

DOOR♦GARD®

232iLM Keypad Installation & Programming Instructions

Note: This product is designed to be installed and serviced by security and lock industry professionals.

Specifications

Case Dimensions:

6-1/2" L x 1-3/4" W x 1-1/8" D

Electrical:

Voltage: 5-12 VDC (keypad)

12-24 VAC/DC (controller)

Current (max): 120 mA

Relay Contacts:

Main Relay (controller): 2 Amps

Aux Relays (controller): 1 Amp

Bell Relay:

Form A; 1 Amp @ 30 VDC;

500 mA @ 125 VAC

Environmental:

-20° F to 130° F



Features

- Vandal Resistant Case
- Sealed for Indoor or Outdoor Applications
- LED's for Relay Status Indication
- Bell Output
- Surface Mount
- Illuminated Hardened Keys
- Rated for Greater than One Million Key Cycles

Applications

- Low to Medium/Heavy Traffic Areas
- Rough Service Environments
- Mullion Frame Mounting
- Dimly Lit Areas

Description:

The 232iLM Access Control unit consists of two pieces: an SSWiLM keypad front end and a 232 Access Control Module. The Door♦Gard Series SSWiLM keypad combines elegant looks with a mullion mount design in a rugged, vandal resistant case, which you can use for almost any application. The SSWiLM has hardened backlit keys designed to perform in medium to high traffic areas and in rough duty environments. The electronics are also conformal coated, which makes the keypad suitable for indoor or outdoor applications.

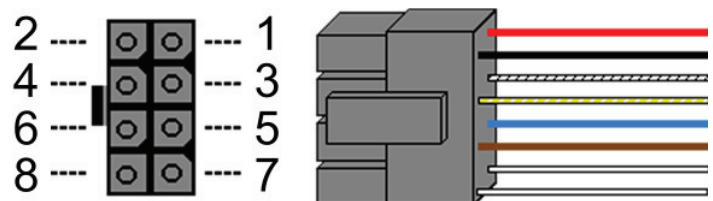
Basic Operation:

To gain access through the door enter your code (1-6 digits) followed by the * key on the keypad.

Packing List:

- (1) SSWiLM Keypad
- (1) 232 Access Control Module
- (1) Eight-Conductor Wire Harness
- (4) Three-Conductor Wire Harness
- (1) Controller Hardware Pack
- (1) Mullion Hardware Pack
- (1) 5/64" Allen Wrench
- (1) Anti-Oxidant Grease Pack
- (1) Installation/Programming Manual
- (1) Self-Contained Access Control Programming Guide

Wire Harness Configuration:



Pin	Wire Color	Signal Name
1	Red	Power (+)
2	Black	Power (-)
3	White/Black	Data 0
4	White/Yellow	Data 1
5	Blue	Not Used
6	Brown	Not Used
7	White	Bell Relay Contact (A)
8	White	Bell Relay Contact (B)

Wiring Requirements:

- 18 AWG – 1000 Ft.
- 20 AWG – 500 Ft.
- 22 AWG – 250 Ft.

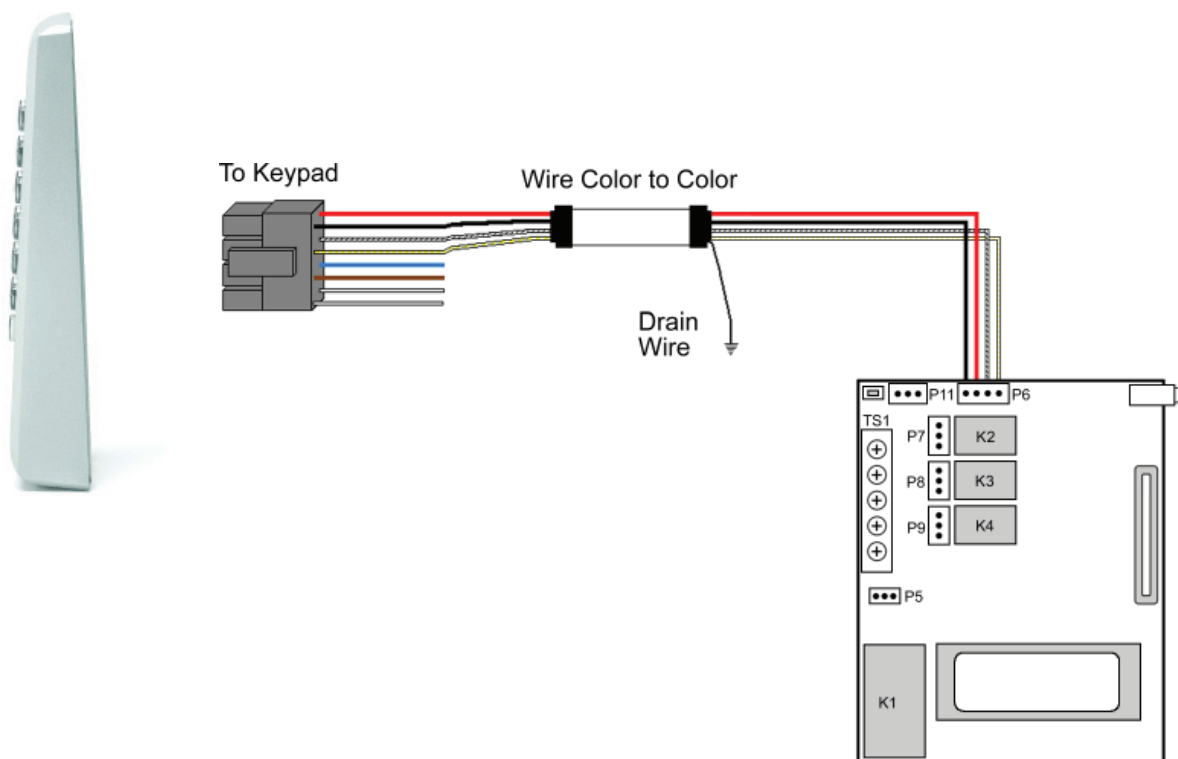
Keypad Installation Procedure:

Step 1: Drill through the back plate using a 11/64" bit. Use the template on the back page to accurately mark the mounting holes before drilling. Then drill the mounting holes with a 9/64" drill bit. Also drill the hole for the wires. This may vary depending on the number of conductors required.

Step 2: On the keypad end, strip back the insulator from the wire and tape the drain wire (shield) to the jacket. Now connect the required wires to the 8-conductor wire harness provided. The wire harness plugs into the 8-position connector on the keypad. At the other end of your wire run, strip back the insulator from the wire but **do not** tape the drain wire to the jacket. The drain wire **must** be connected to ground at the controller end. See the diagrams below.

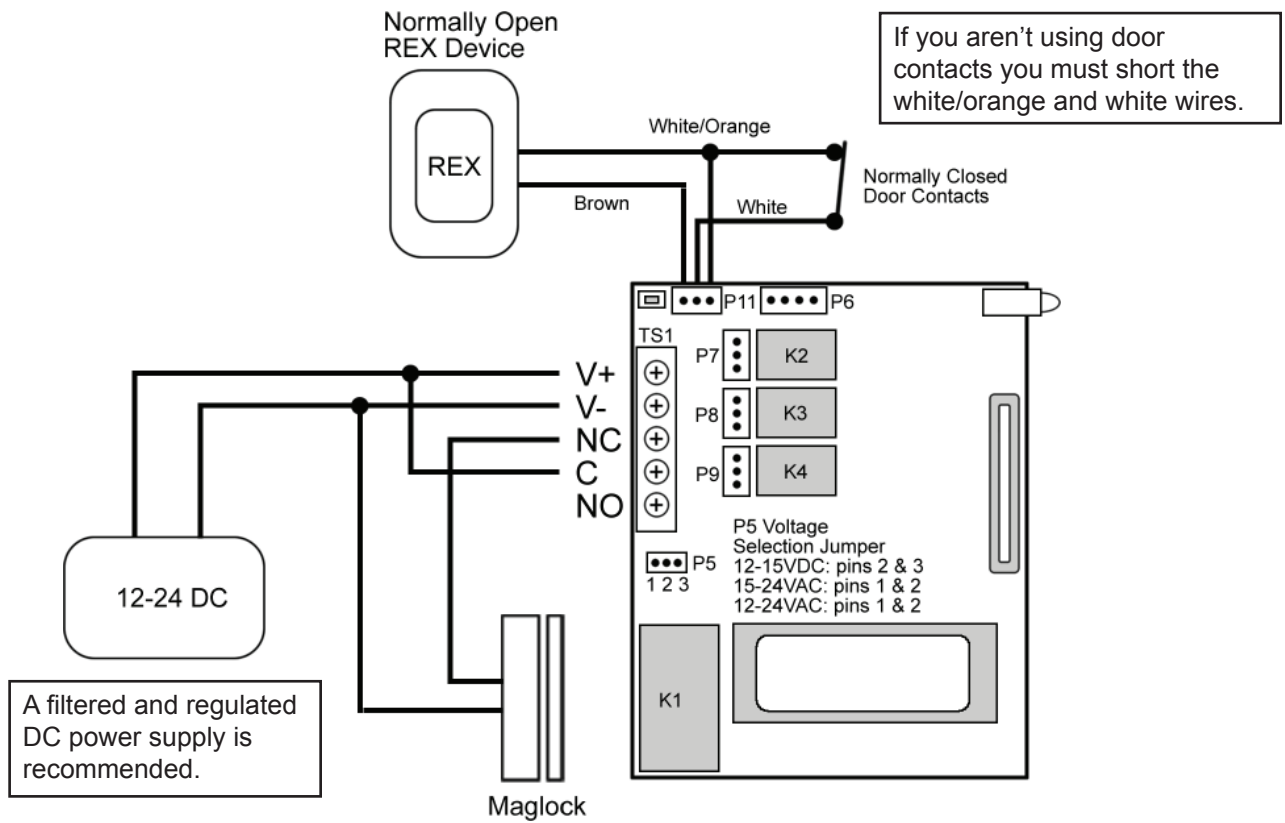
Step 3: Finally mount the keypad onto the mounting surface using the provided screws. Do not over-tighten the screws, which may result in damage.

Wiring the SSWiLM Keypad to a 232 Access Control Module

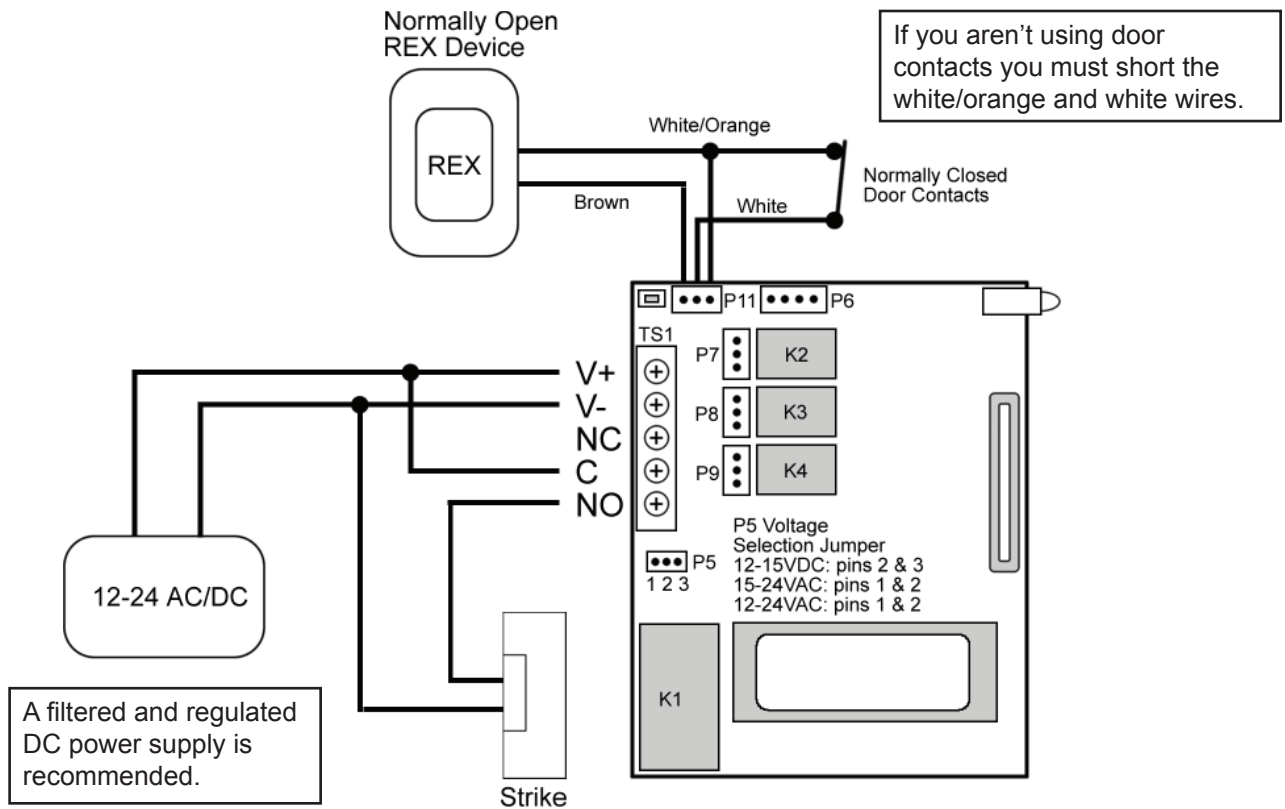


The connection between the SSWiLM Keypad and the 232 Controller requires a 4-conductor, stranded wire with overall foil shield. The 8-conductor wire harness from the keypad connects to connector P6 on the controller. Connect the wires, color to color (red to red, black to black, white/black to white/black and white/yellow to white/yellow). Refer to the wire lengths on the first page. As mentioned above, the drain wire must be attached to Ground on the controller side, which is the V- terminal or negative of your power supply.

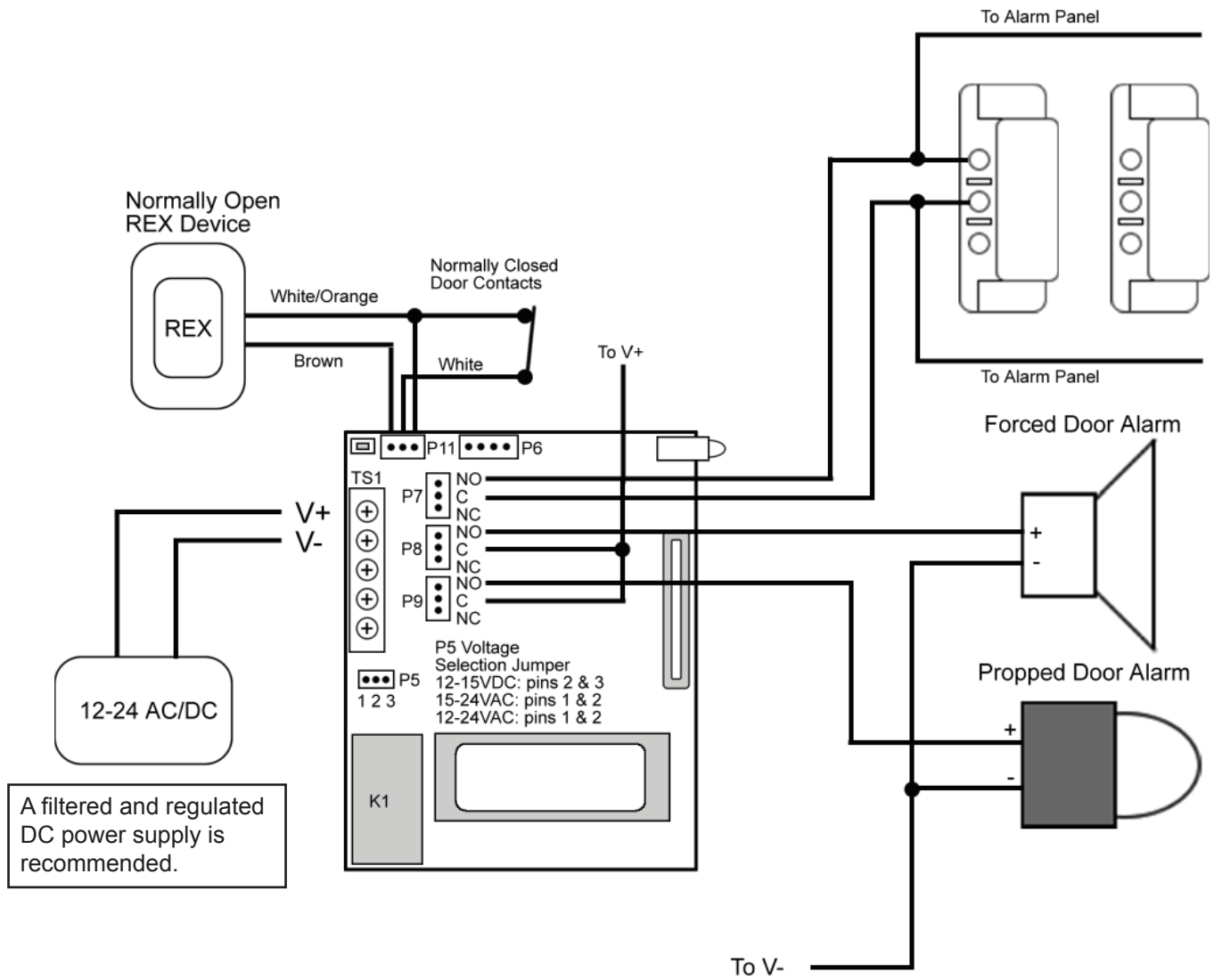
Basic Access Control Using an Electromagnetic Lock (Maglock)



Basic Access Control Using an Electric Door Strike



Integrated Access Control Wiring

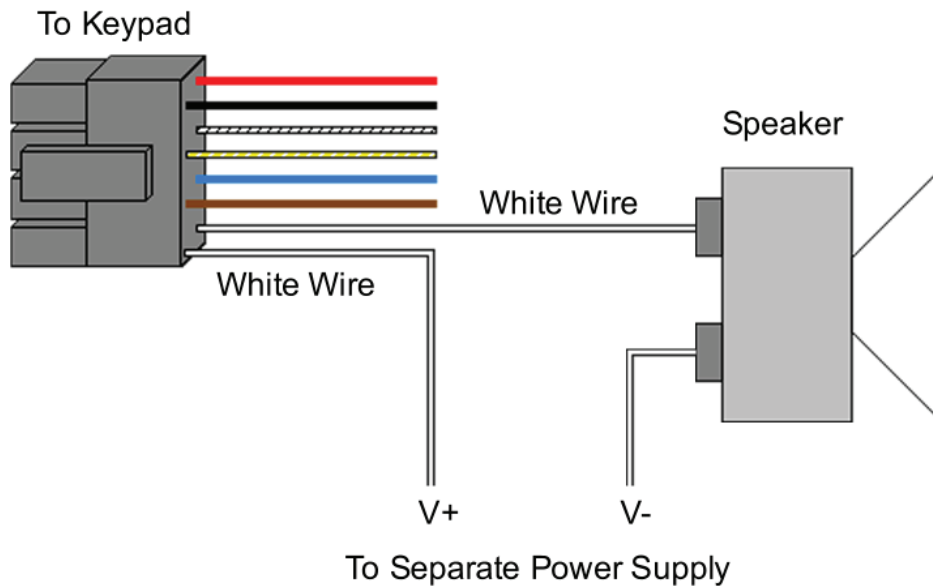


A filtered and regulated DC power supply is recommended.

Wire Color	Relay Connection
Gray	Normally Closed
Blue	Common
Green	Normally Open

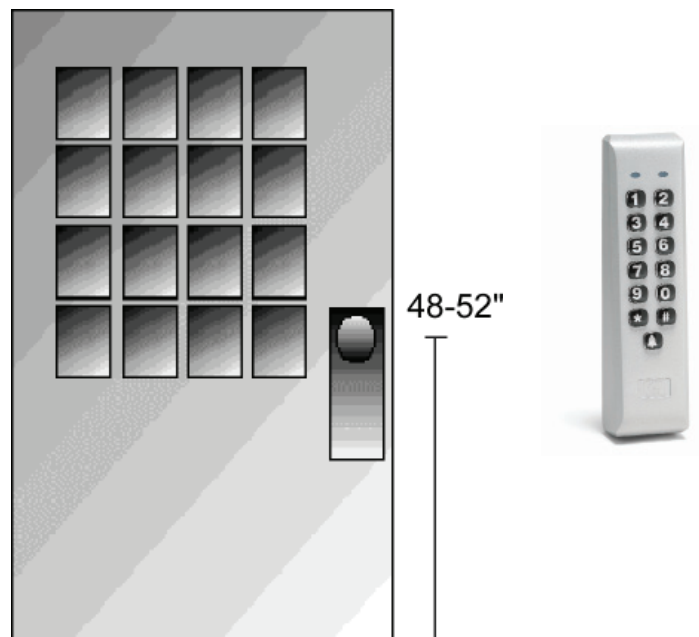
Wiring the Bell Output to a Speaker:

The SSWiLM keypad has a built in bell button, which triggers a relay output when pressed. This relay is normally open and the contact closes when triggered. You can use this relay output to trigger devices that require a momentary closure, such as a doorbell. The relay output provides a dry contact, but you can run up to 24 VDC or 125 VAC through it for devices that require power to operate. The diagram below shows these connections.



Keypad Mounting Height

Mounting height can vary depending on requirements. An appropriate range is typically between 48 and 52 inches on center off the floor.



Programming the 232iLM Keypad

The SSWiLM keypad has its own local programming options. All user codes and other access control features are programmed into the controller. Refer the Self-Contained Access Control Programming Guide for those features. The programming options chart below shows all the programming commands available in the SSWiLM.

To program the SSWiLM you first must enter program mode.

To enter program mode enter the following on the keypad: **099 # program code *** (default program code is 6789).

Keypad Default Settings

Option	Default Setting	Option	Default Setting
Local Program Code	6789	Audio Keypress Feedback	Enabled
Visual Keypress Feedback	Enabled	Door Bell Select	Continuous
Keypad Illumination	Enabled	Keypad Dimming	Enabled

Programming Options Chart

Command/Action	Keys to Enter/Details	
Command 90 Change Local Program Code	90 # 0 # 0 # new code * new code * (default = 6789)	
Command 91 Set/Clear Keypad Options (options below, defaults in bold)	91 # option # set/clear # * *	
Option	Clear	Set
0 – Visual Keypress Feedback	0 = Disabled	1 = Enabled
1 – Audio Keypress Feedback	0 = Disabled	1 = Enabled
11 – Keypad Illumination	0 = Disabled	1 = Enabled
12 – Keypad Dimming	0 = Disabled (always bright)	1 = Enabled
13 – Door Bell Select	0 = Disabled	1 = Enabled
Command 92 Set Door Bell Duration	92 # 4 # time # * *	Set timed output (1 – 99 seconds)
	92 # 4 # 0 # * *	Set to continuous
Command 96 Reset Keypad to Default Settings	96 # 0 # 0 # * *	
Exit Program Mode	Press the * Key	

Testing the Keypad

After installing the keypad, it is recommended that you perform the keypad self-test once a year, to ensure that the keypad is working properly.

- To perform the self-test, with the unit powered up, press the following keys on the keypad: **7890 # 123456 ***
- If all 12 keypresses are accepted, the keypad enters self-test mode.
- The LEDs alternate three times followed by the sounder beeping three times.
- When finished the yellow LED starts flickering rapidly.
- Press ***** to clear.

LED Indications

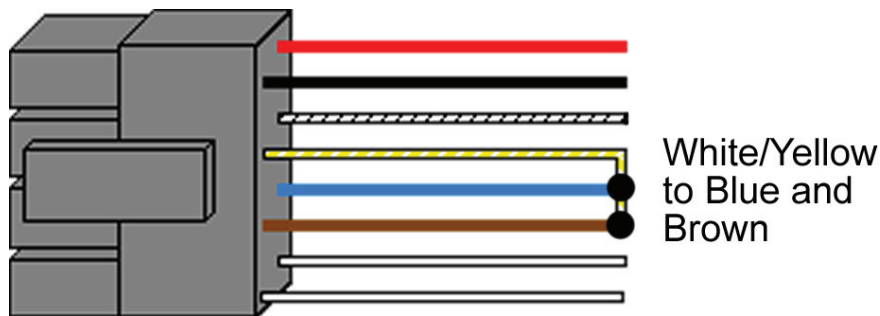
LED State	Description
Red Solid	Door Locked
Green Solid	Door Unlocked
Yellow Solid	Programming Error
Yellow Flashing Slowly (single flash)	Controller Program Mode
Yellow Flashing Slowly (double flash)	Front End Program Mode
Yellow Momentary Flash	Visual Keypress Feedback

Replacing the 232m (discontinued) with an 232iLM

The 232iLM is functionally equivalent to the 232m keypad, which was discontinued. It's not, however, a direct physical replacement. They are both two piece units, but they use a different control boards. It is not possible to replace just the mullion keypad portion of the unit. You must replace the entire unit. Refer to the previous sections for wiring your new 232iLM unit.

Program Mode Loopback

If you've forgotten the local program code use the following loopback connection to enter program mode. Power down the unit, short the wires in the configuration illustrated, then power the unit back up. The yellow LED should be flashing. Now change your local program code or reset the unit. Power the keypad down and reconnected the wire harness in the original configuration.



Limited Warranty

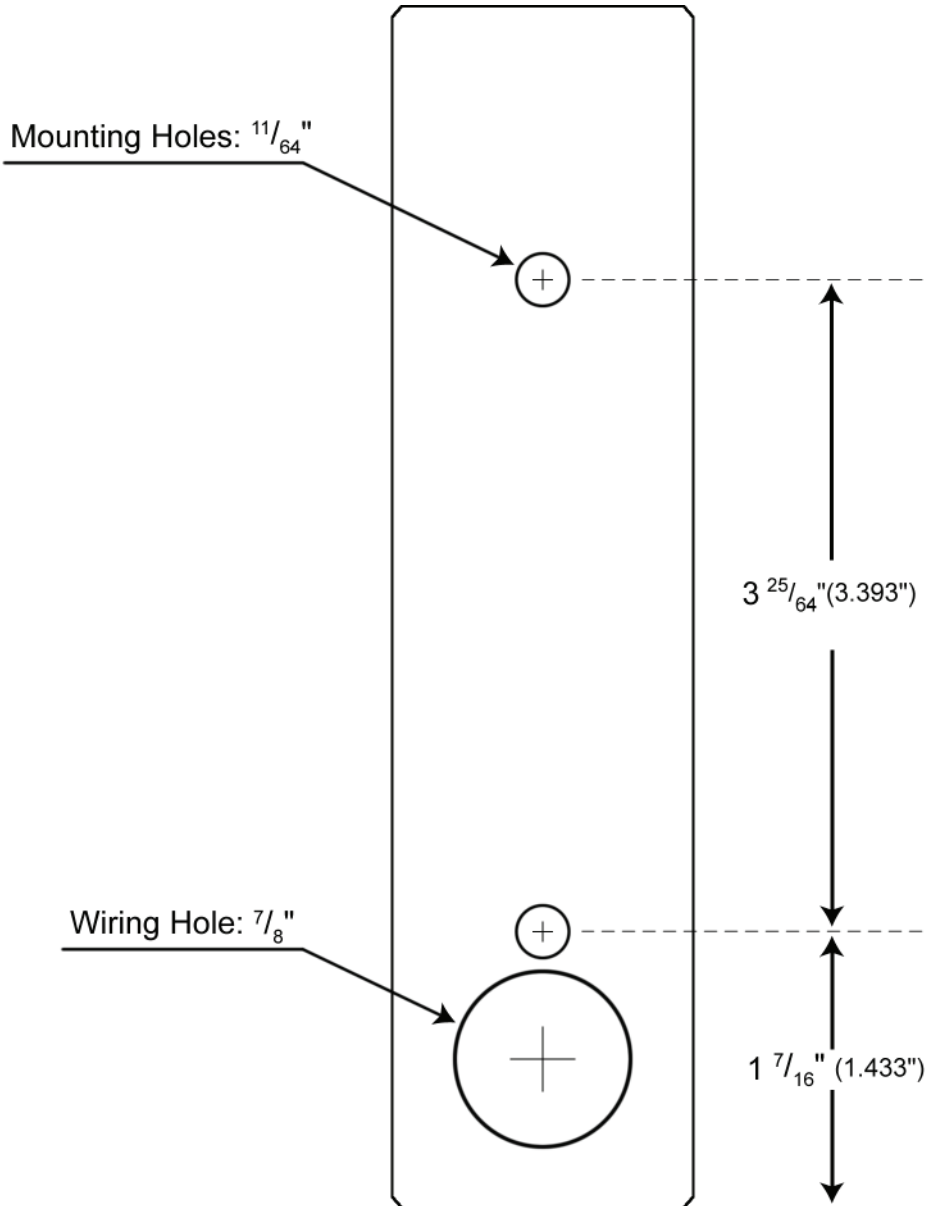
This Nortek Security & Control product is warranted against defects in material and workmanship for twenty four (24) months. **This warranty extends only to wholesale customers** who buy direct from Nortek Security & Control or through Nortek Security & Control's normal distribution channels. Nortek Security & Control does not warrant this product to consumers. Consumers should inquire from their selling dealer as to the nature of the dealer's warranty, if any. **There are no obligations or liabilities on the part of Nortek Security & Control LLC for consequential damages arising out of or in connection with use or performance of this product or other indirect damages with respect to loss of property, revenue, or profit, or cost of removal, installation, or reinstallation.** All implied warranties, including implied warranties for merchantability and implied warranties for fitness, are valid only until the warranty expires. **This Nortek Security & Control LLC Warranty is in lieu of all other warranties express or implied.**

All products returned for warranty service require a Return Authorization Number (RA#). Contact Returns at 1-855-546-3351 for an RA# and other important details.

Technical Support

DEALERS/INSTALLERS ONLY! End users must contact the dealer/installer for support. If the keypad still does not work after troubleshooting, please call the Technical Services department at 1-800-421-1587.

232iIM Mounting Template



The iLM keypad is designed for surface mount applications. You must drill a $\frac{7}{8}$ " hole for the wire harness connector as shown so the unit is flat against the mounting surface.

NORTEK
 SECURITY & CONTROL
 USA & Canada (800) 421-1587 & (800) 392-0123
 (760) 438-7000 - Toll Free FAX (800) 468-1340
www.nortekcontrol.com