

IEI prox.pad™ Proximity Reader/Keypad Access Control Installer Guide



This Installer Guide is designed as a reference document for experience installers only. It is not intended for routine use and does not replace the more comprehensive information supplied in the prox.pad Installation/Programming Manual located on the included CD-ROM. You can also download the reference manual from our website at www.linearcorp.com.

Please refer to the table of contents and list of illustrations on the inside cover.

prox.pad Pin Connector Diagram

The diagram below shows all the wire harness connectors on the main circuit board and their functions.

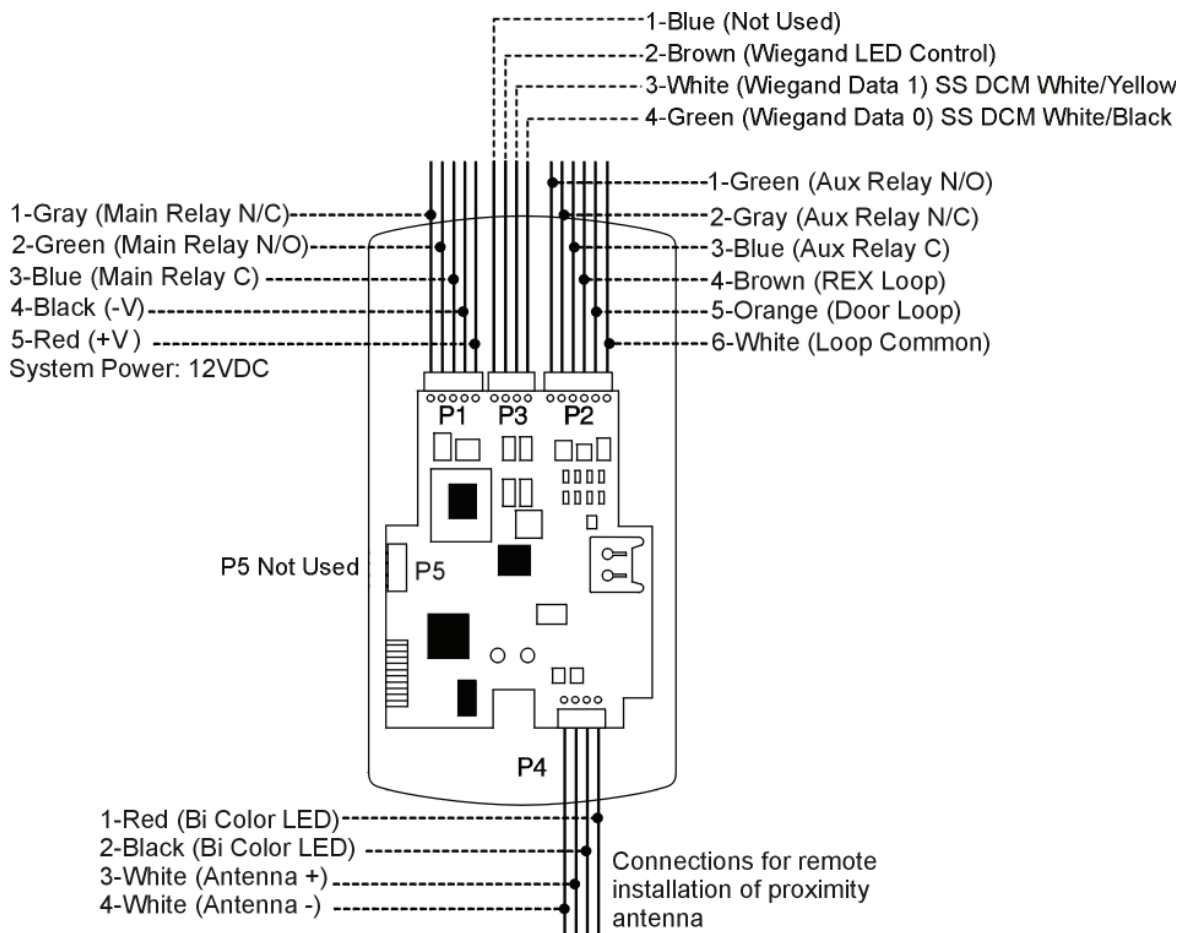


Figure 1: Identifying Pin Connectors

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.

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prox.pad Pin Connector Table

Pin Connector (on main circuit board)	Description/Use		
P1 (5-pin connector, top left-most location)	Pin	Wire Color	Use
	1	Gray	Main Relay Normally Open
	2	Green	Main Relay Normally Closed
	3	Blue	Main Relay Common
	4	Black	Ground (Power Supply)
P3 (4-pin connector, top middle location)	Pin	Wire Color	Use
	1	Blue	Not Used
	2	Brown	Wiegand LED Control
	3	White	Wiegand Data 1
	4	Green	Wiegand Data 0
P2 (6-pin connector, top right most location)	Pin	Wire Color	Use
	1	Green	Aux Relay Normally Open
	2	Gray	Aux Relay Normally Closed
	3	Blue	Aux Relay Common
	4	Brown	REX Loop
	5	Orange	Door Contact Loop
6	White	Loop Common	
NOTE: Pins 1, 2, 3 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 are not installing door contacts per Figure 11, twist the white and orange wires together. If not done, the REX input won't work			
P4 (4-pin connector, bottom location)	Pin	Wire Color	Use
	1	Red	Bi-Color LED (Red +)
	2	Black	Bi-Color LED (Green +)
	3	White	Antenna (no polarity)
4	White	Antenna (no polarity)	

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
1	CD-ROM containing instruction manuals
4	Cable Assemblies
1	Tamper Screw
Optional Items	
1	Data Collection Device (to capture user list and transaction event log)
1	prox.pad Replacement Battery: Panasonic BR1225, Renata CR1225 or Varta CR1225; Refer to caution below.
lots of 25 only	ProxKey ProxFobs (part number 0-297301A)
lots of 25 only	ProxCARD II Cards (part number 0-297401)

Caution: Replace battery with types listed above only. Use of another battery may present risk of fire or explosion. Battery may explode if mistreated. Do not recharge, disassemble or dispose of battery in fire.

prox.pad Specifications

Electrical	
Power Supply/Current Requirements	10-15 VDC, linear filtered and regulated power supply; 55mA
Wiring	
Remote Antenna Cable (if installing in a secured configuration)	[ALPHA 1294C (22AWG) 4-conductor, stranded and shielded]
Wiegand Interface Guide	[ALPHA 1295C (22AWG) 5-conductor, stranded and shielded]
Secured Series Front End Cables	[ALPHA 1295C (22AWG) 4-conductor, stranded and shielded]
Power Supply Cable	18AWG - 22 AWG 2-wire stranded (depends upon distance)
Door Lock Cable	18AWG - 22 AWG 2-wire stranded (depends upon distance)
Door Monitor Cable	18AWG - 22 AWG 2-wire stranded (depends upon distance)
REX Cable	[ALPHA 2421C 18 AWG or ALPHA 1292C 22 AWG, 2 conductor, stranded and shielded] (if using remote switch)
Mechanical	
Height	5.25 in (13.3 cm)
Width	2.75 in (7 cm)
Depth	1.375 in (3.5 cm)
Relay Outputs	
Main Relay	Form C (switches up to 2A)
	Program for either timed (1-99 sec) or toggle
Aux Relay	Form C (switches up to 1A)
	One of three functions can be programmed: Alarm Shunt Relay, Forced Door Relay, or Propped Door Relay
Monitor Inputs	
Door Position Switch	Normally Closed, Dry Contact
Other Outputs	
Sounder	4000 Hz, defeatable
Bi-Color LED	Red/Green
Yellow LED	
Compatible Proximity Cards (All HID cards up to 40 bits, including the following)	
	Prox Card II
	IsoProx II
	DuoProx II
	Proxkey FOB

Specifications continued on next page.

Specifications Continued

Unit Capacity	
Users (standalone mode only)	2000 Maximum (each user can have a card, PIN or both)
Environmental (Indoor or Outdoor)	
Operating Temperature	-31° to 150° F (-35° to 66° C)
Operating Humidity	5% to 95% relative humidity, non-condensing

Mounting the prox.pad Unit

Select one of these three installation configurations, wall mount, glass mount, or secure as appropriate for this installation.

Performing a Wall Mounted Installation

This section provides general considerations when performing a wall mounted installation. Typically, the prox.pad unit is mounted on a flat, level surface (drywall, masonry, wood, etc.) exterior to the room to be accessed. A single-gang electrical box (or back box) can be used. Typically, the prox.pad unit is wall mounted outside the access area on the unsecured side of the door.

Figure 2 below illustrates the components on the prox.pad unit used for wall mounting. Two single-gang box holes align with two corresponding holes in the single-gang box. A wire exit knockout is supplied through which the prox.pad wiring is pulled. A typical wall mounted installation proceeds as follows:

1. Install a single-gang box in the desired location.
2. Punch out the two single-gang box knockouts on the controller backplate of the prox.pad unit.
3. Disconnect the controller backplate of the prox.pad unit from the front keypad/controller. Align the two single-gang box holes on the controller backplate over the two corresponding holes on the single-gang box, previously secured at step 1.
4. Secure the backplate to the single-gang box by inserting/tightening two screws into the two single-gang box holes.
5. Connect the front keypad/controller to the back housing.
6. Pull the prox.pad wiring through the wiring exit as appropriate.
7. Install the tamper screw into the hole at the bottom front of the enclosure using a #6 spanner bit.

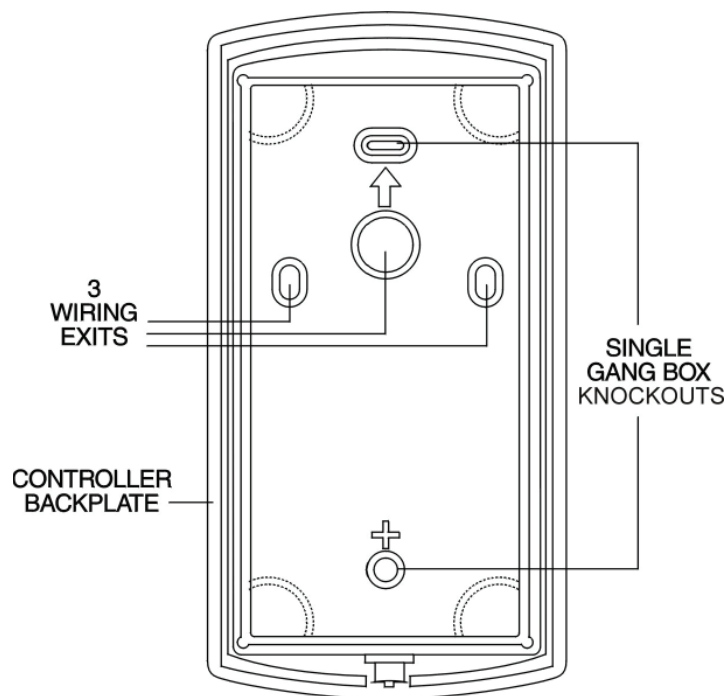


Figure 2: Performing a Wall Mounting Installation

Performing a Glass Mounted Installation

Figure 3 below shows the four supplied pressure-sensitive adhesive pads and the two side cut-outs used for this installation. In this configuration, the prox.pad unit is affixed with the four self-adhesive pads to the glass or the glass window adjacent to the door being accessed, on the interior side of the glass. One of the two side cut-outs is used to bring the wires out of the side of the prox.pad case.

A typical glass mounted installation proceeds as follows:

1. Disconnect the back housing from the front keypad/ controller. Remove the tape from the four self-adhesive pads on the back housing and apply the pads to the four corners of the backplate.
2. Affix the back housing to the glass door or the glass window adjacent to the door being accessed, on the interior side of the glass.
3. Determine which of the two side cut-outs on the back housing to use for the wiring and remove that cut-out using the appropriate cutting tool.
4. Pull the wiring through the selected side cut-out as required.
5. Connect the front keypad/controller to the back housing.
6. Install the tamper screw into the hole at the bottom front of the enclosure using a #6 spanner bit.

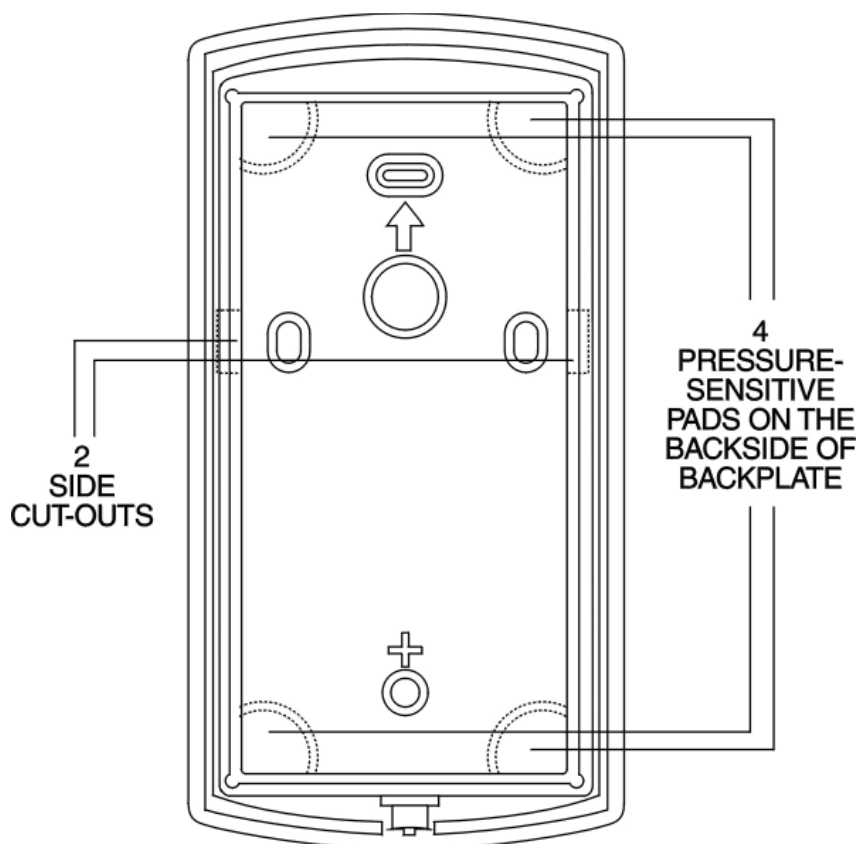


Figure 3: Performing a Glass Mounted Installation

Performing a Secure Installation

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

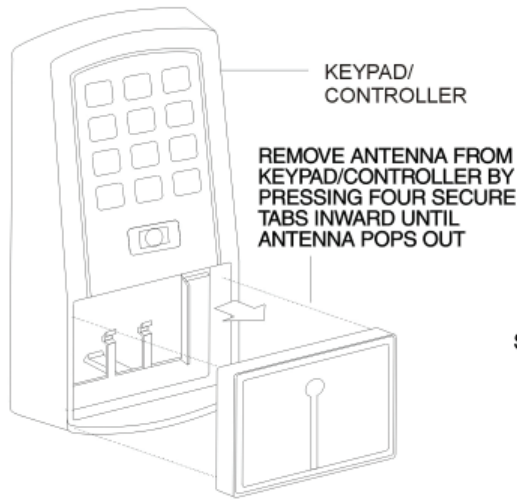
1. Remove the antenna housing from the prox.pad keypad/controller as described below:
 - Disconnect the backplate of the prox.pad unit from the front keypad/controller.
 - When handling the main printed circuit board, to guard against possible static discharges, touch a grounded object before touching the prox.pad unit. Remove the main printed circuit board by pressing the two spring tabs in the direction of the arrows as shown in Figure 4 on the next page. Be careful with the wires.
 - Pull on the main circuit board and remove the wire harness from P4 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 (see Figure 5) until the antenna housing pops out.
2. Prepare the wiring and extension wiring as follows:
 - Cut off the plastic end of the prox.pad antenna housing harness.
 - Splice the recommended remote antenna cable Alpha 1294C (22AWG, stranded and shielded), 10-foot maximum length, to the properly cut antenna cable using standard electrical techniques.
3. Mount the antenna backplate in a vertical orientation and secure it to the wall through the two screw holes using two provided screws. Ensure that the two weep holes, provided to remove possible moisture, are positioned on the bottom. The wiring exits in the antenna backplate. (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.

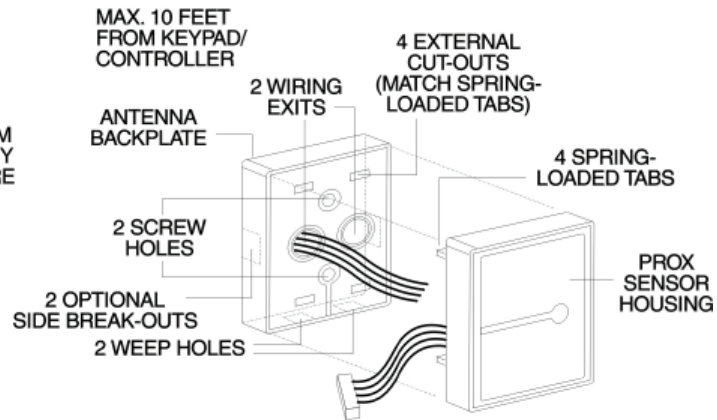
 - Once the antenna backplate is mounted properly, align the antenna to the backplate and connect the antenna to the antenna backplate. The large tab in the center of the antenna assembly must be broken off before being attached to the antenna backplate.
4. Run the antenna wiring back to the secure keypad/controller 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 4. The filler piece replaces the antenna on the front of the keypad/controller for secure installations.
 - If the filler piece is not to be used as a REX switch, do not remove the two tabs.
 - Select "Filler or "REX" operation and affix the appropriate 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 replaced. 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).

For the remote antenna wire, use ALPHA 1294C (22AWG) 4-wire, stranded and shielded cable. The cable shield drain wire must be grounded at the reader end to P1, pin 4 connection (DC Power Supply Ground).

SECURE INSTALLATION SITE



REMOTE INSTALLATION SITE



**FILLER PIECE/
REX OPERATION**

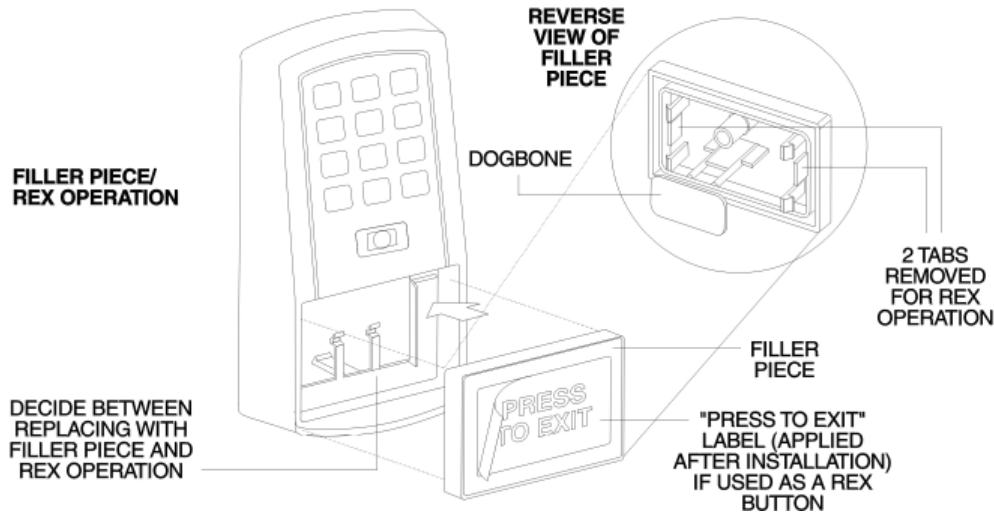


Figure 4: Performing a Secure Installation

Installing a Tamper Switch

A tamper switch must be installed in one of the configurations described below and connected to an intrusion alarm system.

Mounting over a metal or plastic single gang J-Box

1. Use an Ademco 945T magnet and reed switch (or equivalent) with foam-backed adhesive tape.
2. Clip the screw mounting tabs from both the magnet and reed switch using pliers or a wire cutter.
3. With the prox.pad base removed, stick the magnet to the Keypad board in location A, using the adhesive tape.
4. Stick the reed switch on the inside of the long side of the J-box in the upper right-hand corner, using thread adhesive tape. The switch should be flush with the edge of the J-box.

Wall mounting

1. Use an Ademco PR-20451 magnet and reed switch (or equivalent).
2. Mount the magnet at location B, using one of the adhesive pads provided.
3. Drill a 3/8 inch hole in the wall behind the magnet location, feed the switch wire through the wall and press the switch into place.

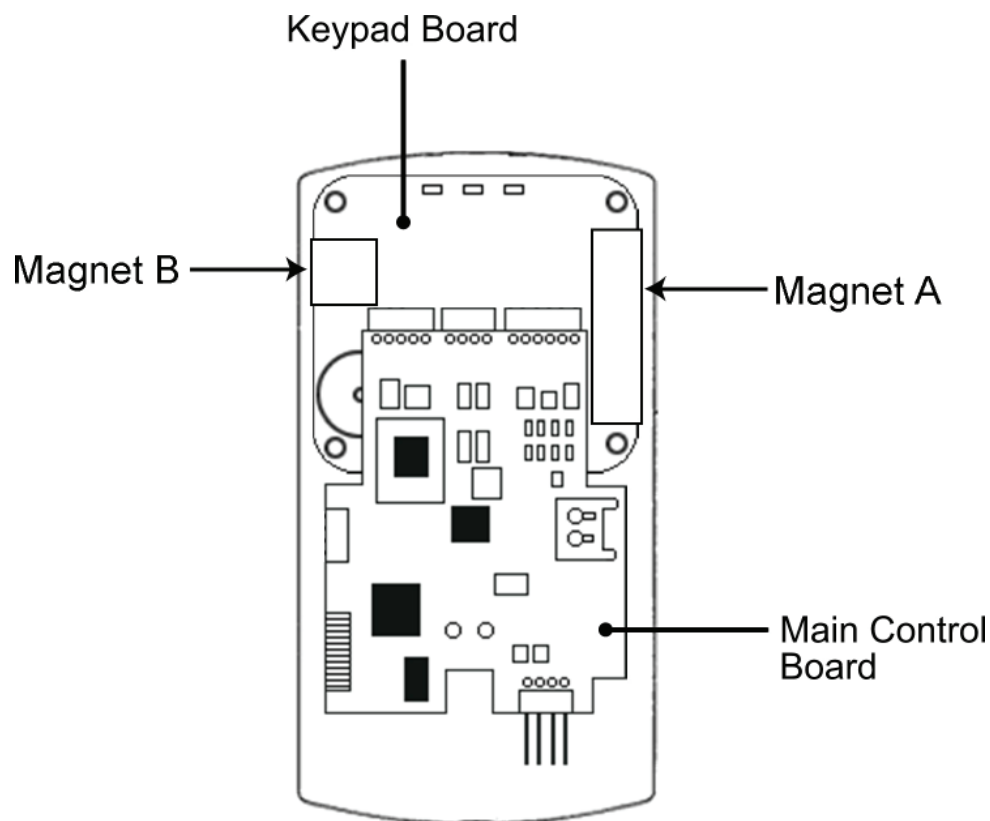


Figure 5: Tamper Switch Locations

Inserting Circuit Boards

If you must remove or insert the main circuit board from/into the prox.pad controller/keypad, follow the steps below.

1. Disconnect the back housing of the prox.pad unit from the front keypad/controller.
2. **When handling the main printed circuit board, to guard against possible static discharges, hold the board by its edges with one hand and then touch a grounded object before touching the prox.pad unit.** Remove the main printed circuit board by pressing the two spring tabs in the direction of the arrows as shown in Figure 5. Be careful with the wires.
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
5. Connect the keypad/controller to the back housing.

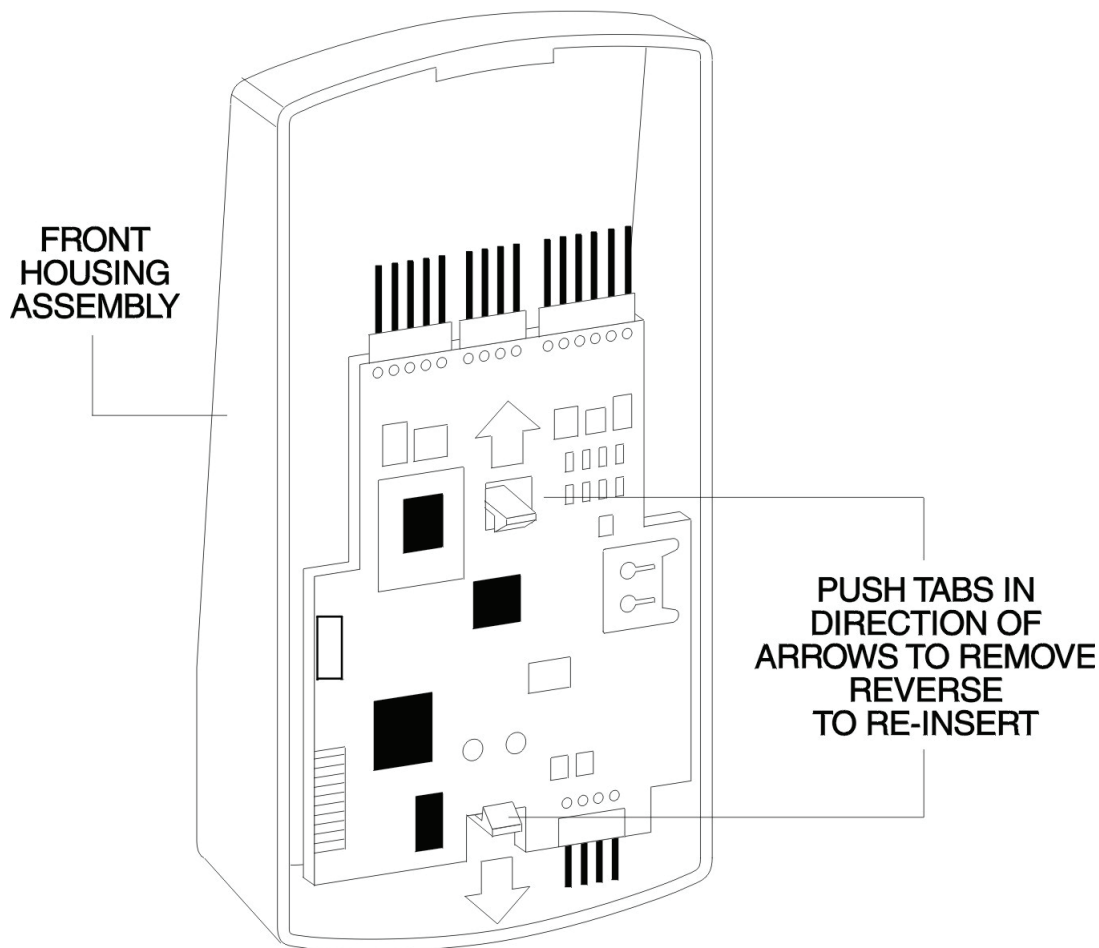


Figure 6: Removing/Inserting Printed Circuit Board

Defaulting prox.pad Memory

If necessary, the prox.pad main memory can be defaulted (erased). This procedure explains how to do this; see Figure 6 below. You would default the memory, if, for instance, static discharges have corrupted the prox.pad unit, during shipping or installation. You can also do this if you have simply forgotten the Master Code and you need to enter program mode.

With the power on, remove the case from the prox.pad front controller/keypad to access the main circuit board. (For a visual reference of the main printed circuit board and the related pin connectors, see Figure 1. The table on page 2 describes these pins in detail.) (When handling the main printed circuit board, to guard against possible static discharges, touch a grounded object before touching the prox.pad unit.)

1. With the power on, press and hold the Program button (located on the rear side of the main printed circuit board) for two seconds and release. The yellow LED flashes slowly.
2. Enter the following on the keypad:
46 # 00000 # 00000 # * *
The yellow LED flickers rapidly for several seconds and then blinks slowly.
3. Once the memory reset is complete press ***** to exit program mode then re-assemble the unit.

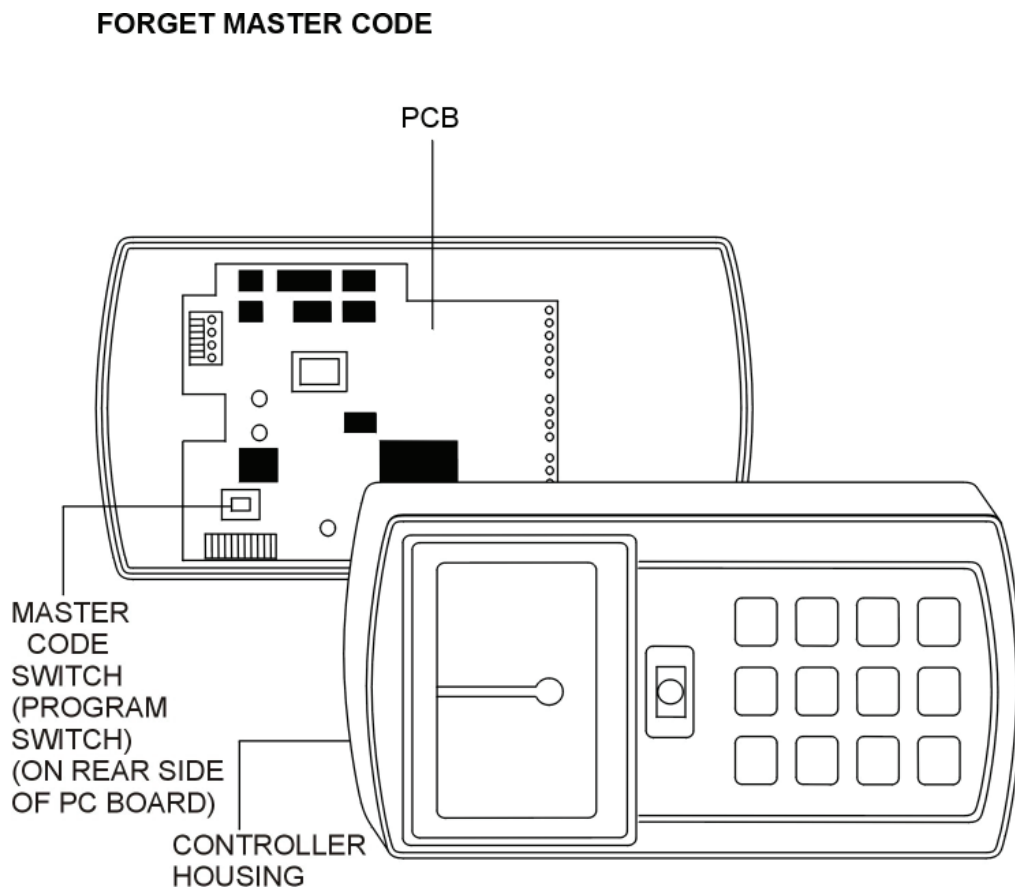


Figure 7: Program Button Location on Main Circuit Board

Standalone Mode Default Settings

The table below lists the default settings for the prox.pad unit as shipped from the factory.

Option	Default Setting	Option	Default Setting
Master Code	1234	Main Relay Time	5 Seconds
Audio Keypress Feedback	Enabled	Visual Keypress Feedback	Enabled
Auxiliary Relay	Alarm Shunt	Auto-Entry	Disabled
Facility Code Access	Disabled	Forced Door Audio Alert	Enabled
Propped Door Audio Alert	Enabled	Internal REX Switch	Disabled
DST Time/Date Format	US	Daylight Savings Time	Enabled
Anti-Passback	Enabled	Invalid PIN Lockout	Disabled
Invalid PIN Lockout Action	Timed Lockout	26-Bit Facility Code	1
Anti-Passback Timer	1 Second	Invalid PIN Lockout Count	5 Attempts
Invalid PIN Lockout Time	5 Minutes	Propped Door Audio Alert	30 Seconds
Forced Door Audio Alert	10 Seconds		

Standalone Mode LED Indicators/Sounder Operations

The table below describes the various LED and Sounder indications used in the prox.pad while operating in standalone mode.

LED/Sounder	Visual/Audible Condition	Description
Yellow LED	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; entry error lockout (no keypress feedback)
	Very rapid blink	Memory (eeprom) erase is in progress (command 46)
	"Pulsing" rapid blink	Batch program of cards in progress (command 56); block delete of users (command 58)
Bi-color LED	Steady red	Lock is locked
	Steady green	Lock is energized (timed or latched)
	Red Drop out	Lock locked, user lockout is active; red LED drops out for 100 ms every second; a latched lock will override lockout indicator
	Green with red blink	Lock latched and user lockout is active
	Quick double red/green flash	Prox card read correctly
	Alternating red/green	Waiting for second PIN or "card and code" user
	Solid green with red flicker	Lock toggle is unlocked and user lockout active
	Red blink	User lockout is active and lock locked; red LED drops out for 100 ms every second; normal users cannot change the state of the relay
All LED's	Rapid red, yellow, green sequencing	Power on/reset
Sounder (system)	Very quick beep (10 ms) with yellow LED blink every second	EEPROM read error during get system parameters; can be turned off by running self-test
	Short beep (100 ms) every 2 seconds	Propped door is active
	Sounder 1/2 sec on, 1/2 sec off	Forced door is active
	3 slow beeps (250 ms), followed by a fourth beep	Indicates self test
Sounder (after PIN)	3 rapid beeps after	PIN not found
Sounder (after card)	3 very rapid beeps	PIN not found, facility code/company ID mismatch and access by facility mode enabled; incorrect card type (option #20)
	1 short beep	Valid card access

Standalone Mode Wiring

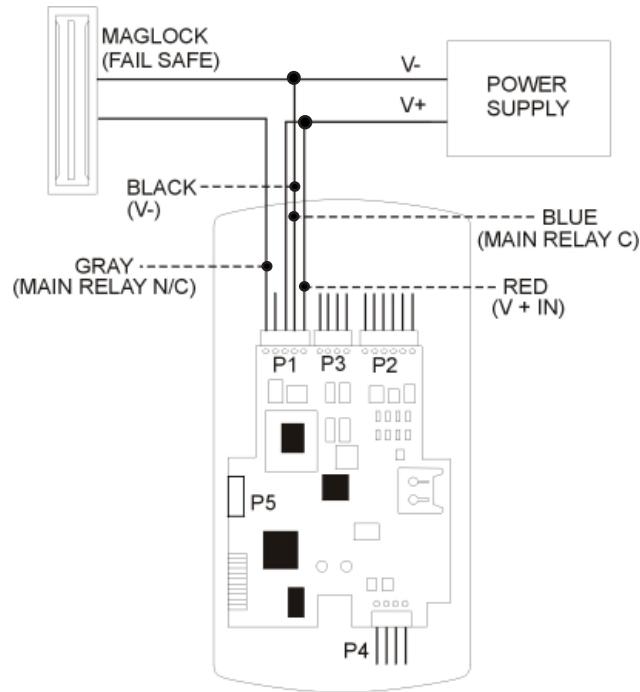


Figure 8: Wiring a Maglock - Fail Safe

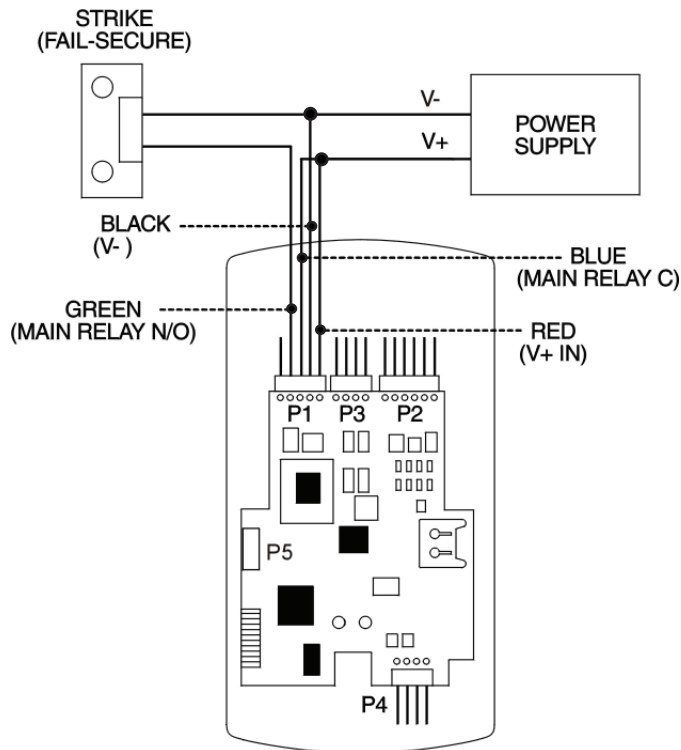


Figure 9: Wiring an Electric Strike - Fail Secure

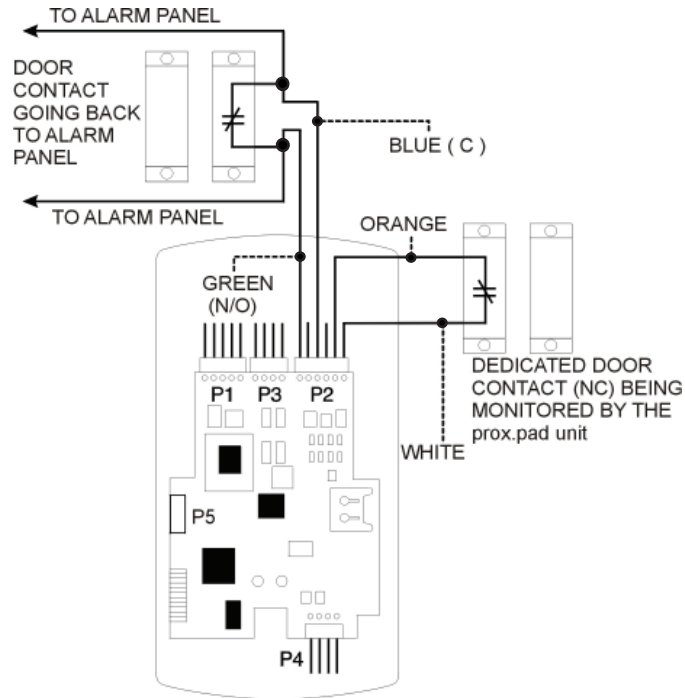


Figure 10: Wiring the Aux Relay for Alarm Shunt

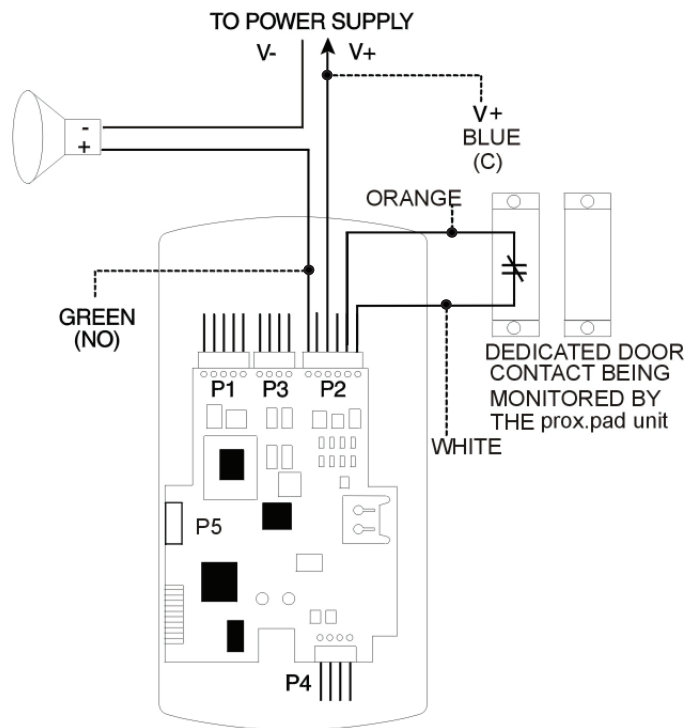


Figure 11: Wiring the Aux Relay for Forced Door

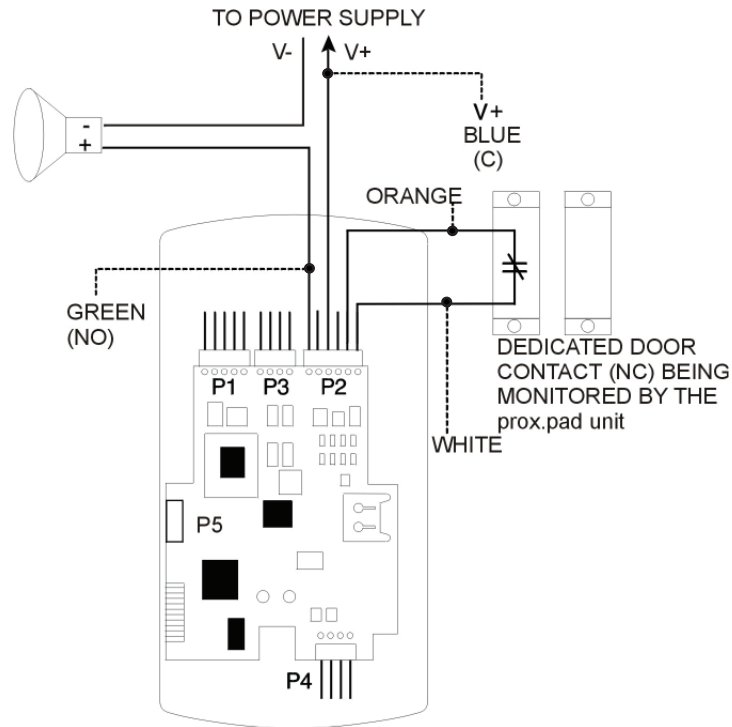


Figure 12: Wiring the Aux Relay For Propped Door

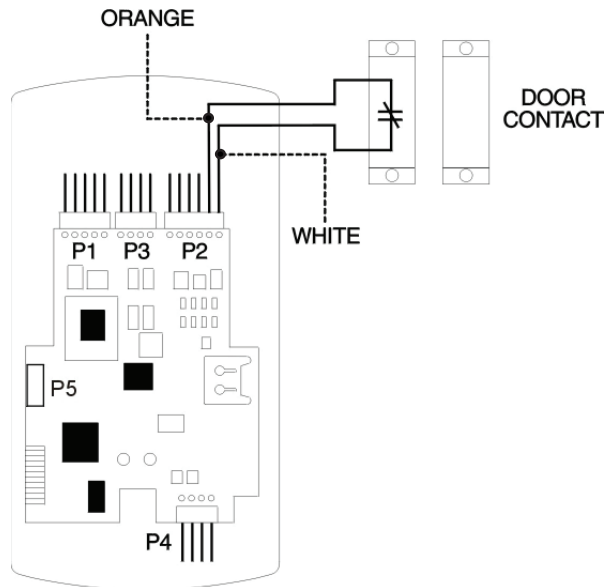


Figure 13: Wiring the Door Contact

Wiring an External REX Switch (Request to Exit)

The prox.pad unit can be wired to monitor a remote switching device, which is intended to be installed on the secure 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. For other installations, a separate REX switch must be purchased.

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 13. To incorporate this feature, follow the steps below:

1. Turn **OFF** power to the prox.pad unit, and then unlatch the keypad from the plastic housing.
2. Locate connector P2 on the main circuit board and remove the 2-pin jumper on pins 5 and 6 of connector P2.
3. Plug the 6-conductor harness into connector P2.
4. **If you do not wish to install the door contacts per figure 13, 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.

NOTE: CONNECTING DOOR LOOP INPUT - Before powering up the prox.pad unit, connect the Door Loop input to the "Loop Common." This prevents "Forced Door" or "Propped Door" conditions from developing upon power-up.

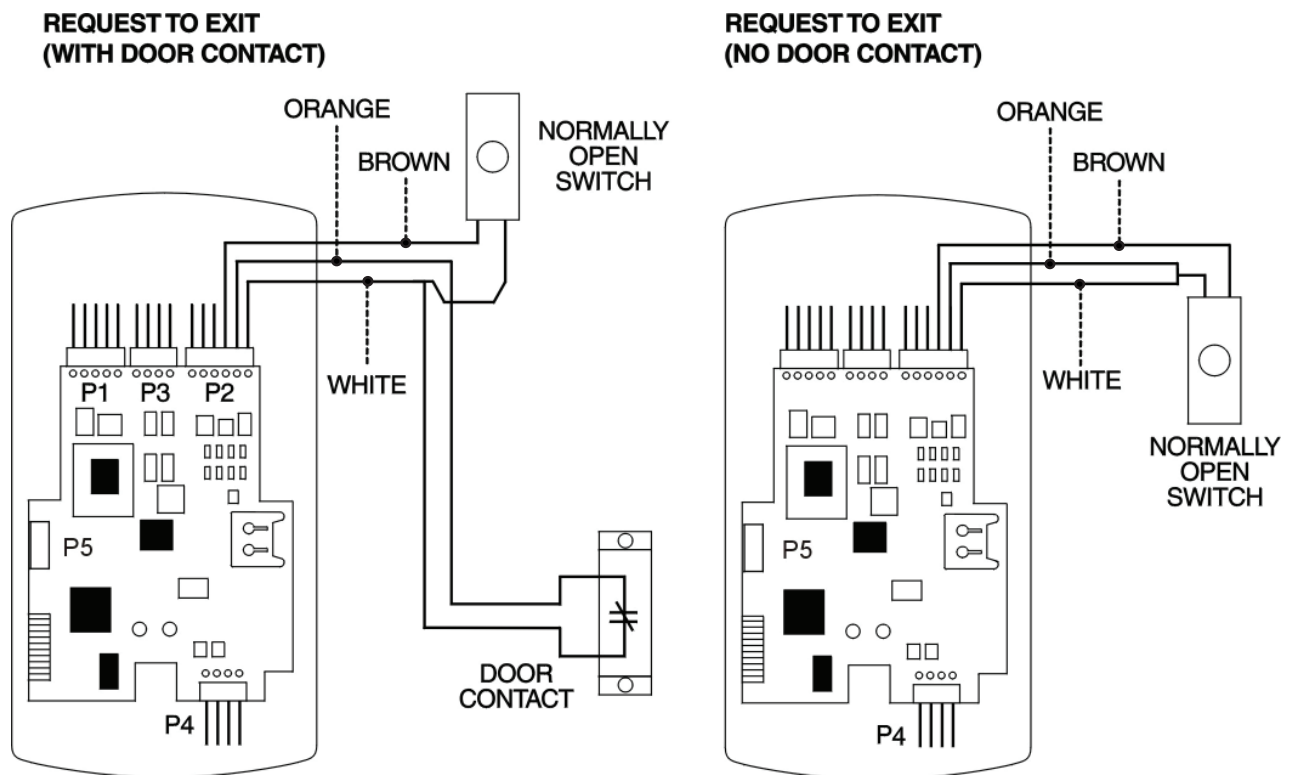


Figure 14: Wiring an External REX Switch

Standalone Mode Program Commands

If you need to change any of the program default values or wish to add functions, first enter program mode and then enter the desired program command. Defaults are in bold.

Note: The **master code must be changed** prior to performing any programming on the prox.pad unit. When programming users, the term user location refers to the place in the units memory that the user is stored.

Action Desired	Press	Details																																										
Enter Program Mode	99 # (Master Code) *	Yellow LED blinks slowly																																										
Change master code	1 # (new code) * (repeat code) * Ex: 1 # 4321 * 4321 *	Enter new code																																										
Set main relay time	11 # tt # 0 # * *	tt=1-99 seconds (default = 5 seconds)																																										
Set AUX relay output	15 # output # 0 # * *	0=disabled 1=shunt (default) 2=forced door 3=propped door																																										
Delete Users	user location # * *																																											
Set/clear standard option	30 # option # s/c # * *	See Chart below																																										
	<table border="1"> <thead> <tr> <th>Option</th> <th>Set</th> <th>Clear</th> </tr> </thead> <tbody> <tr> <td>0 — Audio Keypress Feedback</td> <td>1 = Enabled</td> <td>0 = Disabled</td> </tr> <tr> <td>1 — Visual Keypress Feedback</td> <td>1 = Enabled</td> <td>0 = Disabled</td> </tr> <tr> <td>2 — Auto Entry</td> <td>0 = Disabled</td> <td>1 = Enabled</td> </tr> <tr> <td>3 — Operating Mode</td> <td>0 = Standalone</td> <td>1 = Front End</td> </tr> <tr> <td>4 — Facility Code Access</td> <td>0 = Disabled</td> <td>1 = Enabled</td> </tr> <tr> <td>5 — Forced Door Audio Alert</td> <td>0 = Disabled</td> <td>1 = Enabled</td> </tr> <tr> <td>6 — Propped Door Audio Alert</td> <td>0 = Disabled</td> <td>1 = Enabled</td> </tr> <tr> <td>7 — Internal REX Switch</td> <td>0 = Disabled</td> <td>1 = Enabled</td> </tr> <tr> <td>8 — Daylight Savings Time Format</td> <td>0 = US</td> <td>1 = European</td> </tr> <tr> <td>13 — Daylight Savings Time</td> <td>0 = Disabled</td> <td>1 = Enabled</td> </tr> <tr> <td>14 — Prox Card Anti-Passback Select</td> <td>0 = Disabled</td> <td>1 = Enabled</td> </tr> <tr> <td>18 — Invalid PIN Lockout Select</td> <td>0 = Disabled</td> <td>1 = Enabled</td> </tr> <tr> <td>19 — Invalid PIN Lockout Action</td> <td>0 = Timed Lockout</td> <td>1 = Forced Door Output</td> </tr> </tbody> </table>	Option	Set	Clear	0 — Audio Keypress Feedback	1 = Enabled	0 = Disabled	1 — Visual Keypress Feedback	1 = Enabled	0 = Disabled	2 — Auto Entry	0 = Disabled	1 = Enabled	3 — Operating Mode	0 = Standalone	1 = Front End	4 — Facility Code Access	0 = Disabled	1 = Enabled	5 — Forced Door Audio Alert	0 = Disabled	1 = Enabled	6 — Propped Door Audio Alert	0 = Disabled	1 = Enabled	7 — Internal REX Switch	0 = Disabled	1 = Enabled	8 — Daylight Savings Time Format	0 = US	1 = European	13 — Daylight Savings Time	0 = Disabled	1 = Enabled	14 — Prox Card Anti-Passback Select	0 = Disabled	1 = Enabled	18 — Invalid PIN Lockout Select	0 = Disabled	1 = Enabled	19 — Invalid PIN Lockout Action	0 = Timed Lockout	1 = Forced Door Output	
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Print User List	25 # 0 # 0 # * *																																											
Print User List (From Certain User Location)	25 # 0 # start user # * *																																											

Action Desired	Press	Details
Change Platform Parameters	32 # parameter # value # * * *	See Chart Below
<u>Parameter</u>	<u>Value</u>	
2 — 26 Bit Facility Code	0 — 255; (Default = 1) Note: IEI Cards are Facility Code 11	
3 — Process Card Time	2 — 240; 1/4 sec. Increments (Defaults to 4 = 1 sec.)	
4 — Invalid PIN Lockout Attempts	1 — 50 (Default = 5)	
5 — Invalid PIN Lockout Duration	1 — 255; 5 sec. increments; (Defaults to 60 = 5 Minutes)	
Set System Time	41 # hhmm # 0 # * * *	hhmm=hour/minute (24 Hour Format)
Set System Date	42 # mmddy # dow # * * *	mmddy=month, date, year; dow=day of week, 1=Sunday
Set Propped Door Time	44 # ttt # 0 # * * *	ttt=propped door time, to nearest 10's seconds, entered as 30-990; (default=30 secs) (this sets the time for both Aux Relay and local sounder)
Set Forced Door Time	45 # ttt # 0 # * * *	ttt=propped door time, to nearest 10's seconds, entered as 30-990; (default=10 secs) (this sets the time for both Aux Relay and local sounder)
Reset System Defaults Only	40 # 00000 # 00000 # * * *	Does not delete users
Delete Entire Memory and Reset System Defaults	46 # 00000 # 00000 # * * *	Deletes all memory including users
Program User — Code Only	50 # user type # user location # code * repeat code *	User Types: 0-Toggle/latch lock 1-Normal access 2-Log Dump 3-Lockout
Program User — Code AND Card By Presenting Card	50 # user type # user location # code * repeat code * * <present card>	User Types: 0-Toggle/latch lock 1-Normal access 2-Log Dump 3-Lockout

Action Desired	Press	Details
Program User - Card Only By Presenting Card	50 # user type # user location # * * * <present card>	User Types: 0-Toggle/latch lock 1-Normal access 2-Log Dump 3-Lockout
Program User –Card Only Without Presenting Card	51 # user type # user location # card PIN * card PIN *	User Types: 0-Toggle/latch lock 1-Normal access 2-Log Dump 3-Lockout For 26-bit Cards only. The card PIN is the first 5 digits on the card (facility code must be entered first; see 32 # 2 # command)
Program User – Code OR Card By Presenting Card	52 # user type # user location# code * repeat code * <present card>	User Types: 0-Toggle/latch lock 1-Normal access 2-Log Dump 3-Lockout
Program Consecutive Users – Card Only By Presenting Cards	53 # user type # start user location # * * <present card1> <presentcard2> <present card3>...	User Types: 0-Toggle/latch lock 1-Normal access 2-Log Dump 3-Lockout Present cards one after another.
Program Consecutive Users – Card Only Without Presenting Cards	56 # total count # user location # card PIN * card pin *	“Total count” = total number of cards to be entered; card PIN appears on the card; a facility code must be entered first (see command 32, option #2)
Delete Block of Consecutive Users	58 # star user # star user # number of users * number of users *	

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Wiring a Wiegand Front End

The following section shows how to wire the prox.pad to a Wiegand control panel. If you require further information on the Wiegand panel connections please refer to the instructions that came with the panel.

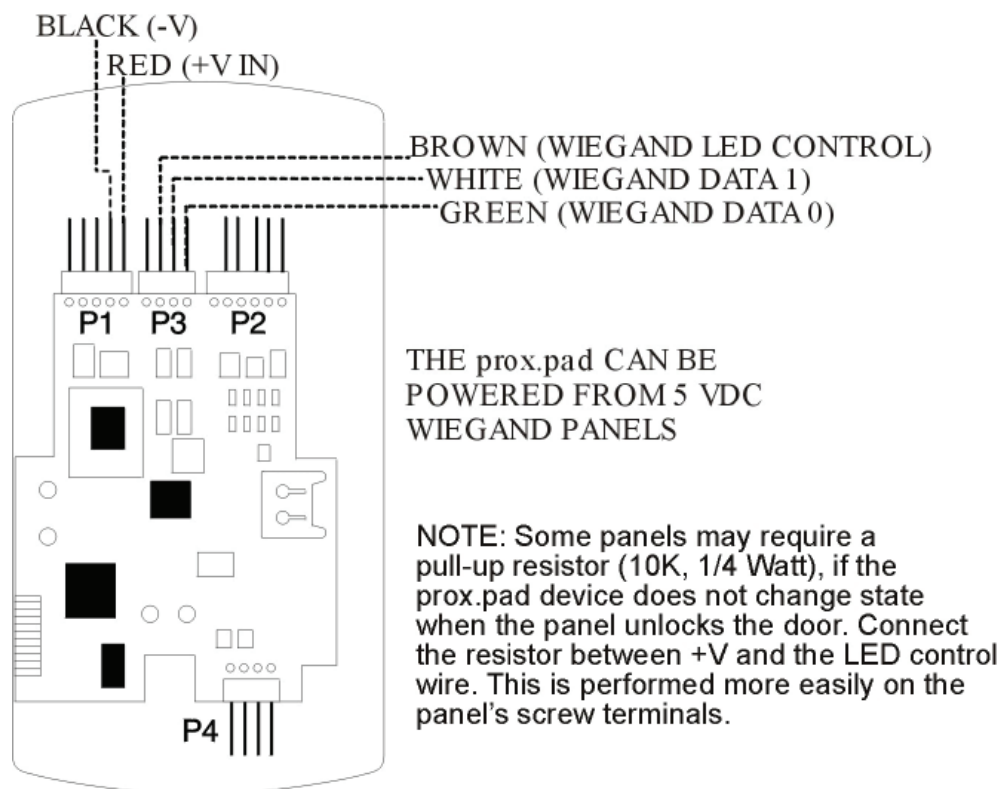


Figure 15: Connecting the prox.pad to a Wiegand Panel

Use ALPHA 1295C (22AWG) 4 - wire, stranded and shielded cable. The cable shield drain wire must be grounded at the reader end to P1, pin 4 connection (DC Power Supply Ground).

Wiegand Mode LED/Sounder States

The table below describes the various LED and Sounder indications used in the prox.pad while in Wiegand Front End Mode.

LED/Sounder	Visual/Audible Condition	Description
Yellow LED	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; entry error lockout (no keypress feedback)
	Very rapid blink	Memory (eeprom) erase is in progress (command 46)
Bi-Color LED	Steady red	Lock is locked
	Steady green	Lock is energized (timed or latched)
	Quick double red/green flash	Prox card read correctly
All LED's	Rapid red/yellow, green sequencing	Power on/reset
Sounder (system)	Very quick beep (10 ms) with yellow LED blink every second	EEPROM read error during get system parameters; can be turned off by running self-test
	3 slow beeps (250 ms)	Indicates self-test
Sounder (after PIN)	Single long beep	Value entered too big, cannot be represented in 16 bits (Wiegand mode)
Sounder (after card)	1 short beep	Valid card access

Wiegand Front End Mode Default Settings

Option	Default Setting	Option	Default Setting
Master Code	1234	Audio Keypress Feedback	Enabled
Visual Keypress Feedback	Enabled	Auto-Entry	Disabled
Wiegand Red LED	Enabled	Red LED Active State	Low
Wiegand Green LED	Enabled	Green LED Active State	High
Pulse Width	8 = 160 μ S	Inter-pulse Spacing	32 = 640 μ S

Wiegand Programming Commands

If you need to change any of the program default values or wish to add functions, first enter program mode and then enter the desired program command. Defaults are in bold.

Note: The **master code must be changed** prior to performing any programming on the prox.pad unit.

Action Desired	Press	Details																														
Enter Program Mode	99 # (Master Code) *	Yellow LED blinks slowly																														
Change master code	1 # (new code) * (repeat code) * Ex: 1 # 4321 * 4321 *	Enter new code																														
Set/clear standard option	30 # option # s/c # * *	See Chart Below																														
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Delete Entire Memory and Reset System Defaults	46 # 00000 # 00000 # * *																															
To exit Program mode	Press *	Yellow stops flashing																														

Wiring the Secured Series Front End

You can connect the prox.pad as a front end to an IEI Secured Series Door Control Module by following the diagram below. Using connector P3 on the prox.pad, connect the white wire to the Secured Series DCM's white/yellow wire or the white/yellow terminal strip and connect the green wire to the white/black wire or white/black terminal strip on the Secured Series DCM.

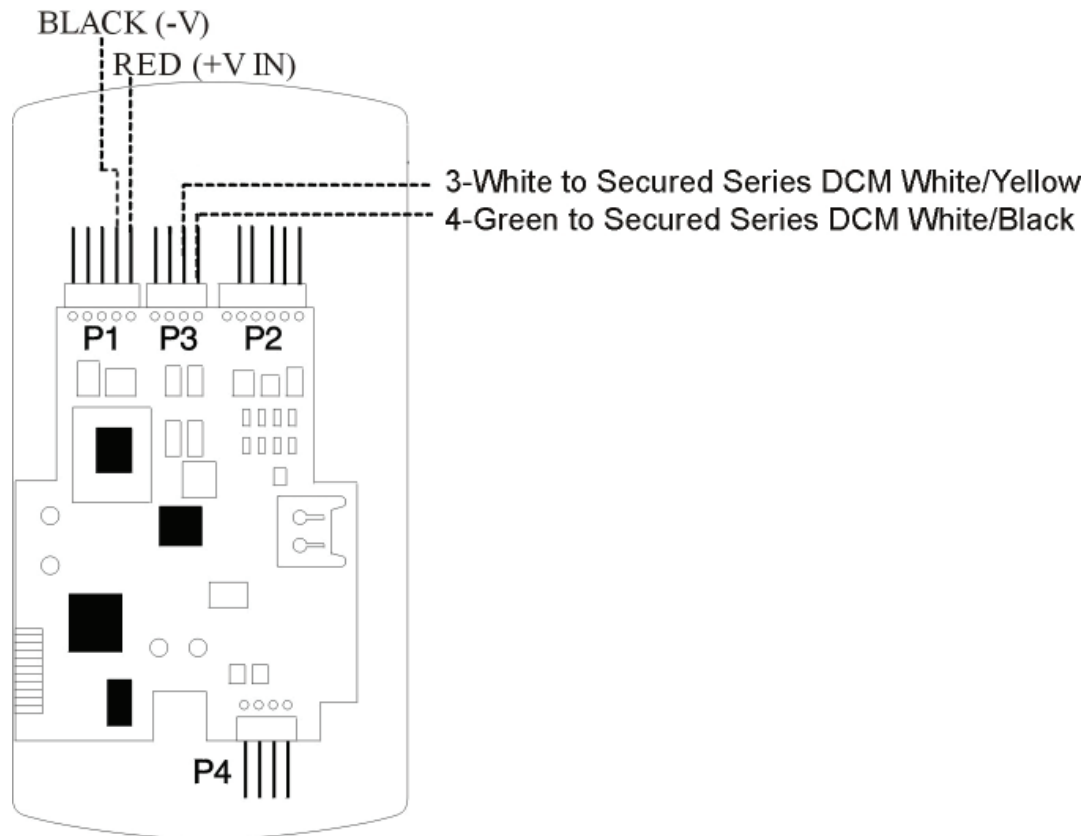


Figure 16: Connecting the prox.pad to a Secured Series DCM

Use ALPHA 1295c (22AWG) 4-wire, stranded and shielded cable. The cable shield drain wire must be grounded at the reader end to P1, pin 4 connection (DC Power Supply Ground)

Secured Series Front End Mode LED Indicators/Sounder

LED/Sounder	Visual/Audible Condition	Description
Yellow LED	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; entry error lockout (no keypress feedback)
	Very rapid blink	Memory (eeprom) erase is in progress (command 46)
	“Pulsing” rapid blink	Batch program of cards in progress (command 56); block delete of users (command 58)
Bi-color LED	Steady red	Lock is locked
	Steady green	Lock is energized (timed or latched)
	Quick double red/green flash	Prox card read correctly
All LED's	Rapid red, yellow, green sequencing	Power on/reset
Sounder (system)	Very quick beep (10 ms) with yellow LED blink every second	EEPROM read error during get system parameters; can be turned off by running self-test
	3 slow beeps (250 ms)	Indicates self test
Sounder (after PIN)	3 rapid beeps after	PIN not found
Sounder (after card)	3 very rapid beeps	PIN not found, facility code/company ID mismatch and access by facility mode enabled; incorrect card type (option #20)
	1 short beep	Valid card access

Secured Series Front End Mode Default Settings

Option	Default Setting	Option	Default Setting
Master Code	1234	Audio Keypress Feedback	Enabled
Visual Keypress Feedback	Enabled	Auto-Entry	Disabled
Anti-Passback	Enabled	Reader In/Out Select	In
Keypad In/Out Select	In	Prox Card Type	26-bit
Facility Match Required	Disabled	Facility Code	1
Corporate 1000 ID	4095		

Secured Series Programming Commands

If you need to change any of the program default values or wish to add functions, first enter program mode and then enter the desired program command. Defaults are in bold.

Note: The **master code must be changed** prior to performing any programming on the prox.pad unit.

Action Desired	Press	Details																																	
Enter Program Mode	99 # (Master Code) *	Yellow LED blinks slowly																																	
Change master code	1 # (new code) * (repeat code) * Ex: 1 # 4321 * 4321 *	Enter new code																																	
Set/clear standard option	30 # option # s/c # * *	See Chart Below																																	
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Technical Support

Service Company: Before calling Linear LLC for installation assistance, refer to Chapter 5, Troubleshooting. This chapter includes a list of common system problems, possible causes, and corrective actions plus easy-to-use diagnostic flow charts. To contact Linear LLC Technical Services department, call 1 800-421-1587 between 5:00 a.m. and 4:30 p.m. (Pacific Time), Monday through Friday. You can also download an electronic version of this manual from this site.

End User: Please contact your service company.

Warranty

Linear LLC 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. Linear LLC 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.

Linear LLC's sole responsibility is limited to the repair (at Linear LLC's option) or the replacement of the defective product or part when sent to Linear LLC's facility (freight and insurance charges prepaid), after obtaining Linear LLC's Return Merchandise Authorization. Linear LLC 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.

This warranty shall expire two years after shipping date for prox.pad Keypads. Except as stated above, Linear LLC makes no warranties, either expressed or implied, as to any matter whatsoever, including, without limitation to, the condition of its products, their merchantability, or fitness for any particular application.

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