## 5700P Series Power Operator with Optional Plug-in Power Input PULL and PUSH Side Installation Instructions

WARNING

This product can expose you to lead which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65warnings.ca.gov.

Pour la version francaise voir www.nortondoorcontrols.com.
READ AND FOLLOW ALL INSTRUCTIONS. SAVE THESE INSTRUCTIONS.


## ASSA ABLOY

## Contents

ADA / ANSI / UL ..... 2
Product Safety Warnings ..... 2
Components ..... 3
General Information ..... 3
Technical Data ..... 3
Before You Begin ..... 4
PULL (Hinge) Side Mounting Installation ..... 5
PUSH (Stop) Side Mounting Installation .....  8
Adjustments. ..... 11
Input Power Configuration ..... 12
Final Electrical and Mechanical Setup ..... 12
Inverter Details ..... 14
Wiring ..... 15
RF Receiver User's Guide ..... 17
Troubleshooting ..... 18
PULL (Hinge) Side Template ..... 19
PUSH (Stop) Side Template ..... 20
ADA / ANSI / UL

## 1. Americans With Disabilities Act (A.D.A.)

These door operators can be installed and adjusted to conform with A.D.A. regulations.
2. ANSI Standards \&

ANSI A117.1 - These door operators permit door assemblies to conform to the requirements of this specification "for buildings and facilities - providing accessibility and usability for physically handicapped people".
ANSI A156.19 - These products are designed to conform to this specification "for power assist and low energy power operated doors".

## Product Safety Warnings

WARNING: To reduce risk of injury to person, use this operator only with Pedestrian Swing doors. FOR INDOOR USE ONLY

1. READ AND FOLLOW ALL INSTRUCTIONS.
2. If local code requires unit to be hard wired instead of using plug-in type power cord supplied, this unit MUST be returned to manufacturer and replaced with a unit designed to be hard wired.
3. 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.
4. 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.
5. Do not connect the door operator to the source power until instructed to do so.
6. To reduce risk of shock, this operator has a ground plug. This plug requires a grounded receptacle.
7. Test door's features at least once a month. After adjusting either force or limit of travel, retest door operator's features. KEEP DOOR PROPERLY OPERATING. An improperly operating door could cause severe injury or death.
8. Maximum door size: 48 " $(1219 \mathrm{~mm})$ wide $\times 250 \mathrm{lb}$ ( 113.4 kg )
9. SAVE THESE INSTRUCTIONS.

## Components



## General Information

- UL labeled fire or smoke barrier door assemblies require that the $120 \mathrm{VAC}(60 \mathrm{~Hz})$ power input to the 5700 P door operator be supplied through normally closed alarm contacts of the alarm system / alarm panel.
- 120VAC power input to 5700P door operator to be through a NEMA 5-15 outlet located within 15 inches of Power Input end of operator.
- All wiring must conform to standard wiring practice in accordance with national and local wiring codes.
- Unit is Non-Handed.
- Door must swing freely through the entire opening and closing cycle before beginning the installation.
- Use of an auxiliary door stop (by others) is always recommended.
- An incorrectly installed or improperly adjusted door operator can cause property damage or personal injury. These instructions should be followed to avoid the possibility of misapplication or misadjustment.


## Technical Data

| Input power: | $120 \mathrm{VAC}, 60 \mathrm{~Hz}$ |
| :--- | :--- |
| Power consumption: | .6 amps |
| Circuit breaker: | 3 amps |
| Power supply: | 24 V DC, max. 1.1 amp. |
| Door width: | $28^{\prime \prime}-48$ " Max. ( $71-122 \mathrm{~cm}$ ) |
| Door weight: | $100-250 \mathrm{lb}$ Max. $(43-113 \mathrm{~kg})$ |
| Door opening angle: | up to $110^{\circ}$ PULL side; up to $170^{\circ}$ PUSH side; <br> Manually to $180^{\circ}$ PUSH/PULL side |
| Hold open time: | $5-30$ seconds (A.D.A. 5 seconds min.) |

Notes:

- Conduit hole is for low voltage Class 2 wiring ONLY.
- Input power is NOT to be hard wired into unit.
- Power cord is to be routed so that it is NOT in any part of a doorway, window opening, wall, ceiling or floor not attached or otherwise secured to the building structure, and not concealed behind walls.
- Activation devices: push plates, access control, mats, touchless wall switches, etc.
- Maximum wire size is:

14AWG at terminals 1-4 on Accessory Terminal

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


WARNING: Make sure ( $120 \mathrm{~V}, 60 \mathrm{~Hz}$ ) input power is turned OFF at facility's main circuit breaker before proceeding with installation

## ASSA ABLOY

## Before You Begin

- All dimensions are given in inches (millimeters). DO NOT scale drawings.
- Thickness recommended for reinforcements in hollow metal doors and frames is charted.
- Template information is based on use of 5 " ( 127 mm ) maximum width butt hinges or 3/4" (19mm) offset pivots.
- Maximum frame reveal is $1 / 8$ " $(3 \mathrm{~mm})$ for PULL units and 2-5/8" - 6-3/4" (67-171mm) for PUSH units.
- Before beginning the installation, verify that the door frame is properly reinforced and is well anchored in the wall. Frame header must be straight - without warp or bow.
- Unreinforced hollow metal frames and aluminum frames should be prepared and fitted with 1/4-20 blind rivet nuts, furnished by others.
- Concealed switch or sensor wires should be pulled to the frame before proceeding.

Fasteners for Frame:

- Hollow metal and aluminum: 1/4-20 Machine screws
- Wood:

No. $14 \times 2-3 / 4$ " $(70 \mathrm{~mm})$ sheet metal screws

Fasteners for Door:

- 1/4-20 Machine screws
$3 / 8 \times 1-5 / 8$ " sex nut

| Mounting Hardware |  | Door or Frame | Drill |
| :---: | :---: | :---: | :---: |
| acmanno | Unit: <br> $14 \times 2-3 / 4$ " Sheet Metal Screw | Wood | 3/16" $(4.76 \mathrm{~mm})$ |
| Mmammax | Unit: <br> 1/4-20 x 1" Flat Head Machine Screw | Hollow Metal or Aluminum | Drill \#7 (. 201 dia. or 5.10 mm ) Tap 1/4-20 |
| 1 mmmum | Track or Arm: Sex Nut and Bolt (SNB) (optional) | Hollow Metal | 9/32" (7.00mm) thru <br> $3 / 8$ " $(9.50 \mathrm{~mm})$ door face opposite to closer |
|  |  | Aluminum or Wood | $3 / 8$ " $(9.50 \mathrm{~mm})$ thru |

## Prepare Frame and Door for PULL Side Installation

Become familiar with operator components and fasteners. It is recommended that components remain in box until installed. Verify there is minimum ceiling clearance for operator installation before proceeding. (Figure 1)

## A. Prepare frame for operator.

1. Verify frame reveal is maximum $1 / 8^{\prime \prime}(3 \mathrm{~mm})$. (Figure 1)
2. Determine if push or pull and if left hand or right hand installation. (Figure 2)


NOTE: These steps are for PULL side only. See page 8 for PUSH side installation.
3. Frame header MUST be flat / without twists. Backplate of operator can be used as reference.

NOTE: If frame is not flat or is twisted, an additional steel back plate or shimming is required. Failure to mount unit properly can result in improper function of operator.
4. Using detailed template on page 19, prepare six (6) holes for 1/4-20 machine screws or 14 x 2-3/4" wood screws. Blind rivet nut (by others) is suggested for unreinforced hollow metal or aluminum frames. (Figure 3)
5. For concealed Class 2 low voltage only: Prepare one (1) 7/8" (22mm) diameter hole for conduit, for switch/ sensor wires only.

## NOTE:

- On new construction, this hole will generally be drilled by frame supplier at their shop or at time-of-install.
- Placement of receptacle (outlet)= max 15" (381mm) of power input end of operator (shaded area). (Figure 3)



## B. Prepare door for track.

1. Using template on page 19 , locate and prepare holes in door for three (3) 3/8" ( 9.5 mm ) sex bolts (Figure 4)

NOTE: Standard units are supplied with sex nuts and bolts for 1-3/4" (44mm) thick door. Sex nuts and bolts for other door thicknesses are available to order.


Figure 4 Right Hand Shown

## Install Operator


A. Remove cover from unit and set cover and screws aside.
B. Mount unit to frame. (Figure 5)

NOTE: Conduit hole nearest hinge is suggested for 120VAC power input.

Select Concealed or Surface option.
Concealed Class 2 Low Voltage Only:

- Connect conduit to frame side of backplate.
- Secure unit to frame with six (6) screws.

Surface Class 2 Low Voltage Only:

- Secure unit to frame with six (6) screws.

- Mount conduit bracket (found in screw pack) to unit backplate with two (2) provided screws.
- Connect wiring conduit to bracket.


## Install Track and Arm


A. Mount track to door.

1. Using previously prepared holes in door, install three (3) 1/4-20 x 1-5/8" screws through track and into sex bolts. (Figure 6)

NOTE: (Figure 7)

- Opening of track is toward top of door.
- Adjustable bumper stop is toward hinge edge of door.



## B. Assemble arms.

1. Insert slide arm rod into slide arm tube. Distance between pinion square and slide stud is 13-1/2" (343mm). (Figure 8)
2. Install 9/64" socket head screw included in screw pack.

NOTE: Center threaded hole of slide arm should align with seventh hole of slide tube. Stud in slide arm should point to same side as holes in slide tube.


## C. Install arm assembly to operator.

1. Open door.
2. Using an adjustable wrench, rotate top pinion 45 degrees toward door hinge. You will feel resistance from spring. (Figure 9)
3. While holding pinion at 45 degrees, slide arm on bottom pinion.

NOTE: Pinion flat should be aligned as shown. (Figure 10)
4. Secure main arm to pinion with $1 / 4-20 \times 1 / 2^{\prime \prime}$ screw.
5. Insert stud on arm into slider in track then press clip on backside of slider onto stud. (Figure 11)
6. To adjust track stop:

- Use allen wrench to loosen set screw in bumper stop.


Figure 9


Figure 8

- Open door to full open position.
- Slide bumper stop until it just touches end of slider.
- Tighten set screw in bumper stop so bumper will stay in position. (Figure 12)


Figure 10



## Figure 12

## Prepare Frame and Door for PUSH Side Installation

Become familiar with operator components and fasteners. It is recommended that components remain in box until installed. Verify there is minimum ceiling clearance for operator installation before proceeding. (Figure 13)

## A. Prepare frame.

1. Verify frame reveal width is $2-5 / 8^{\prime \prime}-6-3 / 4$ " (67171 mm ). (Figure 13)

NOTE: If frame reveal is less than 3 " ( 76 mm ), arm adjusting rod can be field cut to 9-1/2" ( 241 mm ) measured from centerline of connecting link bushing assembly.
2. Determine if push or pull and if left hand or right hand installation. (Figure 14)


NOTE: These steps are for PUSH side only. See page 5 for PULL side installation.
3. Frame header MUST be flat / without twists. Backplate of operator can be used as reference.

NOTE: If frame is not flat or is twisted, an additional steel back plate or shimming is required. Failure to mount unit properly can result in improper function of operator or inability to snap on cover.
4. Using template on page 20, prepare six (6) holes for 1/4-20 machine screws or $14 \times 2-3 / 4$ " wood screws. Blind rivet nut (by others) is suggested
 for unreinforced hollow metal or aluminum frames. (Figure 15)
5. For concealed Class 2 Low Voltage:

Prepare one (1) 7/8" (22mm) diameter hole for conduit, for switch/ sensor wires.

NOTE:

- On new construction, this hole will generally be drilled by frame supplier at their shop or at time-of-install.
- Placement of receptacle (outlet)= max 15" (381mm) of power input end of operator (shaded area). (Figure 15)



## B. Prepare door for arm assembly.

1. Using template on page 20, locate and prepare two (2) 3/8" (9.5mm) holes in door for sex bolts. (Figure 16)

NOTE: Standard units are supplied with sex nuts and bolts for 1-3/4" ( 44 mm ) thick door. Sex nuts and bolts for other door thicknesses are available to order.


Figure 16 Left Hand Shown

## Install Operator



OR


## A. Remove cover from unit and set cover and screws aside.

## B. Mount unit to frame. (Figure 17)

NOTE: Select Concealed or Surface option.
Concealed Class 2 Low Voltage Only:

- Connect conduit to frame side of backplate.
- Secure unit to frame with six (6) screws.

Surface Class 2 Low Voltage Only:

- Secure unit to frame with six (6) screws.
- Mount conduit bracket (found in screw pack) to unit backplate with two (2) provided screws.
- Connect wiring conduit to bracket.


ASSA ABLOY

## Install Arm



## A. Mount forearm shoe to door.

1. Using previously prepared holes in door, install two (2) 1/4-20 x 1-5/8" screws through shoe and into sex bolts. (Figure 18)

NOTE: Orient shoe with short side of shoe toward hinge.

## B. Install main arm to operator.

1. Insert main arm onto pinion shaft of unit at $90^{\circ}$ angle to frame.
(Figure 19)


NOTE: Align arm mark " $S$ " with flat corner of pinion shaft square. (Figure 20)
2. Secure main arm to pinion with $1 / 4-20 \times 1 / 2$ " flange head screw.

## C. Preload arm.

1. Open door.
2. Remove $1 / 4-20$ hex head screw on forearm adjusting rod. (Figure 21)
3. Insert adjusting rod into adjusting tube. (Figure 21)
4. Reinstall 1/4-20 screw and leave loose.
5. Rotate main arm in direction away from hinge edge until adjusting rod and tube are perpendicular (at $90^{\circ}$ angle) to frame.
6. Tighten $1 / 4-20$ hex head screw on adjusting rod to secure arm in this new position.


Figure 19 View from ceiling looking downward


Figure 21 View from ceiling looking downward

## Adjustments

## A. Adjust mechanical closer features.

NOTE:

- Make necessary mechanical adjustments so unit functions as a standard surface mounted door closer before adjusting spring force, applying power, adding accessories or making electrical/programming adjustments.
- Refer to table for recommended minimum opening/closing times per ANSI/BHMA A156.19. (Figure 24)
- Use hex wrench to make adjustments.


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

1. Closing Speed Controls (Figure 22)

- Valve "S" controls Sweep Range from full open to $10^{\circ}$.
- Valve "L" controls Latch Range from $10^{\circ}$ to closed.

2. Opening Cycle (Figure 23)

- Valve "BC" controls strength of cushioning in Backcheck Range.

!NOTE: Too much backcheck can affect operation of unit pump, preventing full open of door. This valve may require fine tuning after all other adjustments have been made.

## B. Adjust spring force.

note:

- The amount of effort to manually open or close a door is called force and is controlled by the operator's closer spring.
- Make necessary mechanical adjustments described in "A" above.
- A closer set to ADA required 5 lbs opening force may not be strong enough to close door due to latching hardware, air pressure, or frame issues.


Figure 25

1. Using $1 / 8^{\prime \prime}$ hex wrench, turn power adjustment screw clockwise to increase door closing power. (Figure 25)

NOTE: Door control is shipped set at midpoint of power setting. Maximum closing power can be achieved with $8\left(360^{\circ}\right)$ clockwise turns of power adjustment screw.

## ASSA ABLOY

## Input Power Configurations

1. Thread conduit fitting into backplate.

Concealed Wiring (Figure 26)
Surface Wiring (Figure 27)

## NOTE:

- This conduit fitting is for low voltage control wiring only.
- Check local codes.

2. Pull conduit out of header and attach to conduit fitting before mounting unit.
3. After installing operator, attach low voltage wiring as illustrated. (Figure 27)

NOTE: Ground wire must be secured to backplate under head of (green) ground


Figure 26 screw.



WARNING: HOT and COM of T1 Terminal Block are factory use for incoming power ONLY. These are not to be handled in the field.


## Final Electrical and Mechanical Setup

1. Confirm all mechanical adjustments have been made and wiring connected.
2. Turn on facility's main circuit breaker.
3. Turn on power at On/Off switch and flip breaker switch to "RESET". (Figure 29)
4. Using a short jumper cable, jump terminals 1 and 2 to activate unit. When door reaches $20^{\circ}$, flip Breaker Switch to "OFF" position cutting power to unit. Allow door to fully close (door may be manually pulled closed). (Figure 30)
5. Adjust Closing Position Magnet (Figure 31)

- With door in closed position, use finger to slide Closed Position Magnet so it aligns directly with Reed Switch.

6. Adjust Open Position Magnet - Use fingers to slide Open Position Magnet $180^{\circ}$ from Open Position Magnet.
7. Flip Breaker Switch to "RESET" to turn power on.
8. Jump terminals 1 and 2 to activate door. Note open position of door. Allow door to close.
9. Use finger to readjust Open Position Magnet to desired door open position.
10. Repeat Step 7 to verify door open position.
11. Make all connections necessary for any accessories to 4-position Accessory Terminal. See Wiring Section.
12. Make necessary adjustments to inverter. See Inverter Details Section.


Figure 30


WARNING: 120VAC power supplied to operator must be a dedicated circuit from the main circuit breaker panel and must NOT be connected into any building lighting system that operates fluorescent lights.

## Attach Cover to finalize installation

1. Align cut-outs in cover to pinion shafts.
(Figure 32)
2. Slide cover onto unit.

NOTE: Verify all wiring and sheet metal guards are inside cover.
3. Secure cover to backplate with cover screws.

NOTE: If cover will not securely install onto unit, verify backplate is not warped or twisted. Additional support or shimming may be required. See Sections A \& B under Prepare Frame and Door.


Figure 32

## A

WARNING: Make sure no wiring is loose or can be caught by cover when it is snapped into place.

## Inverter Details



Inverter Adjustments:
Use table to determine which POT to adjust based on function.

| POT | Description | Function |
| :---: | :--- | :---: |
| M/DLY | Motor Delay on Opening | Clockwise: <br> Increase |
| OBSTR SENS | Obstruction Detection on <br> Open |  |
| P1 | Closing Speed | Hold Open Time (5-30 Secs) |
| H/O TM | Holor Torque at Hold Open |  |
| H/O TQ | Motor <br> Position | Ppening Speed |



WARNING: 120 high volt potential present.
Make sure power is turned off during installation procedure.

## Standard Function With Switches

## Operation:

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


## NOTE:

1. Power input to Door Operator Unit is at "T1" Power Input Terminal (not shown) 120VAC 60 Hz .
2. Door must be visible by person operating activation switch(es).


## Radio Frequency Function Option

Operation:

- Door is normally closed.
- Activating wireless switch or hand held wireless transmitter will open door.
- Door will close after hold open time delay has elapsed.

NOTE:

1. Power input to Door Operator Unit is at "T1" Power Input Terminal (not shown) 120VAC 60 Hz .
2. Radio Frequency feature is purchased as a separate kit.
3. Door must be visible by person operating activation switch(es).


# Fail Safe Electromagnetic Lock 24VDC Wiring 

## Operation:

- Door is normally closed and latched.
- Activating switch will cut power to mag lock and door will automatically open.
- Door will close after hold open time delay has elapsed.
- Door will unlock during power failure.


## NOTE:

1. Power input to Door Operator Unit is at "T1" Power Input Terminal (not shown) 120 VAC 60 Hz .
2. Unit Relay Rating: 30VDC @ 1A or 125VAC @ .5A
3. Door must be visible by person operating activation switch(es).

Jumper Settings:
Place jumper to upper position for normally closed operation or to lower position for normally open operation.


## Fail Secure/Fail Safe Electric Strike Wiring

## Operation:

- Door is normally closed and latched.
- Activating switch will unlock electric strike and door will automatically open.
- Door will close after hold open time delay has elapsed.
- For Fail Secure Strike - door will remain locked during power failure.
- For Fail Safe Strike - door will remain unlocked during power failure.


## NOTE:

1. Power input to Door Operator Unit is at "T1" Power Input Terminal (not shown) 120 VAC 60 Hz .
2. Unit Relay Rating for strike interface: 30VDC @ 1A or 125VAC @ .5A
3. Door must be visible by person operating activation switch(es).

Jumper Settings:
Place jumper to upper position for normally closed operation or to lower position for normally open operation.


## 433MHz Receiver User's Guide



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

0.5 second Pulse Setting



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

## NOTE:

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


## Hand-Held Configuration

1. Set dip switches to receiver to desired activation cycle (dip switch 1 - Toggle or Pulse and dip switch $2-0.5$ s or 10 s hold).
2. Press either Learn w/ Delay Button or Learn w/o Delay Button on receiver depending on 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 ( $0-30 \mathrm{sec}$ ).
3. Depress transmitter button repeatedly until Blue LED on receiver illuminates (indicating reception of signal from transmitter).
NOTE: Repeat Steps 2-3 to program additional transmitters.
4. To test system, depress transmitter button (Red LED on Transmitter will illuminate) and observe that Blue LED illuminates on receiver. This indicates that relay has been activated.

## Push Plate Configuration

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

## 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 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).

| Problem | Troubleshooting |
| :--- | :--- |
| Solution |  |
| LED on receiver is flickering - unable to <br> program and/or won't work | Push plate stuck or faulty transmitter. Disconnect each push plate until LED goes <br> out. If LED does not go out, remove each transmitter battery until it does. Replace <br> appropriate transmitter. |
| Receiver intermittently doesn't receive <br> transmitter(s) signal. | Extend receiver antenna wire only in multiples of 6-3/4" (171) <br> Example: 6.75 $\times 4=27 "(686)$ of extended antenna wire. |

Troubleshooting Guide

| Problem | Possible Reasons Why | Solution |
| :---: | :--- | :--- |
| The door does not open <br> - The motor does not start | Control switch is set to OFF position | Change the setting of the ON/OFF switch |
|  | Electrical power is missing breaker is set to OFF position | Reset circuit breaker to the ON position |
|  | Activation unit does not function | Check the electrical power switch |
|  | Motor is driving in wrong direction | Flip Door Mounting dip switch to other direction |
|  | Something jammed beneath the door | Remove object |
|  | Arm has come loose | Re-time and re-install arm. |
| The door does not close | Arm has come loose | Increase spring tension |
|  | Spring tension too low | Re-time and re-install arm |
|  | Something jammed beneath the door | Remove object |

## 5700P Series Power Operator PULL Template

4
Right hand door opening to $110^{\circ}$ shown.
PULL side application is shown.
PUSH side mounting template is provided on page 20.


- Do not scale drawing.
- Right hand door shown.
- All dimensions given in inches (mm).
- Maximum frame reveal is $1 / 8$ " $(3 \mathrm{~mm})$ for this application.

Notes:

1. Thickness recommended for reinforcements in hollow metal doors and frames is charted on page 4.
2. This template information based upon use of 5 " ( 127 mm ) maximum width butt hinges or $3 / 4^{\prime \prime}$ offset pivots. A separate template is required for other conditions.
3. Shaded area $=15$ " $(381 \mathrm{~mm})$ maximum distance for placement of power input receptacle.
4. Door must be visible by person operating activation switch(es).


## 5700P Series Power Operator PUSH Template

ASSA ABLOY

4Left hand door opening to $110^{\circ}$ shown.
PUSH side application is shown.
PULL side mounting template is provided on page 19.


- Do not scale drawing.
- Left hand door shown.
- All dimensions given in inches (mm).
- Frame reveal is $2-5 / 8^{\prime \prime}-6-3 / 4^{\prime \prime}(67-171 \mathrm{~mm})$ for this application.

Notes:

1. Thickness recommended for reinforcements in hollow metal doors and frames is charted on page 4.
2. This template information based upon use of 5 " ( 127 mm ) maximum width butt hinges or $3 / 4^{\prime \prime}(19 \mathrm{~mm})$ offset pivots. A separate template is required for other conditions.
3. Shaded area $=15$ " $(381 \mathrm{~mm})$ maximum distance for placement of power input receptacle.
4. Door must be visible by person operating activation switch(es).

| Door Opening Angle | $\operatorname{Dim} A$ | Dim B |
| :--- | :--- | :---: |
| Up to $110^{\circ}$ | $12^{\prime \prime}(305 \mathrm{~mm})$ | $15-3 / 4^{\prime \prime}(400 \mathrm{~mm})$ |
| $111^{\circ}$ to $170^{\circ}$ | $9-1 / 2^{\prime \prime}(241 \mathrm{~mm})$ | $13-1 / 4^{\prime \prime}(337 \mathrm{~mm})$ |

