

# Installation Instructions



## Trident TEL-220

### Trident Series Models

**Use with Series:** Trident Series Models.

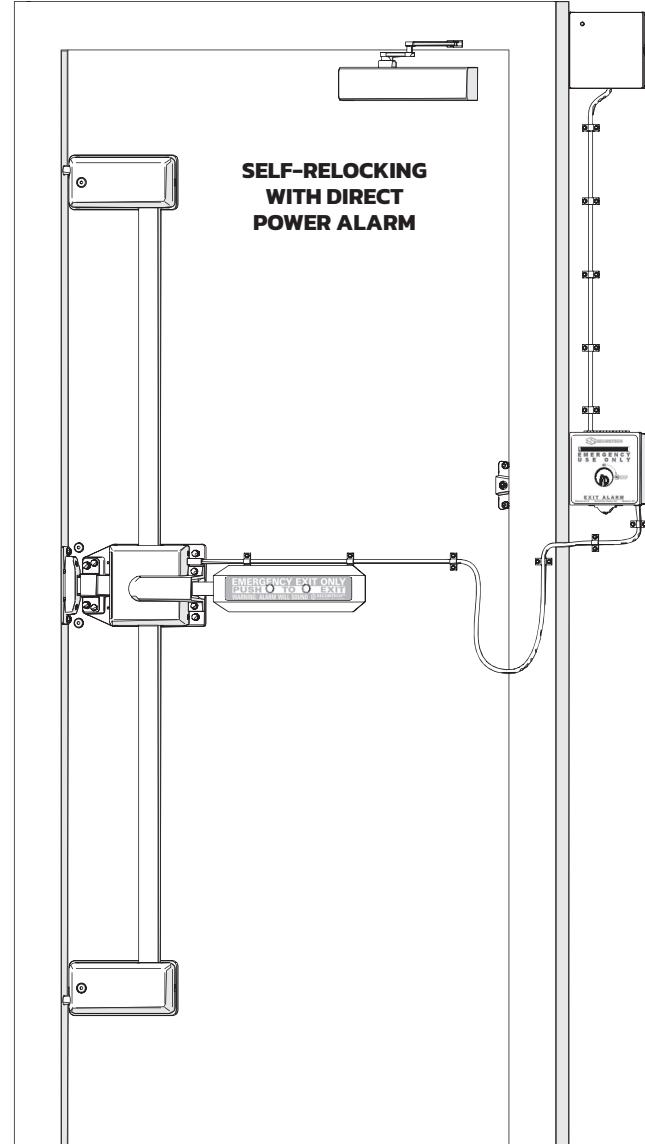
#### Tools Required:

- Hex key (#5mm)
- Phillips head screw drivers
- Nut drivers
- Drill with drill bits\*
- \*see templates for all sizes of drill bits needed
- Water level
- Marking putty, grease pencil or equivalent

**Damage caused by misuse of power tools is not covered under Warranty.**

Before beginning the installation:

- Check that everything in the parts list was received. Parts received may be slightly different from parts shown in instructions. Please refer to packing list for details on parts and fasteners received.
- Read all of the installation instruction steps.



#### ⚠️ 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](http://www.P65warnings.ca.gov).

#### ⚠️ WARNING

Attention Installer: Improper installation may result in damage to the product and void the factory warranty. **Damage caused by misuse of power tools is not covered under warranty.**

**Table of Contents:**

Packing List: TEL:220 .....	3
A TEL-220 Overview .....	6
B. Door Preparation .....	7
C. Exterior Trim Installation (Optional) .....	9
D. Mechanism Installation .....	10
E. Top & Bottom Bolt Modules Installation .....	10
F. Main Strike Installation .....	11
G. Marking & Drilling Frame for Top & Bottom Bolts .....	12
H. Paddle Installation .....	12
I. Channels and Module Covers Installation .....	12
J. Hinge Side Bolt Installation .....	13
K. Direct Power Alarm Theory of Operation .....	13
L. Connecting Power Supply to Alarm Box .....	14
M. Alarm Control Cylinder Installation .....	14
N. Connecting Alarm Cable to Alarm Box .....	15
O. Mounting The Alarm to The Wall .....	15
P. Mounting The Power Supply to The Wall .....	16
Q. Fastening the Armored Cable To The Wall & Door .....	16
R. Powering Up & Arming .....	17
S. Operating Instructions – Disarming the Alarm .....	18
T. Operating Instructions – Arming the Alarm .....	18
U. Operating Instructions – Last Door Out (LDO) Function .....	18
V. Operating Instructions – Changing the Batteries .....	19
W. Troubleshooting – Alarm cannot be armed .....	20
X. Removing the Alarm Cable .....	20
Y. Installation Checklist .....	22
Z. Operating Instructions .....	23
AA. Maintenance Information .....	24
AB. Reinforcement Templates .....	25

**MAKE LIFE EASY. READ THROUGH THE ENTIRE INSTALLATION INSTRUCTIONS FIRST.**

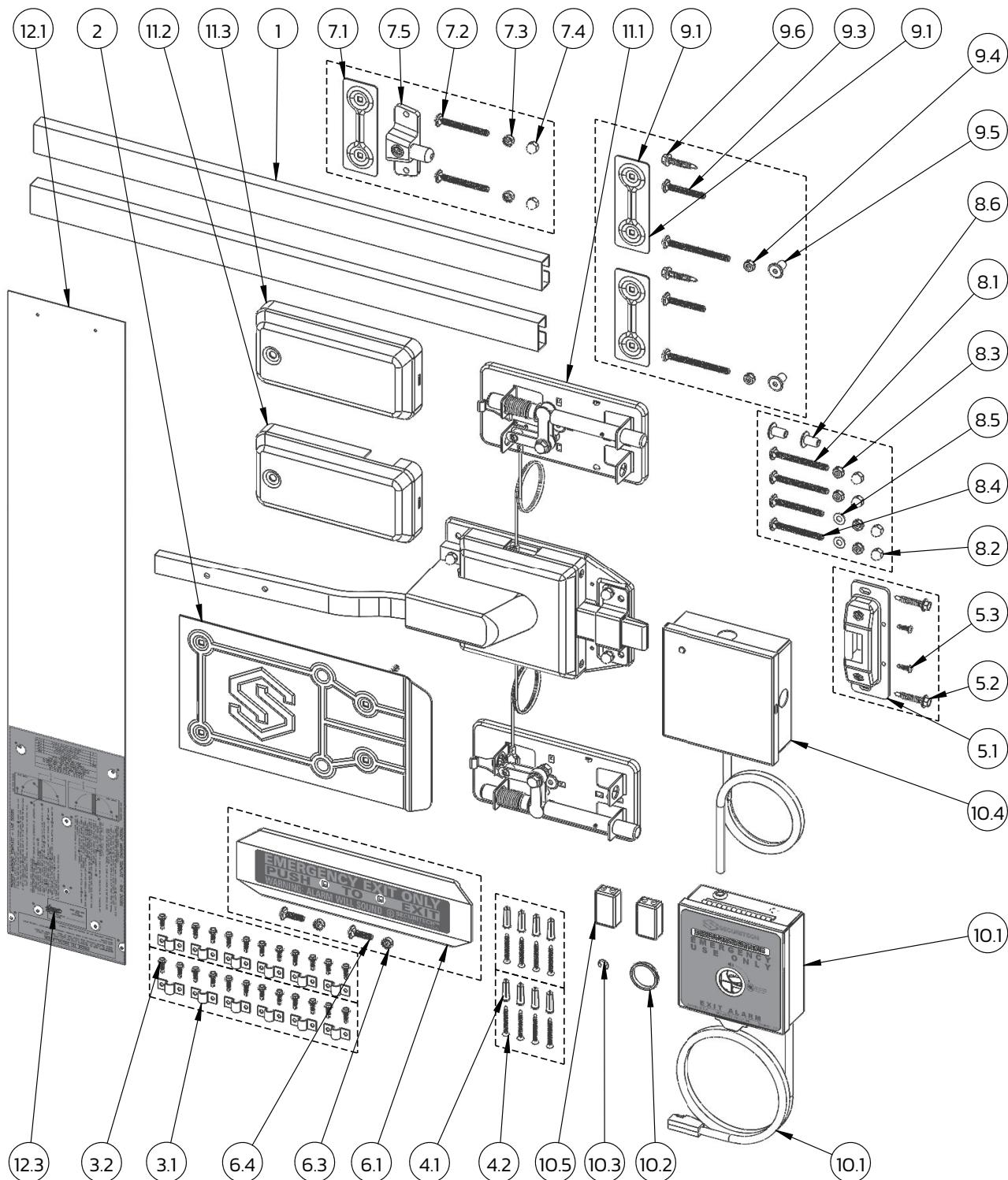
- A. Before attempting to install this device make sure that door frame is square and plumb, door is not sagging, and clearances between door and frame are within acceptable tolerances per standards corresponding to door type.
- B. Make sure any exposed holes left from previous hardware are completely covered after installation.
- C. Lock edge of door needs to be free of insulation, debris, and weather stripping. Remove any weather stripping on the door or frame.
- D. Make all door adjustments before starting the lock installation.
- E. Remove all burrs. All holes must be smooth.
- F. Insert material into the mortise opening to prevent collapsing or squeezing.

**TEL-200 SERIES SELF-LOCKING TRIDENTS REQUIRE A DOOR CLOSER TO BE INSTALLED.**

 **If installing on double door, refer to the TEL-IAL/IAT instructions now.**

**PACKING LIST: TEL-220**

DOCUMENT NUMBER: A00057-09-689 REV: C (07-18-24)

**ASSA ABLOY**


**NOTE: FOR MODELS WITH KEYED LEVER TRIM, ITEMS 2 AND 8 ARE REPLACED BY TRIM ANTI-PRY PLATE AND FASTENERS**

SHEET: 1/2

**PACKING LIST DETAILS****LEVER:** N/A**HANDING:** 09 [LHR/RHR]**DOOR TYPE:** HOLLOW METAL**FINISH:** 689 [Aluminum Painted Any US29]

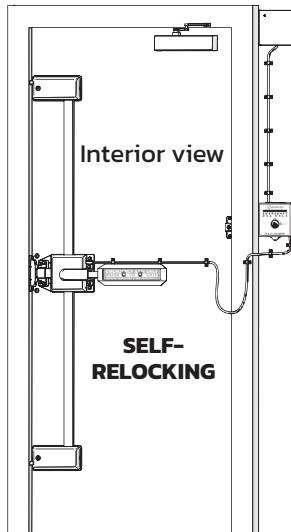
ITEM	PART NUMBER	DESCRIPTION	QTY
1	100798-01-150	WIRE CHANNEL, TRIDENT	2
2	101593-01-000	ANTI-PRY PLATE ASSEMBLY, LARGE, TEL	1
3	102850-10-000	HARDWARE KIT J, ARMORED CABLE BRACKETS AND SCREWS	2
3.1	102830-01-102	MOUNTING BRACKET FOR ARMORED CABLE	6
3.2	102592-01-102	#8 X 5/8", SELF DRILLING, HEX WASHER, HEX, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	12
4	102850-11-000	HARDWARE KIT K, ANCHORS AND SCREWS	2
4.1	102831-01-000	PLASTIC ANCHOR, #10 SCREW	4
4.2	102836-01-102	#8 X 1-1/2", SHEET METAL, TYPE AB, FLAT, PHILLIPS, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	4
5	102850-04-000	HARDWARE KIT D, STRIKE PLATE WITH FASTENERS	1
5.1	101144-01-000	MAIN STRIKE ASSEMBLY	1
5.2	102593-01-102	#1/4 X 1-1/2", SELF DRILLING, HEX WASHER, HEX, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	2
5.3	102609-01-102	#8 X 5/8", SHEET METAL, TYPE AB, PAN, PHILLIPS, ZINC PLATED, LOW CARBON STEEL	2
6	102850-05-000	HARDWARE KIT E, PADDLE	1
6.1	100172-01-146	PADDLE, 12 IN LENGTH, 4900, TRIDENT	1
6.2	101845-01-000	LABEL, RED STANDARD FOR PADDLE	1
6.3	101513-01-102	#1/4-20, K-LOCK NUT, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	2
6.4	101696-08-102	#1/4-20 X 1", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 2	2
7	102850-23-000	HARDWARE KIT G, HINGE SIDE BOLT	1
7.1	100756-01-114	THRU-BOLT PLATE, TRIDENT, 4900	1
7.2	101696-02-102	#1/4-20 X 2-1/2", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 5	2
7.3	101513-01-102	#1/4-20, K-LOCK NUT, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	2
7.4	101265-02-105	#1/4-20, ACORN NUT, SATIN NICKEL PLATED, LOW CARBON STEEL	2
7.5	100805-02-103	HINGE SIDE BOLT, SILVER PAINTED	1
8	102850-01-000	HARDWARE KIT A, ANTI-PRY PLATE FASTENERS	1
8.1	101696-01-102	#1/4-20 X 2-3/4", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 5	2
8.2	101265-02-105	#1/4-20, ACORN NUT, SATIN NICKEL PLATED, LOW CARBON STEEL	4
8.3	101513-01-102	#1/4-20, K-LOCK NUT, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	4
8.4	101696-02-102	#1/4-20 X 2-1/2", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 5	2
8.5	106287-01-102	.562 X .266 X .047 X FLAT WASHER, ZINC PLATED, LOW CARBON STEEL	2
8.6	100824-01-102	#1/4-20, T NUT, ZINC PLATED, LOW CARBON STEEL	2
9	102850-02-000	HARDWARE KIT B, TOP & BOTTOM THRU-BOLT PLATES	1
9.1	100756-01-114	THRU-BOLT PLATE, TRIDENT, 4900	2
9.2	101696-03-102	#1/4-20 X 3-1/4", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 5	2
9.3	101696-09-102	#1/4-20 X 2", BOLT, FULL THREAD, CARRIAGE, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL, GRADE 5	2
9.4	101513-01-102	#1/4-20, K-LOCK NUT, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	2
9.5	100824-01-102	#1/4-20, T NUT, ZINC PLATED, LOW CARBON STEEL	2
9.6	102593-01-102	#1/4 X 1-1/2", SELF DRILLING, HEX WASHER, HEX, CLEAR CHROMATE ZINC PLATED, LOW CARBON STEEL	2

**PACKING LIST: TEL-220**

DOCUMENT NUMBER: A00057-09-689

REV: C (07-18-24)

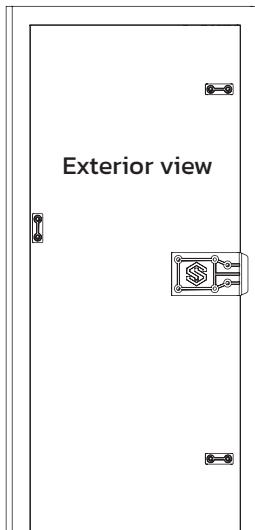
ITEM	PART NUMBER	DESCRIPTION	QTY
10	102867-01-000	TEL A20 SHIPPING ASSEMBLY, TEL 100/200	1
10.1	112022-11-000	TEL-A20 ALARM ASSY, TEL-100/200	1
10.2	100950-01-000	CYLINDER COLLAR NUT	1
10.3	101607-05-116	EXTERNAL, E - 31, 312 SHAFT, .025 THICK, RETAINING RING, PHOSPHATE COATING, LOW CARBON STEEL	1
10.4	102849-01-000	POWER SUPPLY PS 501, SHIPPING ASSEMBLY	1
10.5	102848-01-000	BATTERY, 9V	2
11	107119-01-FFF	FIELD REPLACEMENT ASSY WITH COVERS, TRIDENT SL	1
11.1	101527-01-FFF	FIELD REPLACEMENT ASSY, TRIDENT SL	1
11.2	100810-01-XXX	MODULE COVER, STYLE A, TRIDENT	1
11.3	100810-02-XXX	MODULE COVER, STYLE B, TRIDENT	1
12	102852-01-000	METAL MARKING TEMPLATE, TRIDENT, SHIPPING ASSY	1
12.1	100833-01-000	DOOR MARKING TEMPLATE, TRIDENT	1
12.2	101821-01-000	LABEL, TRIDENT METAL MARKING TEMPLATE	1
12.3	102609-01-102	#8 X 5/8", SHEET METAL, TYPE AB, PAN, PHILLIPS, ZINC PLATED, LOW CARBON STEEL	1

**A. TEL-220 Overview****Highest Level of Protection Against Forced Entry for Exit Doors**

Securitech's Trident™ has been protecting America's pharmaceutical and high end retail market since 2005 with thousands installed across the country offering the highest level of protection against forced entry with automatic deadbolt locking each time the door closes.

**Trident TEL-220 Features:**

- 4 standard locking points located at pry points
- Automatic self-locking: hitting the trigger in the main bolt extends all bolts, relocking the door each time it closes
- All moving parts are protected
- Stainless steel primary deadbolt with 1" throw
- Bolts project into the frame: 3 horizontal locking points on lock side and 1 bolt on hinge side Two 5/8" diameter auxiliary bolts with 1" throw, free-spinning to resist sawing
- Stainless steel anti-pry plate, thru-bolted at 6 locations
- Alarm signal is generated when the paddle is depressed
- An armored cable carries the wires across the door and it is connected to a 110v direct power alarm system
- No bolts in the floor to prevent potential jamming
- Door closer required, not included



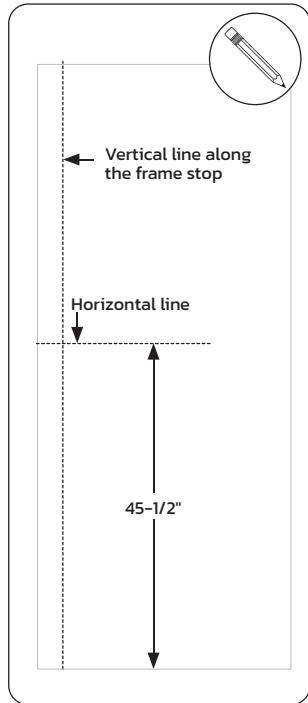
## B. Door Preparation

### 1.

Draw a vertical line along the entire length of the frame stop on the interior side of the door. Draw a horizontal line 45-1/2" from the bottom edge of the door. For double doors, draw the line at least 4" across to the inactive leaf.

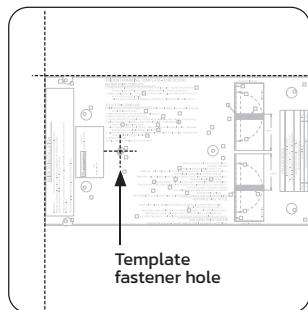
**Note: The Trident should always be installed at a height that meets applicable code.**

**Horizontal line position can be adjusted to allow mechanism to cover any existing holes on the door. For double doors, horizontal line position MUST be set at 45-1/2".**



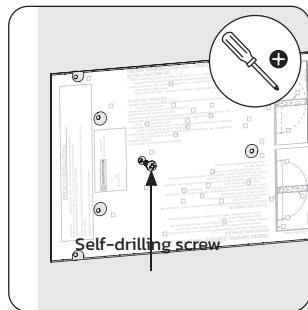
### 2.

Place the top corner of the metal marking template at the intersection of the horizontal and vertical lines. Make sure template is level. Mark hole for template fastener (hole D).



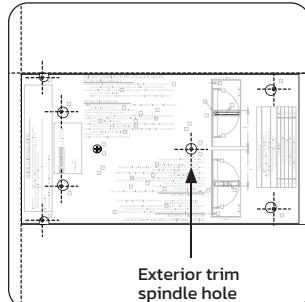
### 3.

Remove template and drill pilot hole. Fasten template loosely to door with (1) self-drilling sheet metal screw through hole D in metal template and into the door.



### 4.

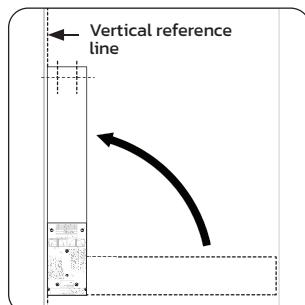
Align the top edge of the template with the horizontal line then mark 6 holes on lock edge and exterior trim spindle hole.



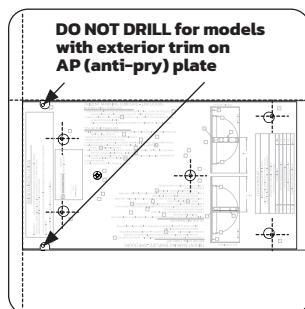
### 5.

Rotate template up vertically and mark top 2 holes. Rotate template down vertically and mark bottom 2 holes.

**Note: Make sure template is always aligned with vertical reference line when marking top & bottom holes.**



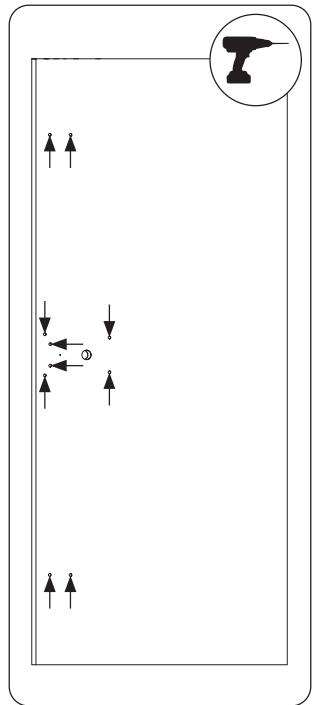
**⚠ Note: If mounting exterior trim on AP (Anti-Pry) plate, refer to separate trim template now. Do not mark or drill 2 indicated holes at door edge.**



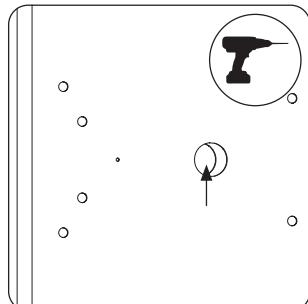
**6.**

Remove the template. Drill ten holes 3/8" diameter through the door.

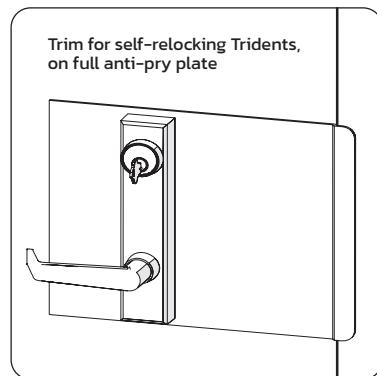
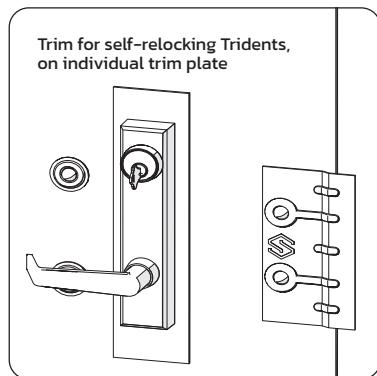
**Note: Make sure drill is level when drilling holes.**

**7.**

Drill 1-5/16" diameter hole through the door for exterior trim spindle or for future use even if not installing exterior trim at this time. The exterior anti-pry plate or exterior lever trim mounting plate will cover this hole.

**C. Exterior Trim Installation (Optional)****1.**

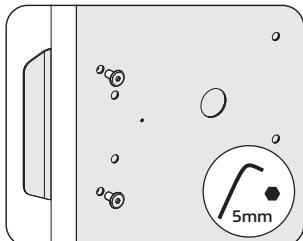
Install exterior lever trim as per separate instructions at this time. Exterior entry trim can be added to the Trident model in field.



## D. Mechanism Installation

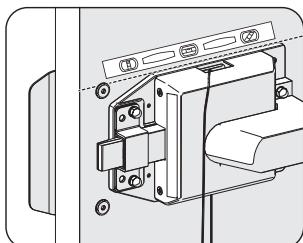
**1.**

Fasten the anti-pry plate with (2) T-nuts. Do not tighten completely.



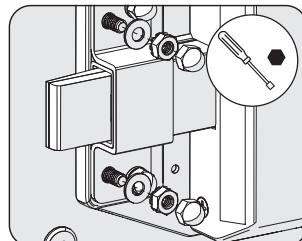
**2.**

Align the top of the mechanism with the horizontal reference line. Use a level to ensure the mechanism is level.



**3.**

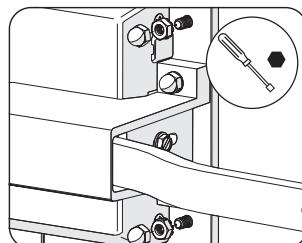
Fasten mechanism with (2) 2-3/4" long carriage bolts, (2) flat washers, (2) K-lock nuts and (2) acorn caps on lockside holes.



**4.**

Fasten mechanism with (2) 2-1/2" long carriage bolts, (2) K-lock nuts and (2) acorn nuts on hingeside holes. Tighten T-nuts completely.

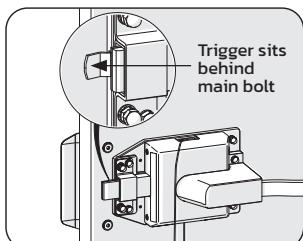
**Note: Do not overtighten. A compressed door can cause the mechanism to fail.**



## E. Top & Bottom Bolt Modules Installation

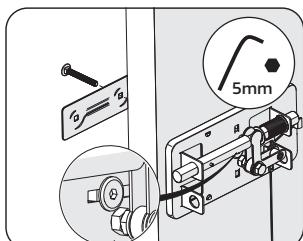
**1.**

Extend main bolt by pressing trigger.



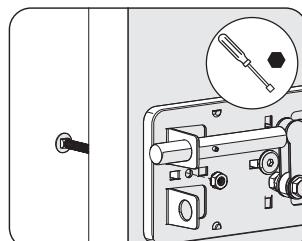
**2.**

To install top bolt module, fasten (1) 2" carriage bolt through the thru-bolt plate with (1) T-nut. Fasten loosely.



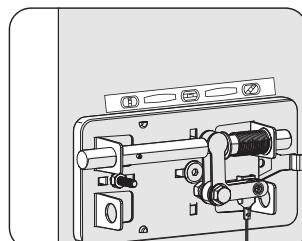
**3.**

Secure (1) 3-1/4" carriage bolt on lock edge opening with (1) K-lock and fasten loosely.



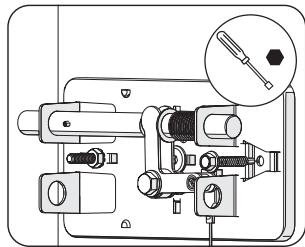
**4.**

Use level to ensure bolt module is level. Tighten T-nut and K-lock nut securely.



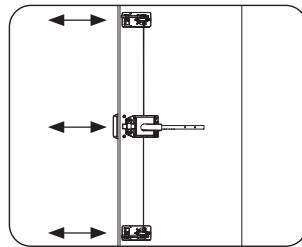
**5.**

Secure module with (1) self-drilling screw.

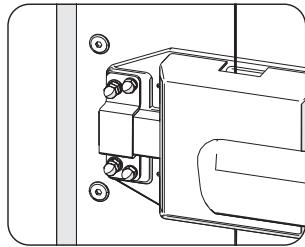
**6.**

Repeat steps for bottom module.

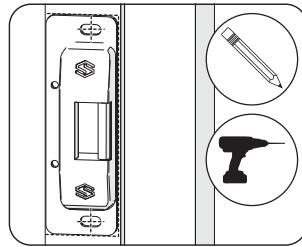
Check for smooth operation by pressing trigger and pushing paddle arm. Make sure bolts extend past vertical reference line.

**F. Main Strike Installation****1.**

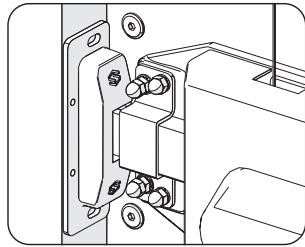
Retract the bolt by pressing the paddle arm. Close the door.

**4.**

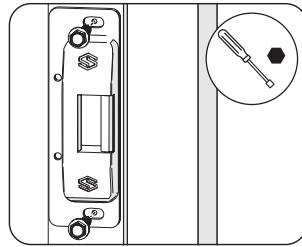
Mark centers of oval mounting holes at top and bottom of strike plate. Remove the strike plate. Drill 1/8" diameter pilot holes at center marks.

**2.**

Hold the strike plate against the frame with roller facing towards the exterior. Extend bolt and center in strike box. Top of bolt should be approximately 1/8" from top of strike opening.

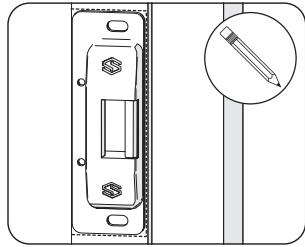
**5.**

Fasten strike to door with (2) self-drilling screws. Test the operation and adjust the position of strike, as necessary.

**3.**

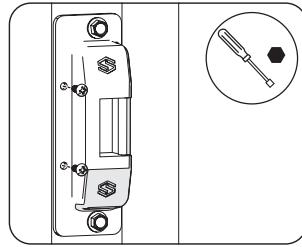
Trace the outline of strike box on frame. Open door and align strike in outline.

**Note: Make sure strike is level.**

**6.**

After final adjustment, secure strike with (2) pan head screws.

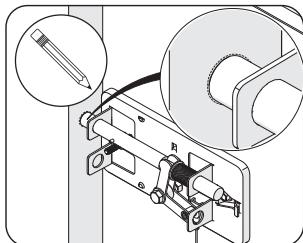
**Note: Make sure that the main deadbolt is centered in the strike before securing these screws.**



## G. Marking and Drilling Frame for Top and Bottom Bolts

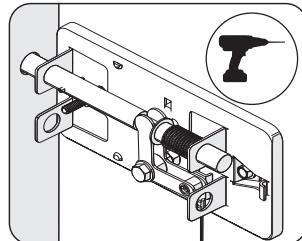
### 1.

Close the door and extend the bolts until horizontal bolts hit the frame stop. Keeping the door pulled against the frame stop, trace the outline of the top and bottom bolts. Open the door and mark the centers of the holes.



### 2.

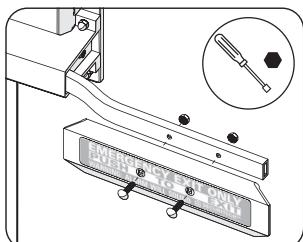
Drill 7/8" hole, starting with 1/8" and working up. Smooth the hole and remove any burrs. Test the bolts operation and make sure that they are not rubbing against hole or binding in any way. If needed, grind or enlarge side of the hole that is rubbing against bolt.



## H. Paddle Installation

### 1.

Fasten the paddle to the paddle arm with (2) carriage bolts and (2) K-lock nuts.

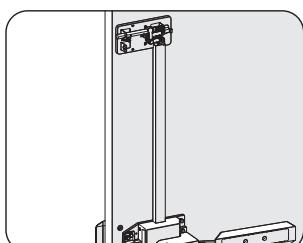


## I. Channels and Module Covers Installation

### 1.

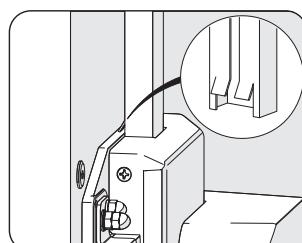
Slide upper channel into lock body, center on cable.

**Note: When installing exterior trim, install channels last.**



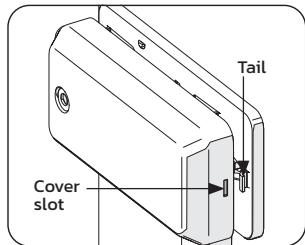
### 2.

The two tabs at the end of channel should rest on the main mechanism mounting plate.

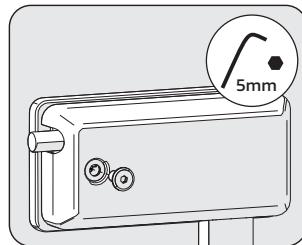


**3.**

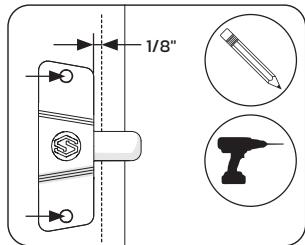
Place cover over module and channel. Make sure tail fits into cover slot.

**4.**

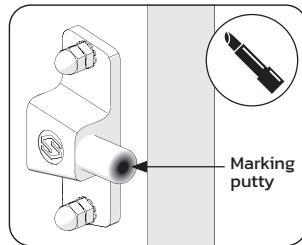
Insert (1) T-nut and fasten until secure. Repeat steps to install channel and cover for lower bolt module. Test operation, all bolts must operate smoothly.

**J. Hinge Side Bolt Installation****1.**

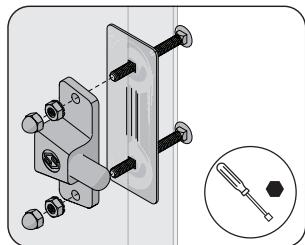
With door closed, mark frame stop on door. Height should be approximately 50" from floor (height can vary). Open door and position the hinge side bolt 1/8" from frame stop line. Mark and drill two 1/4" holes through the door at the indicated positions.

**3.**

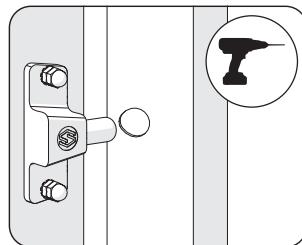
Mark the tip of the bolt with marking putty. Close the door just enough for the putty to leave a location mark on the frame.

**2.**

Secure the hinge side bolt to the door with thru-bolt plate, (2) carriage bolts, (2) K-lock nuts and (2) acorn nuts.

**4.**

Drill 3/4" hole, starting with 1/8" and working up. If needed, make the hole egg-shaped toward exterior to prevent bolt from rubbing. Smooth the hole and remove any burrs. Test the bolt operation and make sure that it is not rubbing against hole or binding in any way.

**K. Direct Power Alarm Theory of Operation**

The TEL-A20 wall alarm is a directly powered alarm with battery backup for single doors with Trident locks installed.

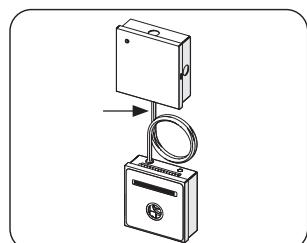
The alarm is triggered when the lock is opened or the alarm unit is tampered with.

The alarm can only be armed and disarmed by key.

Optional Last Door Out (LDO) functionality allows a 20 second delay when arming in order to exit.

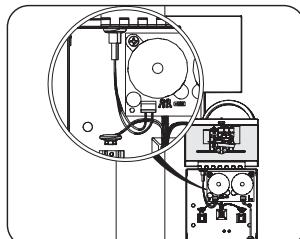
## L. Connecting Power Supply to Alarm Box

The power supply may already be installed on received unit. If so, skip this section and move onto instructions for installing the cylinder.



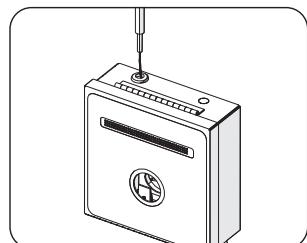
**2.**

Insert stripped wires into the screw terminal indicated and screw down to secure. Polarity does not matter.



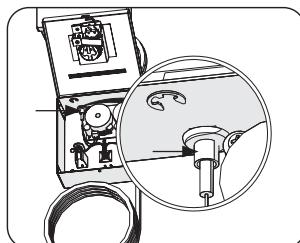
**1.**

Insert the side of the cable with loose wire ends into the rubber grommet on the top-left of the alarm box.



**3.**

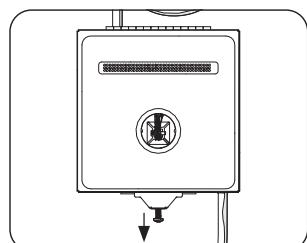
Leaving a small amount of slack in the wires, attach e-clip as shown around the armored cable so it cannot be pulled out.



## M. Alarm Control Cylinder Installation

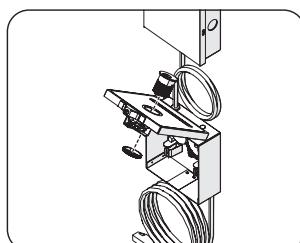
**1.**

Using a Phillips-head screwdriver, unfasten the anti-tamper screw until it spins freely. Do not remove the screw completely.



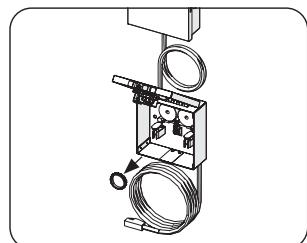
**3.**

Insert the cylinder into the hole in the lid as shown, secure with locking ring.



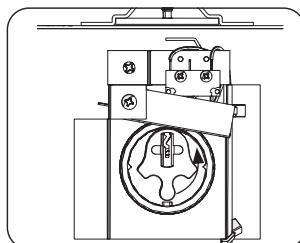
**2.**

Lift the lid and retrieve the cylinder locking ring from inside.



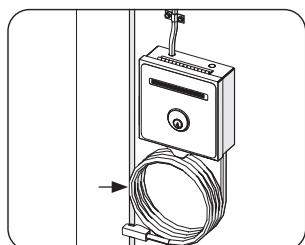
**4.**

Check that the cam on the back of the cylinder depresses the arm and actuates the switch below when turning the key to disarm.

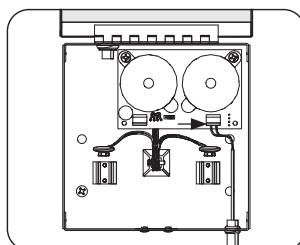


**N. Connecting Alarm Cable to Alarm Box**

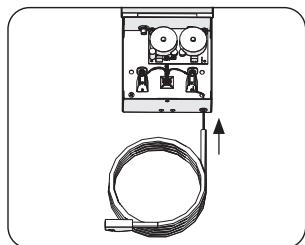
The alarm cable may already be installed on received unit. If so, skip this section and move onto instructions for fastening the armored cable to the wall and door.

**2.**

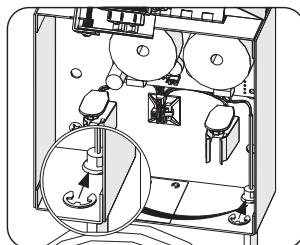
Insert stripped wires into screw terminal indicated and screw down to secure. Polarity does not matter.

**1.**

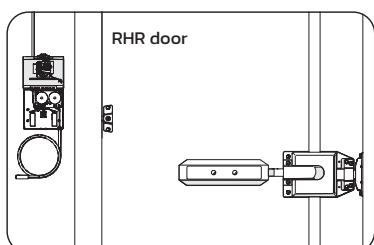
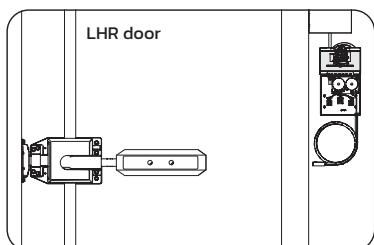
Insert the side of the cable with loose wire ends into the rubber grommet on the bottom-right of the alarm box.

**3.**

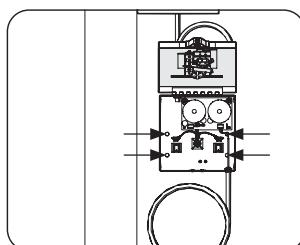
Leaving a small amount of slack in the wires, attach e-clip as shown around the armored cable so it cannot be pulled out.

**O. Mounting the Alarm to the Wall****1.**

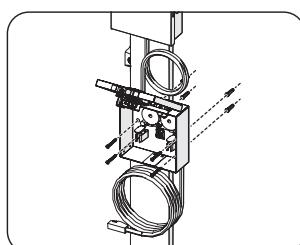
On the hinge side of the door, position the alarm box against the wall as shown. The bottom of the box should be approximately 3" above the top of the lock.

**2.**

Using the indicated holes in the back of the alarm box after positioning, mark the locations to pre-drill holes for mounting hardware.

**3.**

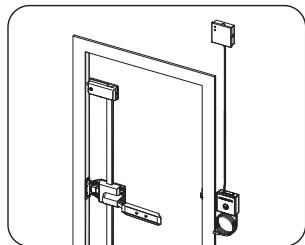
Mount the box using the hardware appropriate for the installation surface. Mounting screws and anchors are provided.



## P. Mounting the Power Supply to the Wall

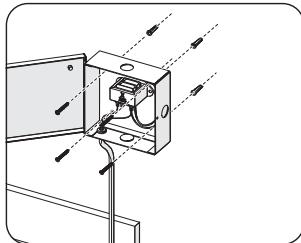
**1.**

Directly above the mounted alarm box, position the power supply box so that it is as high as the armored cable will allow. A 4-foot power cable is provided with the power supply.



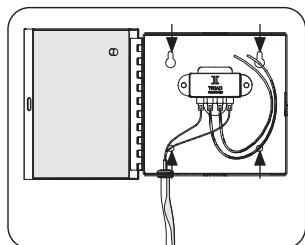
**3.**

Mount the power supply using the hardware appropriate for the installation surface. Mounting screws and anchors are provided.



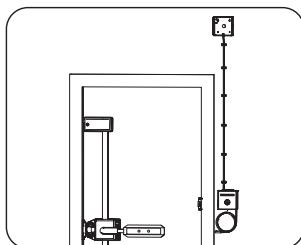
**2.**

Using the indicated holes in the back of the alarm box after positioning, mark the locations to pre-drill holes for mounting hardware.

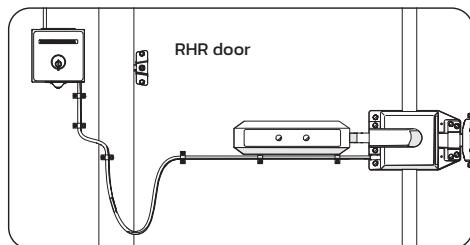
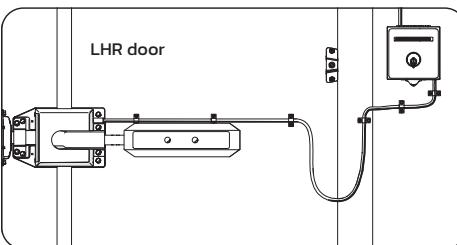
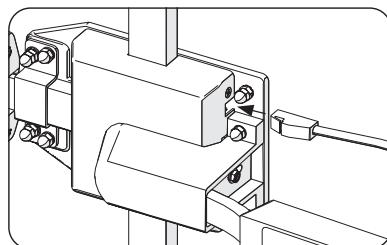


**4.**

Using included cable clips secure the armored cable to the wall as shown.



## Q. Fastening the Armored Cable to the Wall & Door



**1.**

Plug the armored cable into the hole in the edge of the lock as shown. (LHR is shown, on RHR installations the hole will be on the bottom left of the lock). Once inserted, this cable can be difficult to remove from the lock. See the section on removing the armored cable for instructions.

**2.**

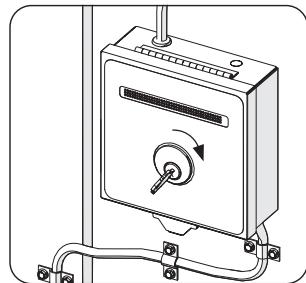
Using included cable clips secure the armored cable to the wall, frame, and door as shown. Leave an approximately 10" loop of loose armored cable between the frame and door.

**3.**

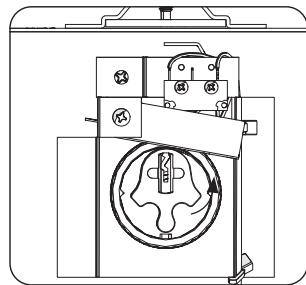
Test that the door will open and close without pulling or pinching the armored cable.

**R. Powering Up & Arming****1.**

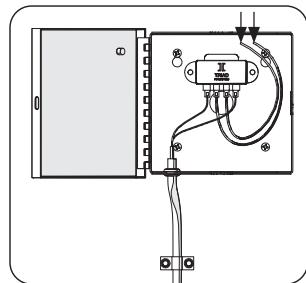
Insert the key and turn clockwise until it stops. Leave the key inserted and open the lid (Unscrew the anti-tamper screw on the bottom of the lid until it spins freely if it's not already loose).

**2.**

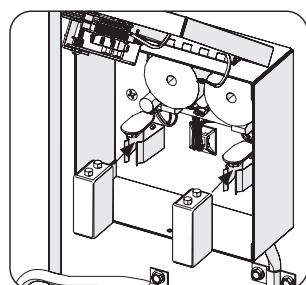
Check that the cam on the back of the cylinder depresses the arm and actuates the switch below when turning the key to disarm.

**3.**

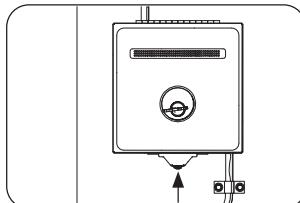
Connect the power supply to external 120VAC power using the indicated black and white wires with provided wire nuts. Close the power supply and secure with provided screw.

**4.**

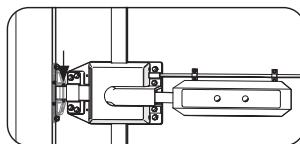
Fasten the anti-pry plate with (2) T-nuts. Do not tighten completely.

**5.**

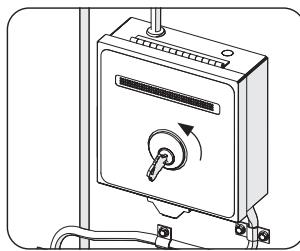
Close the lid and screw the anti-tamper screw all the way in. Do not overtighten.

**6.**

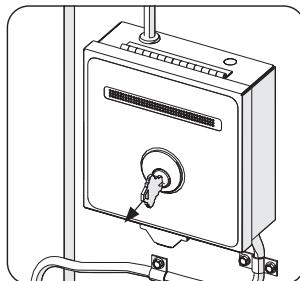
Make sure the deadbolts on the Trident lock are fully extended.

**7.**

Turn the key counter-clockwise to the center. The alarm will sound twice (many mistake this for the alarm failing to arm, wait until it sounds twice).

**8.**

If the alarm continues to sound more than 2 times, insert the key and turn clockwise to disarm and see the troubleshooting section. If it stops then the alarm is armed and the installation is finished and the key can be removed.

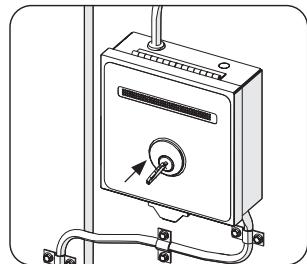
**9.**

Test the alarm by opening the door when armed. Teach the customer how to use the alarm. Place these instructions inside the alarm box or give to the customer.

## S. Operating Instructions - Disarming the Alarm

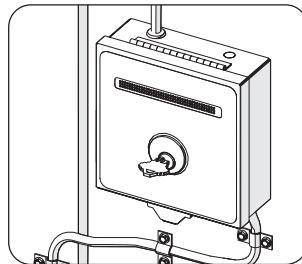
**1.**

To disarm the alarm, insert the key and turn clockwise until it stops. The key must remain in this position while the alarm is disarmed.



**2.**

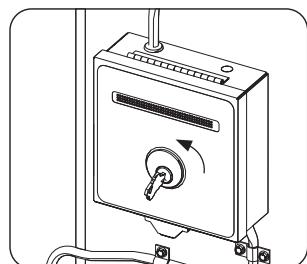
If the alarm sounds when disarming, the battery voltage may be critically low. Follow instructions for changing the batteries.



## T. Operating Instructions - Arming the Alarm

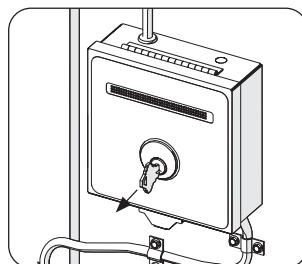
**1.**

Turn the key counter-clockwise to the center. The alarm will sound twice (many mistake this for the alarm failing to arm, wait until it sounds twice).



**2.**

If the alarm continues to sound more than 2 times, insert the key and turn clockwise to disarm and see the troubleshooting section. If it stops then the alarm is armed and the key can be removed.

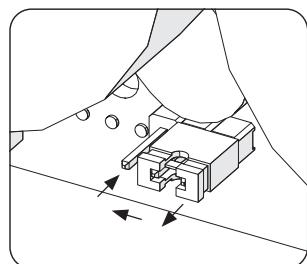


## U. Operating Instructions - Last Door Out (LDO) Function

The Last Door Out (LDO) feature is available on all Trident alarms. This function delays the arming of the alarm 20 seconds to allow exiting without tripping the alarm.

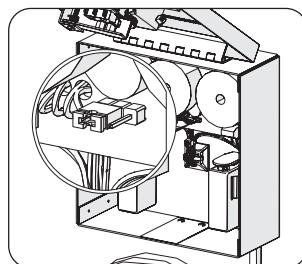
**1.**

To turn on the LDO delay, turn off external power and disconnect batteries. Wait 30 seconds for power to dissipate and move the indicated jumper marked "DELAY" from the right and middle pins onto the left and middle pins. Reconnect external power and batteries. Be careful not to pull on battery terminal wires.



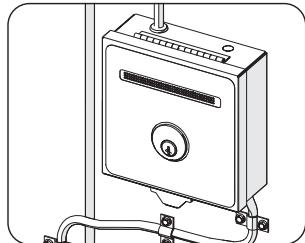
**2.**

To use the alarm with the LDO delay active, arm as usual. Before the alarm sounds twice, it will chirp more quietly 18 times, once per second. Exit during this time and the alarm will not sound and will arm after the time has elapsed.

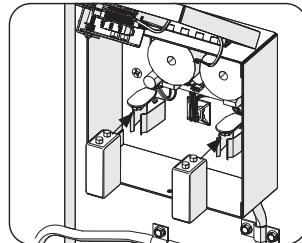


**V. Operating Instructions - Changing the Batteries****1.**

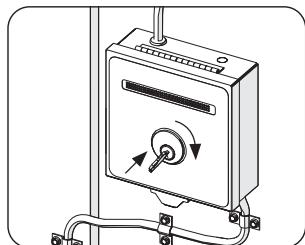
The alarm will chirp twice every 40 seconds when the battery voltage is low, and will continuously sound when the battery voltage is critically low. Two Alkaline 9 volt batteries are needed for battery backup (newly purchased Duracell batteries are recommended).

**5.**

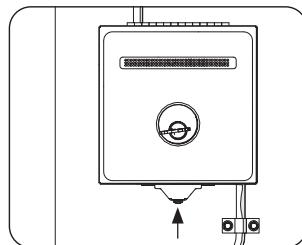
Replace with two Alkaline 9 volt batteries (newly purchased Duracell batteries are recommended). Attach the battery terminals and secure in the battery clips. Be careful to not pull the battery wires when connecting the batteries.

**2.**

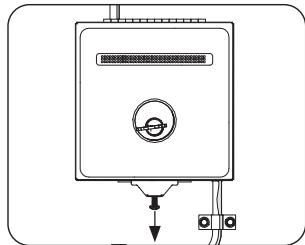
Insert the key and turn it clockwise until it stops to disarm (it may be impossible to disarm if the battery level is critically low).

**6.**

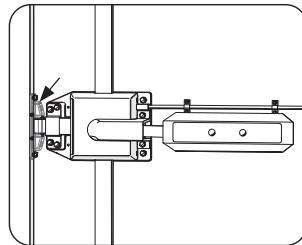
Close the lid and screw in the anti-tamper screw located at the bottom of the lid in completely. Do not overtighten. (The alarm will not arm unless this screw is completely inserted).

**3.**

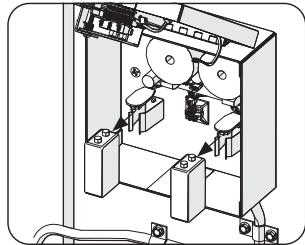
Using a Phillips-head screwdriver, unfasten the anti-tamper screw until it spins freely. Do not remove the screw completely.

**7.**

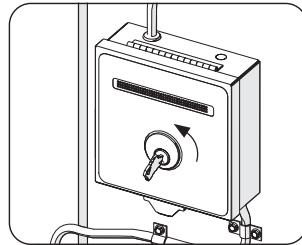
Make sure the deadbolts on the Trident lock are fully extended.

**4.**

Open the lid and remove the two 9 volt batteries from the clips and battery terminals. Be careful to not pull the battery wires when disconnecting the batteries.

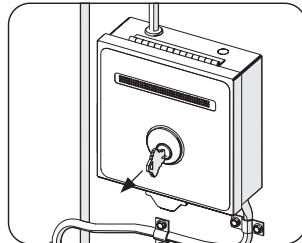
**8.**

Turn the key counter-clockwise to the center. The alarm will sound twice (many mistake this for the alarm failing to arm, wait until it sounds twice).



**9.**

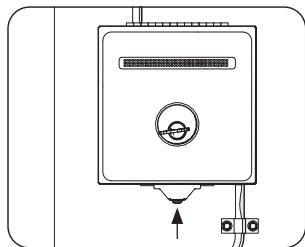
If the alarm continues to sound more than 2 times, insert the key and turn clockwise to disarm and see the troubleshooting section. If it stops then the alarm is armed and ready to use and the key can be removed.



## **W. Troubleshooting - Alarm Cannot Be Armed**

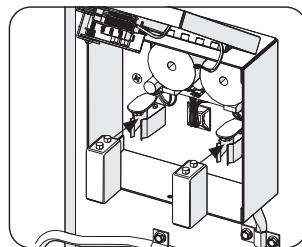
**1.**

If the alarm cannot be armed, first check that the lid is closed and the anti-tamper screw is screwed in completely. It must depress a switch inside of the box to arm.



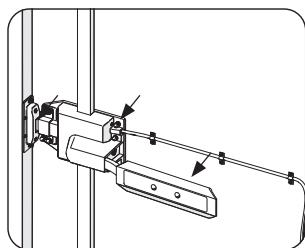
**3.**

If the alarm cable is inserted and the lock is engaged, then the battery may have low voltage. See the "Changing the Batteries" section.



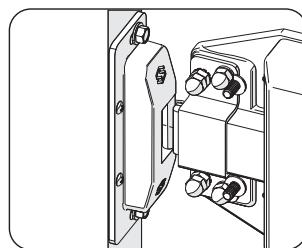
**2.**

If the screw and lid are secure, check that the lock mechanism is not open. The door should be closed and all deadbolts extended. Check that the alarm cable is fully inserted.



**4.**

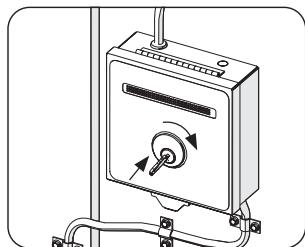
If the alarm continues to sound when arming, check to make sure the main deadbolt on the Trident lock is centered in the frame strike. The deadbolt should not rub or lean on the strike roller. Any pressure on the deadbolt will not allow it to extend fully.



## **X. Removing the Alarm Cable**

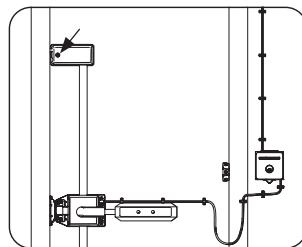
**1.**

Disarm the alarm by inserting the key and turning it clockwise until it stops. The key must remain in this position while the alarm is disarmed.



**2.**

Remove the 5mm hex nut from the upper bolt cover on LHR installations or the lower bolt cover on RHR installations and remove the cover.



## Installation Instructions

### Trident TEL-220

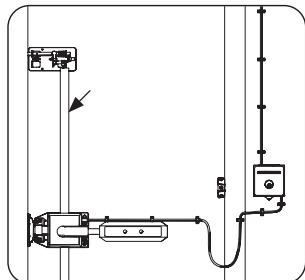
#### Trident Series Models

**SECURITECH®**

**ASSA ABLOY**

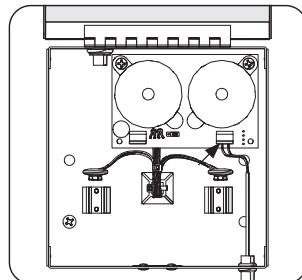
#### 3.

Remove the aluminum channel connecting the bolt cover that was just removed, sliding out of the hole in the main lock and bringing the cable through the slot in the back of the channel.



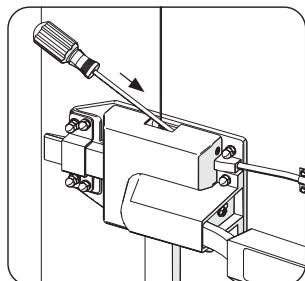
#### 7.

Loosen the small screws at the right terminal on the circuit board and disconnect the wires.



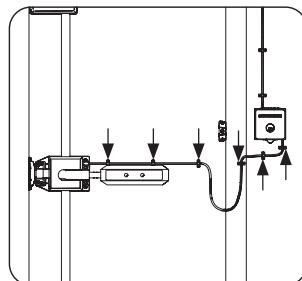
#### 4.

Insert a long, slotted head screwdriver into the hole now open where the channel was removed in the main lock and use it to depress the plastic clip as shown.



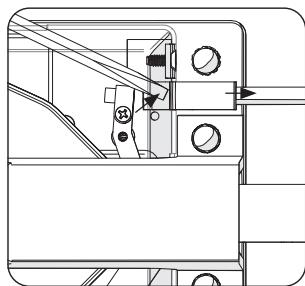
#### 8.

Remove cable clips holding the alarm cable to door.



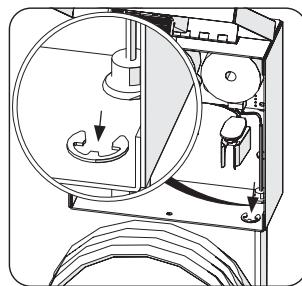
#### 5.

With the clip depressed, pull gently on the plastic housing to remove.



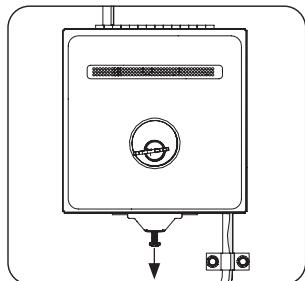
#### 9.

Remove the e-clip from the armored cable.



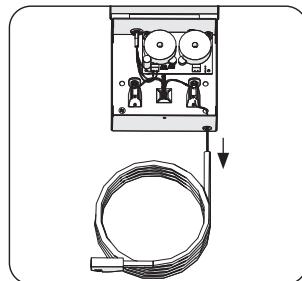
#### 6.

Using a Phillips-head screwdriver, unfasten the anti-tamper screw until it spins freely. Do not remove the screw completely.



#### 10.

Gently pull the armored cable and wires from the bottom of the box.



**Y. Installation Checklist****1.**

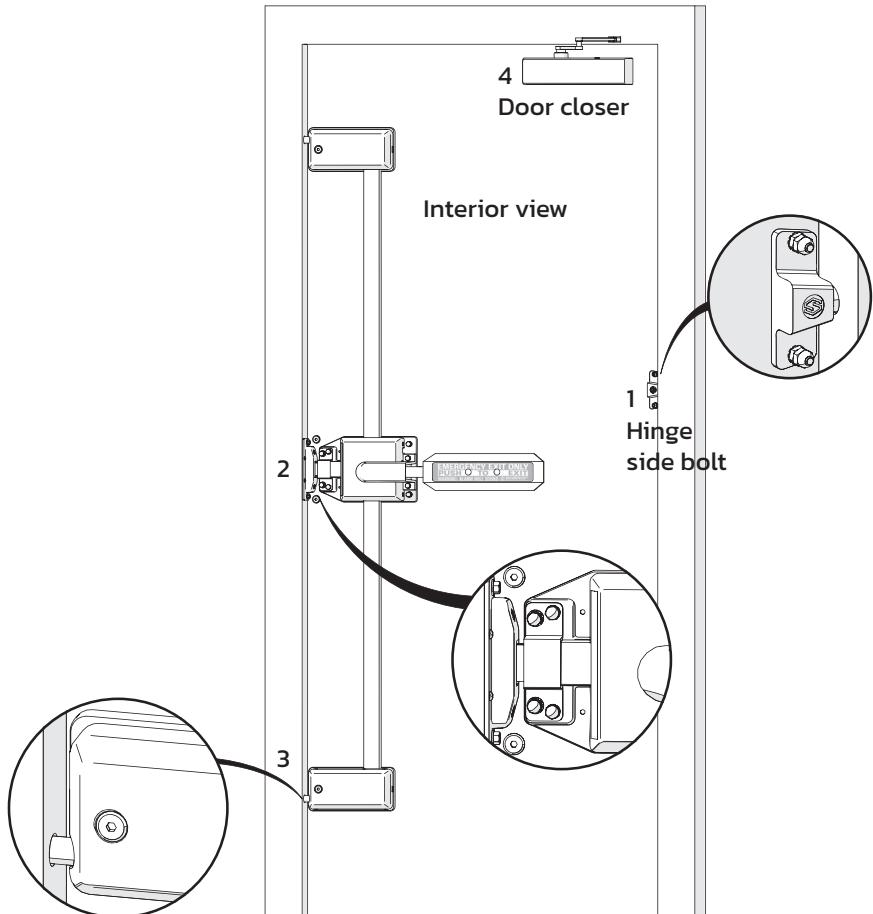
Is the hinge side bolt installed?

Yes  No  **2.**

Is there a 3/16" space between the strike and mechanism edge?

Yes  No  **3.**Are the bolts rubbing on the frame?  
Holes should be large and smooth.Yes  No  **4.**

Does the door relock automatically when the door closes?

**Note that a door closer is required for the door to relock automatically.**Yes  No  

## Z. Operating Instructions

### USAGE INSTRUCTIONS

**1.**

Push emergency paddle fully to unlock the door.

**2.**

Wait for door closer to completely close door. If the door closer is not working properly, call a locksmith for repair.

**The Trident lock will relock automatically once the door is fully closed.**

### INCORRECT USAGE

**1.**

Do not use the emergency exit paddle to pull the door closed. Damage may occur. Please add a door pull if needed (supplied by others).

**If the door closer is not working properly, call a locksmith for repair.**

**2.**

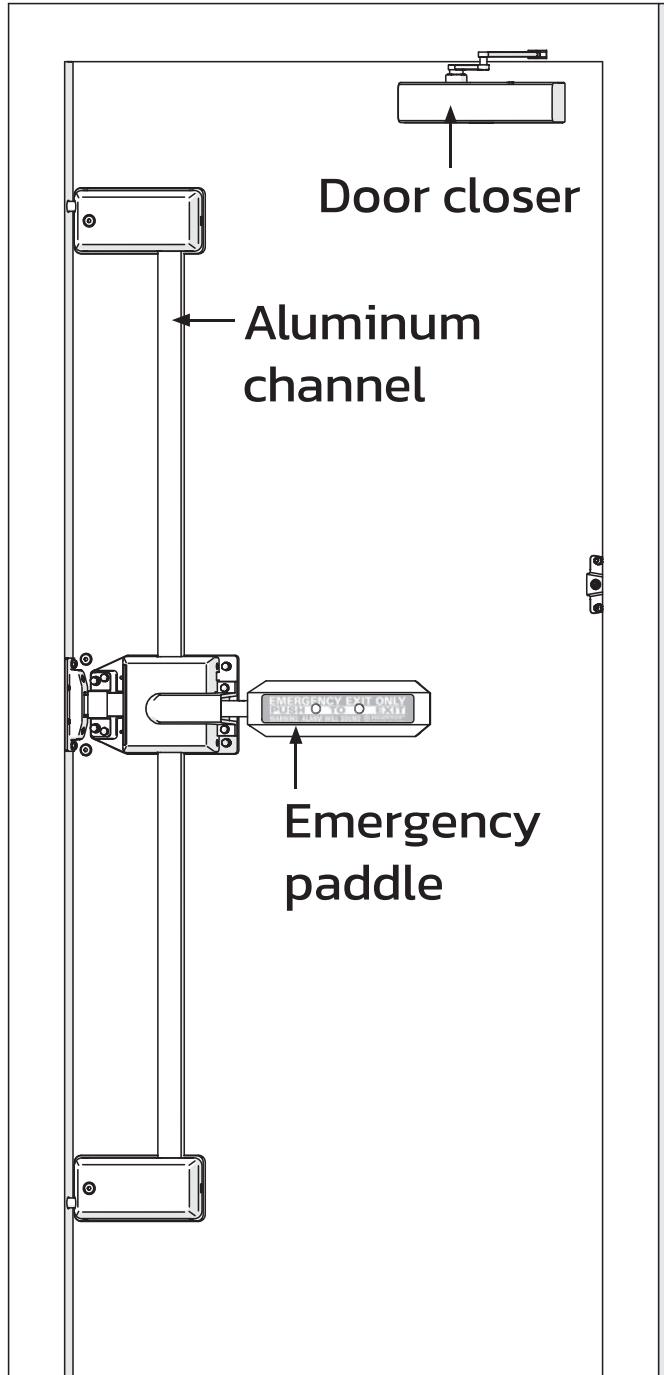
Do not use carts or other objects to unlock the door.

**3.**

Do not prop the door open by extending deadbolt. Use a door stop.

**4.**

Do not place any objects behind the vertical aluminum channels.



## AA. Maintenance Information

### **Maintenance:**

All products must be installed in accordance with the instructions and templates and by employing professional good trade practices or the warranty shall be void.

### **Recommended Method for Cleaning:**

Use a mild soap and water with a soft cloth or brush to clean powder-coated or anodized aluminum surfaces. Avoid using hard abrasives, such as wire brush, steel wool, or scouring powder. Avoid using harsh chemical cleaners, such as solvents or petroleum-based cleaning products. Before using any cleaner, first try cleaning a small test area.

### **Locksets and Exit Devices:**

Lever trims/exit devices are designed for life safety first. Securitech lever trims/exit devices are built to require minimal maintenance; however factors such as installation, severity of use, environmental conditions, and changes in the door opening may require that maintenance and/or adjustments be performed.

The following steps are recommended to the building owner to ensure proper operation:

- Check that exposed screws are tight.
- Check lockset and lever trims/exit devices for smooth operation periodically.
- Check strikes and deadbolts to ensure they are secure and properly aligned.
- Check deadbolt and other moving parts for binding or sluggish operation due to dirt or chemical buildup.
- Check strikes for debris.
- Clean parts according to aforementioned cleaning methods. Lock mechanism is factory lubricated with white lithium grease and red high pressure lubricants. Lightly spray PTFE lubricant on moving parts. Do not use petroleum-based lubricant since it can dissolve grease. Do not over lubricate.

### **Frequency:**

The procedures mentioned above need to be carried out as often as is necessary to prevent deterioration in the installed environment, however we recommend the following minimum frequency of inspection:

- General environments: Every 3 months
- Marine and industrial environments: Every 2 months

A record of preventive maintenance and cleaning must be maintained and submitted with any warranty claims or service requests.

**TMP TRIDENT REINFORCEMENTS**  
**REFERENCE TEMPLATE FOR DOOR**  
**REINFORCEMENTS AND FRAME GROUT GUARDS**  
**PREPARATION**

**SECURITECH®**

**ASSA ABLOY**

**AB. Reinforcement Templates**

**DOOR TYPE**

HOLLOW METAL

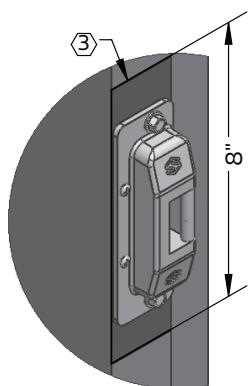
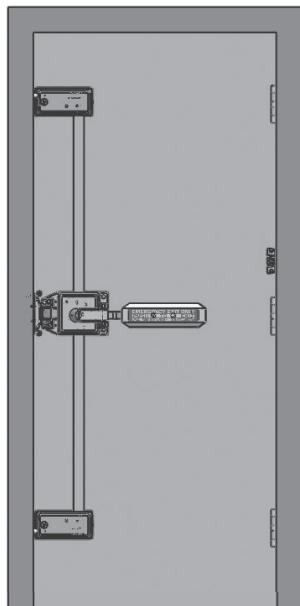
**APPLIES TO:**

TRIDENT MODELS – SINGLE DOOR

**ALL REINFORCEMENT DESIGNS AS PER  
DOOR/FRAME MANUFACTURER.**

**REINFORCEMENTS SHALL PROVIDE ADEQUATE  
METAL THICKNESS FOR SHEET-METAL SCREWS  
AND SUPPORT THE DOOR AT THRU-BOLT  
LOCATIONS.**

**ALL METAL GROUT GUARDS SHALL BE  
INSTALLED IN FRAME PRIOR TO SHIPPING TO  
THE JOBSITE. ALL GUARDS WILL BE A MINIMUM  
OF 3" IN LENGTH x 1" IN DEPTH. PLACE GUARD  
WHERE BOLT ENGAGES FRAME.**

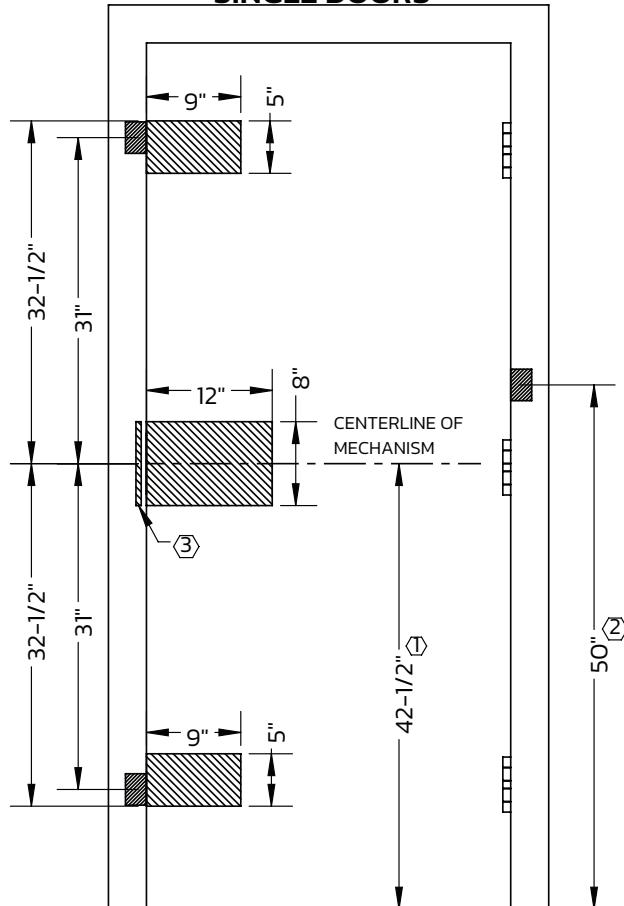


**NOTES:**

- ① THE TRIDENT SHOULD ALWAYS BE INSTALLED AT A HEIGHT THAT MEETS APPLICABLE CODE. HORIZONTAL LINE POSITION CAN BE ADJUSTED TO ALLOW MECHANISM TO COVER ANY EXISTING HOLES ON THE DOOR.
- ② RECOMMENDED POSITION OF HINGE SIDE BOLT. FOR MODELS WITH 2 HINGE SIDE BOLTS, DISTRIBUTE GUARDS EVENLY ALONG HINGE SIDE OF DOOR.
- ③ FRAME SOFFIT SHOULD HAVE SUFFICIENT METAL THICKNESS TO SUPPORT #1/4 SELF-DRILLING SCREWS. ALTERNATIVELY, REINFORCE SOFFIT AREA WITH 8" LONG PLATE.

**NOT  
TO SCALE**

**SINGLE DOORS**



**DOC #** TMP-01892  
**REV** B (06-13-24)  
**SHEET** 1/2

# TMP TRIDENT REINFORCEMENTS

REFERENCE TEMPLATE FOR DOOR  
REINFORCEMENTS AND FRAME GROUT GUARDS  
PREPARATION

 SECURITECH®

ASSA ABLOY

## DOOR TYPE

HOLLOW METAL

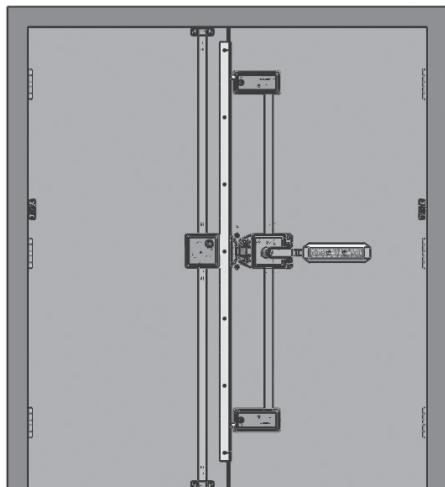
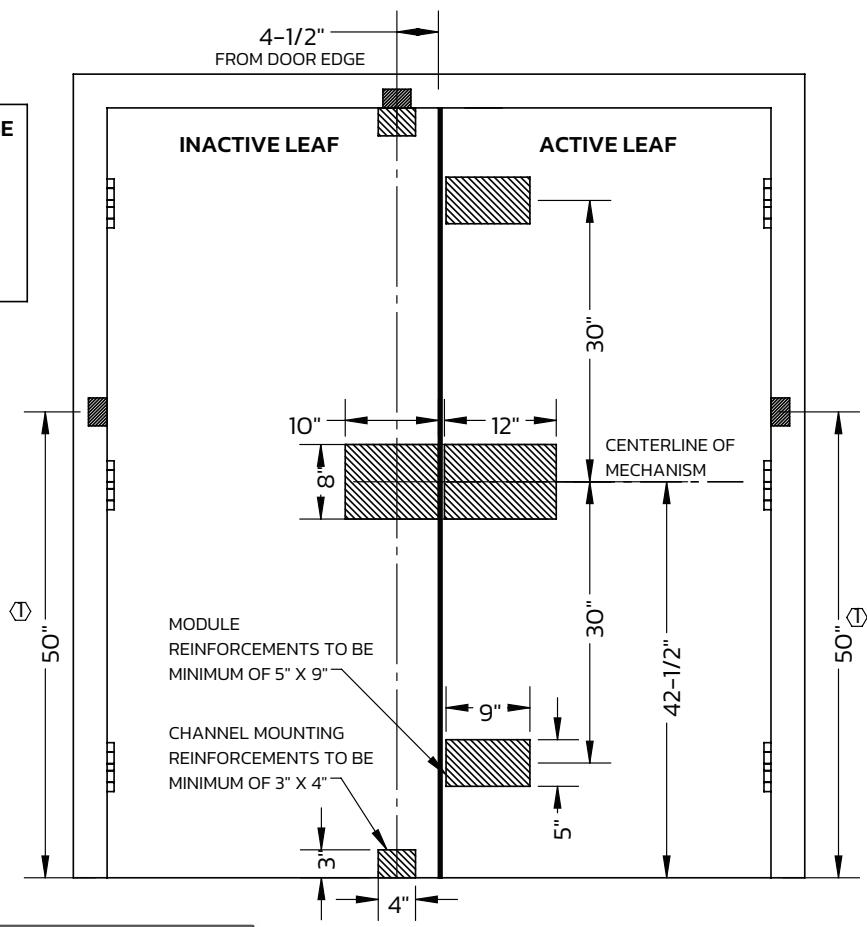
## APPLIES TO:

TRIDENT MODELS - TEL-IAL/IAT

**ALL METAL GROUT GUARDS SHALL BE INSTALLED IN FRAME PRIOR TO SHIPPING TO THE JOBSITE. ALL GUARDS WILL BE A MINIMUM OF 3" IN LENGTH x 1" IN DEPTH. PLACE GUARD WHERE BOLT ENGAGES FRAME.**

**ALL REINFORCEMENT DESIGNS AS PER DOOR/FRAME MANUFACTURER.**  
**REINFORCEMENTS SHALL PROVIDE ADEQUATE METAL THICKNESS FOR SHEET-METAL SCREWS AND SUPPORT THE DOOR AT THRU-BOLT LOCATIONS.**

## PAIR OF DOORS



NOT  
TO SCALE

DOC # TMP-01892  
REV B (06-13-24)  
SHEET 2/2

Installation Instructions

Trident TEL-220

Trident Series Models

 **SECURITECH**<sup>®</sup>

**ASSA ABLOY**

Installation Instructions

## Trident TEL-220

Trident Series Models

 **SECURITECH**<sup>®</sup>

**ASSA ABLOY**

**1-800-622-5625 • [www.securitech.com](http://www.securitech.com)**

Copyright © 2023, 2025 Securitech<sup>®</sup>. All rights reserved. Reproduction in whole or in part without the express written permission of ASSA ABLOY Access and Egress Hardware Group, Inc. is prohibited.

INS-00094-Rev: C 11/25



**225 Episcopal Road  
Berlin, CT 06037**

**1-800-622-5625 • [www.securitech.com](http://www.securitech.com)**

Copyright © 2021, 2025, Securitech®. All rights reserved. Reproduction in whole or in part without the express written permission of ASSA ABLOY Access and Egress Hardware Group, Inc. is prohibited.

INS-00094-Rev: C 11/25