

TRINE 3000 SERIES ELECTRIC RELEASES:

Congratulations on the purchase of this quality TRINE security product.

This product has been designed to install easily, perform reliably, and provide years of trouble free security.

In order for this product to fulfill its objectives, certain steps must be performed by the installer, and certain site conditions must be satisfied.

Before proceeding with your installation, please review the following list of items. If you have any questions first please finish reading this document to see if the information you require is contained in this document, otherwise please call TRINE TECH SUPPORT (718) 829-2332 EXT. 425, or visit the TRINE Website www.TrineOnline.com.

Both the TRINE Model #3258 & Model #3458 are designed for new installation or retrofitting into Aluminum frames. Be sure that you have ordered the correct TRINE strike for your application.



Model Number:
3258 - Fail-Secure
3258RS - Fail-Safe



Model Number:
3458 - Fail-Secure
3458RS - Fail-Safe

STANDARD FEATURES:

- Face Plate - 3258, 2-5/8" x 5/8" - **Non-Handed**
3458, 4-5/8" x 1-9/16" - **Must order LH or RH**
- All stainless steel locking components
- Fail-Secure: (standard action) unlocks with power applied (MODELS #3258 & #3458)
- Fail-Safe: RS (reverse action) unlocks when power is off (MODELS #3258RS & MODELS #3458RS)
- Mortise Type - 1" backset (Smallest in the Industry)
- Durability - 500,000 Life Cycles
- Holding Force - 1,200 Pounds
- Latch Cavity: Width 5/8", Height 1-1/8", Depth 1/2"
- Handed - The 3258 is non-handed. The 3458 is handed, LH for left hand or RH for right hand
- Heavy-duty latch spring
- Silent Operation
- Intermittent Duty
- Micro Solenoid assembly
- Low current draw

FINISHES:

- Satin Stainless Steel - US32D (3458 ONLY)
- Satin Chrome - US26D (3258 ONLY)
- Dark Bronze - US10B
- Bright Chrome - US26

RECOMMENDED INSTALLATION SEQUENCE:

1. Verify strike is proper for the door into which it is to be installed.
 2. Verify that you have all parts required to complete the installation.
 3. Verify that the new electric release operates with the existing power supply/control circuit (retrofit applications); or verify that the new power supply/control circuit operates the new electric release (new installations).
 4. Locate and clearly mark the circuit breaker which provides ac power to your transformer/ power supply or that supplies power to the receptacle into which you will plug your transformer/power supply. This will enable you to safely cut power during installation, and permit troubleshooting if required.
 5. Verify that the receptacle or circuit providing power to the electric release is not controlled by a wall switch, time clock, or other external device.
 6. Verify that the circuit/receptacle used for the locking system is not powering any other equipment. Remember that interruption of power to your locking system could prevent access into the protected area, or jeopardize the security/safety of the site's occupants.
 7. Verify that the door and associated components are in good working order.
 8. Install electric release as per attached guidelines.
 9. Wire electric release as per attached guidelines.
 10. Perform final test of completed installation.
- Be sure that you have ordered the correct TRINE strike for your application.

LUBRICATION: The TRINE Model #3258 & Model #3458 do not require lubrication. Lubricating these units will actually hamper their performance by attracting dust and debris into the tight tolerance precision Micro Solenoid assembly

GETTING STARTED: Before proceeding with your installation, verify that the door to which the electric release is being applied is in good working condition.

These items are essential for either new installations or retrofits Items which should be specifically checked prior to beginning the installation include:

- The hinges (or pivots) are in good condition
- If your installation is a retrofit, that the existing latch lines up perfectly with the existing strike plate.
- The door is not rubbing on the saddle or anywhere on the frame
- The door closer is not leaking and is in good condition and properly adjusted.
- The door is not warped or otherwise damaged which might hamper its operation or otherwise affect your installation or the final system's performance.
- That the door frame member into which the door release is to be installed is deep enough (1 inch) for the body of the electric strike, and that the wiring to operate the electric release can be installed for your application.

FOR RETROFITS:

With only a minimal modification to the frame the Model #3258 is the ideal replacement for the ADAMS-RITE® #4502 Strike; (Use with Adams-Rite Model 4510, 4710 or 4750 dead latches)

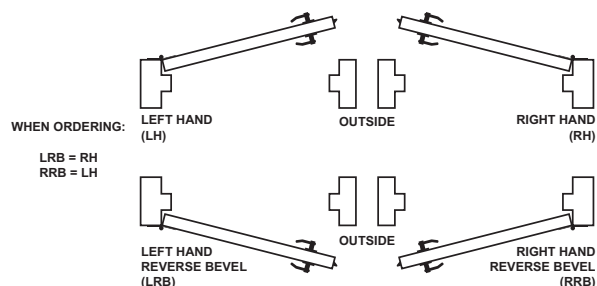
With only a minimal modification to the frame the Model #3458 is the ideal replacement for the ADAMS-RITE® #4730/4501 Strike plate.

For both the TRINE #3258 & #3458 retrofits, these strikes are designed so that the original mounting tab holes may be used to secure the electric release into the frame.

Mounting Tabs are supplied with both units for use in new or retrofit installations.

HANDING: The TRINE Model #3458 is NOT field handable. Verify that you have ordered the correct handed door release for your application. The TRINE Model #3258 is NONE handed.

DOOR HANDING GUIDE



HANDING OF DOOR IS ALWAYS DETERMINED FROM THE OUTSIDE.

DUTY & VOLTAGES: The TRINE Model #3258 & Model #3458 are available as FAIL-SECURE (Normally Locked, Power to Unlock), INTERMITTENT DUTY and are supplied in two different operating voltages and the LC Version, suitable for use in a range of voltages from 12V AC/DC to 24V AC/DC. The TRINE Model #3258RS & Model #3458RS are FAIL-SAFE (Normally Unlocked, Power to Lock), CONTINUOUS DUTY and are supplied only in LC Version.

3000 Series Electrical Characteristics Chart					
Voltage	Current (Amps)	Resistance (Ohms)	Audible Sound	Solenoid Duty	Wire Color
12V DC	0.480	25	None	Intermittent	Blue - Blue
24V DC	0.240	100	None	Intermittent	White - White
LC Version	0.200	12.5	None	Intermittent/Continuous	Red - Red
RS Version	0.200	12.5	None	Intermittent/Continuous	Red - Red

LC units will operate on any voltage from 12V to 24V AC or DC, and offer surge suppression and inductive kickback protection. In addition, they offer the benefits of reducing inventory by enabling you to stock one strike.

Please note, as indicated on the unit, the LC module must be positioned within 15 feet of the electric strike.

Please refer to the accompanying VOLTAGE DROP CHART for recommended wire gauges for various VOLTAGES & WIRE LENGTHS.

VOLTAGE DROP GUIDE		
Length to Transformer	12V	24V
Up to 50 feet	18 AWG	20 AWG
50 to 150 feet	16 AWG	18 AWG
150 to 300 feet	14 AWG	16 AWG
300 to 600 feet	12 AWG	14 AWG

The TRINE MODEL # 3258 and Model #3458 FAIL-SECURE "INTERMITTENT DUTY" units are designed for momentary application of less than a minute of voltage for access control purposes, and cannot be continuously powered without permanent and irreversible damage to the electric strike's solenoid.

The TRINE MODEL # 3258RS and Model #3458RS FAIL-SAFE "CONTINUOUS DUTY" versions may be used for applications where the release must remain UNLOCKED for extended periods or when required by code.

The TRINE LC version of MODEL # 3258, #3458, # 3258RS and #3458RS can be used for "INTERMITTENT DUTY" AND "CONTINUOUS DUTY"

ELECTRICAL: If you are performing a new installation, be certain that you make provisions for the proper voltage power supply for your electric strike. If you are performing a retrofit type installation, determine that the voltage present at the location of the strike is appropriate for the TRINE strike you have, that the circuitry supplying the voltage is operating properly, and also verify that you are able to cut the power completely to the door location so that you may perform the installation safely without endangering yourself or causing damage to the power supply or other devices connected to the circuit. It is strongly recommended that you also test for high voltages which may exist between each lead of the power wiring to the electric release solenoid, and to the door frame which is an earth ground.

Dangerous voltages or currents may occur due to a miswire or other pre-existing fault conditions in the system you are servicing.

TESTING YOUR ELECTRIC STRIKE; POWER SUPPLY; & SWITCHING CIRCUIT PRIOR TO FINAL MOUNTING OF THE ELECTRIC RELEASE IS RECOMMENDED

POWER SOURCES:

The TRINE MODEL #5208 (12 VDC) or MODEL # 5209 (24 VDC) are suitable DC POWER SUPPLIES which are plug-in and therefore do not require that the installer perform line voltage wiring.

TRINE offers several low voltage transformers suitable for use with the TRINE MODEL #3258 & #3458 electric releases.

For 12 Volt door releases; use the TRINE #5204 PLUG-IN AC LOW VOLTAGE TRANSFORMER and MODEL SR-1 SILICON RECTIFIER

For 24 Volt door releases; use the TRINE #5201 PLUG-IN AC LOW VOLTAGE TRANSFORMER and TRINE #SR-1 SILICON RECTIFIER

HARDWIRED POWER SUPPLY MODELS are also available - see our website or call our Customer Support Line for details.

SILENT OPERATION: The TRINE #3258 & #3458 are referred to as "Silent Operating"; unlike some types of AC electric releases which make a "buzzing sound" when activated. For some applications, such as entrances into apartment buildings or storerooms, an audible sound is desirable, and even expected. For other applications, such as offices, silent operation is preferred because a buzzing sound is distracting or disturbing. Verify with your client which they require, and if an audible signal when the electric release is activated is desirable, then add a audible/visual annunciating device as shown in the accompanying wiring diagrams, Figures 1, 2 and 3 (see page 4).

CONFIRMING PROPER LOCK-LATCH ENGAGEMENT & CLEARANCES:

The latch and the lock must engage properly for the electric strike to operate as intended. On doors where the gap between the edge of the door and the jamb are within standard tolerances and the latch is the proper length, no adjustments will be required and this is true for the majority of installations.

But too little lock-latch engagement will result in an installation where the door may be easily spread; allowing the locked door to be forced open.

Too much lock-latch engagement will result in a situation where the door release will interfere with the door latch, causing binding; improper operation and premature mechanical wear on the latch and release.

Extended latch length (LL) minus the gap (G) between the edge of the door and the edge of the jamb equals the amount of lock-latch engagement.

$$\text{"Lock-Latch Engagement"} = \text{LL} - \text{G}$$

INSTALLATION OF SHIM:

An adequate amount of clearance must exist between the door latch and the strike keeper so that they do not interfere or bind when the door opens or closes. Two 1/16" thick shim are supplied with the TRINE #3258 & #3458 which may be installed as shown in Diagram 8a and 10a to resolve this situation if this problem is encountered. (See Figure 4 below)

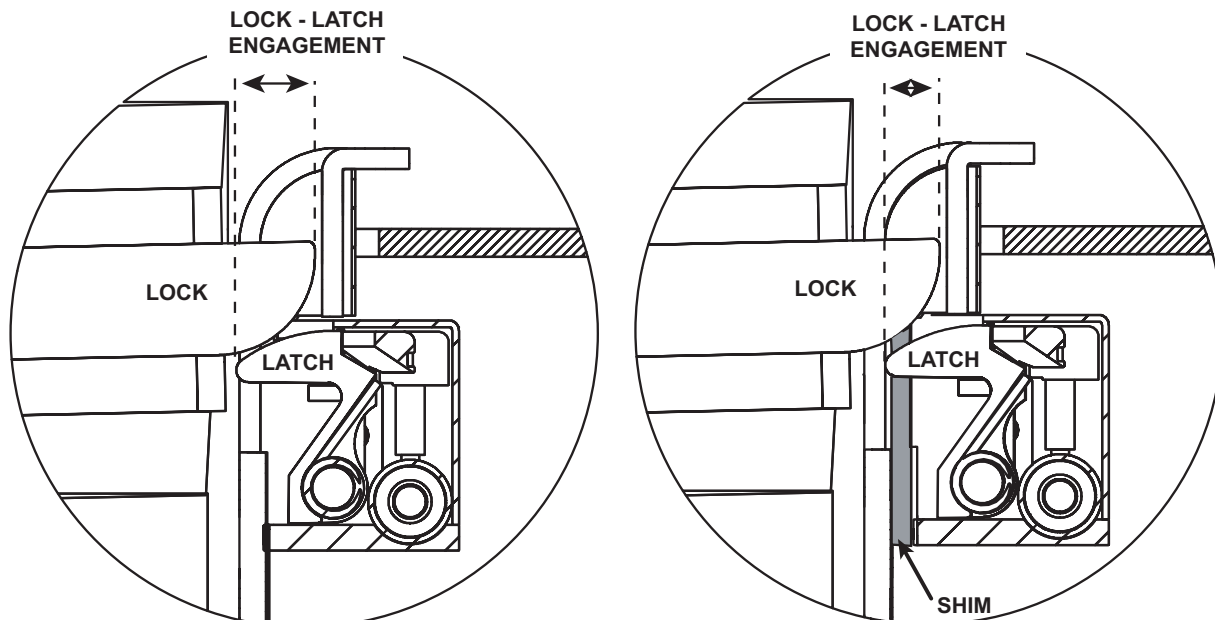
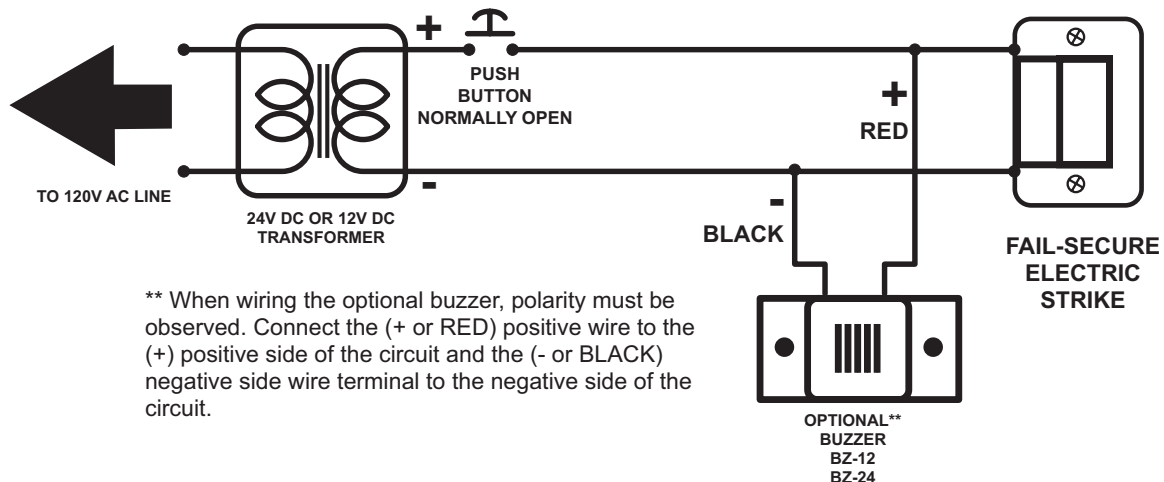
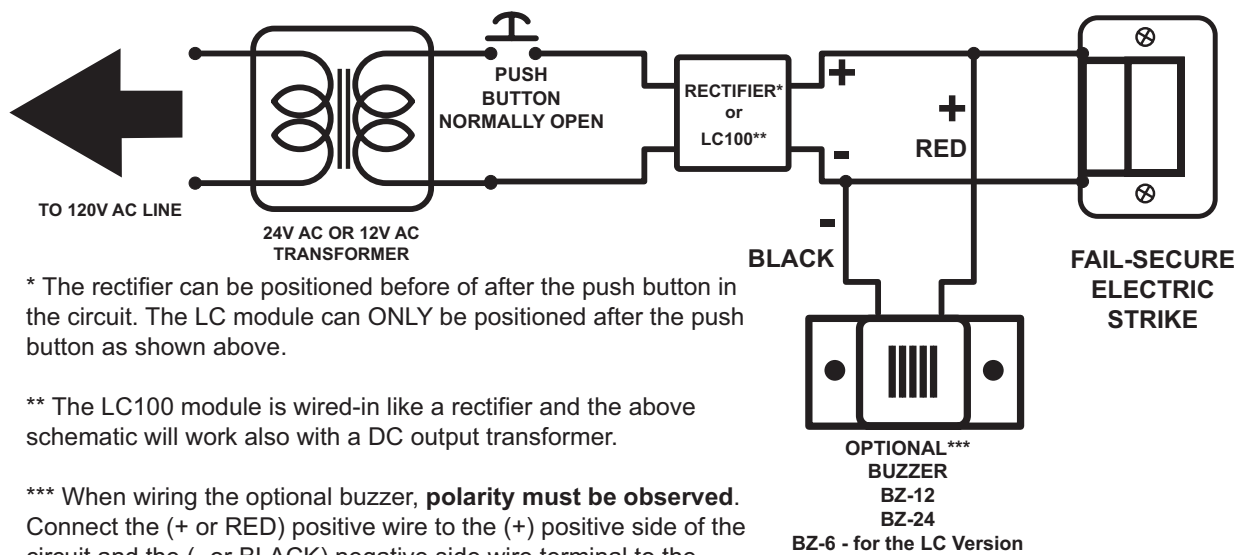


FIGURE 4

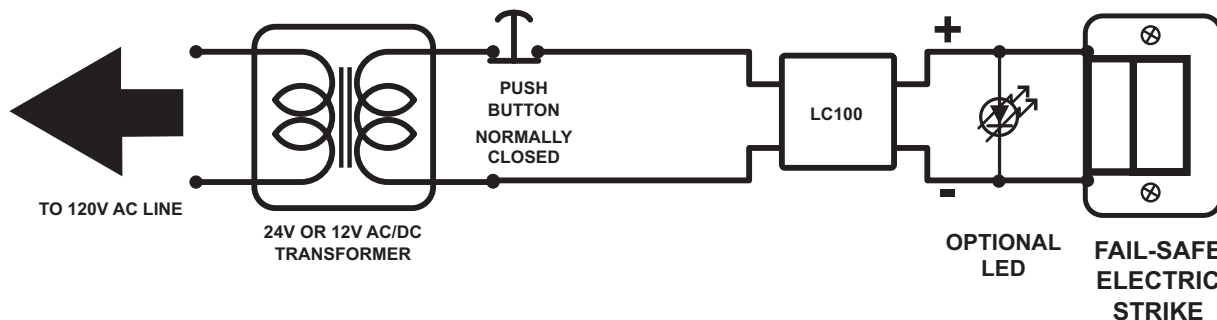
**FIGURE 1
USING DC TRANSFORMER**



**FIGURE 2
USING AC TRANSFORMER**



**FIGURE 3
FAIL-SAFE MODELS**



ALUMINUM FRAME INSTALLATION

The 3458's 4-5/8" x 1-9/16" full lip steel faceplate requires the least amount of jamb preparation when compared with other electric strikes with an auxiliary ramp. The full lip design acts as a trim plate by wrapping around the frame edge.

Figure 5 shows the required cutting.

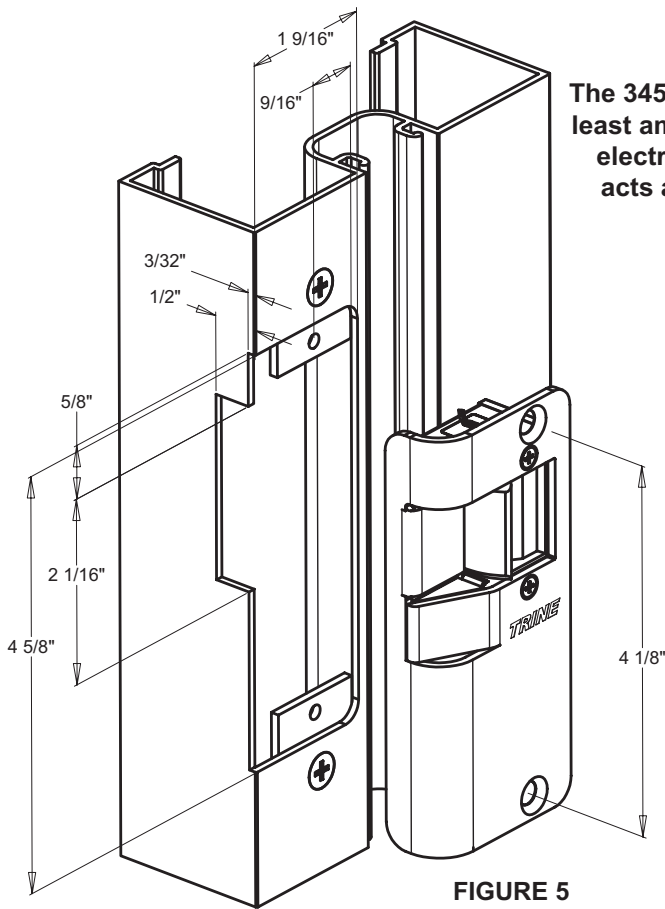


FIGURE 5
3458 Frame Preparation

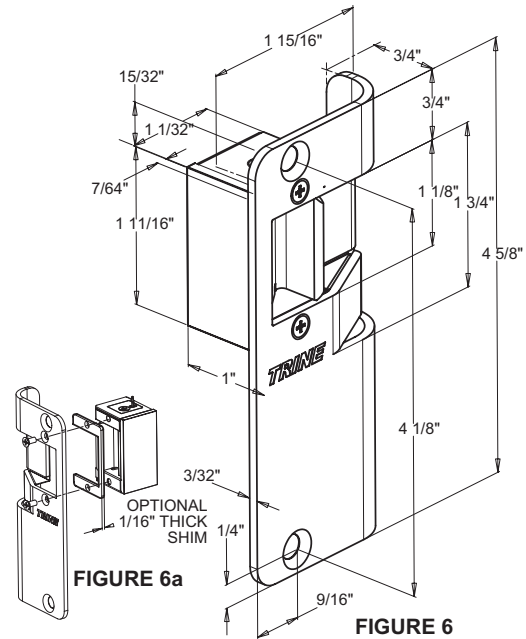


FIGURE 6
3458 Template

ALUMINUM FRAME INSTALLATION

The 3258's 2-5/8" x 5/8" full lip faceplate requires the least amount of jamb preparation when compared with other electric strikes with an auxiliary ramp.

Figure 7 shows how much less cutting is needed by our 3258 electric strike.

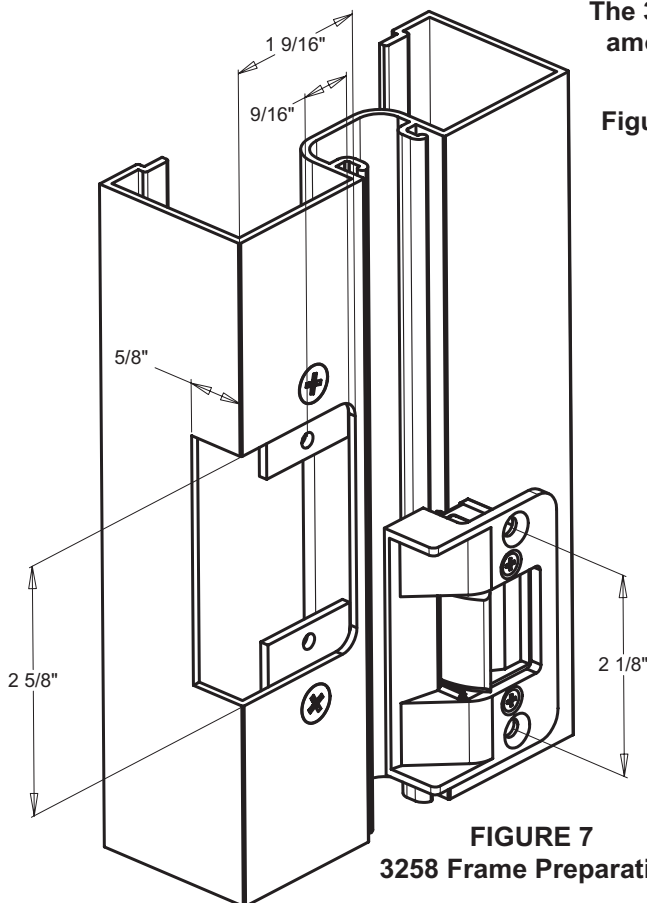


FIGURE 7
3258 Frame Preparation

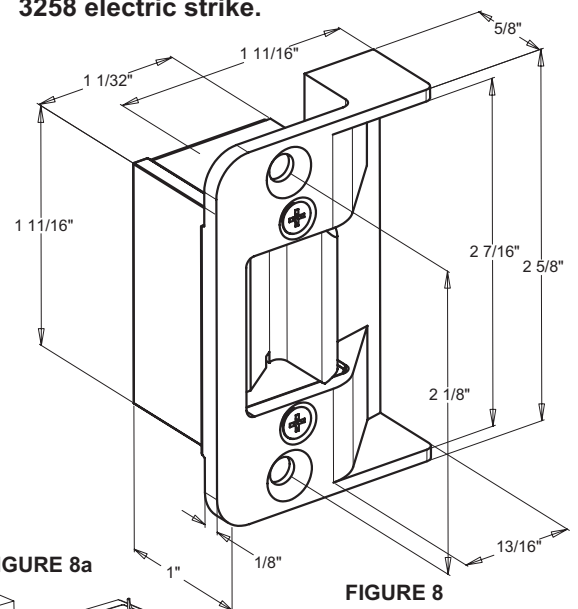


FIGURE 8
3258 Template

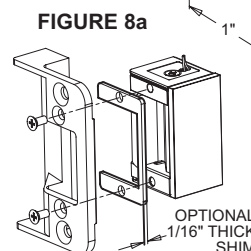


FIGURE 8a
OPTIONAL
1/16" THICK
SHIM

TROUBLESHOOTING THE COMPLETED INSTALLATION:

SYMPTOM: Electric release is not actuating:

1. Verify proper voltage is present **AT STRIKE**. If voltage **IS** present: the strike may have been damaged during the installation, or dirt or debris may be preventing proper operation.
2. Verify for proper electric release coil resistance (REFER TO COIL RESISTANCE CHART), for either a short circuit or open circuit. Coil is **NOT** a serviceable part. **Note that intermittent coils can only receive power for 1 minute or less.**
3. If voltage **IS NOT** present:
 - Verify Circuit breaker is on
 - Verify voltage at the transformer/power supply output.
 - Verify output from rectifier (if used)
 - Verify that there are no additional, unknown external switches or devices which may be interrupting your circuit.
 - Check for damaged wiring or bad wire splices.

SYMPTOM: Door will not open but strike is working

- ◆ Check for other locks on door
- ◆ Check for proper lock-latch engagement (SEE SECTION: "CONFIRMING PROPER LOCK-LATCH ENGAGEMENT & CLEARANCES").
- ◆ Lock latch engagement may be not set correctly. (If proper clearance cannot be achieved by installing a shim; a shorter lock latch may be required for your installation.)
- ◆ Check for excessive backpressure on door release latch by following these steps:

While observing the electric release and latch; apply enough pressure on the door so that the lock's latch does not press on the electric release's latch. If applying pressure as described does not cause any movement of the lock away from the latch, then there may be too much pressure on the electric release's latch. If electric release works properly while you are applying this pressure, then steps must be taken to relieve this pressure. Possible remedies include:

 - Re-adjust (or install) a door closer
 - Remove door silencers
 - Correct excessive door warpage
 - Re-center electric release in jamb
 - Remove or trim weather stripping around the door



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