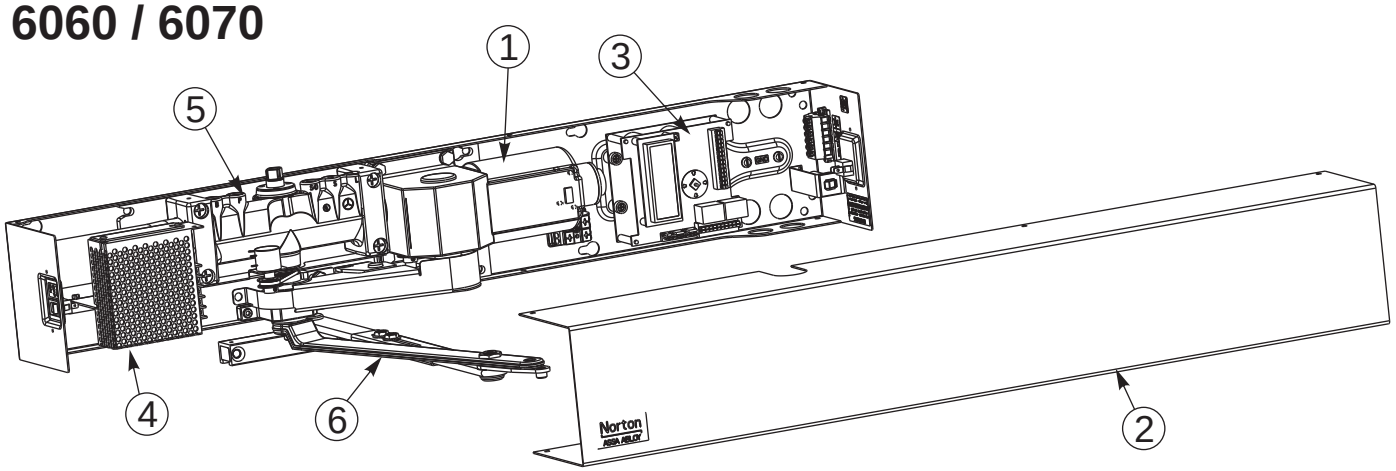
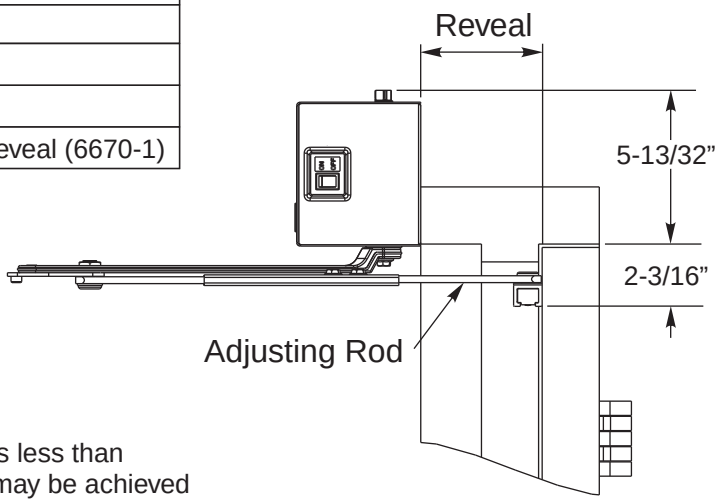
6000 Series
Power Operator
Installation and Instruction Manual

6060 / 6070



Item No.	Description
1	Motor (6000M)
2	Cover (6000COV)
3	Control Inverter (6000IN)
4	Power Supply 24VDC (6000SUP)
5	Closer Assembly (7500LAP)
6	Unitrol Arm - standard reveal (6660-1); deep reveal (6670-1)

Door Swing	85°	90°	95°	100°	105°	110°
Minimum Door Width	36”	35”	34”	34”	33”	33”



Model No.	Reveal Type	Reveal Depth
6060	Standard	2-1/4” to 4-3/4”
6070	Deep	4-13/16” to 7-3/8”

Reveals less than 2-1/4” may be achieved by field cutting adjusting rod.

Tools required:

- Allen wrench set (inch)
- Flat blade screwdriver (potentiometer & terminal size)
- Screwdriver (Phillips size 2)
- Tape ruler
- Power drill
- Center punch
- Wire stripper
- #7 drill 1/4-20 tap (metal frame install)
- ` Ø3/8 drill (door sex bolt install)

Use screw pack and hardware provided to mount operator.

WARNING: To reduce the risk of injury to person, use this operator only with Pedestrian Swing doors. **For Indoor Use Only.**

ETL certified; conforms to ANSI/UL standard 325 for automatic closing doors and UL10C Positive Pressure Fire Test for Door Assemblies. Certified to ANSI/BHMA A156.19 for Low Energy Door Operators.

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General Information

Operation:

Your Low Energy Operator can be configured in three variations to meet the standards:

1. Push plates, Wave-to-open switches, etc. are available to activate the operator.
2. Push & Go can be enabled. In this mode, your door is pushed (or pulled) slowly 15° manually, and then automatically opens to full open position.
3. Door can be used as a manual door. The door will work and act like a standard door closer, with or without power, when pushed or pulled open manually. If Push & Go is enabled and door is opened quickly, door will function as a manual door (energy save feature). Push plates are still active.

If desired, overhead presence devices can be provided for an extra level of protection. Consult local authority having jurisdiction. These are not required by current ANSI/BHMA A156.19 standards.

Opening:

When an opening signal is received by the control unit, the door opens to the fully open position. The open position is held by the motor and is adjustable from 0 to 30 seconds. If the door is obstructed while opening, the door will stop; the operator will sense obstruction (obstruction time is adjustable from 0 to 5 seconds) and the door will close.

Note: Door must be visible by person operating activation switch(es). Auxiliary door stop (by others) required.

Closing:

When the hold open time has elapsed, the door closer will close the door automatically. The door will slow to low speed at latch before it reaches the fully closed position. The door is kept closed by spring force of the closer. If the door is obstructed while closing, the door will stop against the obstruction; the operator will sense obstruction and re-open to fully open position after obstruction time has been reached. Once the hold open time has elapsed a second time, the door closer will close the door automatically. If the door is obstructed during this second closing cycle, the door will stop and rest against the obstruction using only the force of the closer spring. To reset, allow door to fully close and re-activate push plates to test operation.

Extended Hold Open:

An optional feature to be used if door is desired to be held open for more than 30 seconds.

Set switch on end cap on the latch side of the operator to hold open. Door will immediately begin to open to the fully open position. Once door is fully open, brake on end of motor energizes holding door in open position. To release from hold open, if door is set up for executive operation (see page 15 for wiring instructions), door can be closed with activation device. A pull on the door will also allow the unit to be taken out of hold open. Once door has closed, the door will reopen to fully open position unless activation device is pressed or 3-position is changed from Hold Open position.

Note: Door must be visible by person operating activation switch(es). Auxiliary door stop (by others) required.



WARNING: Make sure that (120V, 60Hz) input power is turned off at facility's main circuit breaker before proceeding with installation.



Note: Flags included in this instruction sheet show a Pull side installation instead of a Push side installation. Use video segments for reference only.

For assistance, contact Norton Technical Product Support at 800-438-1951 Ext 4706.

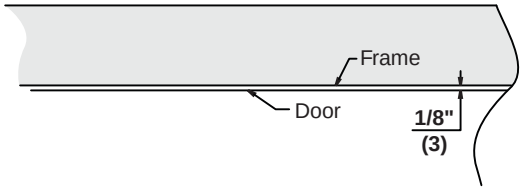
Norton
ASSA ABLOY
3000 Highway 74 East • Monroe, NC 28112
Tel: 800-438-1951 Ext 4706 • Fax: 800-338-0965
www.nortondoorcontrols.com

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Door Prep

Hollow Metal Door Frame Reinforcing		
Frame Material	Reinforcing	
	Recommended	Min. Required
12 Ga. .1046 (2.66)	**12 Ga. .1046** (2.66)	**18 Ga. .0478** (1.21)
14 Ga. .0747 (1.90)	**10 Ga. .1343** (3.41)	**12 Ga. .1046** (2.66)
16 Ga. .0598 (1.52)	**10 Ga. .1343** (3.41)	**12 Ga. .1046** (2.66)
18 Ga. .0478 (1.21)	**8 Ga. .1644** (4.18)	**10 Ga. .1343** (3.41)

Fasteners for Frame:
- 1/4-20 Machine screws for hollow metal and aluminum.
- No. 14x2-3/4 “ (70mm) long sheet metal screws for wood.



Templating is based on 1/8" gap between door and frame.

Notes:
- All dimensions are given in inches.
- Thickness recommended for reinforcements in hollow metal doors and frames is charted at the left of this page.
- Do not scale drawing.
- This template information based upon use of 5" maximum width butt hinges.
- Maximum frame reveal is 4-3/4" for 6060 units and 4-13/16” up to 7-3/8” maximum for 6070 units.
- Before beginning the installation, verify that the door frame is properly reinforced and is well anchored in the wall.
- Unreinforced hollow metal frames and aluminum frames should be prepared and fitted with 1/4-20 blind rivet nuts, furnished by others.
- Concealed electrical conduit and concealed switch or sensor wires should be pulled to the frame before proceeding.

Technical Data

Input power:	120VAC, 60Hz
Power consumption:	.9 amps
Circuit breaker:	3 amps
Power supply:	24 V DC, max. 2.2 Amp.
Door width:	28 - 48" (71-122 cm)
Door weight:	100-250 lb. (45-113 kg)
Door opening angle:	up to 110° with reveal up to 3” (7.6 cm) max
Hold open time:	0-30 seconds (A.D.A. 5 seconds min.) Indefinite for optional Extended Hold Open

Notes: Permanent wiring is to be employed as required by local codes.
Activation devices: push plates, access control, mats, touchless wall switches, etc.

Maximum wire size is:
12AWG at terminals LINE and NEUTRAL (120VAC; 60Hz) on Power Input Terminal mounted on inside of end cap.
14AWG at all other terminals.

Rate of operation shall not exceed 300 cycles of opening and closing per hour.

Standards

ETL Certified; conforms to ANSI/UL standard 325 for automatic closing doors and UL10C Positive Pressure Fire Test for Door Assemblies .

Americans with Disabilities Act (A.D.A.)
These door operators can be installed and adjusted to conform with A.D.A. regulations.

ANSI A156.19:
These products are designed to conform to this specification “for power assist and low energy power operated doors.” These products are designed to exceed all the requirements for the “Low Energy Power Operated Door.”

ANSI A117.1:
These door controls permit door assemblies to conform to the requirements of this specification “for buildings and facilities - providing accessibility and usability for physically handicapper people.”

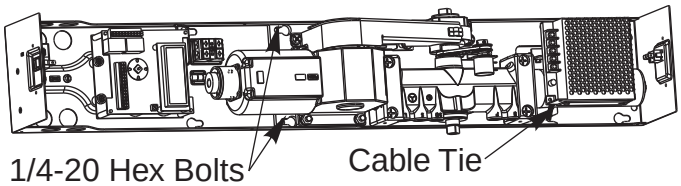
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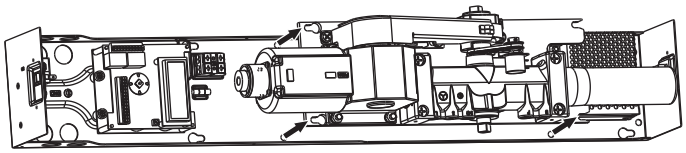
IMPORTANT INSTALLATION INSTRUCTIONS

1) READ AND FOLLOW ALL INSTALLATION INSTRUCTIONS.
2) Install only on a properly operating and balanced door. A door that is operating improperly could cause severe injury. Have qualified service personnel make repairs to any hardware before installing the operator.
3) Remove, or make inoperative, all locks (unless mechanically and/or electrically interlocked to the power unit) that are connected to the door before installing the operator.
4) Do not connect the door operator to the source power until instructed to do so.

1a Unpack Operator

A. Remove from box and unwrap operator.
B. Remove (6) screws holding cover (save to be reused later) and remove cover.
C. Carefully remove cardboard insert.
D. Cut large cable tie, remove (2) 1/4-20 hex bolts, and separate back plate and closer sub-assembly.





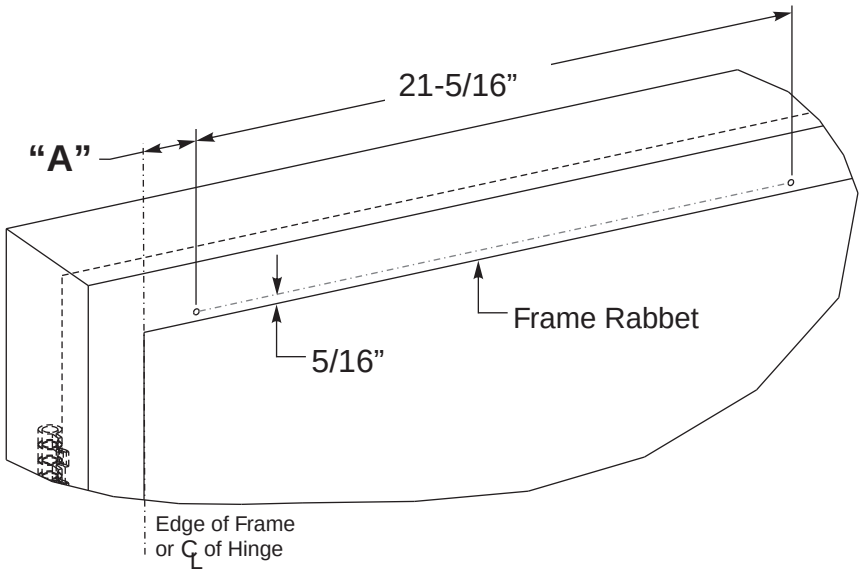
1b Initial Frame Holes

Left hand door illustrated.

A. Using template, locate and prepare holes in the frame.
B. Drill #7 and tap 1/4-20 Machine Screws or Self Drilling Screws (2 places).

See page 24 for removable template.

Door Opening Angle	Dim “A”
85°	4-1/8”
90°	3-1/2”
95°	2-7/8”
100°	2-3/8”
105°	2-0”
110°	1-5/8”



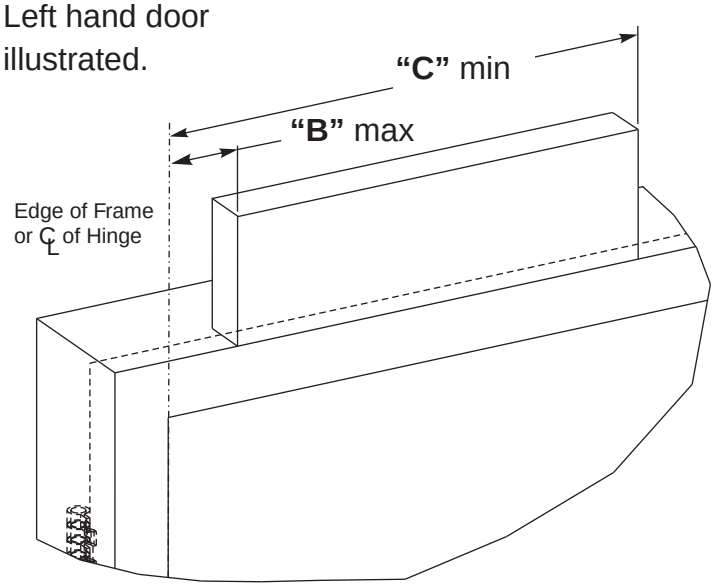
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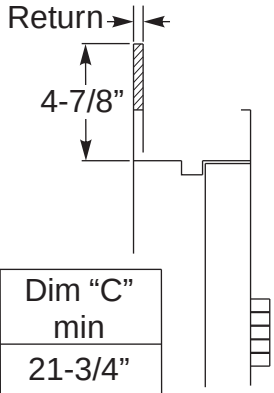
Norton
ASSA ABLOY

1c Initial Wall Prep

Blocking (supplied by others) is required for proper support of operator. Thickness is dependent upon Frame Return.
Material must comply with local codes.
A. For wood framing, screw blocking into wall studs.
B. Lag anchoring required for masonry walls.
Left hand door illustrated.

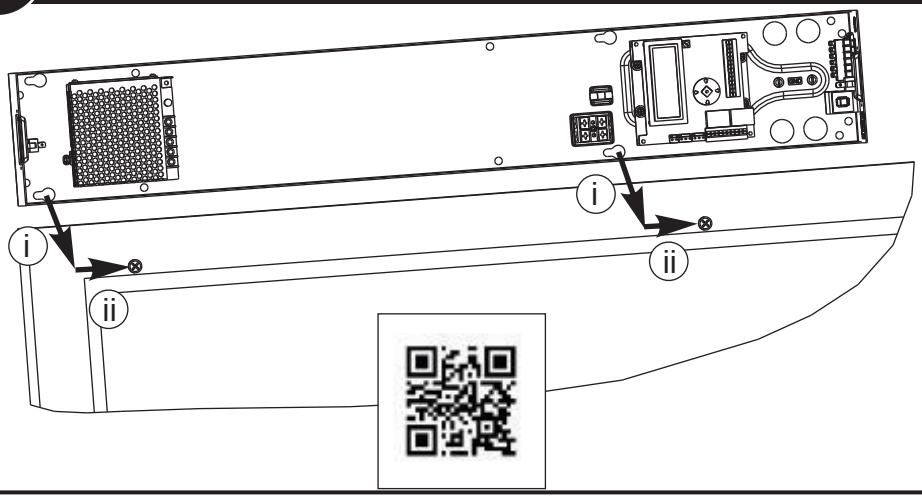
See page 24 for removable template.





Door Opening Angle	Dim "B" max	Dim "C" min
85°	7"	21-3/4"
90°	6-3/8"	21-1/8"
95°	5-3/4"	20-1/2"
100°	5-1/4"	20-0"
105°	4-7/8"	19-5/8"
110°	4-1/2"	19-1/4"

2a Back Plate Mounting



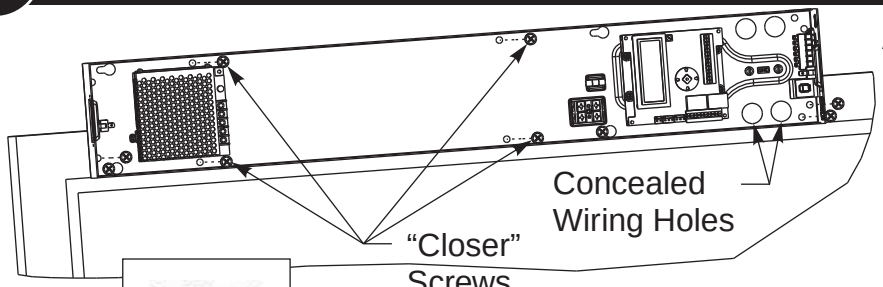
A. Install (2) 1/4-20 x 1" screws into holes drilled in Step 1B. Leave 1/8" gap between bottom of screw head and frame.
B. i) Install Back Plate assembly over screws in Step 2A and ii) slide Back Plate toward Latch edge of door.
C. Secure (2) screws.

2b For Concealed Wiring Only

A. Mark conduit holes using back plate as template.
B. Remove back plate.
C. Drill (2) Ø7/8" holes.
D. Install conduit in frame, if desired.
E. Reinstall back plate and secure (2) screws.

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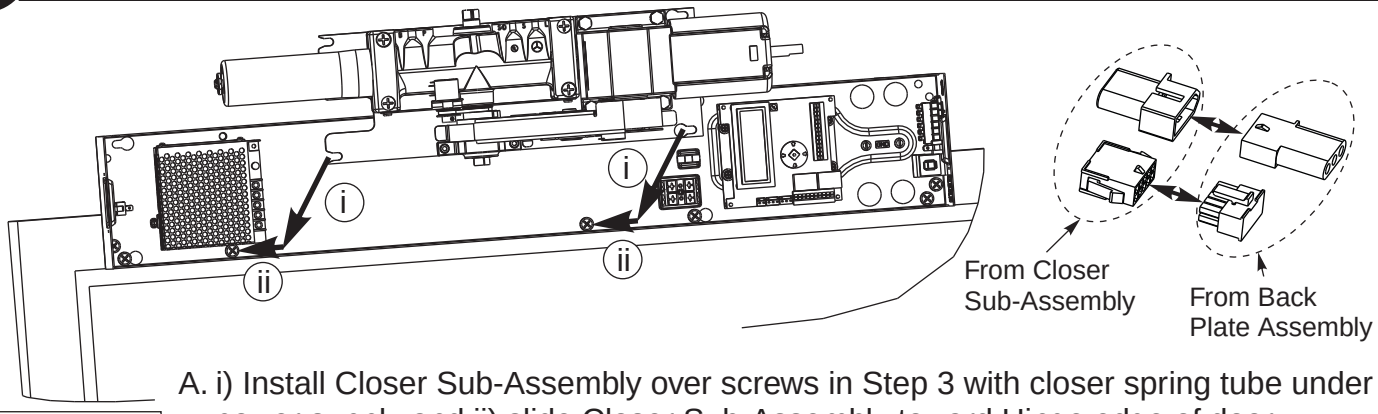
3 Remaining Back Plate Screws



See page 24 for removable template.

A. Drill #7 and tap 1/4-20 Machine Screws or Self Drilling Screws (7 places).
B. Install (7) 1/4-20 x 1" screws into holes drilled in Step 3A. Leave 1/4" gap between bottom of screw head of screws marked "Closer" and frame.
C. Support between back plate and wall is required.

4 Assembly Closer Sub-Assembly

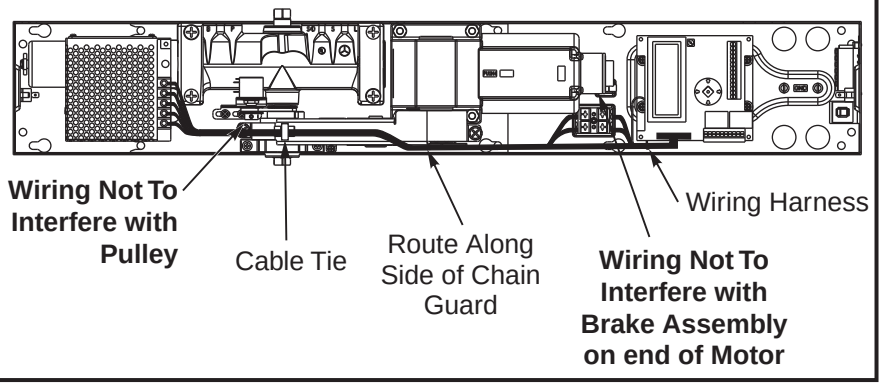


A. i) Install Closer Sub-Assembly over screws in Step 3 with closer spring tube under power supply and ii) slide Closer Sub-Assembly toward Hinge edge of door.
NOTE: *Valves on door closer should be facing away from chain.*
B. Secure screws for Closer Sub-Assembly from Step 3.
C. Secure top of Sub-Assembly to Blocking (for masonry, use anchors and spacers).
D. Connect wiring harnesses from Closer Sub-Assembly to Back Plate Assembly. Connectors are keyed and only connect in one direction. Connectors will lock.

5 Attach Wiring Harness to Chain Guard

Using Cable Tie supplied in pack with installation instructions, secure wiring harness to loop on chain guard just above the pinion.

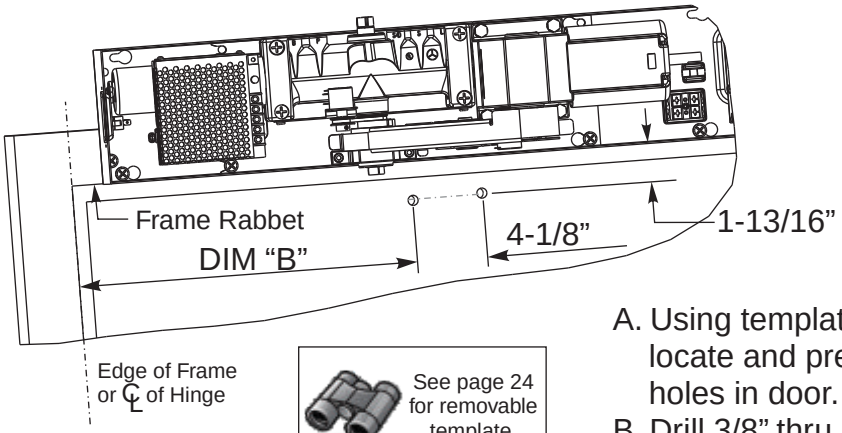
Note: Wiring to be routed so it does not interfere with pulley, is out of door opening, and must route beside chain guard, not over at motor area, for cover to fit properly.



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6 Prep Door for Shoe

Door Opening Angle	Dim “B”
85°	13-1/4”
90°	12-5/8”
95°	12-0”
100°	11-1/2”
105°	11-1/8”
110°	10-3/4”

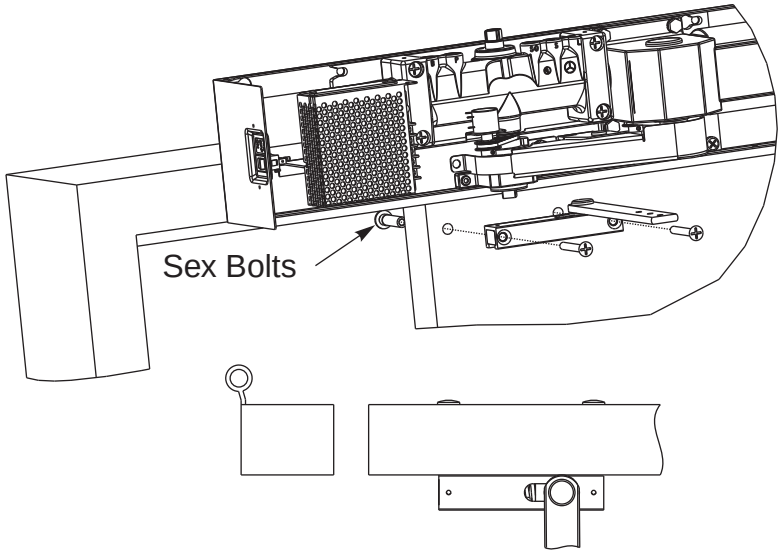


See page 24 for removable template.

A. Using template, locate and prepare holes in door.
B. Drill 3/8” thru (2 places) for sex bolts.

7 Mount Adjusting Tube and Shoe Assembly on Door

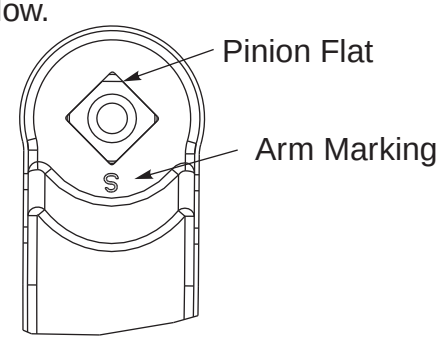
A. Install sex bolts thru holes in back side of door (2 places) prepared in Step 6.
B. Orient shoe with long side of snubber shoe toward hinge and adjusting rod toward the top of the door as shown in illustration. Install (2) 1/4-20 x 1” screws thru shoe and into sex bolts installed in Step 7A.

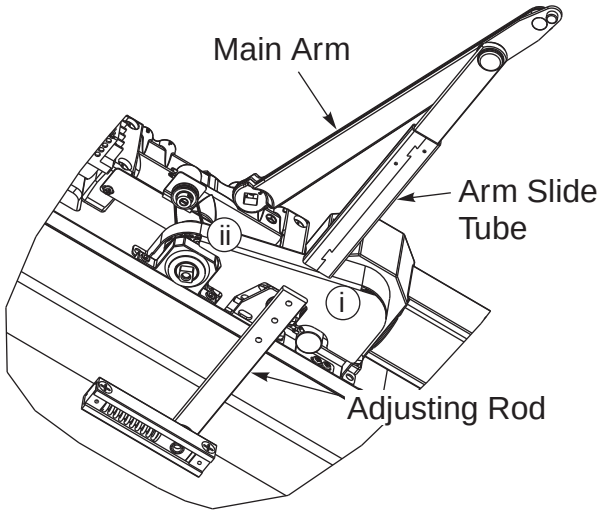


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8 Assemble Arm to Pinion

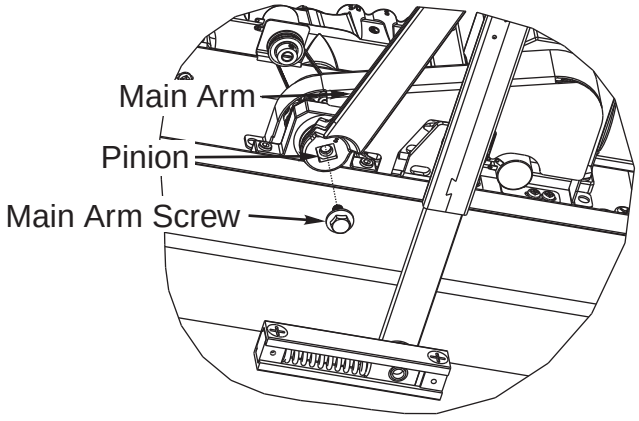
A. i)Slide Adjusting Rod into Tube of Arm Slide and Tube Assembly. ii) Place square of Main Arm onto pinion with pinion flat and arm marking as shown below.





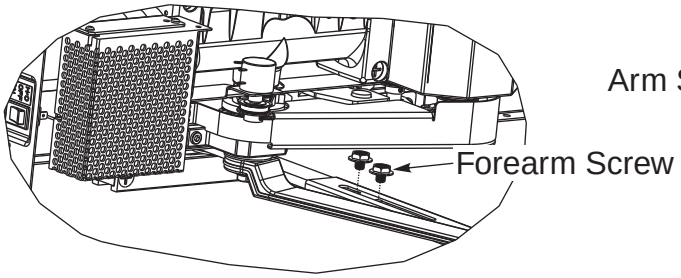
9 Secure Arm to Pinion

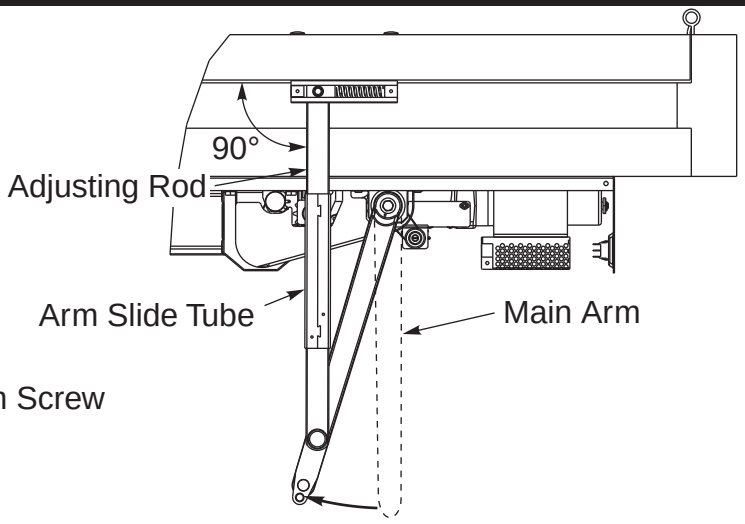
A. Secure Main Arm to Pinion with provided screw.
B. Tighten arm screw with 7/16” wrench.



10 Secure Adjusting Rod and Arm Slide Tube

A. Rotate Main Arm away from hinge until Adjusting Rod and Arm Slide Tube are perpendicular (at 90 degrees) with the door.
B. Secure with forearm screws.



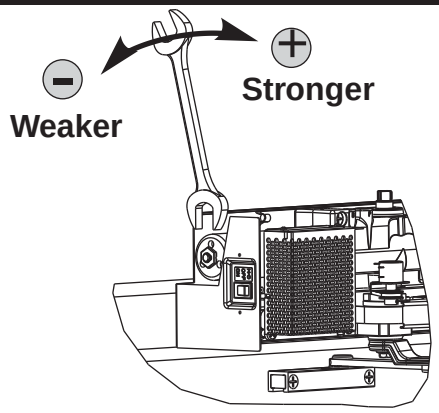


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11 Closer Spring Force Adjustment

Slowly increase closer power until door closes consistently.

NOTE: A closer set to the ADA required 5 lbs opening force may not be strong enough to close the door due to latching hardware, air pressure, or frame issues.

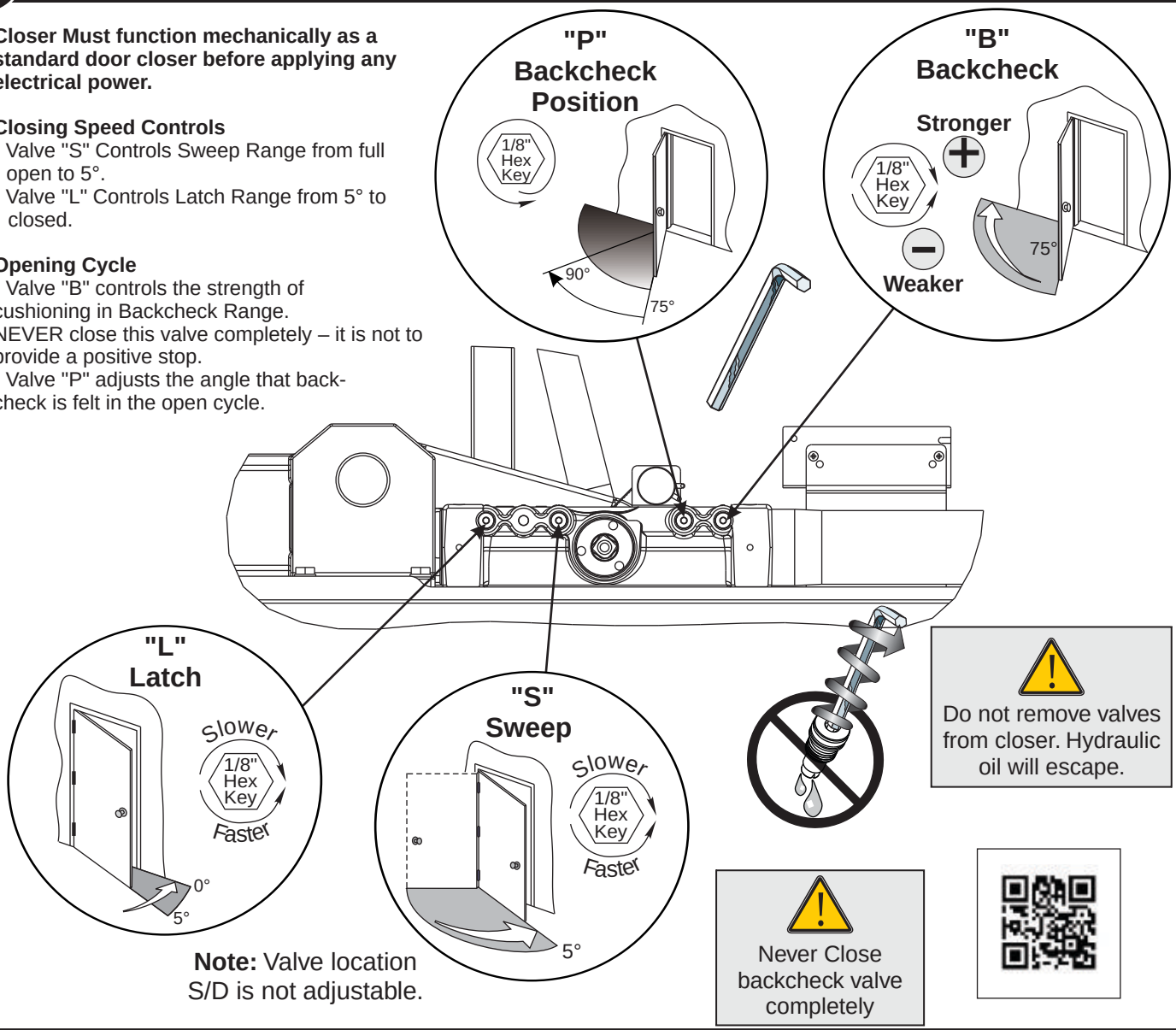


12 Mechanical Closer Adjustments

Closer Must function mechanically as a standard door closer before applying any electrical power.

Closing Speed Controls
- Valve "S" Controls Sweep Range from full open to 5°.
- Valve "L" Controls Latch Range from 5° to closed.

Opening Cycle
- Valve "B" controls the strength of cushioning in Backcheck Range. NEVER close this valve completely – it is not to provide a positive stop.
- Valve "P" adjusts the angle that back-check is felt in the open cycle.



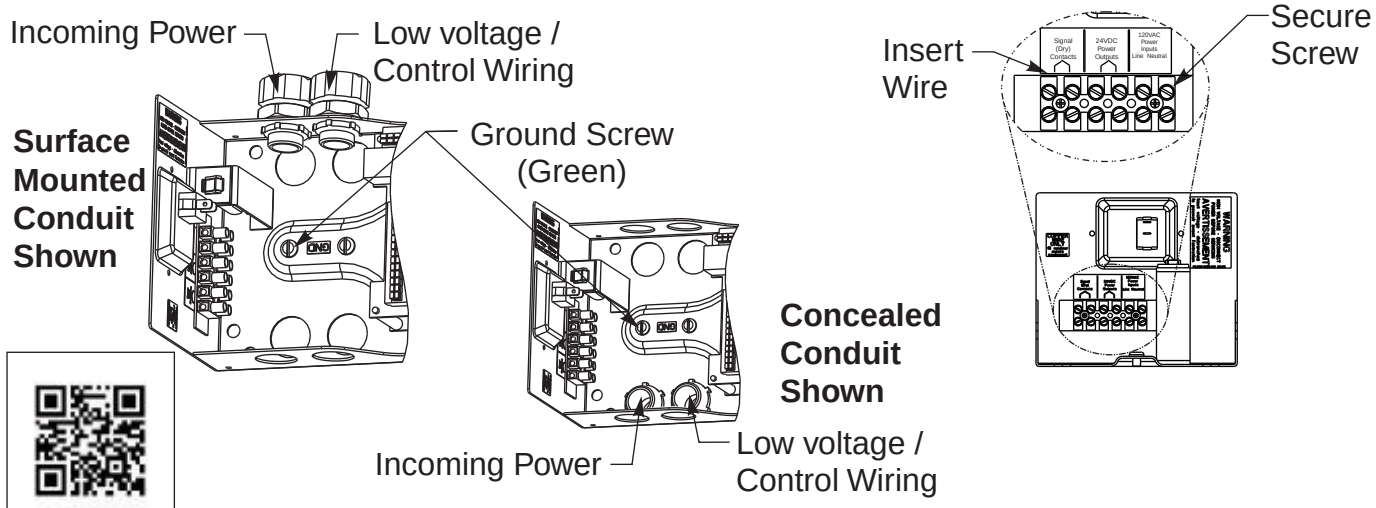
Note: Valve location S/D is not adjustable.

Do not remove valves from closer. Hydraulic oil will escape.

Never Close backcheck valve completely

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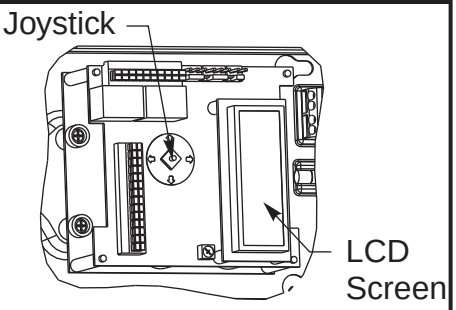
13 Incoming Power Connection



A. Pull wire thru Incoming Power conduit.
B. Strip insulation back 3/8” on Hot and Common Incoming Power wires.
C. Insert stripped end of wire into terminal.
D. Secure wire into terminal by turning screw using a small flat blade screw driver.
E. Attach ground wire to green ground screw.

14 Controller Interface

A. To power unit, flip switch on end cap furthest from the hinge from “OFF” to “ON” position.
B. To scroll thru menu items, push up or down on joystick.
C. To change setting of a menu item, when cursor is on that item, push joystick right to increase or left to decrease value.
D. To permanently accept changes to settings, scroll down to “Save Values” and press in on the joystick. **NOTE:** If power is turned off to the unit before “Save Values” has been accepted to “Saved”, any changes made to that point will be lost.

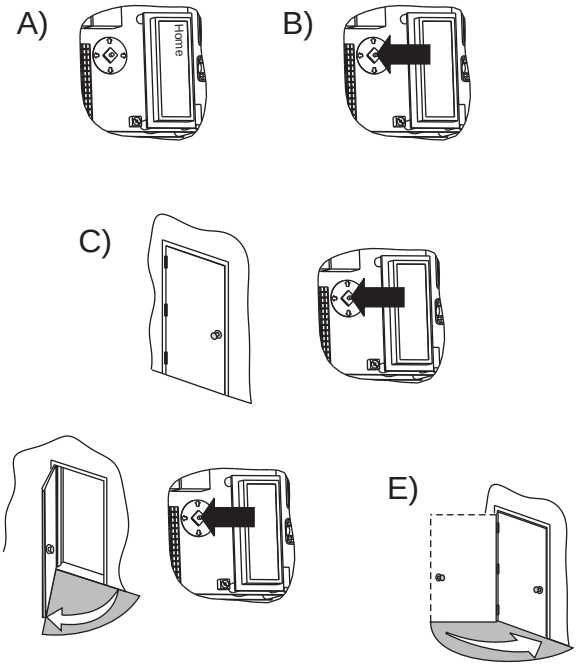


See Page 13 for Controller Adjustment Options.

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15 Set Home and Open Positions

A. With door closed and 3-position switch on end of back plate in the “OFF” position, use joystick to scroll down menu on LCD screen to “Home”.
B. Push in on joystick to activate menu feature. Display changes to “Set Close Limit”.
C. Push in on joystick again, while door is still closed, to set the Home or closed position. Display changes to “Set Open Limit”.
D. Open door to desired open position and push in on joystick again. Display changes to “Closing to Home”.
E. Allow door to fully close again. Display changes to “Home”.
F. Scroll to Save Values and push in on joystick to permanently save open and closed positions.

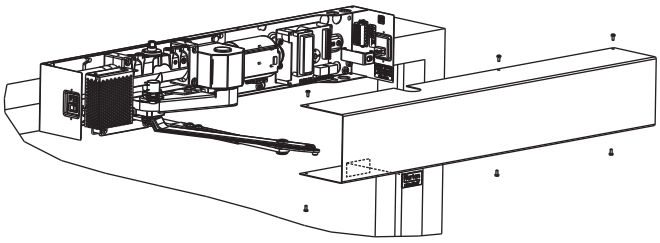


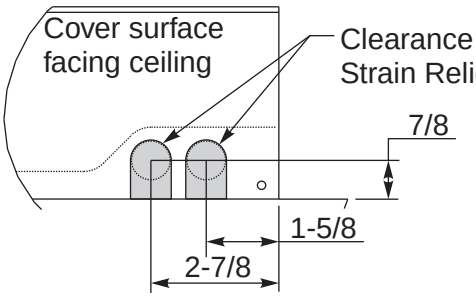
16 Connect Accessories and Make Necessary Controller Adjustments

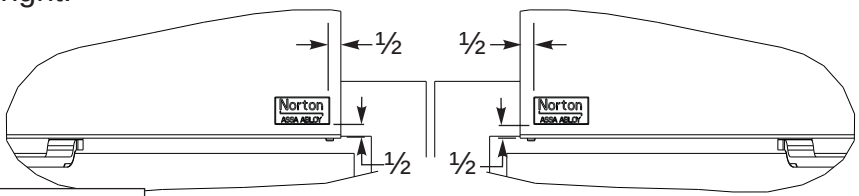
See Page 13 for Controller Adjustments
See Pages 14 - 20 for Accessory Wiring Instructions
See Page 21 for Troubleshooting Guide

17 Install Cover and Label

A. If using Surface Mount power input **ONLY**, remove appropriate shaded area from cover, see illustration below. Repaint cut edges as necessary to prevent corrosion.
B. Place cover over unit and secure with (6) 6-32 screws taken out previously.
C. Attach label to cover as shown at right.

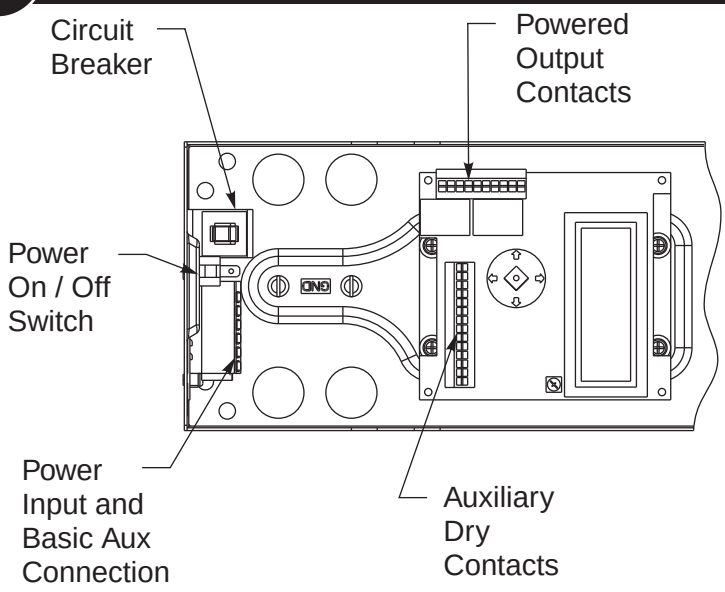






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General Electrical Information



A. Power inputs at Power Input Connection and Power Output Contacts must be made with copper wire only.
B. Maximum wire size:
12 AWG at Power Input connection
14 AWG at all other terminals.
C. Power input at terminals LINE and NEUTRAL must be 120VAC at 60 Hz (+10%, -15%).
D. Maximum current draw from auxiliary devices is 1.3 amps.
E. All wiring and connections use standard wiring practice conforming with local wiring codes.
F. **Labeled fire or smoke barrier door assemblies require the 120VAC 60Hz power input be supplied through normally closed alarm contacts of the alarm system / alarm panel.**

IMPORTANT SAFETY INSTRUCTIONS - WARNING: To reduce the risk of severe injury or death

1) READ AND FOLLOW ALL INSTRUCTIONS.
2) Never let children operate or play with door controls. Keep the remote control (where provided) away from children.
3) Personnel should keep away from a moving door in motion.
4) Test the door's safety features at least once a month. After adjusting either the force or the limit of travel, retest the door operator's safety features. Failure to adjust the operator properly may cause severe injury or death.
5) KEEP DOOR PROPERLY OPERATING. See Door Manufacturer's Owner's Manual. An improperly operating door could cause severe injury or death. Have a trained door systems technician make repairs.
6) SAVE THESE INSTRUCTIONS.

Controller Error Codes

Error Code	Description
Short Circuit	A short was sensed on the motor outputs
Temperature Trip	Power module reached 200°F or greater (too much load in too hot ambient condition)
Over Voltage	Line Voltage has reached 145VAC or greater
Under Voltage	Line Voltage has dropped below 80VAC
Aux 1 Stuck	Activation device connected to Aux 1 is sending constant signal
Aux 2 Stuck	Activation device connected to Aux 2 is sending constant signal
Aux 3 Stuck	Activation device connected to Aux 3 is sending constant signal
Comm Error	No communication between top and bottom controller boards. Boards not functioning properly
Presense Detect	Device connected to Presence Detect and was activated
Drive Disabled	3-position switch on end cap closest to latch is in "OFF" position

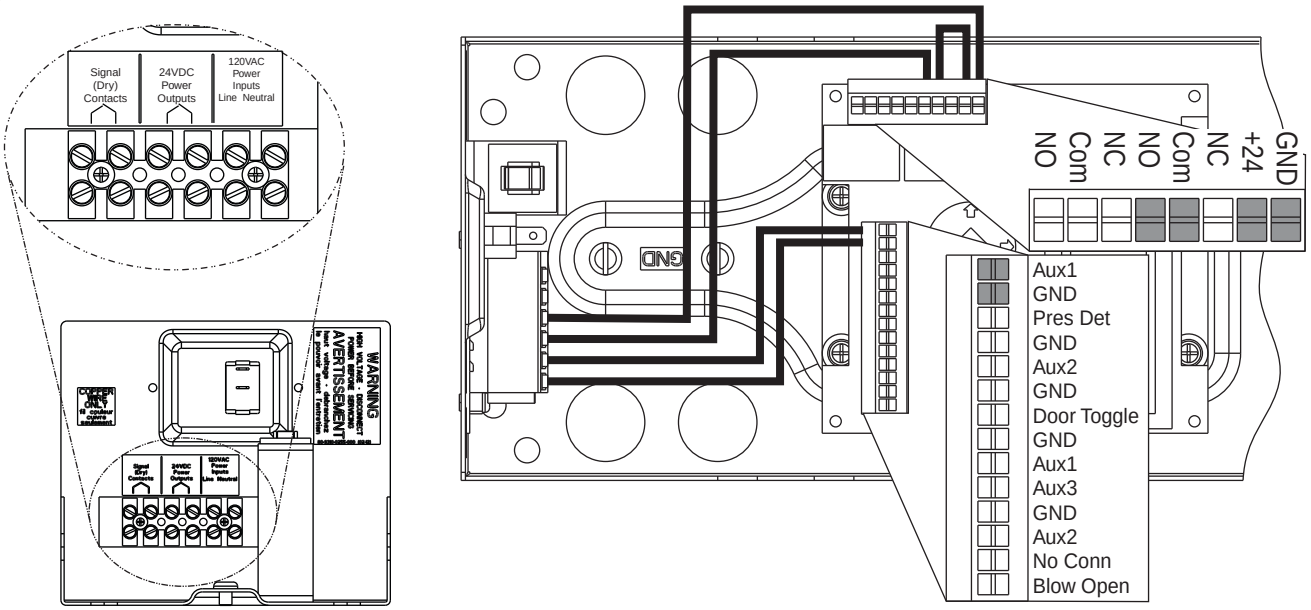
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Controller Interface Description

Screen Display	Adjustments	Default	Description
Mount:	Push or Pull	Pull	Side of opening operator is mounted on
Push:	OFF or PushNGo	Off	Turn on or off Push N Go feature.If On, a slight push or pull of the door starts it automatically opening.
Obst Delay:	0 - 5 sec in 1 sec increments	3s	Obstruction Delay: the amount of time the operator will push against an obstruction before closing if during an opening cycle or reopening and trying to close again if during a closing cycle.
Hold Open:	0 - 30 sec in 1 sec increments	6s	Amount of time door will stay in full open position.
Open Speed:	0 - 100% in 1% increments	100	How fast the door opens to full open position.
Close Speed:	0 - 100% in 1% increments	60	How fast the motor returns to the home position. As Latch and Sweep on the closer are adjusted, adjustments may be needed for Close Speed to assure closer is not trying to backdrive the motor.
Slow Speed:	0 - 100% in 1% increments	55	Speed up or slow down door during last few degrees of opening.
Hold Speed:	0 - 100% in 1% increments	55	Increase or decrease hold open force (when in "ON" position only, not "H/O") to compensate for spring force, wind conditions, etc
Start Delay:	0 - 10 sec in 1 sec increments	0s	Time before operator begins to open door. This is to allow accessories time to function and not hinder the opening of the door.
Vestibule:	OFF, 5 - 30 in 5 sec increments	Off	Amount of delay for opening 2nd vestibule door
Latch Rtrct:	OFF, 3 - 45 in 3 sec increments	Off	Amount of time power is supplied to a latch retraction device.
Alarm Delay:	OFF, 30 sec, 60 sec	Off	Used only for alarm accessories.
A2	Standard, Presence Off, Presence On	Standard	A2 input can be used for Alarm Delay or Input for door mounted presence detector: Presence Off - door will not reactivate; Presence On - door will reopen if presence detected during closing cycle.
Rly2:	Alarm, Activation, On Opened, On Closed	Alarm	How Relay 2 is used: Alarm - used with above Alarm Delay; Activation - acts as an additional NO / NC contact; On Opened - relay trips (closed contacts) when door is in opened position; On Closed - relay trips (closed contacts) when door reaches the fully closed position.
Cycles:	not adjustable	-	Number of electrical cycles on the operator.
Days:	not adjustable	-	Number of full days electricity have been supplied to the operator.
Open Time	not adjustable	-	Time it took for previous opening cycle to go from Home to fully open position.
Close Time	not adjustable	-	Time it took for previous closing cycle to go from fully open position to Home.
Errors	not adjustable	-	Error code seen by controller. See below for Troubleshooting codes.
Home	see Setting Open Position	-	Used to set the Home position and the Fully Open positions of the operator.
Save Values	Save Values or Saved	-	Used to permanently add adjustments to controller's memory.

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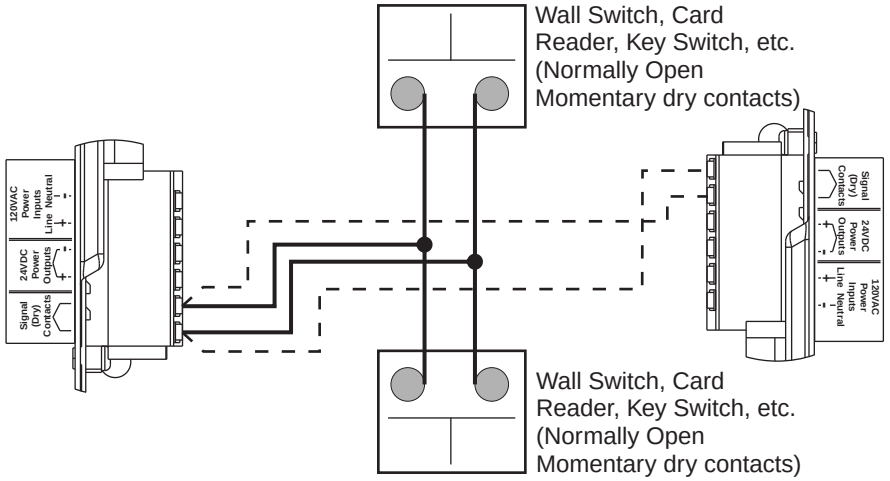
Factory Pre-Wiring of Connections



Basic Wiring Diagrams Using Factory Pre-Wired Connection

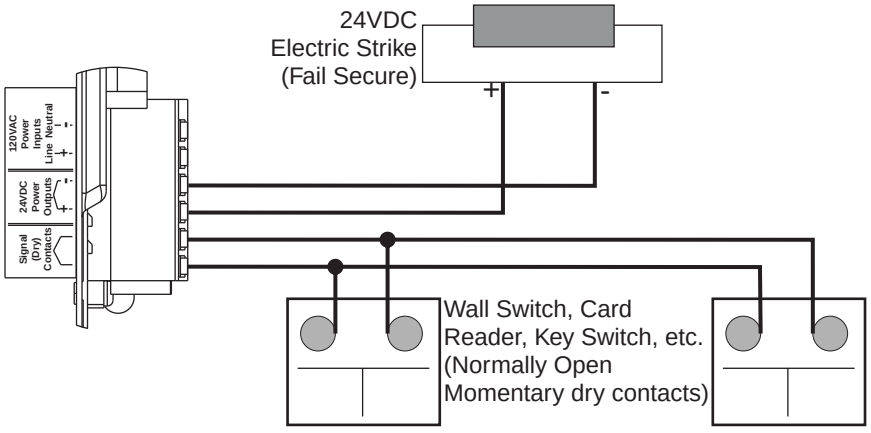
Standard Function with Switches

- Doors are normally closed.
- Activating either switch will open both doors. Door will close after hold open time delay has expired.



Fail Secure Electric Strike 24VDC Wiring

- Doors are normally closed and latched.
- Activating switch will unlock electric strike and door will automatically open. Door will close after hold open time delay has expired.
- The door will remain **locked** during power failure.

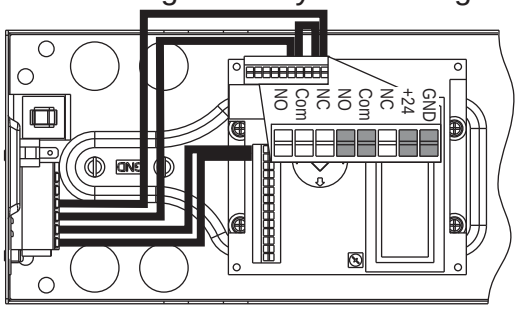


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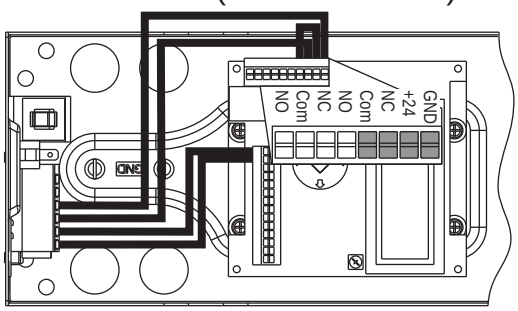
Fail Safe Electric Strike or Electromagnetic Lock 24VDC Wiring

Change Factory Pre-Wiring from Illustration A to Illustration B (more NO to NC)

A)

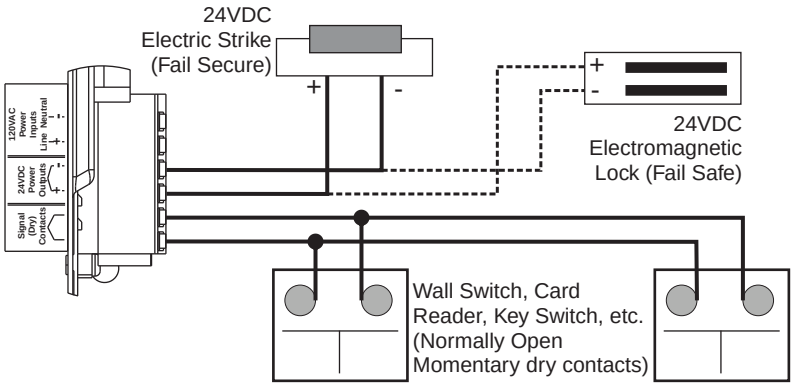


B)



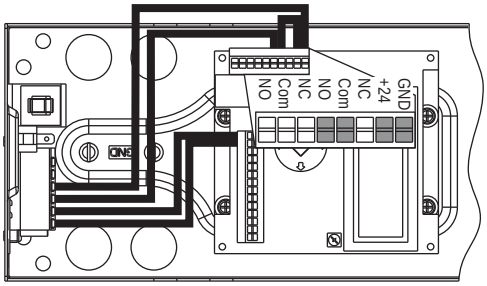
Fail Safe Electric Strike 24VDC Wiring

- Doors are normally closed and latched.
- Activating switch will unlock electric strike or mag lock and door will automatically open. Door will close after hold open time delay has expired.
- The door will remain **unlocked** during power failure.
- Current draw at Power Outputs not to exceed 1.3 amps.



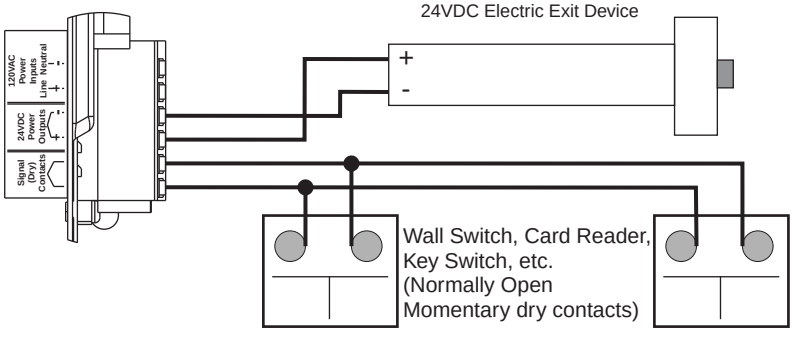
24VDC Electric Exit Device Wiring

Factory Pre-Wiring in Illustration is for this functionality.



24VDC Electric Exit Device Wiring

- Doors are normally closed and latched.
- Activating switch will energize exit device and door will automatically open. Exit device will stay energized based on Latch Rtrct setting. Door will close after hold open time delay has expired.
- Current draw at Power Outputs not to exceed 1.3 amps.

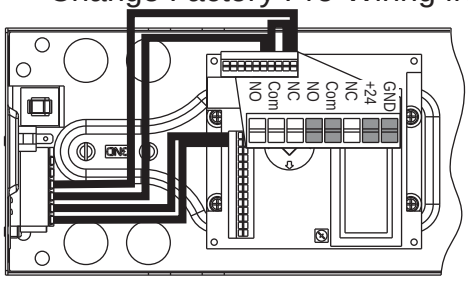


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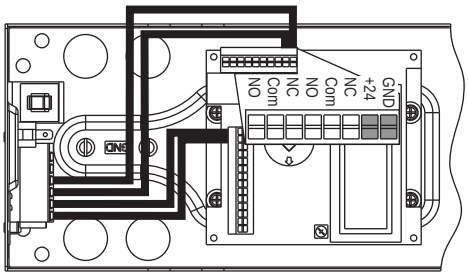
Electric Dogging Exit Device Wiring

Change Factory Pre-Wiring from Illustration A to Illustration B (more NO to NC)

A)

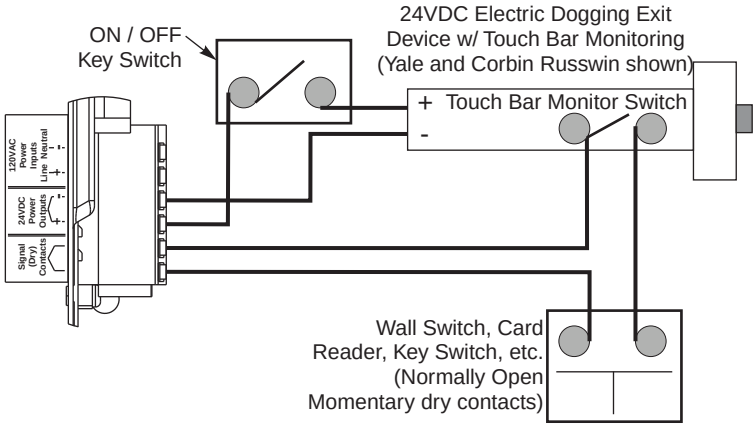


B)



Electric Dogging Exit Device Wiring

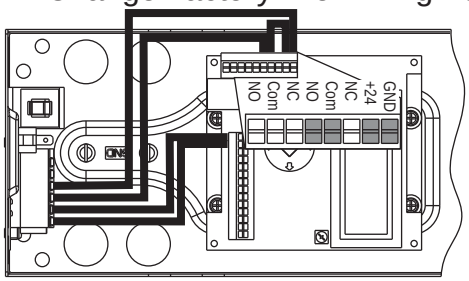
- Doors are normally closed and latched.
- Turning key switch ON will apply power to the exit device.
- The first depression on the device touchpad will electrically dog the device for push/pull operation.
- The door will now open automatically when the wall switch is depressed.
- The device will relatch during a power failure or when the key switch is turned off.
- The exit device allows egress at all times. The exit device allows egress during power failures.
- Current draw at Power Outputs not to exceed 1.3 amps.



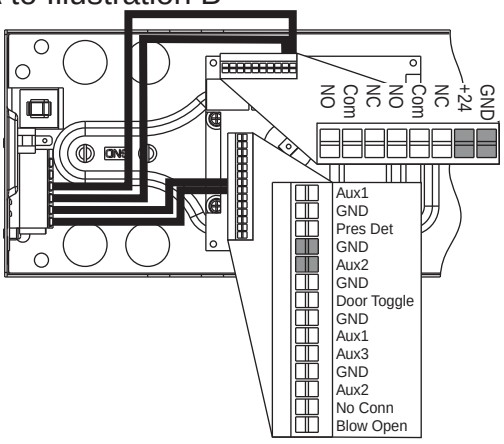
Hard Wired Executive Function Wiring

Change Factory Pre-Wiring from Illustration A to Illustration B

A)

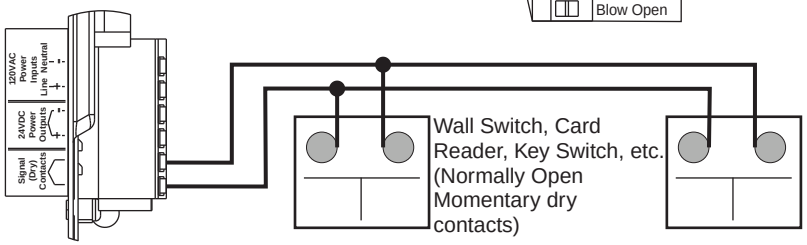


B)



Hard Wire Executive Function

- Doors are normally closed.
- Activating switch will open door.
- The door will remain in indefinite hold open until activating switch or is activated a second time causing the door to close.

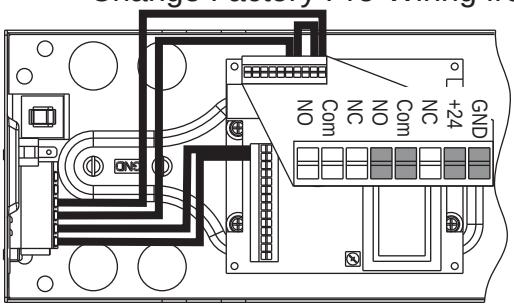


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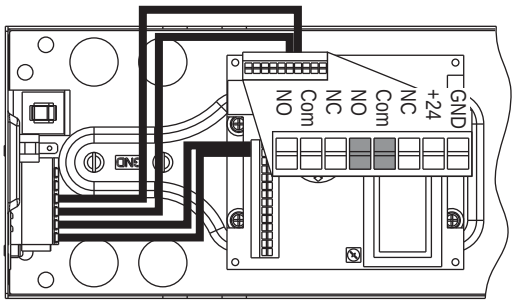
Electric Latch Retraction Exit Device Wiring

Change Factory Pre-Wiring from Illustration A to Illustration B

A)

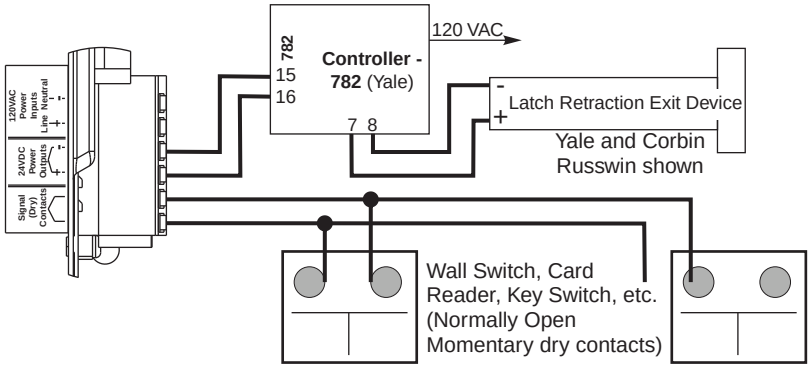


B)



Electric Latch Retraction Exit Device Wiring

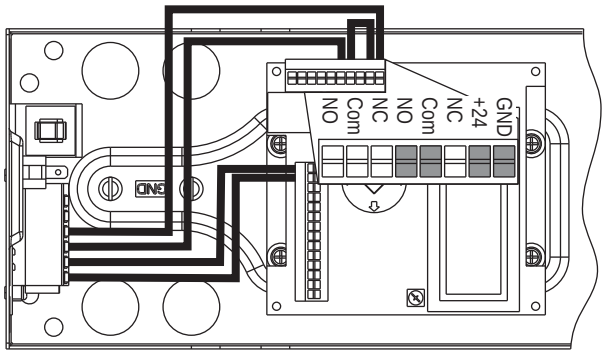
- Doors are normally closed and latched.
- Activating switch will retract exit device latch bolt and operator will open the door.
- The door will closer after hold open time delay has elapsed.
- Exit device allows egress at all times. Exit device allows egress during power failure.
- Contact Tech Support for other devices or manufacturer's instructions.



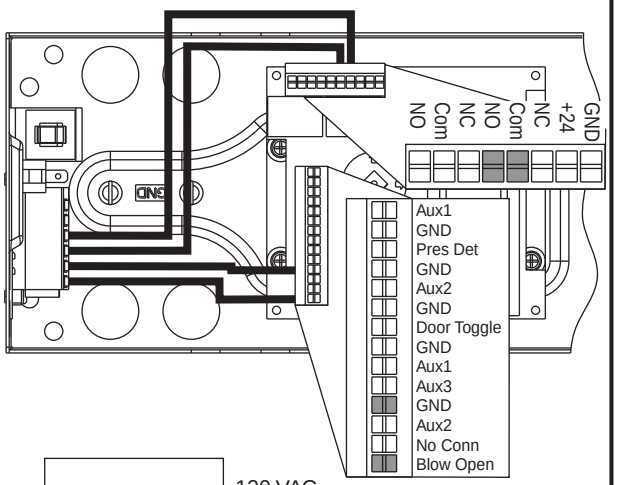
Electric Latch Retraction Exit Device Wiring for Smoke Ventilation - Blow Open Function

Change Factory Pre-Wiring from Illustration A to Illustration B

A)

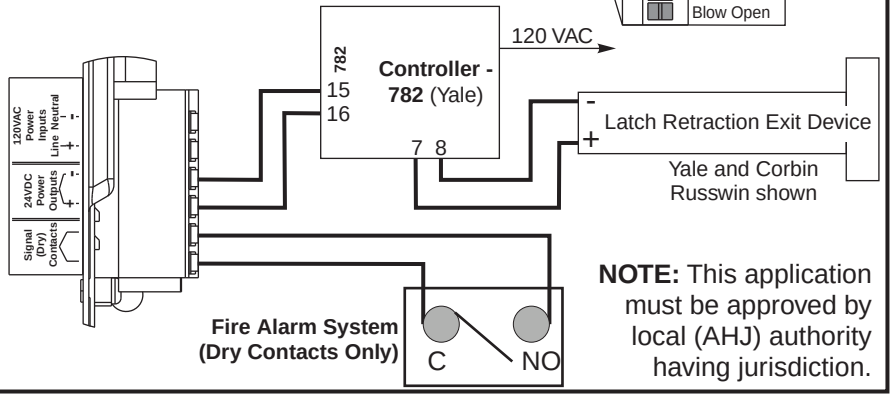


B)



Electric Latch Retraction Exit Device Wiring - Blow Open

- Doors are normally closed and latched.
- Fire Alarm activation will retract exit device latch bolt and door operator will open door.
- Door will remain open until the Fire Alarm System has been reset.
- Door Operator's main power input must be wired into building's back-up power system.
- Exit device allows egress at all times. Exit device allows egress during power failure.



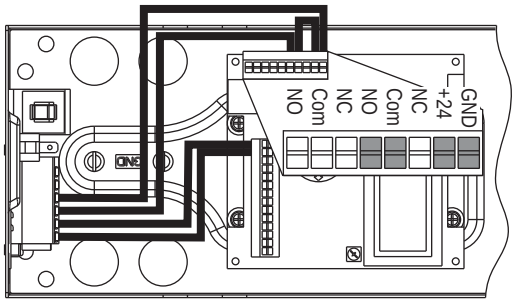
NOTE: This application must be approved by local (AHJ) authority having jurisdiction.

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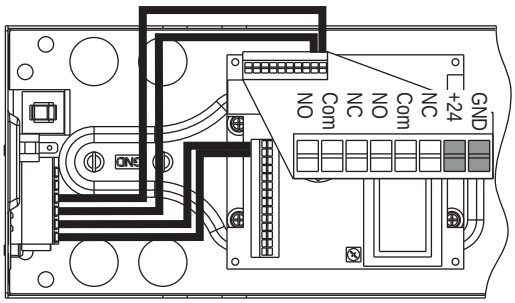
Radio Frequency Standard Function Wiring (can be ordered pre-wired to this RF wiring)

If installing in the field, change Factory Pre-Wiring from Illustration A to Illustration B

A)

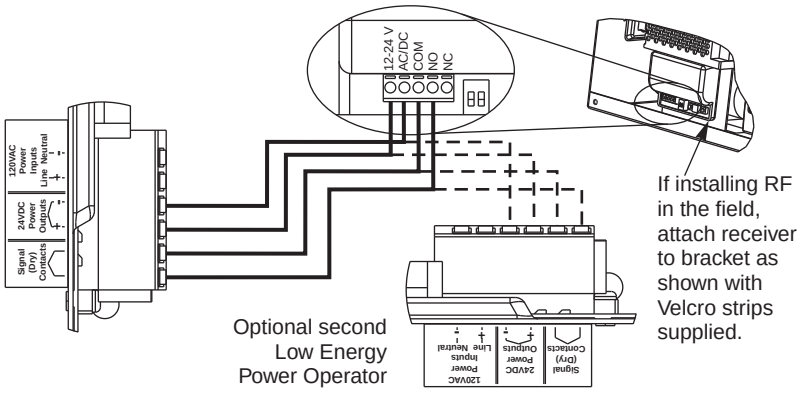


B)



Radio Frequency Standard Function

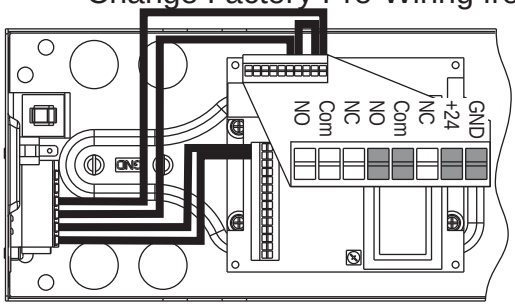
- Doors are normally closed.
- Activating wireless switch or hand held wireless transmitter will open the door.
- The door will closer after hold open time delay has elapsed.
- Current draw at Power Outputs not to exceed 1.3 amps.



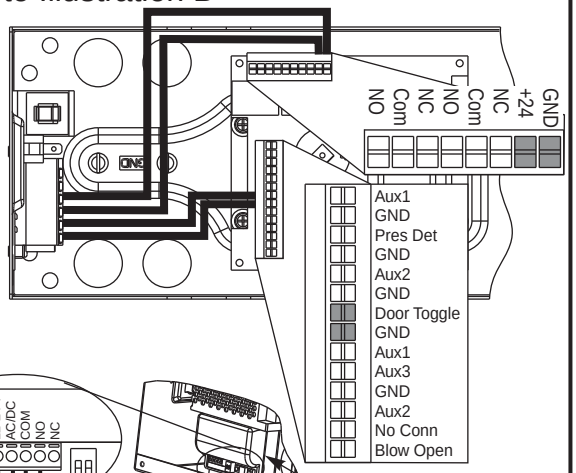
Radio Frequency Executive Function Wiring

Change Factory Pre-Wiring from Illustration A to Illustration B

A)

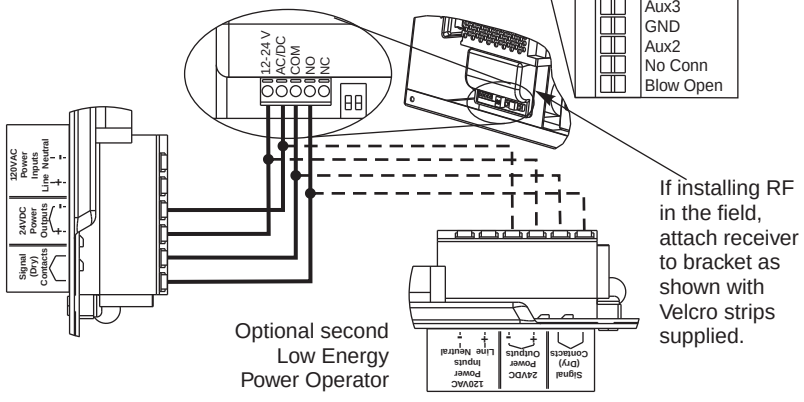


B)



Radio Frequency Executive Function

- Doors are normally closed and latched.
- Activating wireless switch or hand held wireless transmitter will open the door.
- The door will remain in indefinite hold open until wireless switch or hand held transmitter is activated a second time causing the door to close.
- Current draw at Power Outputs not to exceed 1.3 amps.



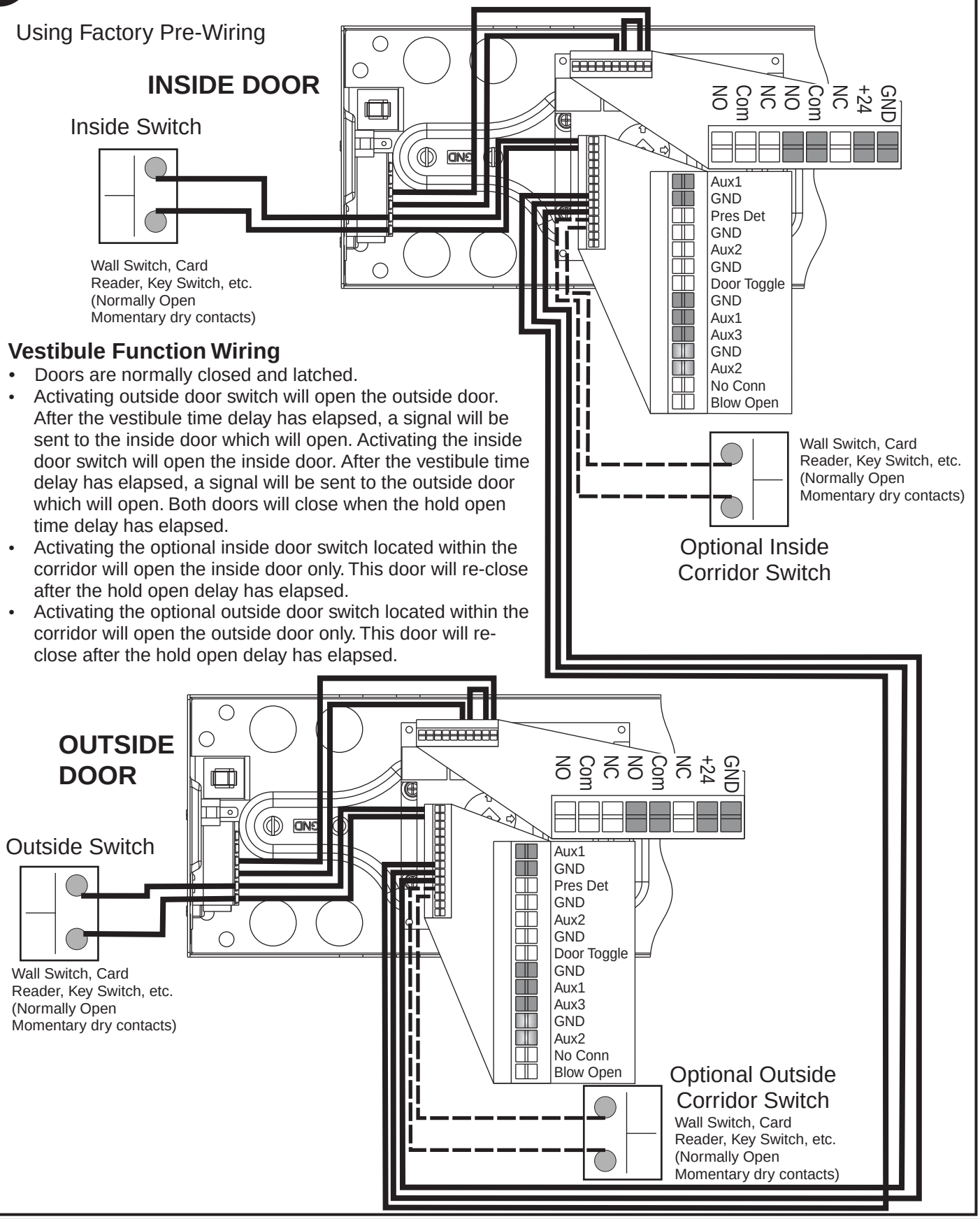
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Vestibule Function Wiring

Using Factory Pre-Wiring



Vestibule Function Wiring

- Doors are normally closed and latched.
- Activating outside door switch will open the outside door. After the vestibule time delay has elapsed, a signal will be sent to the inside door which will open. Activating the inside door switch will open the inside door. After the vestibule time delay has elapsed, a signal will be sent to the outside door which will open. Both doors will close when the hold open time delay has elapsed.
- Activating the optional inside door switch located within the corridor will open the inside door only. This door will re-close after the hold open delay has elapsed.
- Activating the optional outside door switch located within the corridor will open the outside door only. This door will re-close after the hold open delay has elapsed.

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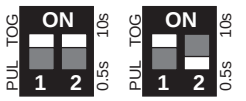
Troubleshooting Guide

Issue Seen	Solution
Door closing too fast	1) Adjust Latch and/or Sweep valves on closer clockwise or 2) Decrease Closing Speed on controller (see page 10)
Door closing too slow	1) Adjust Latch and/or Sweep valves on closer counterclockwise or 2) Increase Closing Speed on controller (see page 10)
Door does not open to desired location	1) Repeat Home process (see page 8), 2) Increase Obst Delay, 3) Adjust Backcheck valve on closer counterclockwise, 4) Decrease spring force on closer body (door myst still close in event of power failure (see page 7), or 5) Move Bumper Stop in track slightly toward hinge (see page 7)
Door does not reach fully opened position	1) Repeat Home process (see page 9), 2) Increase Obst Delay, 3) Adjust Backcheck valve on closer counterclockwise, 4) Decrease spring force on closer body (door must still close in event of power failure (see page 7), or 5) Move Bumper Stop in track sligh
Door opens and closes repeatedly	Change 3-position switch from H/O to On
Motor is driving in the wrong direction	Change Mount (Push / Pull) on controller, reset Home process (see page 8), and Save Values
When door reaches open position, door drifts toward closed position	Increase Hold Speed on controller (see page 10) until door stops drifting
When door reaches open position, door drifts further open	Decrease Hold Speed on controller (see page 10) until door stops drifting
When door reaches open position, door bounces	Decrease Slow Speed on controller (see page 10)
When signal is received, operator tries to open door before auxiliary components are unlatched / retracted	1) Confirm latch devices are getting proper power, 2) Confirm latch devices are receiving power long enough to fully retract - adjust Latch Retraction on controller (see page 10) as needed, 3) If latch device is not retracting fast enough, increase Start Delay on controller (see page 11) to assure latch device has had sufficient time to fully retract before operator starts opening door.
Values previously set on controller are changed after power removed from operator	Reset necessary values on controller (see page 10) and Save Values. Failure to Save Values will result in changes to the controller being lost when power is removed
Error message says "Short Circuit"	Turn off power to unit. Check wiring for short / cut.
Error message says "Over Voltage"	Check incoming power - line voltage has exceeded 145VAC
Error message says "Under Voltage"	Check incoming power - line voltage has dropped below 80VAC
Error message says "Aux1, Aux 2, or Aux 3 Stuck"	Disconnect Aux 1, 2, or 3 inputs and confirm error message goes away. If so, make sure input device is not stuck (sending contant signal). Controller has a 3 minute protection limit
Error message says "Comm Error"	Inverter must be replaced
Error message says "Presense Detect"	Unit has a presense detector attached and device has been activated
Error message says "Drive Disabled"	3-position switch is in the "Off" position

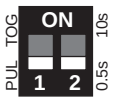
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Norton
ASSA ABLOY

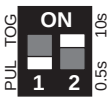
433MHz Receiver User's Guide



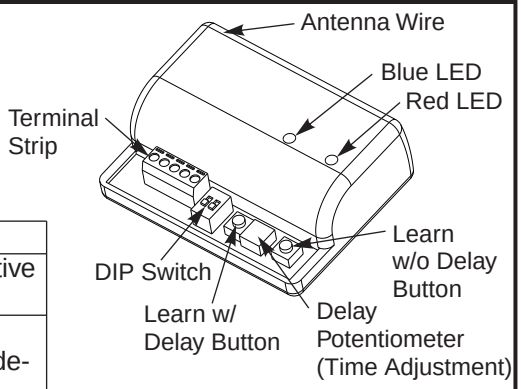
In Toggle Setting (1-ON), the Hold Time is inactive. Either setting for #2 dip switch will have the same result.



0.5 second Pulse Setting



10 second Pulse Setting



#1	Description	Function
OFF	Pulse Relay	Press the transmitter once and the relay will be active momentarily.
ON	Toggle Relay	Press the transmitter once and the relay output is active indefinitely, press it again and the relay will de-energize indefinitely.

#2	Description	Function
OFF	0.5s Hold Time	Relay will remain active 0.5 sec after loss of activation.
ON	10s Hold Time	Relay will remain active 10 sec after loss of activation.

- Always stop pedestrian traffic through the doorway when performing tests that may result in unexpected reactions by the door.
- Ensure compliance with all applicable safety standards upon completion of installation.

R1 Hand-Held Configuration

1. Set dip switches to the receiver to the desired activation cycle (dip switch 1 - Toggle or Pulse and dip switch 2 - 0.5s or 10s hold.
2. Press either Learn w/ Delay Button or Learn w/o Delay Button on the receiver depending on the activation requirements (if delay learn is selected, adjust potentiometer to counterclockwise limit, 0 second delay). Red LED on receiver will flash. After learn cycle is complete, adjust potentiometer to desired delay time (0 - 30 sec).
3. Depress transmitter button repeatedly until Blue LED on the receiver illuminates (indicating reception of signal from transmitter).
   NOTE: Repeat Steps 2 - 3 to program additional transmitters.
4. To test the system, depress transmitter button (Red LED on Transmitter will illuminate) and observe that the Blue LED illuminates on the receiver. This indicates that the relay has been activated.

R2 Push Plate Configuration

1. Before beginning, it is easiest to have already prepared the installation of the push plate.
2. Connect the wires from the transmitter to the NO and COM contacts of the push plate's switch.
3. Follow Steps 1 - 4 (Hand-Held Configuration); depress the push plate to activate the transmitter.
4. Attach the transmitter to the inside of the electrical box and complete the installation.

R3 Removing Transmitter Code(s)

Single Transmitter Code:
- Press both Delay and No Delay Buttons simultaneously until Red LED flashes once (approximately 1 second).
- Press transmitter button twice within 10 seconds and the transmitter code will be deleted.

All Transmitter Codes:
- Press and hold both Delay and No Delay Buttons simultaneously until Blue LED illuminates then release (approximately 10 seconds).

R4 Troubleshooting

Problem: The LED on my receiver is just flickering and I'm unable to program and/or it won't work.
Solution: You have a push plate stuck or faulty transmitter. Disconnect each push plate until the LED goes out. If LED does not go out, remove each transmitter battery until it does. Replace the appropriate transmitter.

Problem: Receiver intermittently doesn't receive the transmitter(s) signal.
Solution: You may extend the receiver antenna wire only in multiples of 6-3/4" (171), i.e. 6.75 x 4 = 27" (686) of extended antenna wire.

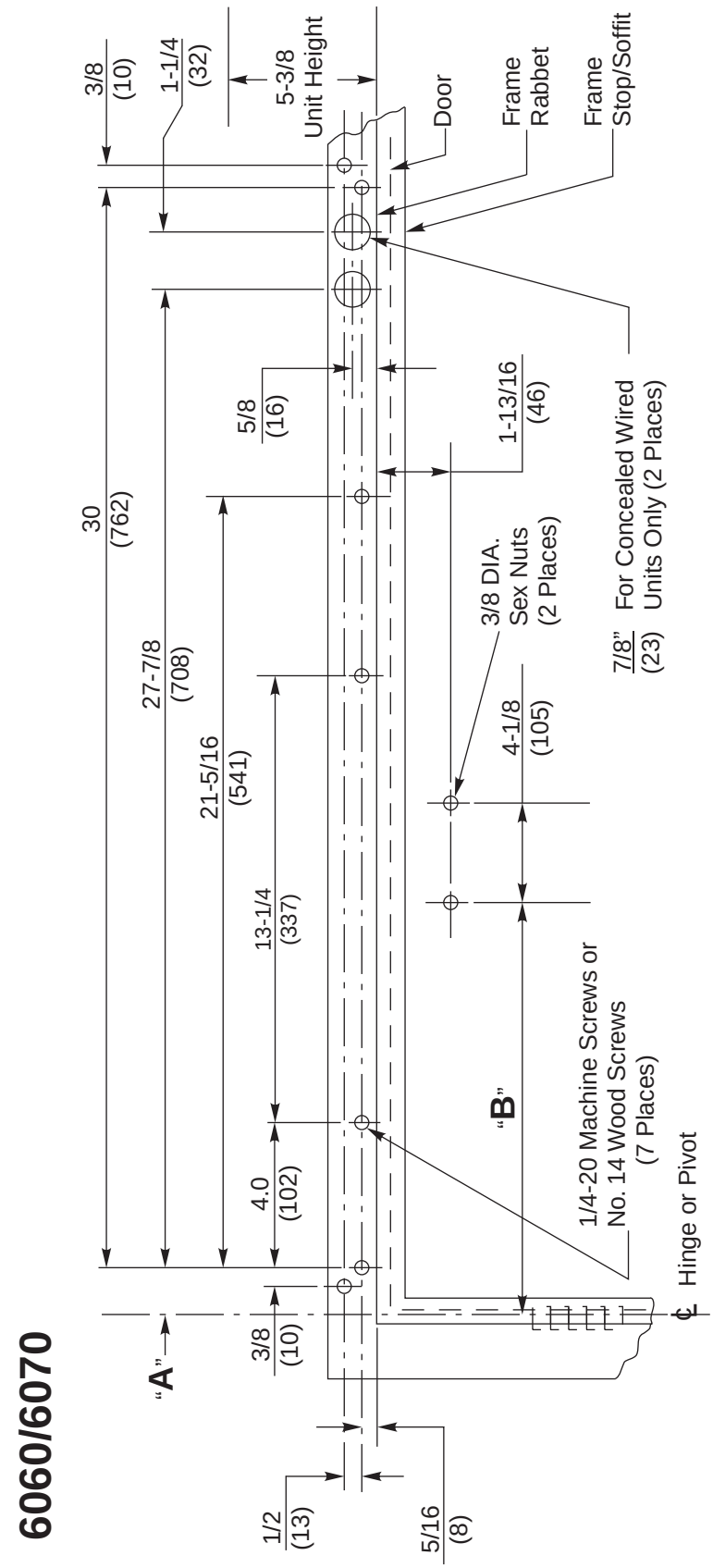
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Removable Template

- Do not scale drawing.
- Left hand door shown.
- All dimensions given in inches (mm).
- Maximum frame reveal is 6-7/8” (175 mm) for this application.



Door Opening Angle	Dim “A”	Dim “B”
85°	4-1/8”	13-1/4”
90°	3-1/2”	12-5/8”
95°	2-7/8”	12-0”
100°	2-3/8”	11-1/2”
105°	2-0”	11-1/8”
110°	1-5/8”	10-3/4”

6060/6070

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