myQ® Business™

Smart Video Intercom M

INSTALLATION MANUAL

Model **CAPXM**

Safety

Safety Symbol and Signal Word Review

When you see these Safety Symbols and Signal Words on the following pages, they will alert you to the possibility of serious injury or death if you do not comply with the warnings that accompany them. The hazard may come from something mechanical or from electric shock. Read the warnings carefully.

When you see this Signal Word on the following pages, it will alert you to the possibility of damage to your property or product if you do not comply with the cautionary statements that accompany it. Read them carefully.

⚠ WARNING

MECHANICAL

⚠ WARNING

ELECTRICAL

⚠ CAUTION

⚠ WARNING

To reduce the risk of SEVERE INJURY or DEATH:

- Disconnect power at the fuse box BEFORE proceeding.
- To AVOID damaging gas, power or other underground utility lines, contact underground utility locating companies BEFORE digging.
- ALL electrical connections MUST be made by a qualified individual.
- ALL power and control wiring MUST be run in separate conduit.
- All power wiring should be on a dedicated circuit and well protected. The location of the power disconnect should be visible and clearly labeled.
- The CAPXM shall be installed in accordance with the National Electrical Code and all local codes.

To protect against fire and electrocution:

- Disconnect power BEFORE installing or servicing CAPXM.
- NEVER connect a keypad/reader or lock to doors without first consulting the applicable fire code.
- You MUST consult with, and get approval from, local fire officials BEFORE installing locks or devices on ANY doors that may be fire exits.
- Use of egress push buttons may not be legal. Single action exits may be required.
- ALWAYS obtain proper permits and approvals in writing BEFORE installing equipment.

⚠ WARNING

DO NOT INSTALL THE SYSTEM IN THE FAIL SECURE MODE UNLESS PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. Doing so may cause interference with the operation of panic hardware.

WARNING: This product can expose you to chemicals including lead, which are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

INTRODUCTION

1 PRE-INSTALL

myQ business™

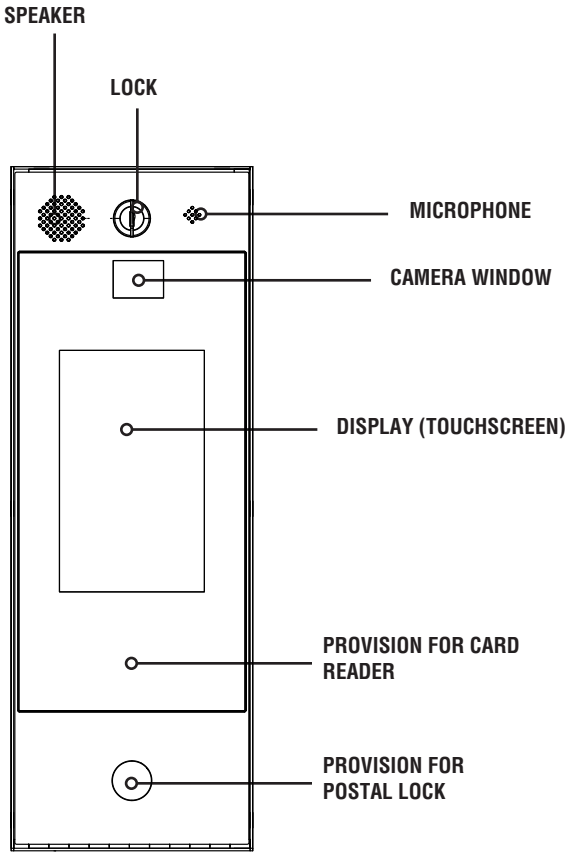
2 INSTALL

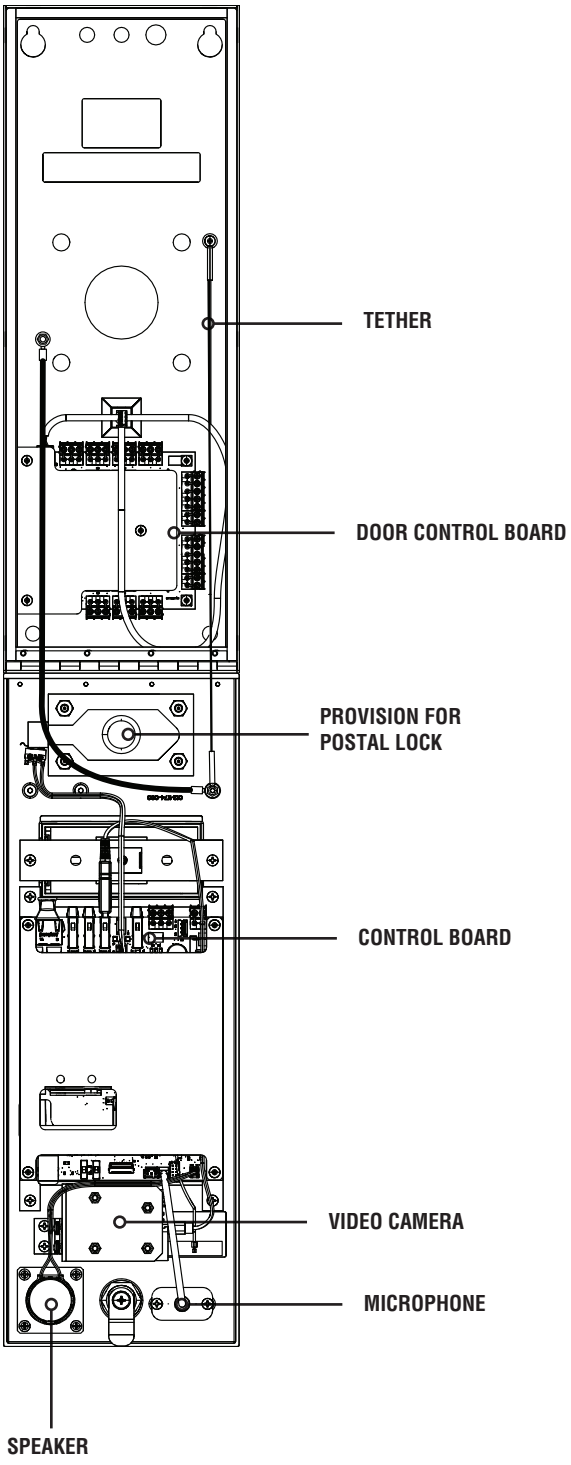
3 NETWORK

4 ACCESS CONTROL

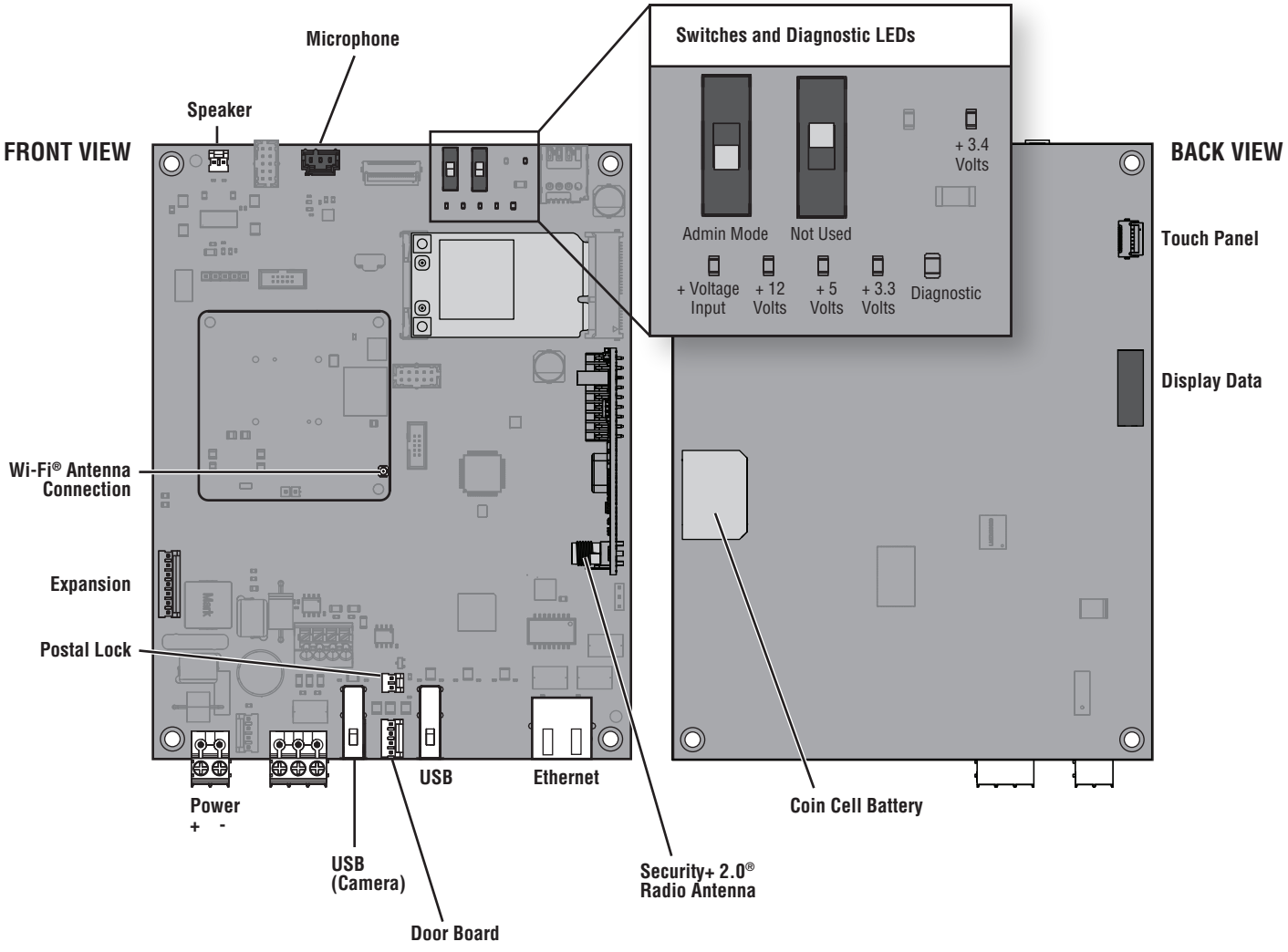
CAPXM Overview

Smart Video Intercom M (Model CAPXM) is a cloud based access control solution that includes an integrated video camera enabling advanced video features.



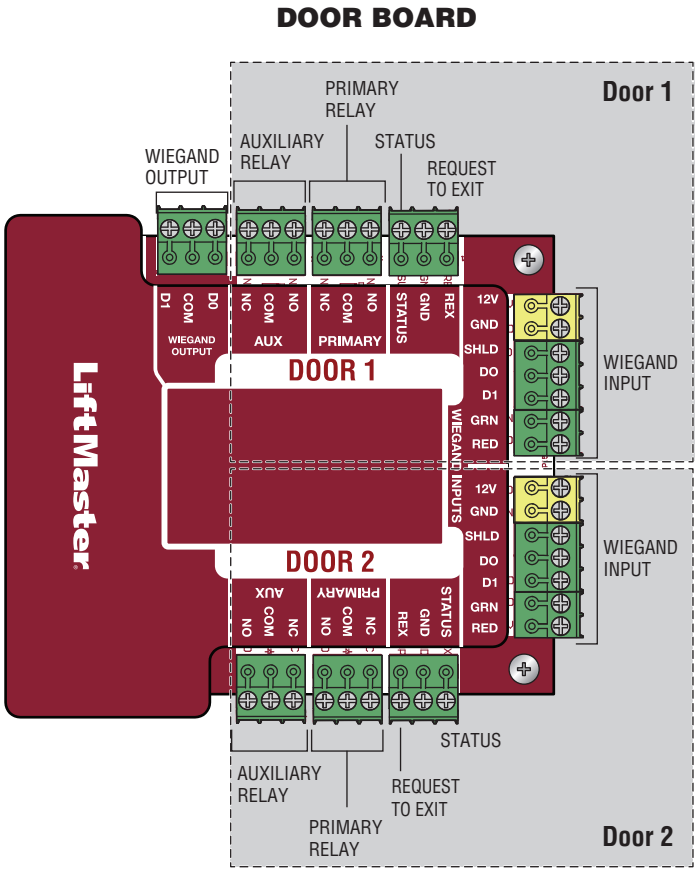


Control Board Overview



Door Board Overview

The CAPXM has a combination of access control inputs/outputs on the Door Board that work in conjunction to control up to 2 access points.

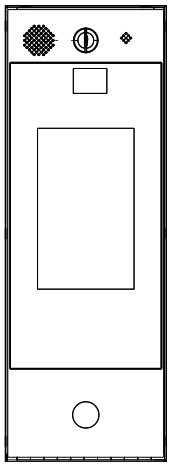


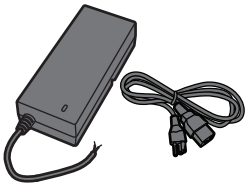
See page 17 for wiring diagram.

INPUT/OUTPUT	USED FOR
Relay Output 1	Gated Operator, Door Strikes, Maglocks, Lights (for control-only power to be provided by external power supply), Alarm Shunt
Relay Output 2	
Wiegand Output 1	Standard 26-bit, 30-bit Wiegand, HID 37-bit with Facility Code, Transcore 37-bit, 32-bit MiFare
Wiegand Output 2	
Supervised Input 1	Closed Door Sensor (Supervised EOL or unsupervised), Closed Limit Gate Sensor (Supervised EOL or unsupervised), Open Limit Gate Sensor (Supervised EOL or unsupervised)
Supervised Input 2	

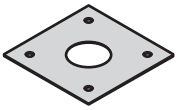
NOTE: *Only the 26-bit Wiegand protocol is compatible in UL installations.*

Carton Inventory





Power Supply



Goose-neck Gasket

S10K30MOV
(Metal Oxide Varistor)(4)

PK625 Keys (2)

1N4005 Diode Kit (4)

PROVIDED (NOT SHOWN)

- Installation Manual

Tools Needed

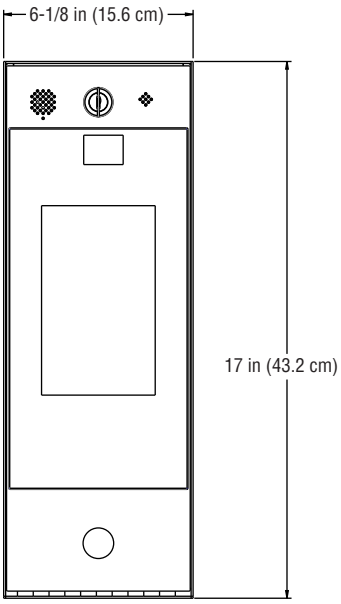
- PH2 Phillips Screwdriver
- Precision 1/8" Flat or PH0 Phillips Screwdriver
- 1/4" Nut Driver
- Drill/Driver
- 7/64" Drill Bit
- Hammer Drill Bits for Drill/Driver
- RJ45 Crimping Pliers
- Multimeter
- Measuring tape
- Conduit Bender
- Conduit Cutter/Reamer
- Hack Saw
- Center Punch Tool
- Hammer

Additional Tools Recommended

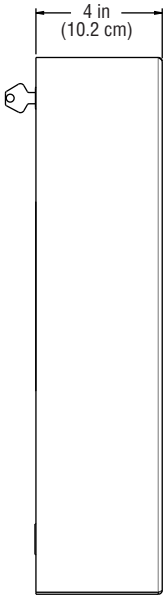
- Network LAN Cable Tester
- Wi-Fi Analyzer App (smartphone app)
- Network Analyzer software
- Computer with Ethernet port
- Ethernet patch cable

Dimensions

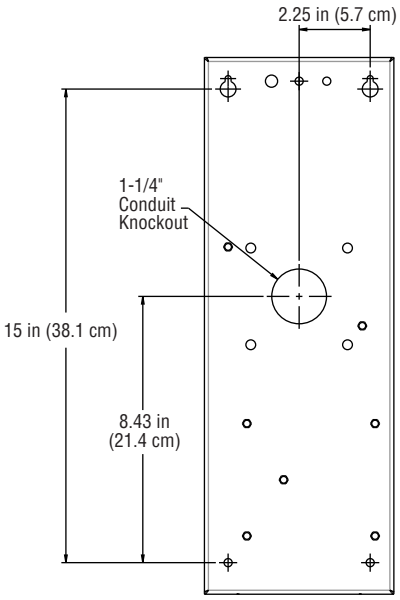
FRONT VIEW



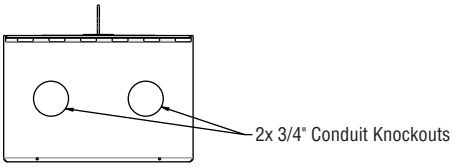
SIDE VIEW



BACK VIEW



BOTTOM VIEW



Specifications

CAPXM Capacity	Resident Capacity 50,000 / Local Event History 50,000
Supply Voltage	24VDC, 60W (minimum), Class 2 Output, Level VI Efficiency, (Power Supply 120VAC, 60Hz, 2A)
Operating Current	0.75A (typical) at 24VDC, 3A Max at 15VDC
Surge Suppression	EFT: 2 kV Power Line, ESD: 15 kV HBM / 8 kV Direct / 200V MM
CAPXM Operating Temperature Range	- 29°C to 54°C (-20°F to 130°F)
Enclosure	Carbon Steel and Aluminum
Storage and Shipping Temperature Range	-40°C To 65°C (-40°F to 149°F)
Wiegand Inputs (2)	26-bit, *30-bit, *32-bit Mifare, *37-bit with and without facility code, and ASCII (for keypads). 12VDC, 250mA power output (per input).
2 Primary and 2 Auxiliary Relay Outputs	SPDT, Rated Load 3A at 30VDC (each)
Accessory Compatibility	Refer to the accessory page for compatible accessories
Network Compatibility	10/100 Ethernet
Wi-Fi® Compatibility	802.11b/g/n @ 2.4 Ghz
Wi-Fi® Security	CAPXM is compatible with routers using the following security protocols: WPA3 Personal and WPA2 Personal (AES).
Wi-Fi® Range	Up to 250 feet (76.2 m), Open Air/Line-of-Sight to front of panel (range will vary depending on obstructions)
Built-in LiftMaster Passport Receiver	Security+ 2.0®
Wireless Communication to Gate Operator	Up to 750 feet (228.6 m), Open Air/Line-of-Sight (range will vary depending on obstructions), Compatible with LiftMaster Security+ 2.0® gate operators, 2018 LiftMaster Gate Operators (firmware v4.4 and later), HD Operators (firmware v3.3 or later). NOT compatible with LiftMaster Barrier Gate Operators.
CAPXM Video Camera	1080p, Viewing angle - 135 degree diagonal, Up to 1,000 30-second temporary video events stored locally

***NOTE:** Only the 26-bit Wiegand protocol is compatible in UL installations. Wi-Fi® and wireless ranges were not evaluated by UL.*

Wire Specifications

Use this chart to pull wires in preparation of your installation. Check the national and local building codes **BEFORE** installation.

DESCRIPTION OF WIRE RUN	WIRE SPECIFICATION	MAXIMUM RUN DISTANCE
Power Wire, secondary DC output	2-Conductor 14 AWG	Up to 300 feet (91.4 m)
	2-Conductor 16 AWG	Up to 200 feet (60.9 m)
	2-Conductor 18 AWG	Up to 100 feet (30.4 m)
Local Area Network (LAN) CAT 5e or better Network Cable.	8-Conductor, 24 AWG Twisted pair	328 feet* (100 m)
Grounding the Chassis (use grounding lug in CAPXM)	12 AWG Copper	12 feet (3.7 m)
Door Strike	2-Conductor 18-22 AWG Shielded	100 - 250 feet (30.5 - 76.2 m)
Magnetic Lock	2-Conductor 18-22 AWG	50 - 125 feet (15.2 - 38.1 m)
Dry Contact Closure (Most Gate Operators)	2-Conductor 18-24 AWG Shielded	500 - 2500 feet (152.4 - 762 m)
Exit Request (REX)	2-Conductor 18-24 AWG	500 feet (152.4 m)
Supervised Input	2-Conductor 18-24 AWG	500 feet (152.4 m)
Wiegand/Proximity Readers	7-Conductor 18-22 AWG Shielded	500 feet (152.4 m)

NOTE: *Main power supply and control wiring MUST be run in separate conduits. Conduits must be UL approved for low and high voltage. Refer to the NEC for additional wiring requirements.*

Category 5e cabling is the minimum performance category recommended.
Wiring shall be in accordance with the National Electrical Code (ANSI/NFPA 70), local codes and authorities having jurisdiction.
Always provide power from a dedicated source. Plug provided transformer into an outlet wired to its own 10 Amp minimum circuit breaker. This will prevent two problems:

- Other equipment cannot introduce spikes, noise, surges or dips into the power circuit that will affect the system.
- The system's operation will not be affected if any other equipment develops a short circuit across the power line.

**** CAT 5/6 NETWORK CABLE NOTES:***

- *For outdoor distances exceeding 140 feet (42.7 m), a UL497 compliant primary surge protector MUST be installed at the CAPXM.*
- *Distances exceeding 328 feet (100 m) may be accommodated with additional hardware (available through third-party sources).*

Internet Requirements

When selecting a router, use the information below to ensure compatibility.

MODEL: CAPXM - Smart Video Intercom M

CAPXM can be connected to a router via a wired connection or Wi-Fi. LiftMaster recommends a minimum upload/download speed of 5Mbps for each CAPXM supporting video camera feeds.

NOTE: *This upload speed should be met when considering usage of other devices on the network like cameras and computers.*

CAPXM IS COMPATIBLE WITH ROUTERS USING THE FOLLOWING Wi-Fi COMMUNICATION PROTOCOLS:

- 802.11b
- 802.11g
- 802.11n @ 2.4 GHz

CAPXM WI-FI SECURITY COMPATIBILITY

- WPA3 Personal
- WPA2 Personal (AES)

ADDITIONAL COMPATIBILITY CONSIDERATIONS*:*

- DO NOT use Wi-Fi extender devices. These may introduce latency in the connection leading to choppy or loss of reliable video transmission.
- If using a Wi-Fi signal strength tool or app, a continuous Wi-Fi signal strength connection of at least -65 DBM (numbers closer to zero are stronger strength) at the CAPXM must be guaranteed to ensure an acceptable connection to the local network.
- Hidden network SSIDs are not supported. The network must be selectable from the CAPXM display.
- Wi-Fi networks requiring secondary authentication are not supported (E.g. Hotels and airport Wi-Fi).
- When checking signal strength in CAPXM admin mode, we recommend at least two bars, as shown on the CAPXM screen.
- If two bars are not available, relocate the router, the antenna or use accessory WFAEXT (Wi-Fi Antenna Extension Kit – 15') to move the CAPXM antenna higher up or to a location resulting in two or more bars.

The following services are required for CAPXM to fully function

Setup a myQ® Business™ Account

NOTE: *If you have an existing myQ® account, your myQ® Business™ account will have the same password. Go to: myQBusiness.com and login.*

1. If you do not have a myQ® Business™ account, call LiftMaster Customer Care at 800.323.2276 to activate a myQ® Business™ account.
   Be prepared by reviewing the information required on the Installation Readiness Survey:
2. You will get a welcome email from LiftMaster. Accept the invitation and register or login to your account.
3. Setup the facility, select a subscription plan, add residents, and credentials (refer to the available Help in myQ® Business™).
4. Continue with the installation of the CAPXM in this manual.

For Support, call 800.528.2806 or visit https://support.partner.liftmaster.com/s/community-access-support

NOTE: *A SIP account is required for calling function. LiftMaster® only supports Phone.com for video calling features and cannot guarantee or support 3rd party SIP provider's compatibility for voice only calling.*

1 Remove Knockouts

1. Prepare the work surface by laying down a cloth or other protective material.
2. Lay the CAPXM face down on the protective material.
3. Identify which knockouts need to be removed based on your application.
4. Use a center punch tool to remove the knockouts from the outside of the box inward using an appropriately sized punch and hammer. ***NOTE:*** *Be careful when removing the knockouts to avoid damaging the CAPXM components.*

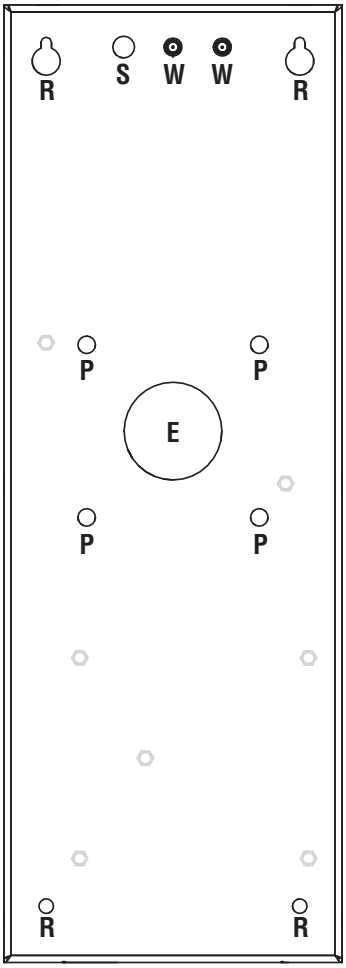
⚠ CAUTION

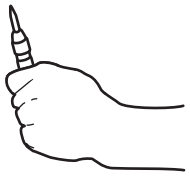
To prevent damage to the CAPXM from moisture or water:

- DO NOT install during rain. Internal components MUST be kept from of water and moisture.
- BEFORE opening the front cover of the CAPXM, remove ANY accumulated water from the top of the CAPXM.

To prevent damage to ANY internal components:

- DO NOT attempt to remove the knockouts with a hammer. Banging on the knockouts may result in shock to the circuit boards, which could cause permanent damage.





E = Electrical Wiring

P = Pedestal Mount

R = Recess/Surface Mount

S = Security+ 2.0® Radio Antenna

W = Wi-Fi® Antenna

2 Mount CAPXM

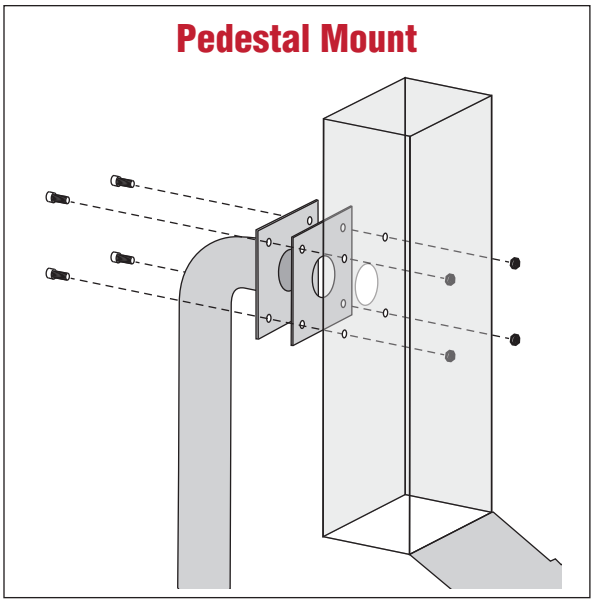
DO
Make sure the CAPXM is properly sealed to prevent damage to the CAPXM from moisture.

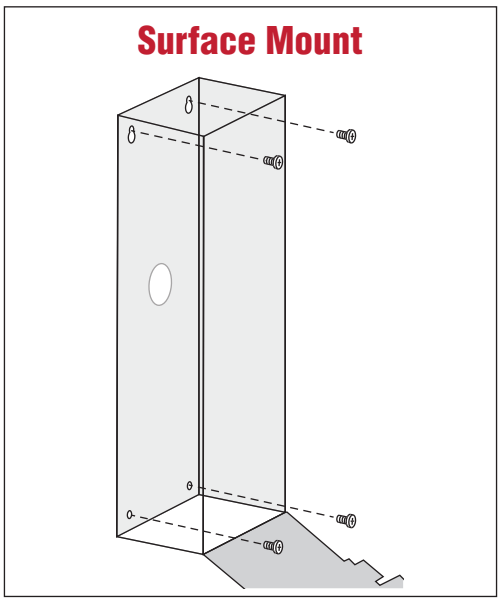
1. Attach the goose-neck gasket (provided) if mounting to a goose-neck.
2. Mount the CAPXM securely to a flat surface or pedestal with appropriate (1/4 in.) hardware taking care to route wiring through appropriate knockouts. Stainless steel hardware is recommended to mount the CAPXM. Use of zinc plated or galvanized hardware is at risk for galvanic corrosion.

NOTES:

-Ensure the cover can fully open to allow access after the installation is complete. Allow 1/8 in. (3.175 mm) of space between the bottom of CAPXM and the wall, if flush-mounting CAPXM without the trim kit.

-ADA Compliance: When mounting the CAPXM at a pedestrian entrance, to meet ADA compliance, mount the top of the CAPXM screen no higher than 54 inches from the ground.





3 Install the Ground

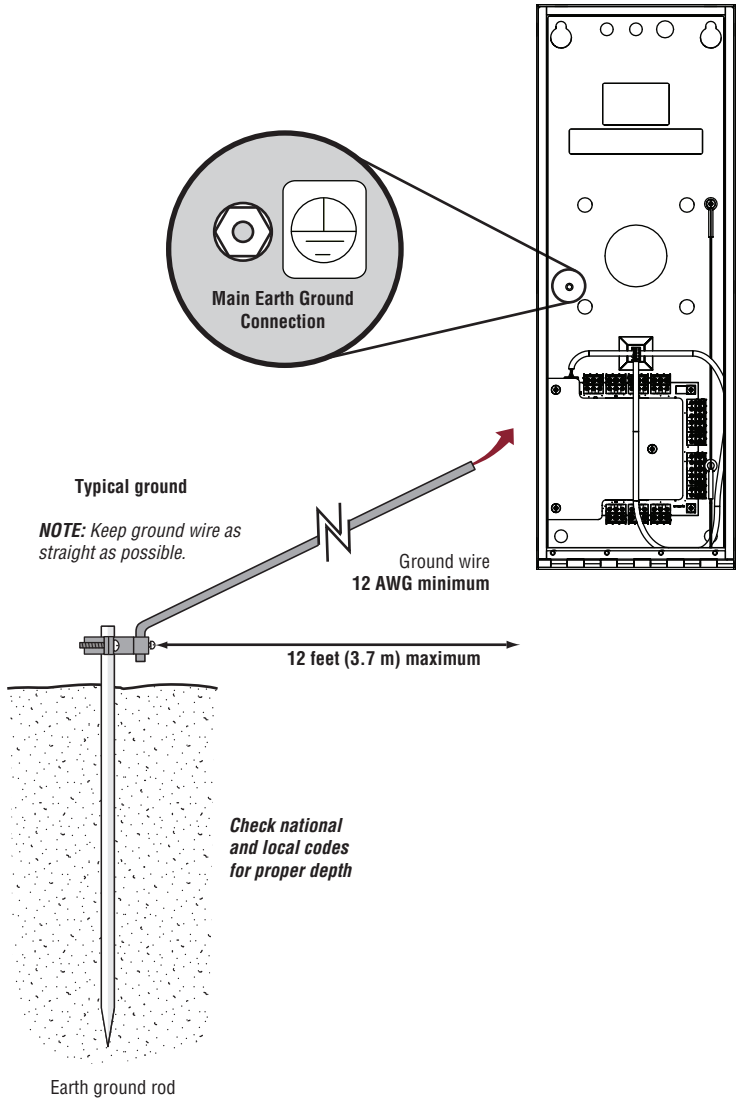
IMPORTANT: *An earth ground rod is strongly recommended and should be no further than 12 feet (3.7 m) from the CAPXM and use a minimum of 12 gauge wire in most cases. The type and length of earth ground rods vary by region. Contact the AHJ (Authority Having Jurisdiction) in the municipality where you plan to install the CAPXM for correct grounding materials and installation procedures. A proper ground is critical to minimizing risk for the CAPXM from damaging electrical transients.*

1. Connect the ground wire (12 AWG or larger) to the CAPXM main earth ground connection.
2. Run the wire from the CAPXM to suitable earth ground.

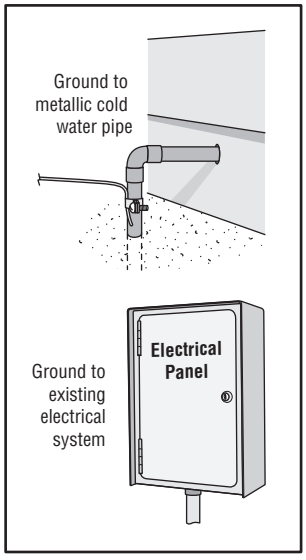
NOTE: *Shield connections on boards should not be connected to main earth ground connection.*

⚠ CAUTION

To AVOID damaging gas, power or other underground utility lines, contact underground utility locating companies BEFORE digging.



Other ground sources within 12 feet of access control panel



4 Connect Power

The outlet for the CAPXM MUST be an external dedicated 120 Vac outlet. Refer to the table below for maximum wire run distances. This outlet should be wired back to its own 10 Amp minimum circuit breaker.

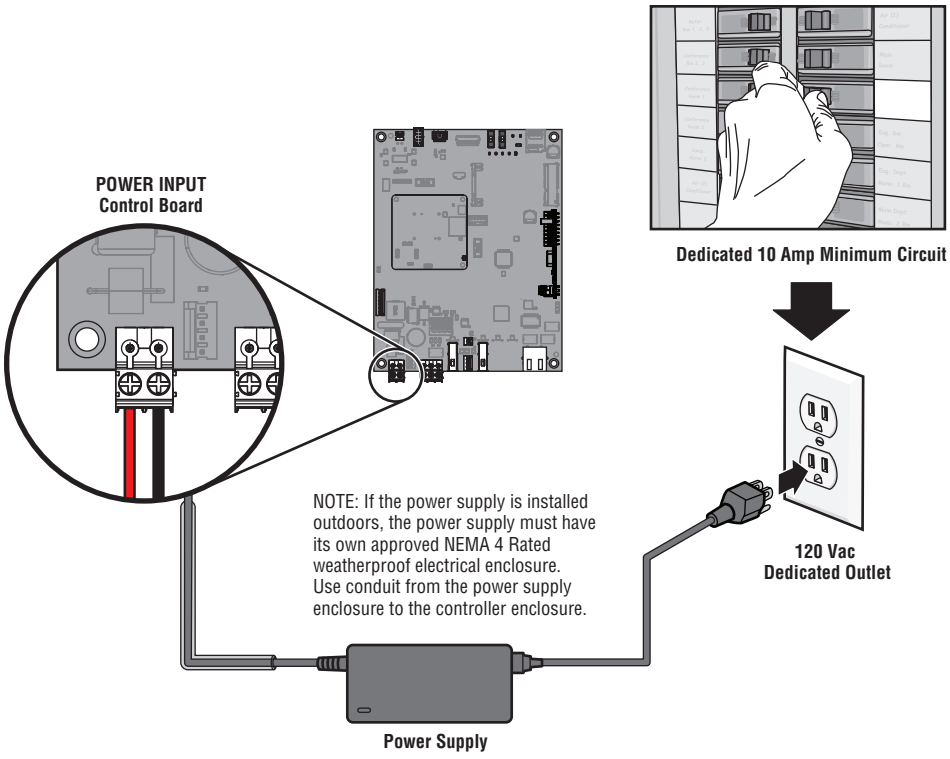
WIRE SPECIFICATION	MAXIMUM RUN DISTANCE
14 AWG	Up to 300 feet (91.4 m)
16 AWG	Up to 200 feet (60.9 m)
18 AWG	Up to 100 feet (30.4 m)

1. Connect 14-18 AWG wire to the stripped secondary DC output wires on the power supply. Black is negative and red is positive.
2. Remove the PWR INPUT terminal block from the Control Board.
3. Connect the power supply wires to the PWR INPUT terminal block (red to +24V and black to GND). Reattach the terminal block to the Control Board.
4. Plug the power supply into a 120 Vac outlet after all connections have been made.

   NOTE: *The green LED on the door board will blink and the green LEDs on the Control Board will light solid when powered up. The CAPXM will display the LiftMaster logo while booting up. When boot up is complete, the user interface will appear.*
5. Close the CAPXM door.

⚠ CAUTION

- DO NOT use ANY power supply other than those supplied with your CAPXM.
- DO NOT power electronic strikes and latches with the same power supply used to power the access control panel; doing so will cause DAMAGE to the CAPXM. Use ONLY a UL listed burglar alarm or access control system to power electronic strikes and latches.
- DO NOT connect the power supply to a switched outlet or otherwise controlled AC outlet.
- DO NOT connect the power supply to the 120 Vac outlet until ALL wiring is completed.
- Install the transient noise suppression device (MOV) supplied with the CAPXM for AC powered devices and Diode for DC powered devices.
- DISCONNECT the power supply from the 120 Vac outlet prior to removing or attaching the terminal block to the Control Board.



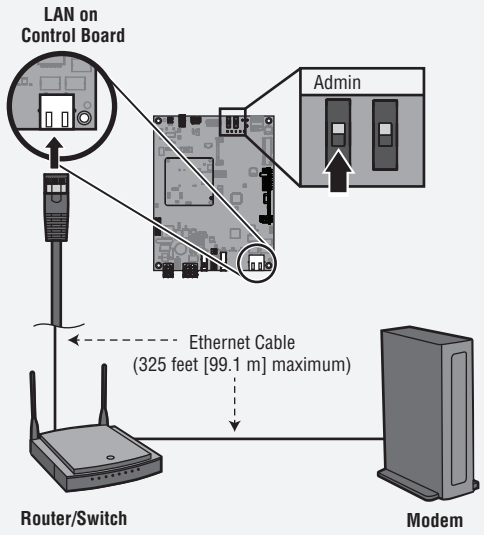
1 Connect Internet

The CAPXM can connect to the Internet with a wired connection or with Wi-Fi® (wireless). See page 10 for Internet requirements. Make sure you are in the Admin Mode before you connect to the Internet. If you are not in Admin Mode, flip switch #1 to the ON position on the Control Board, press the Network tab on the CAPXM display, and press the "Change Network Settings" button. Follow the instructions according to your application.

OPTION 1 Wired Connection

The Local Area Network (LAN) port is a 10/100 Ethernet interface with an RJ45 jack for connecting the CAPXM to a hub, switch, or router in order for it to gain connectivity to the Internet. Use a straight, (i.e., non-crossover) Cat5e, or Cat6 cable to connect to a local hub, switch or router. This type of cable is referred to as an Ethernet cable in this manual.

1. Connect an Ethernet cable from the hub, switch, or router to the LAN port on the Control Board. When connected properly, the green and amber LED on the Ethernet port of the control board will light/flicker (the control board is located on the back of the CAPXM display). If the green LED is not lit, check the connections on the CAPXM and the Ethernet hub.
2. On the display, select **Wired Network** if dynamic configuration (DHCP) is desired or select **Manual Setup** for a static IP address.



OPTION 2 Connect through Wi-Fi® (Wireless)

1. On the display select **Wi-Fi® Network**.
2. Select the network the CAPXM will use.
3. Enter the password for the network.
4. Select **Login**.

Additional compatibility considerations:

- **When checking signal strength in CAPXM admin mode, we recommend at least two bars.**
- If two bars are not available, relocate the router, the antenna or use accessory WFAEXT (Wi-Fi® Antenna Extension Kit – 15') to move the CAPXM antenna higher up or to a location resulting in two or more bars.
- If using a Wi-Fi® signal strength tool or app, a continuous Wi-Fi® signal strength connection of at least -65 dBm (numbers closer to zero are stronger strength) at the CAPXM must be guaranteed to ensure an acceptable connection to the local network.

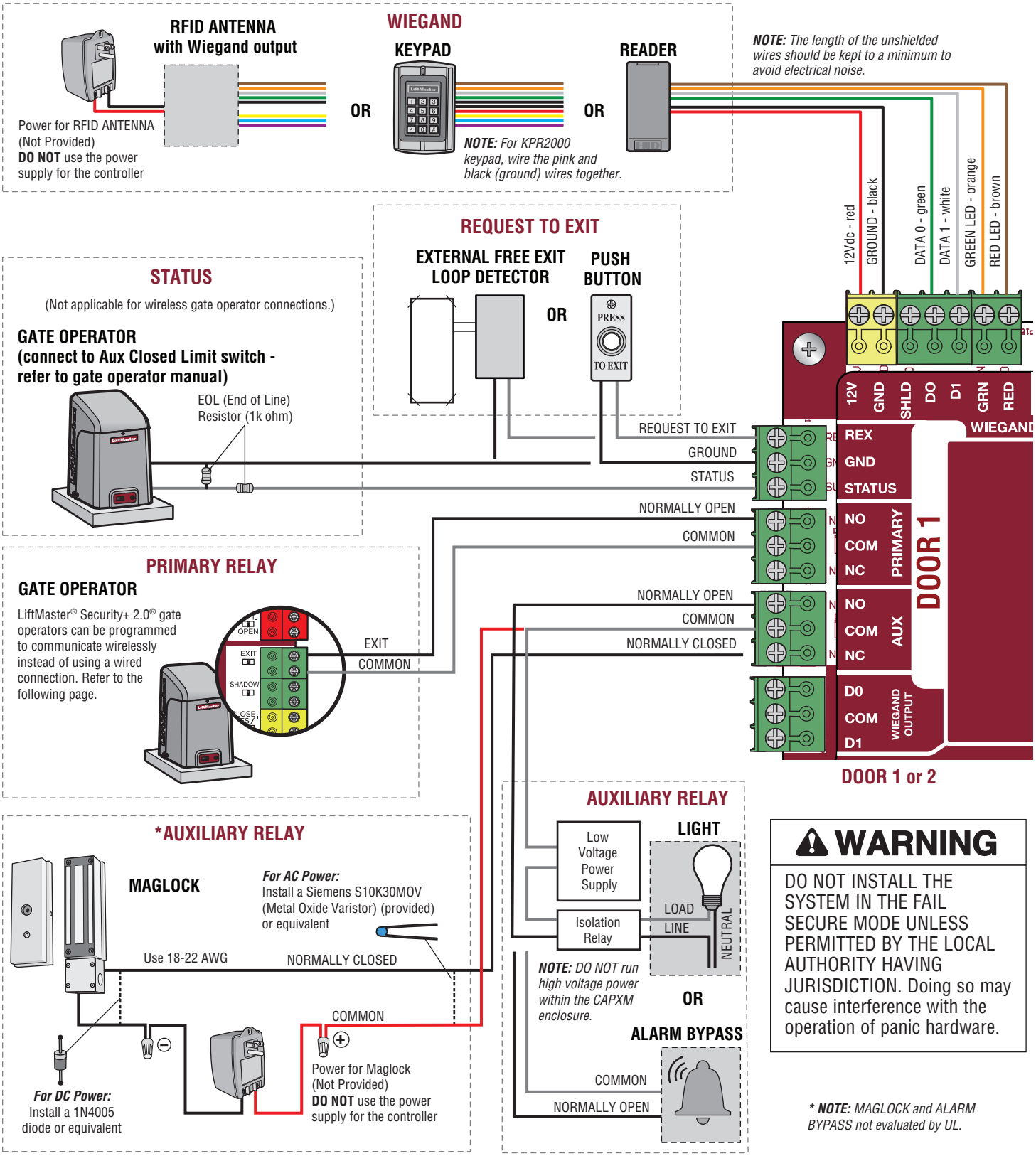
- Hidden network SSIDs are not supported. The network must be selectable from the CAPXM display.
- Wi-Fi® networks requiring secondary authentication are not supported (E.g. Hotels and airport Wi-Fi®).

2 Validate Setup

On the display, select each tab in Admin Mode to validate setup (network, inputs, outputs, etc.). Once you have validated the setup, exit Admin Mode.

Gate Access (Wired)

Disconnect power BEFORE making electrical connections. Below is an example of a wiring setup for gate access. Gate access can be wired to Door 1 or 2 on the Door Board. LiftMaster® Security+ 2.0® gate operators can also be programmed to communicate wirelessly instead of using a wired connection (refer to the following page).



⚠ WARNING

DO NOT INSTALL THE SYSTEM IN THE FAIL SECURE MODE UNLESS PERMITTED BY THE LOCAL AUTHORITY HAVING JURISDICTION. Doing so may cause interference with the operation of panic hardware.

*** NOTE:** *MAGLOCK and ALARM BYPASS not evaluated by UL.*

Gate Access (Wireless)

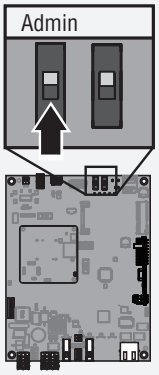
The CAPXM can communicate wirelessly to LiftMaster® UL325 gate operators to send open commands, monitor gate position, and send email notifications if an error occurs in the operator (email notifications are configured in myQ® Business™). Up to 4 gate operators can be paired with the CAPXM - one for each primary and auxiliary relay. If using dual gates, program the CAPXM to the primary operator.

***NOTE**: Use of this feature requires the optional Passport antenna kit.*

1 Enter Admin Mode

Flip switch #1 to the ON position to enter Admin Mode.

***NOTE:** For new installations press the login button without entering information in the Admin Username and Admin Password fields.*

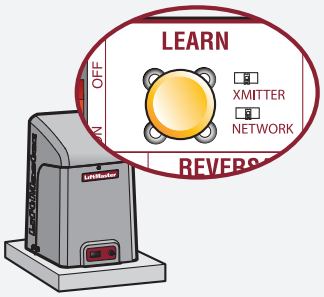


2 Select Outputs and Relay

Select the **Outputs** tab. Then select the desired relay on the left-hand side (1 through 4).

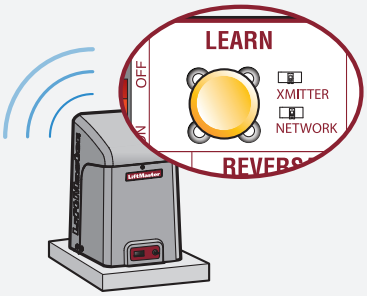
3 Press LEARN button on gate operator

Press and release the LEARN button on the primary operator. The green XMITTER LED will light. ***NOTE:** The operator will time out of programming mode after 180 seconds.*



4 Press LEARN button on gate operator again

Press and release the LEARN button again on the primary operator. The yellow NETWORK LED will light.



5 Select LEARN on display

Select the LEARN button on the display and the Learn button will go from blue to red. The gate operator and the CAPXM will beep once and the NETWORK LED on the gate operator will turn off indicating programming is successful.

***NOTE:** 4 beeps/blinks indicate you are not programming to the primary operator. Reattempt programming from the other operator.*

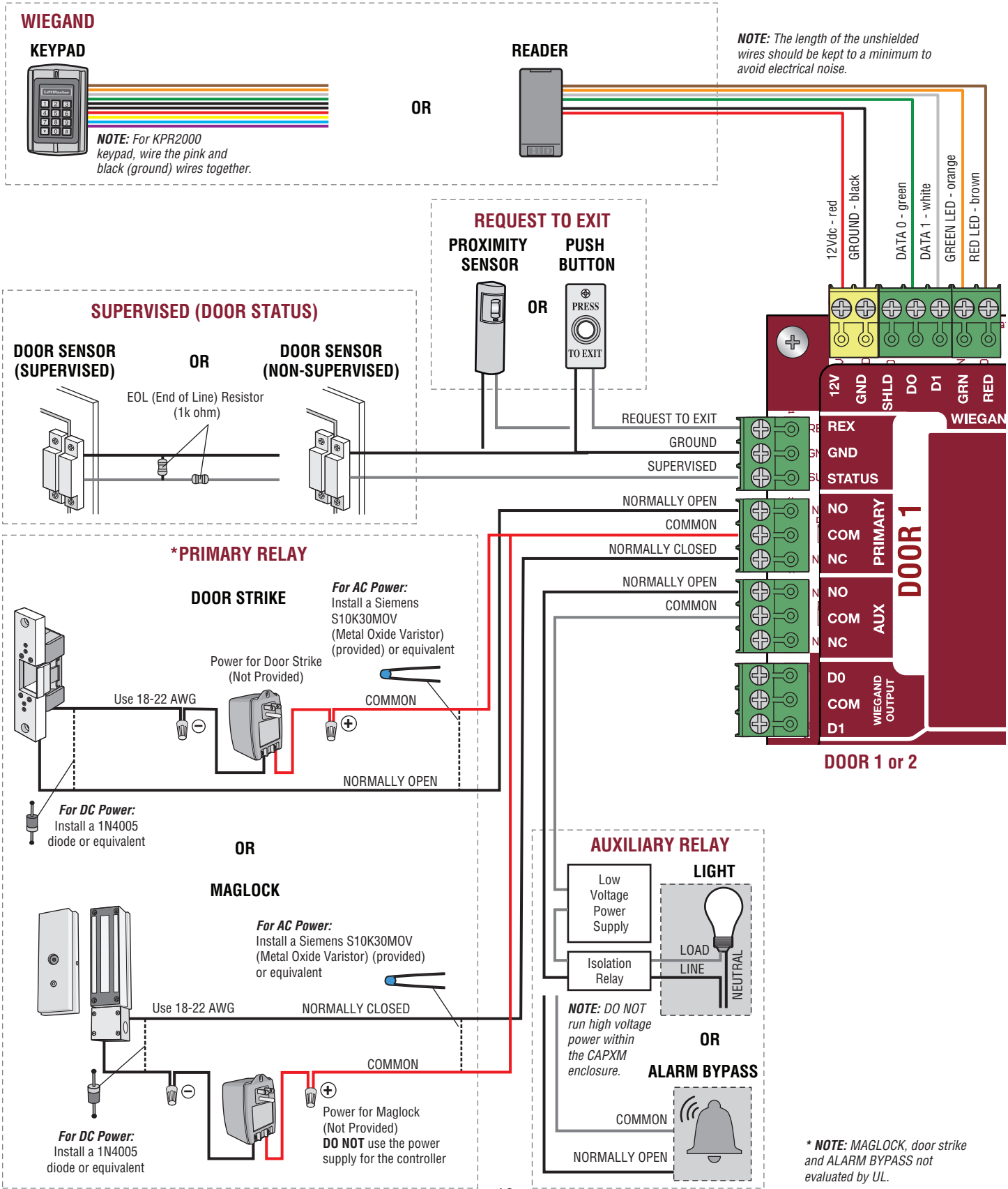
6 Validate

Validate functionality by selecting **Test Relay** on the CAPXM display.

Visit myQBusiness.com for more information on how to set up doors for wireless linking.

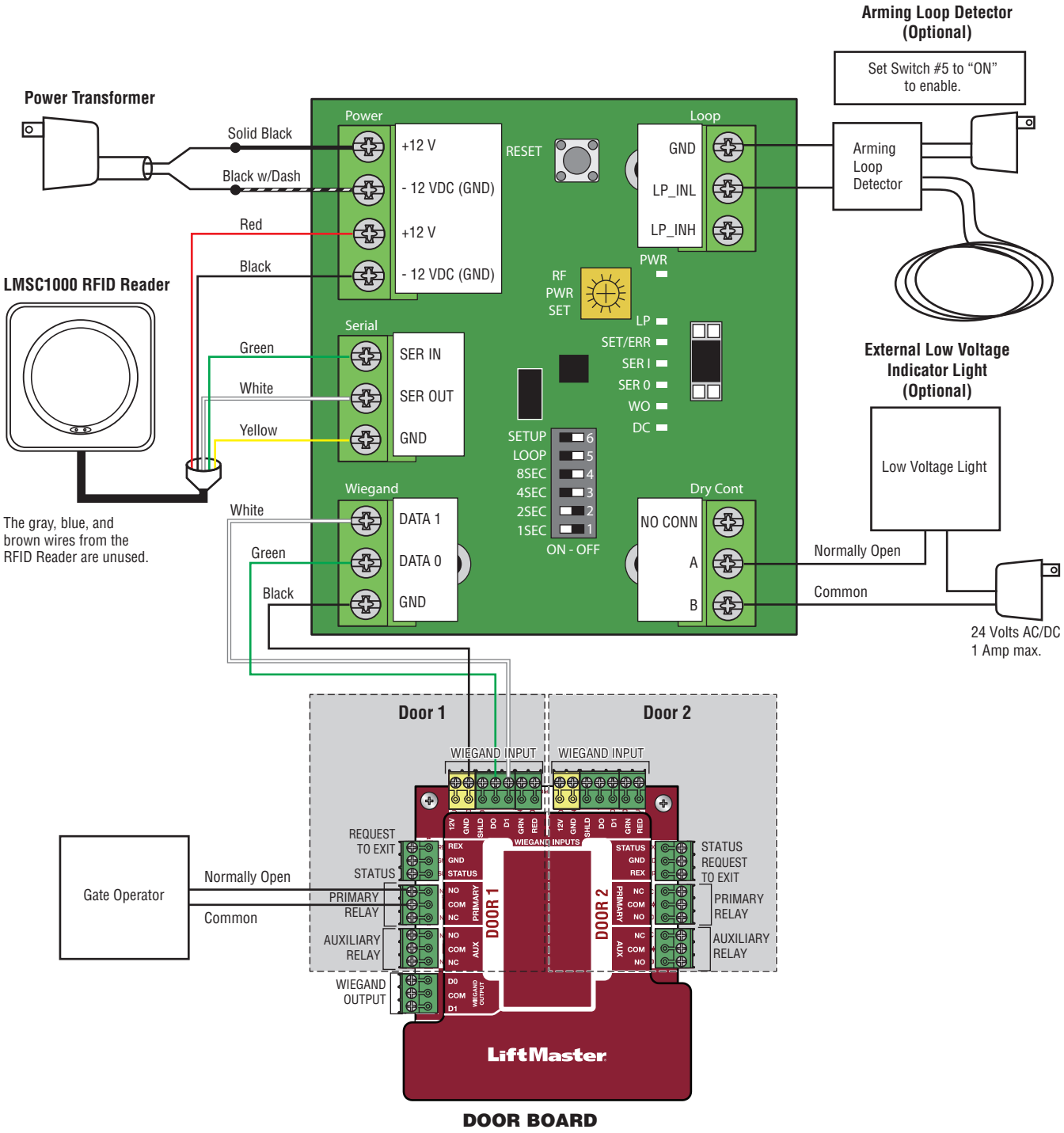
Door Access

Disconnect power BEFORE making electrical connections. Below is an example of a wiring setup for door access. Door access can be wired to Door 1 or 2 on the Door Board.



* **NOTE:** *MAGLOCK, door strike and ALARM BYPASS not evaluated by UL.*

LiftMaster LMSC1000 RFID Reader Wiring Diagram



Wiegand Output

Disconnect power BEFORE making electrical connections. The CAPXM offers a Wiegand output capable of 26-bit transmission of the following data:

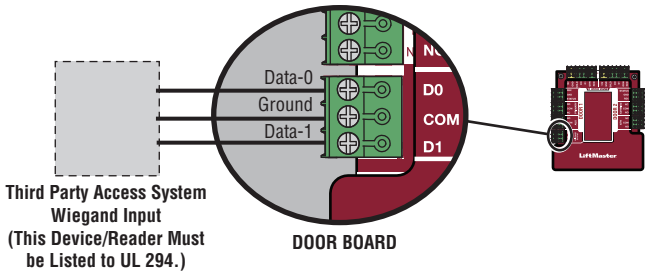
- Success Call with access granted by the resident. The CAPXM will provide a myQ® Business™ specified facility code followed by the Directory Code of the resident that granted access.

  And/Or

- Successful access through Entry Code. The CAPXM will provide a myQ® Business™ specified facility code followed by the successful Entry Code.

  And/Or

- Successful access with a Wiegand credential. The CAPXM will pass along the successful credential Facility Code and ID.



Postal Lock

1. Remove the wing nut and plug. Discard the wing nut and plug.
2. Remove 4 mounting nuts from studs.
3. Install postal lock using 4 nuts.
4. Cut the factory installed wire tie from the postal lock switch.
5. The postal lock switch is wired from the factory.