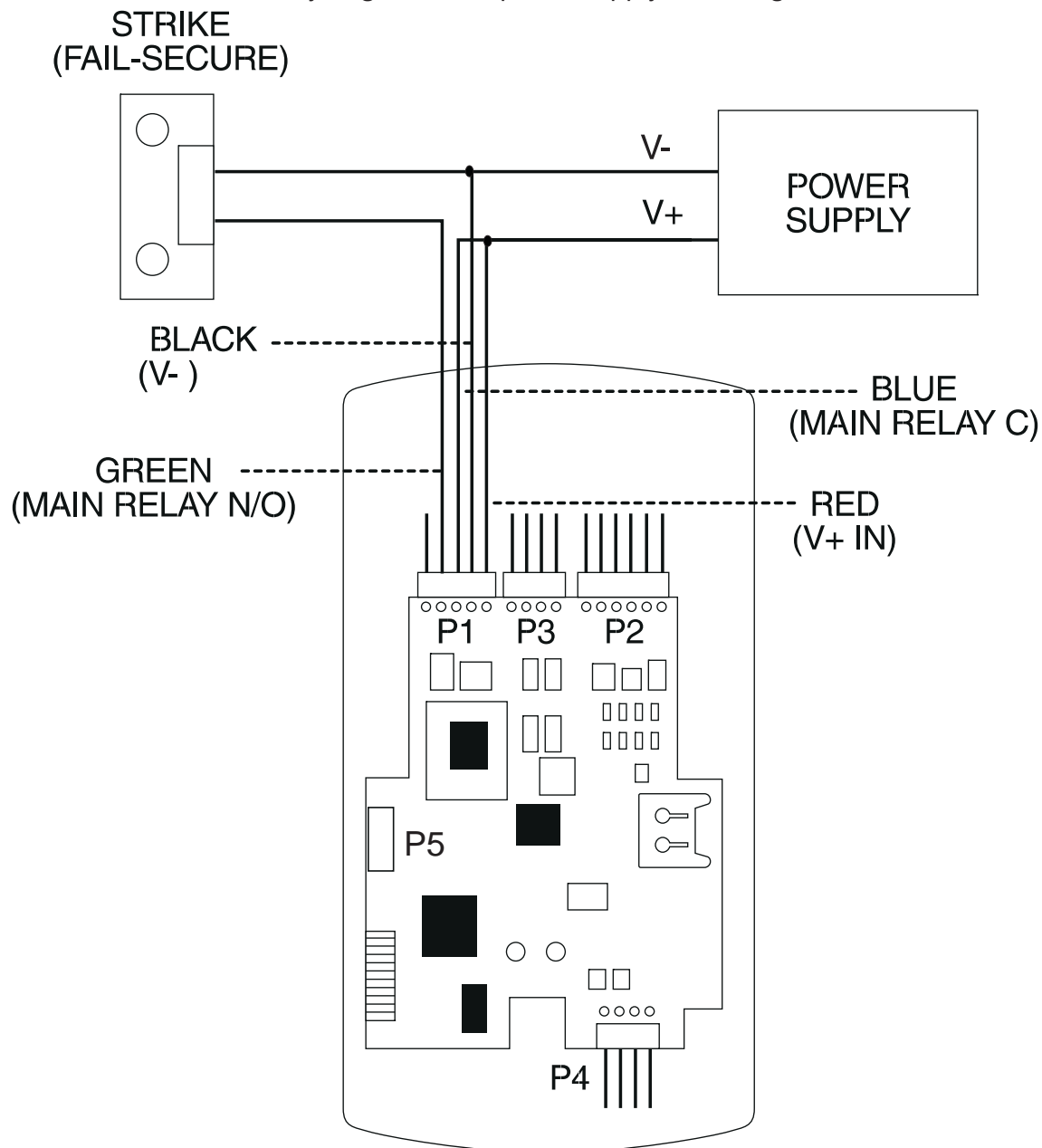


Figure 9 Electric Strike (Fail Secure Wiring Diagram)

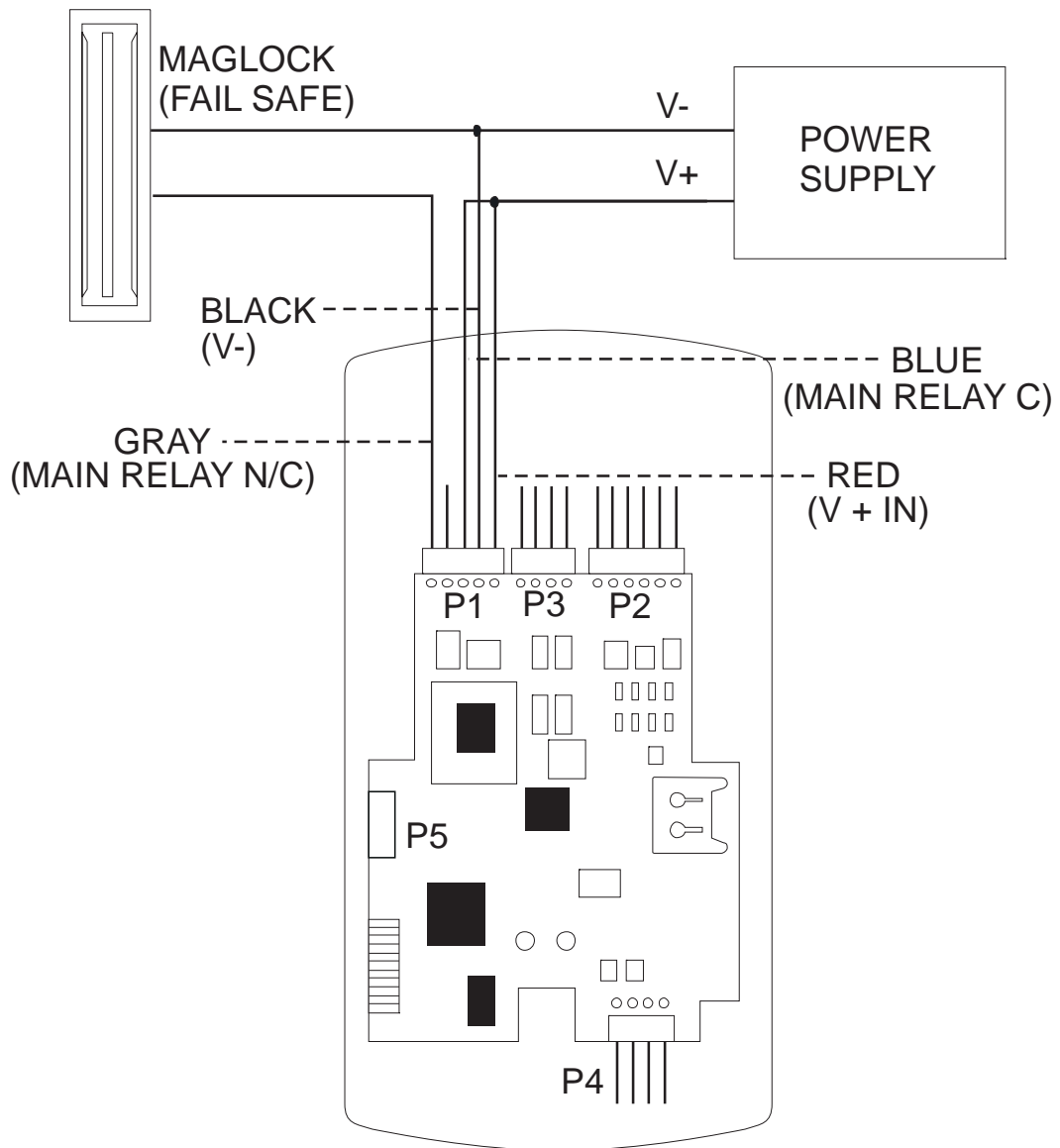


Figure 10 MagLock (Fail Safe) Wiring Diagram

## prox.pad plus Communications

The prox.pad plus is equipped with RS-485 communications with a data rate of 19200 bits/sec. This allows you to connect the unit to a personal computer (PC) either via the computer's COM (serial) port or over a computer network to manage the system using Hub Manager™ Professional (v 5 or higher) software. To connect the prox.pad plus unit to a computer COM port (which is RS-232), an RS-232 to RS-485 converter is required. To connect the prox.pad plus unit via a computer network, the IEI Gateway device is required. **The maximum distance from the RS-485 device is 4000 feet using the specified cable.** The illustrations below show examples of both connection types. Please see the instructions for your RS-232 to RS-485 converter or the instructions for the IEI Gateway for details about those devices. Also, refer to the EIA RS-485 specifications for further details.

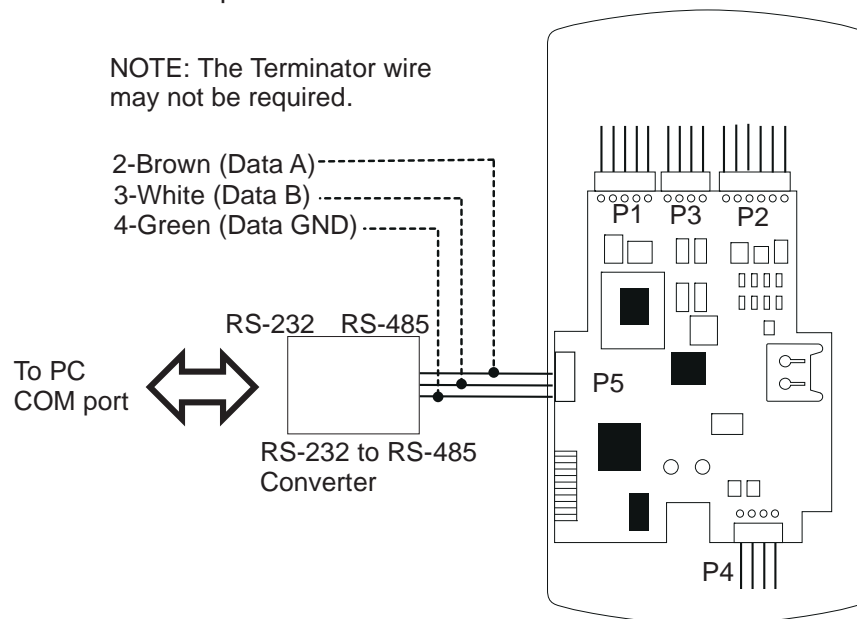


Figure 11 Connecting the prox.pad plus to a PC COM Port

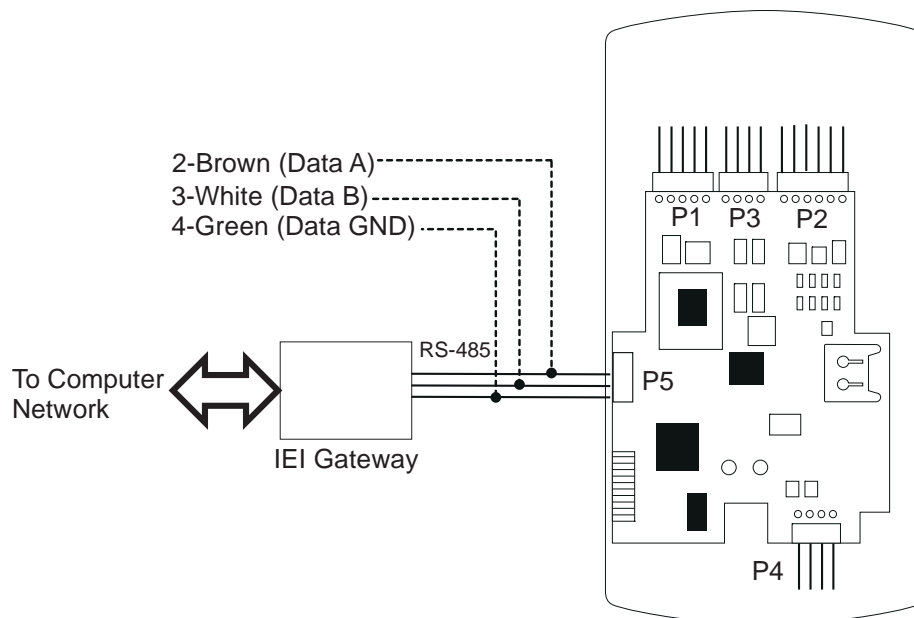


Figure 12 Connecting the prox.pad plus to a Network



## Networking Multiple prox.pad plus Units Together

For multiple door applications, the prox.pad plus can be networked together. When networking prox.pad plus devices together on an RS-485 system, the prox.pad plus units are all wired in parallel. This networking capability is available when connecting directly to your personal computer's COM port or when communicating over a computer network with the IEI Gateway. The illustration below is an example of networking multiple units together.

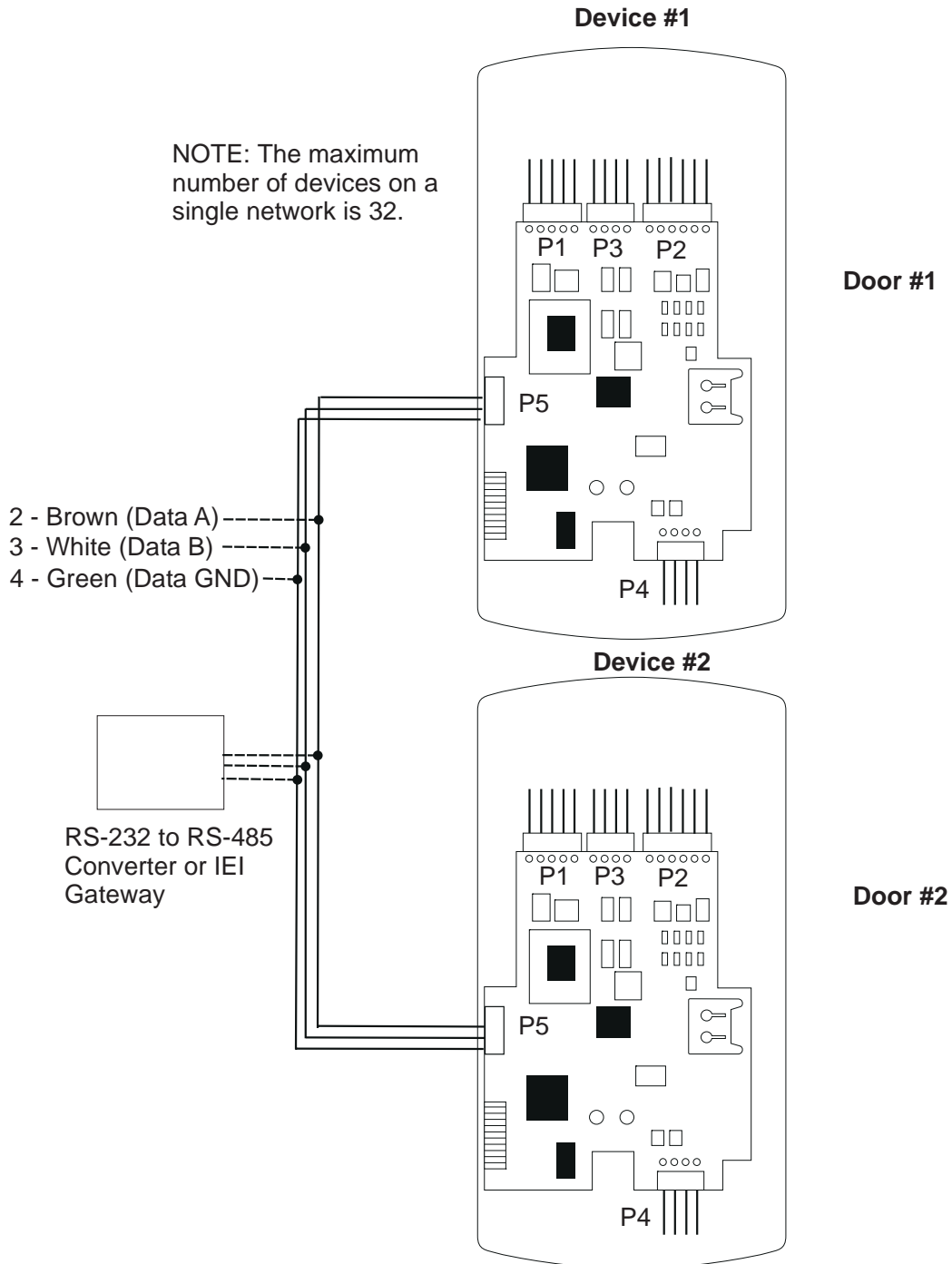


Figure 13 Networking Multiple prox.pad plus Units Together

## Program Commands

In addition to personal computer (PC) programming, the prox.pad plus unit can be programmed manually using the keypad on each unit and without the use of a personal computer and software. Keypad programming can be helpful to get a door or doors up and running prior to having the availability of the host computer. In all cases, the personal computer programming options supersede the keypad programming options.

Defaults are in bold. See the *prox.pad plus Installation/Programming Manual* located on the supplied CD-ROM for further details.

Action Desired	Press	Details																																
To enter program mode	<b>99 # (Master Code) *</b>	Default Master code = 1234. Yellow LED blinks slowly																																
1. Change master code <b>Code-only operation</b> (example, 4321 master code)	<b>1 # (new code) * (repeat code) *</b> <b>1 # 4321 * 4321 *</b>																																	
2. Assign outputs	<b>10 # virtual output # physical output # **</b>																																	
	<table border="0"> <tr> <td><b>Virtual Output</b></td> <td><b>Physical Output</b></td> </tr> <tr> <td>1 - Lock</td> <td>1 - Relay 1 (Main)</td> </tr> <tr> <td>2 - Alarm Shunt</td> <td>2 - Relay 2 (Aux)</td> </tr> <tr> <td>3 - Propped Door</td> <td>5 - Audio Alert #1</td> </tr> <tr> <td>4 - Forced Door</td> <td>6 - Audio Alert #2</td> </tr> </table>	<b>Virtual Output</b>	<b>Physical Output</b>	1 - Lock	1 - Relay 1 (Main)	2 - Alarm Shunt	2 - Relay 2 (Aux)	3 - Propped Door	5 - Audio Alert #1	4 - Forced Door	6 - Audio Alert #2	Entering a zero (0) for a virtual output disables the physical output																						
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4 - Forced Door	6 - Audio Alert #2																																	
3. Set lock output duration	<b>11 # tt # 0 # * *</b>	tt = number of seconds to operate lock on access (1 through 255) <b>defaults to 5 seconds</b>																																
4. Delete users	<b>user-location # **</b>																																	
5. Set/clear keypad options	<b>30 # option # set/clear # **</b>	See options below																																
	<table border="0"> <tr> <td><b>Option</b></td> <td><b>Set/Clear</b></td> </tr> <tr> <td>0-audio keypress feedback</td> <td>0=off, 1=<b>ON</b></td> </tr> <tr> <td>1-visual keypress feedback</td> <td>0=off, 1=<b>ON</b></td> </tr> <tr> <td>2-auto entry enable</td> <td><b>0=OFF</b>, 1=on</td> </tr> <tr> <td>3-Card and PIN required for Program mode</td> <td><b>0=OFF</b>, 1=on</td> </tr> <tr> <td>5-user lockout enable</td> <td>0=off, 1=<b>ON</b></td> </tr> <tr> <td>7-internal REX select</td> <td><b>0=OFF</b>, 1=on</td> </tr> <tr> <td>8-user lockout select</td> <td><b>0=BY LOCATION</b>, 1=by group</td> </tr> <tr> <td>9-timezones select</td> <td><b>0=OFF</b>, 1=on</td> </tr> <tr> <td>10-holiday timezone midnight crossing</td> <td>0=off, 1=<b>ON</b></td> </tr> <tr> <td>11-auto-unlock select</td> <td><b>0=OFF</b>, 1=on</td> </tr> <tr> <td>12-first-in auto-unlock</td> <td><b>0=OFF</b>, 1=on</td> </tr> <tr> <td>13-daylight savings time select</td> <td>0=off, 1=<b>ON</b></td> </tr> <tr> <td>15-daylight savings time format</td> <td><b>0=USA</b>, 1=European</td> </tr> <tr> <td>16-anti-passback</td> <td>0=off, 1=<b>ON</b></td> </tr> <tr> <td>17-user dump select</td> <td><b>0=all users</b> 1=programmed users only</td> </tr> </table>	<b>Option</b>	<b>Set/Clear</b>	0-audio keypress feedback	0=off, 1= <b>ON</b>	1-visual keypress feedback	0=off, 1= <b>ON</b>	2-auto entry enable	<b>0=OFF</b> , 1=on	3-Card and PIN required for Program mode	<b>0=OFF</b> , 1=on	5-user lockout enable	0=off, 1= <b>ON</b>	7-internal REX select	<b>0=OFF</b> , 1=on	8-user lockout select	<b>0=BY LOCATION</b> , 1=by group	9-timezones select	<b>0=OFF</b> , 1=on	10-holiday timezone midnight crossing	0=off, 1= <b>ON</b>	11-auto-unlock select	<b>0=OFF</b> , 1=on	12-first-in auto-unlock	<b>0=OFF</b> , 1=on	13-daylight savings time select	0=off, 1= <b>ON</b>	15-daylight savings time format	<b>0=USA</b> , 1=European	16-anti-passback	0=off, 1= <b>ON</b>	17-user dump select	<b>0=all users</b> 1=programmed users only	
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## Program Commands (continued)

Action	Press	Details
14. Set forced door output time	<b>45 # ttt # 0 # **</b>	ttt=forced door time, to nearest 10's seconds, entered as 00-990 (00 latches it); default=10 secs
15. Clear eeprom memory and restore default settings	<b>46 # 00000 # 00000 # **</b>	(See page 2)
	<b>User Types</b> 0-toggle code 1-standard access 2-Log Dump 3-lockout 4-extended lockout 5-single use 6-relock code 7-emergency	
16a. "Code only" user	<b>50 # type # location # key pin * key pin *</b>	
16b. "Card only" user by presentation	<b>50 # type # location # ** &lt;present card&gt;</b>	
16c. "Card AND code" user	<b>50 # type # location # key pin * key pin * &lt;present card&gt;</b>	
16d. Delete user	<b>50 # 0 # location # **</b>	
17. Program 26-bit "card only" user without presenting card	<b>51 # type # location # card pin * card pin *</b>	Location must be greater than 2; master/supervisor cannot be set as "card only"
18. Program "card OR code" user	<b>52 # type # location # key pin * key pin * &lt;present card&gt;</b>	
19. Program consecutive "card only" users by presentation	<b>53 # type # start user # ** &lt;present card&gt; &lt;present card&gt; ...</b>	Start user must be greater than 2; master/supervisor cannot be set as "card only"
20. Enable/disable users	<b>56 # enable/disable # user # **</b>	0 = Enables that user 1 = Disables that user; master user cannot be disabled; an unprogrammed user cannot be enabled or disabled (generates a program error)
21. Program block of 26-bit "card only" users without presenting cards	<b>57 # number of users # start user # card pin * card pin *</b>	Start user must be greater than 2; master/supervisor cannot be set as "card only"; uses site ID set in command 32, parameter 4

## Program Commands (continued)

Action	Press	Details
22. Delete block of consecutive users	<b>58 # start user # start user # number of users * number of users *</b>	
23. Dump transactions to IR port	<b>70 # 0 # 0 # **</b>	This command must be used while in Program mode
24. Set/clear event log mask	<b>73 # event # set/clear # **</b>	See options below; all events are logged by default unless stated otherwise below
	<p><b>Event</b>                      1-access denied - invalid PIN                      2-program denied                      4-REX                      5-Propped Door                      6-Door Closed                      7 Forced Door                      16-log dumped by user #N                      17-access granted to user #N                      19-access denied to user #N, bad timezone                      20-toggle mode activated by user #N (latch set)                      21 - toggle mode de-activated by user #N (latch clear)                      22 - 1st in auto-unlock triggered by user #N                      23 - door relocked by user #N                      24 - user lockout enabled by user #N                      25 - user lockout disabled by user #N                      26 - access denied to user #N - user is disabled                      27 - card/code mismatch                      29 - program mode started by user #N                      30 - log erased by user #N                      32 - unprogrammed card data                      33 - unprogrammed code data                      50 - log retrieved                      51 - access denied to user #N, user group lockout</p>	<p>Events 30 and 50 cannot be disabled</p> <p>Events 32 and 33 are disabled by default</p>
25. Reset (erase) transaction log	<b>76 # 0000 # 0000 # **</b>	
26. To exit Program mode	<b>* (after final command)</b>	Yellow stops flashing

## Led Indicators/Sounder Operations

LED or Sounder	Visual/Audible Condition	Description
<b>Yellow LED</b>	Slow blink	Unit is in Program mode
	Rapid blink	Verify mode is active (checking that the last two values in sequence match)
	Steady	Program error; to clear, press * or error lockout
	Very rapid blink	Memory (eeprom) erase is in progress (commands 40/46, loop-back)
<b>Bi-color LED</b>	Steady red	Lock output deenergized
	Steady green	Lock output is energized (timed or latched)
	Red/green alternating	Awaiting second PIN during "Card AND Code" access attempt
	Green blink	Auto-unlock active
<b>Sounder</b>	Short beep (100 ms) every 2 seconds	Audio alert #2 is active
	Sounder 1/2 sec on, 1/2 sec off	Audio alert #1 is active
	Double beep	Lockout is canceled
	Pair of double beeps	Lockout is activated
	3 slow beeps (250 ms), then single beep	Self-test is complete
<b>Sounder After PIN/Card</b>	1 single beep	Valid card access
	1 long beep followed by 1 short beep	User disabled
	1 long beep followed by 2 short beeps	Bad timezone
	1 long beep followed by 3 short beeps	User lockout
	3 rapid beeps after code entered or card presented	Code or Card is not found
	4 quick beeps	First-In Auto-unlock
	6 quick beeps	Toggle mode is active

## prox.pad plus Specifications

<b>ELECTRICAL</b>	
Power Supply/Current Requirements	10-15 VDC, linear filtered and regulated power supply 500 mA (not including locking device or peripherals)
<b>WIRING</b>	
Remote Antenna Cable	ALPHA 1174C (22AWG) 4-wire, stranded (this is required ONLY if you choose to remote the antenna 10 feet away from the keypad/controller)
RS-485 Cable	24AWG, shielded, two twisted-pair telephone cable with a shunt capacitance of 16 pF/Ft (required only when using software)
Power Supply Cable	18AWG - 22AWG 2-wire stranded (depends on distance)
Door Lock Cable	18AWG - 22AWG 2-wire stranded (depends on distance)
Door Monitor Cable	18AWG - 22AWG 2-wire stranded (depends on distance)
REX Cable	(if using remote switch) 2-wire stranded
<b>MECHANICAL</b>	
Height	5.25 in (13.3 cm)
Width	2.75 in (7 cm)
Depth	1.375 in (3.5 cm)
<b>RELAY OUTPUTS</b>	
	Main Relay - Form C (switches up to 2A)
	Aux Relay - Form C (switches up to 2A)
<b>MONITOR INPUTS</b>	
	Door Position (Normally Closed, dry contact)
	Request to Exit (REX, Normally Open, dry contact)
<b>OTHER OUTPUTS</b>	
	Infrared output to optional PDA program (19200 bits/sec)
<b>SOUNDER</b>	4000 Hz, defeatable
<b>LEDs</b>	Bi-Color (red/green)
	Yellow

<b>COMPATIBLE PROXIMITY CARDS</b>	All 26-bit HID card, including the following: ProxCard II, IsoProx II, Duo Prox II, and Proxkey FOB; 26-bit cards are required for manual or batch programming
<b>UNIT CAPACITY</b>	
Users	2,000 users maximum; each user can have a card/tag, a PIN code, or a card/tag plus a PIN code
Transactions	2,000 transactions maximum; each transaction includes time, date, user "slot number," and event
Lock Time	1-255 seconds
Lock Mode	Access Time or Toggle/Latch
<b>ALARM OUTPUT</b>	One of these three events can be programmed: Alarm Shunt Relay, Forced Door Relay, or Propped Door Relay
<b>USER ACCESS CONFIGURATIONS</b>	
	Code ONLY
	Code AND Card
	Card ONLY
	Code OR Card
<b>PROGRAMMABLE USER TYPES</b>	Each user is assigned one of the following user types:
	0-Toggle/latch strike
	1-Normal access
	2-log Dump
	3-Lockout
	4-Extended unlock
	5-Single use
	6-Relock
	7-Emergency
<b>SYSTEM USES/ INSTALLATION CONFIGURATIONS</b>	Suitable for small installations or remote locations, indoors or outdoors Wall mounted, glass mounted, or secure installation
<b>ENVIRONMENTAL</b>	Indoor or outdoor
Operating Temperature	-31° to 150° F (-35° to 66° C)
Operating Humidity	5% to 95% relative humidity, non-condensing



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## Questions or Problems

If you have any questions about initial prox.pad plus programming or operation, or encounter any installation problems, contact your prox.pad plus dealer or distributor. The complete Installation/Programming Reference manual is contained on the supplied CD-ROM.

## Warranty Policy

International Electronics Inc. (IEI) warrants its products to be free from defects in material and workmanship when they have been installed in accordance with the manufacturer's instructions and have not been modified or tampered with. IEI does not assume any responsibility for damage or injury to person or property due to improper care, storage, handling, abuse, misuse, normal wear and tear, or an act of God.

IEI's sole responsibility is limited to the repair (at IEI's option) or the replacement of the defective product or part when sent to IEI's facility (freight and insurance charges prepaid) after obtaining IEI's Return Material Authorization. IEI will not be liable to the purchaser or any one else for incidental or consequential damages arising from any defect in, or malfunction of, its products.

Except as stated above, IEI makes no warranties, either expressed or implied, as to any matter whatsoever, including, and without limitation to, the condition of its products, their merchantability, or fitness for any particular purpose.

### Warranty Periods Are:

1 Year	PowerKey
2 Years	Door Gard & Secured Series Products
2 Years	prox.pad and prox.pad plus
2 Years	LS Series
2 Years	Glass Break
5 Years	'e' Series Keypads
2 Years	Network Gateway

All products have date code labeling to determine the warranty period. A 90-day grace period is added to all products to account for shelf life.

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