

**SILENT OPERATION:**

The 30LC & 30RS 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 sounding device. LC100 must always be used with the 30LC & 30RS units.

**LUBRICATION:**

This device does not require lubrication. Lubricating these units will actually hamper their performance by attracting dust and debris into the tight tolerance precision Micro Solenoid assembly.

**TROUBLESHOOTING THE COMPLETED INSTALLATION:**

**SYMPTOM: What is this Line Conditioner or LC100 for?**

1. In models 30LC, 30RS, & in the 323478LC kit, the lc100 is not optional, it must be installed between the power supply and strike mechanism, as seen on page 3. The LC100 'conditions' the power supply to allow the mechanism to run continuously (and so in Fail Safe configuration)

**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. Inspect electric release and clean. **DO NOT LUBRICATE SOLENOID.**

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.

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 back pressure 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 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 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

# 3000 SERIES ELECTRIC STRIKE

## INSTALLATION INSTRUCTIONS



**TRINE 3000 SERIES  
THE SMALLEST ELECTRIC STRIKE IN THE WORLD  
FOR CYLINDRICAL LOCKS AND DEADLATCHES**

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.

BEFORE PROCEEDING with your installation, please review the following list of features. If you have any questions after reading this document please call TRINE's TECHNICAL SUPPORT (203) 730-1756, email [technicalservice@trineonline.com](mailto:technicalservice@trineonline.com), or visit us: [www.trineonline.com](http://www.trineonline.com)

**THE 3000 SERIES STANDARDS:**

- Mortise Type - 1" backset
- BHMA Grade 1 (Durability - 500,000 Life Cycles, Holding Force - 1,200 Pounds (Static Force)- 70 ft-lb (Dynamic Force))
- All stainless steel locking parts
- Solid Cast Latch - Stainless Steel
- Cavity: Width 5/8", Height 1-1/8", Depth 1/2"

**3012/3024 ELECTRICAL CHARACTERISTICS:**

Item	Voltage	Amps (A)	Ohms (Ω)	Duty	Duty
3012	12DC	0.480 A	25.0	Intm	Silent
3024	24DC	0.240 A	100.0	Intm	Silent

3012 has two (2) blue wires. 3024 has two (2) white wires.

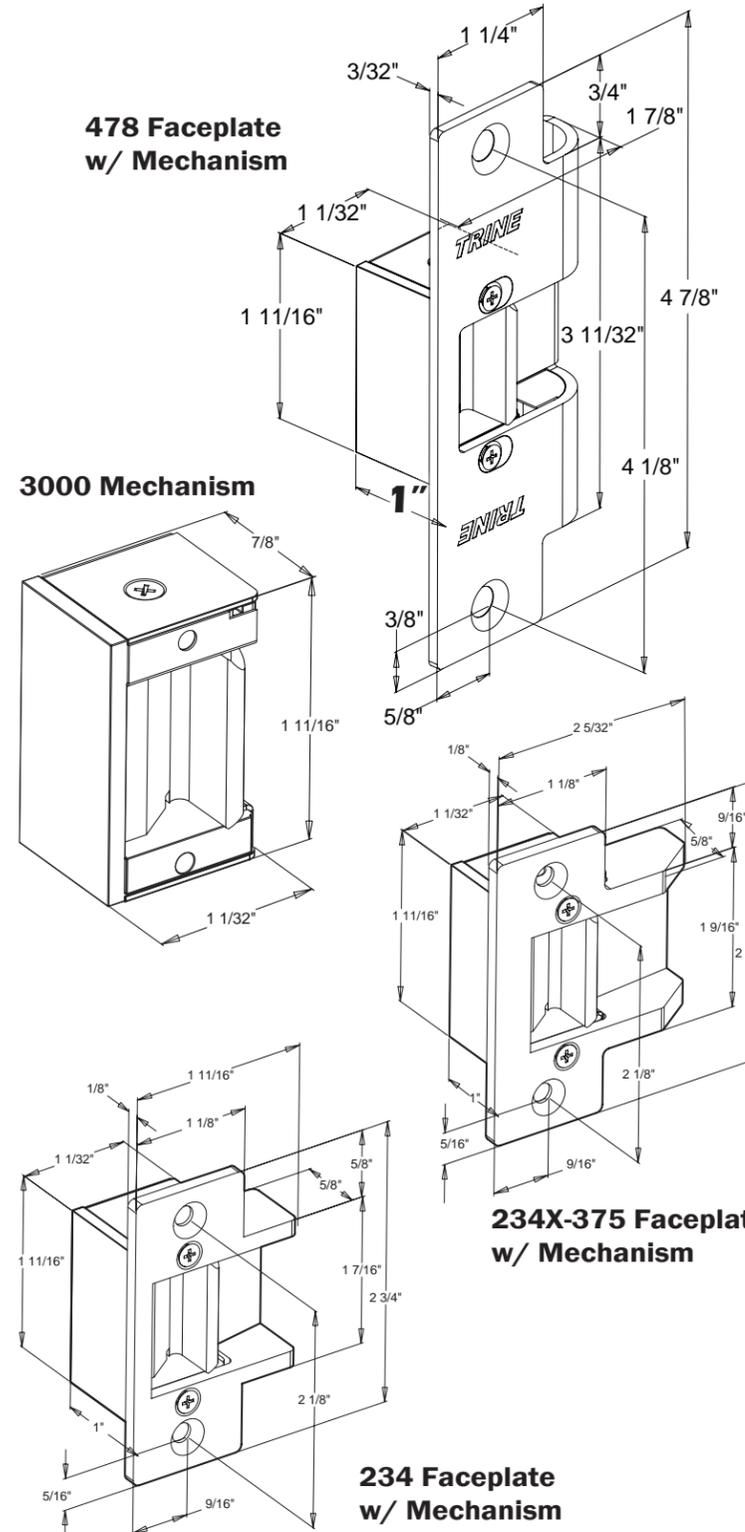
**30LC/30RS ELECTRICAL CHARACTERISTICS:**

Voltage	Pull-in/Hold Amps (A)	Ohms (Ω)	Duty	Duty
12DC	0.743/0.298 A	13.0	Intm/Cont	Silent
12AC	0.715/0.277 A	13.0	Intm/Cont	Silent
24DC	0.397/0.170 A	13.0	Intm/Cont	Silent
24AC	0.378/0.173 A	13.0	Intm/Cont	Silent

The LC100 accepts 12-24AC & DC power, plus surge and kickback protection.

**WARNING - PLEASE READ PRIOR TO INSTALL**

- LC-100 (line conditioner) **MUST** be used for ALL installations (LC100 outputs 9DC to fire the solenoid and drops to 5.5DC to hold the strike unlocked with power)
- LC-100 **MUST BE WITHIN 15 FEET** OF ELECTRIC STRIKE.
- Ensure pigtails for buzzer leads on LC100 are not touching. (If a buzzer is not being used)
- **DO NOT** Lubricate.
- **DO NOT** Apply an over voltage of more then 10% of the strikes operating voltage.
- **NOT** recommended for outdoor use
- Operating temperture range: -20 °C through +40 °C



## WHAT IS INCLUDED IN THE 3000 SERIES PACKAGES:

**3012 & 3024 BOXES:** Come with Mechanism only (pair with a faceplate)

**30LC & 30RS BOXES:** Come with Mechanism & LC100 - MUST USE LC100 (pair with a faceplate)

### ALL FACEPLATES COME WITH:

(2) Mounting screw • (2) Tab shims • (2) 'Short' Strike screws  
(2) 'Long' Strike screws (for use with Strike shims) • (2) 1/16" Strike Shims

### 478 & 478X-375 FACEPLATES COME WITH:

(2) 1/8" Horizontal Adjustment tabs • (1) CCFP (competitor filler plate)  
(1) CCFP SCREW

## 3000 SERIES FACEPLATE OPTIONS:

**234:** 2 - 3/4" ANSI cutout - Available in: 26D (Satin Chrome), 10B (Dark Bronze)  
US4 (Satin Brass)

**234X-375:** 2 - 3/4" ANSI cutout with .375" ramp extension for Timely®/Redi® Frames  
- Available in: 26D (Satin Chrome), 10B (Dark Bronze)

**258:** 2 - 5/8" cutout for aluminum, replaces 4502 strike plate  
- Available in: 26D (Satin Chrome), 10B (Dark Bronze),

**258RD:** 2 - 5/8" cutout with radiused surface, replaces 4502 strike plate  
- Available in: 26D (Satin Chrome), 10B (Dark Bronze)

**334:** 3 - 3/4" cutout for wood with no faceplate ramp.  
- Available in: 26D (Satin Chrome), US3 (Bright Brass), US4 (Satin Brass)

**458:** 4 - 5/8" cutout for aluminum, replaces 4730/4501 strike plate (RH or LH)  
- Available in: 32D (Satin Stainless Steel), 10B (Dark Bronze)

**478:** 4 - 7/8" ANSI cutout with 1/8" adjustments - Available in:  
- 32D (Satin Stainless Steel), 32 (Polished Stainless Steel), 10B (Dark Bronze),  
US3 (Bright Brass), US4 (Satin Brass)

**478X-375:** 4 - 7/8" ANSI cutout with .375" ramp extension for Timely®/Redi® Frames  
- Available in: 32D (Satin Stainless Steel), 10B (Dark Bronze), US3 (Bright Brass)

**478X-375:** 4 - 7/8" ANSI with 3/16" Offset  
- Available in: 32D (Satin Stainless Steel), 32 (Polished Stainless Steel),  
10B (Dark Bronze)

## RECOMMENDED PREINSTALLATION CHECK FOR THE 3000 SERIES ELECTRIC STRIKE FOR CYLINDRICAL & DEADLATCHES:

- Determine that door is properly adjusted; Door must operate properly in order for system to provide best results.
- Door must swing properly, without interfering with jamb or sill
- The door should be equipped with a door closer and the door closer "latch mode" must hold door in a completely closed position in order to avoid the lock latch from applying pressure against the releasing latch portion of the electric strike.
- Electrical wire connections must be completed and ready to be terminated inside the frame.
- Confirm that the power line in the frame is the correct voltage, amperage, and that the switch works properly.
- Confirm proper clearance exists between the end of the lock latch and jamb.
- The electric door strike must be aligned properly with lock latch when it is installed on the doorjamb.
- For best installation results, the door frame must be reasonably flat and straight.

## INSTALLATION PROCEDURE:

**CAUTION: TO AVOID ELECTRICAL SHOCK AND INJURIES, BEFORE DOING YOUR WIRING, TURN OFF THE POWER FROM THE CIRCUIT BREAKER.**

- Verify strike is proper for the door into which it is to be installed.
- Verify that you have all parts required to complete the installation.
- 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).
- 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.
- Verify that a wall switch, time clock or other external device does not control the receptacle or circuit providing power to the electric release.
- 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.
- Verify that the door and associated components are in good working order. 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.

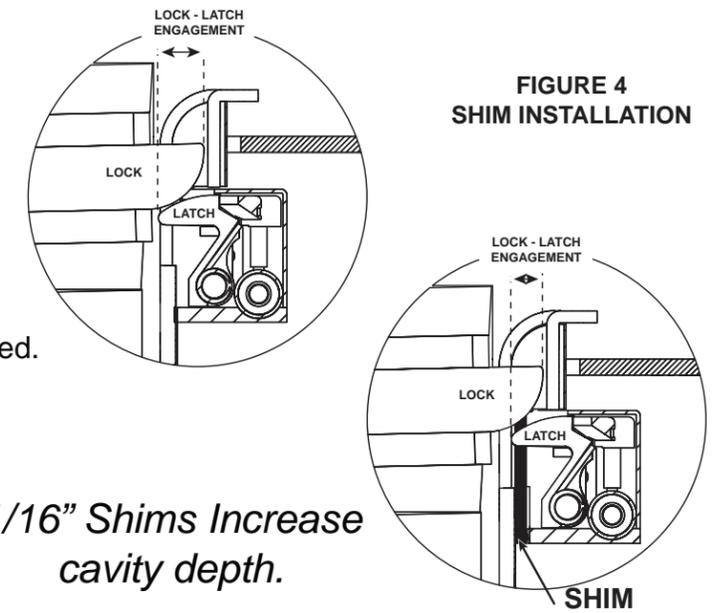
## INSTALLATION PROCEDURE CONTINUED...

- 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.
- Install electric release as per attached guidelines.
  - Wire electric release as per attached guidelines.
  - Perform final test of completed installation.

### INSTALLATION OF SHIMS:

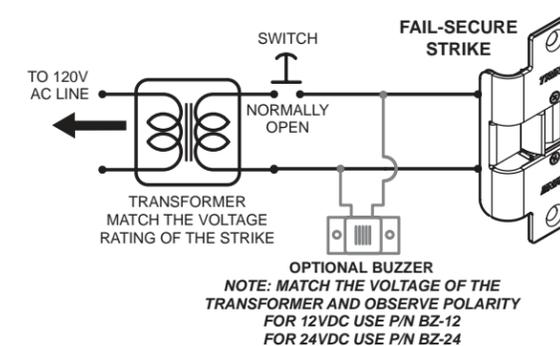
An adequate amount of clearance must exist between the door latch and the strike keeper so that they do not interfere or bind when the door opens or closes.

- Two (2) 1/16" thick "C" shaped shims are supplied with this unit which may be installed as shown in the "Installation Drawing section" to resolve this situation if this problem is encountered. (also See Figure 4 below)

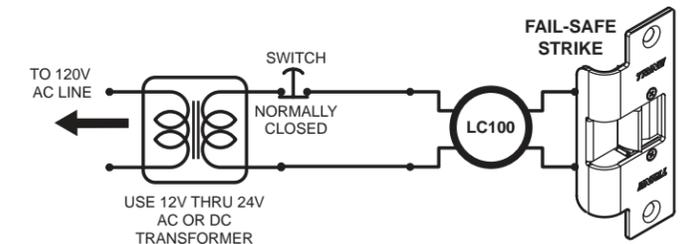


1/16" Shims Increase cavity depth.

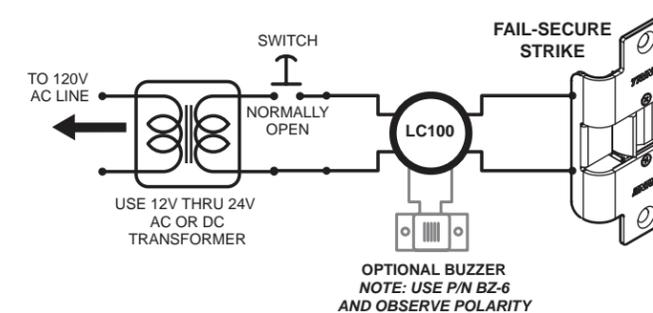
### WIRING FOR FAIL-SECURE MODE (3012 & 3024 ONLY)



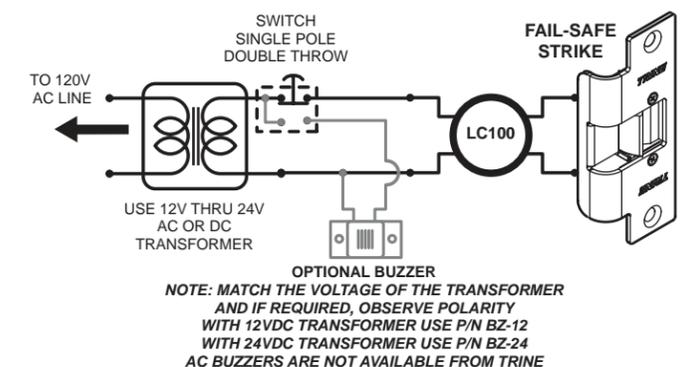
### WIRING FOR FAIL-SAFE MODE (MUST USE LC100)



### WIRING LC VERSION FOR FAIL-SECURE MODE (MUST USE LC100)



### WIRING FOR FAIL-SAFE MODE (MUST USE LC100) WITH OPTIONAL BUZZER



WHEN OBSERVING POLARITY, THE RED WIRE WILL BE THE POSITIVE SIDE (+) AND THE BLACK WIRE IS THE NEGATIVE SIDE (-)