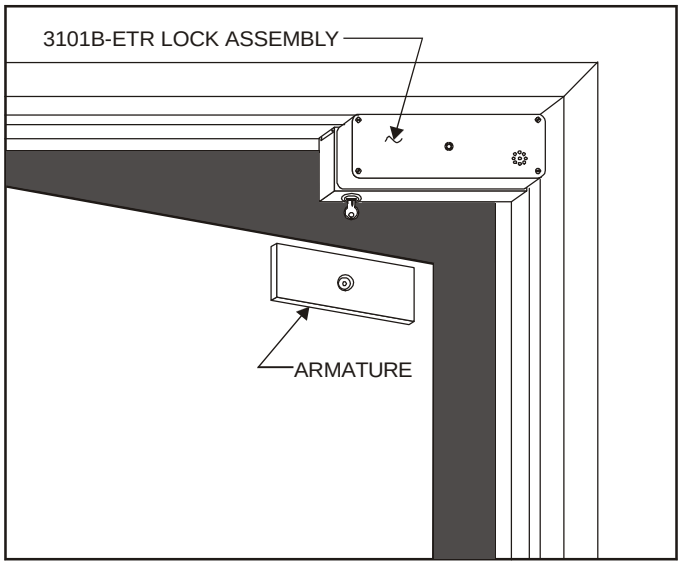
DynaLock
705 Emmett Street • Bristol, CT 06011-2728
Phone:(860)582-4761 • Fax:(860)585-0338

MODEL #3101B-ETR
DELAY EGRESS SYSTEM
INSTALLATION INSTRUCTIONS



INSTALLATION DESCRIPTION

The 3101B-ETR (Externally Triggered Release) Delay Egress System is a 1500 pound holding force electromagnetic lock electronically controlled to provide a 15 or 30 second delay in unlocking. Delayed egress is activated by an external dry contact closure usually provided by a switch located in an exit device.

The 3101B-ETR requires both mechanical and electrical installation procedures as described herein.

HANDLING

The electromagnetic lock and armature are ruggedly constructed and designed to provide years of trouble-free service. Care must be taken during installation and use that the lock face and armature face are kept free of dirt, rust, paint, or any other obstruction which may interfere with the lock and armature making good contact.

MECHANICAL INSTALLATION

Familiarize yourself with the door and frame conditions. The lock must mount rigidly to the underside of the door frame header and against the vertical strike jamb.The armature is designed to pivot slightly to compensate for reasonable misalignment.

NOTE: This lock does not change hands to match the hand of the door. Do not remove the coil assembly from the lock housing.
NOTE: If this lock is supplied with the DSM feature be certain to mount the armature with the DSM block extension aligned with the end cover of the lock assembly.

ELECTRICAL INSTALLATION

After mechanical installation is complete the 3101 needs to be wired and adjusted. A power source, 12 or 24 VDC or VAC is required. Once low voltage power is supplied the unit is operational, however a normally-open dry contact from an external exit device must be wired to the lock to trigger delayed egress. Delay egress systems also normally require fire panel tie-in. All other wiring is for selected options.

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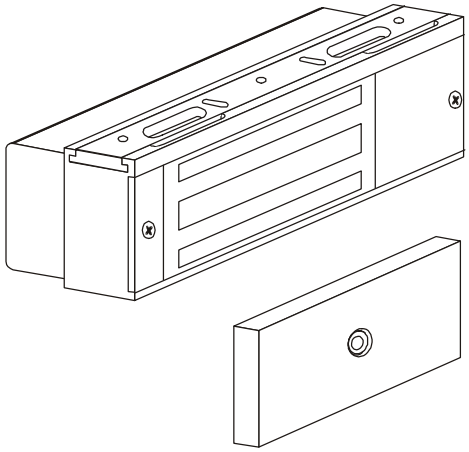
REQUIRED TOOLS

(1) Electric Drill
(1) #2 Phillips Screw Driver
(1) Soft Faced Mallet
(1) Hammer
(1) Center Punch
(1) 3/16” Hex Wrench
(1) Pencil & Tape
Drill Bits: 1/8”, 1/4”, 17/64”, 5/16”, 3/8”, 9/16”, 21/32”

MODEL #3101B-ETR
BILL OF MATERIALS



(1) 3101B-ETR LOCK ASSEMBLY
(1) ARMATURE
(1) HARDWARE KIT
(1) TEMPLATE
(1) DOOR SIGN - 15 SECONDS

HARDWARE KIT CONTENTS

QTY.	ITEM	DESCRIPTION
(5)	Baseplate Mounting Screws	#10 x 1” phillips pan head tek screw
(1)	Armature Mounting Screw	5/16-18 x 2” hex flat head machine screw
(1)	Armature Spacer	3/8”D x 1/4”L spacer
(1)	Steel Washer	1/4” flat steel washer
(1)	Rubber Washer	1/8” neoprene washer
(1)	Door Spacer	5/8”D x 1-11/16”L spacer
(1)	Sex Nut	5/16-18 sex nut
(2)	Armature Anti-Spin Pins	3/16”D x 1”L split roll pin
(1)	Anti-Tamper Cover Screwdriver	#6 spanner key
(1)	Baseplate Set Screw Wrench	1/8” ball head hex wrench

NOTE: For further parts clarification refer to the Exploded Parts View on page 13 or consult factory.

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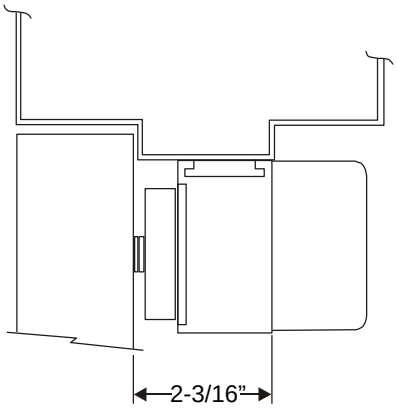
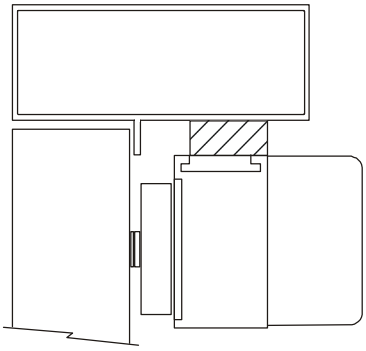
INSTALLATION INSTRUCTIONS

MOUNTING CONSIDERATIONS

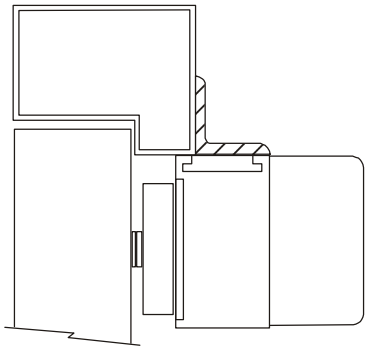
Inspect the door frame and determine if an angle bracket or filler plate will be required for installation. The lock will require a 2-3/16" wide header stop for a suitable mounting surface.



NORMAL MOUNTING



***FILLER PLATE REQUIRED**



***ANGLE BRACKET REQUIRED**

*These items are available from DynaLock.

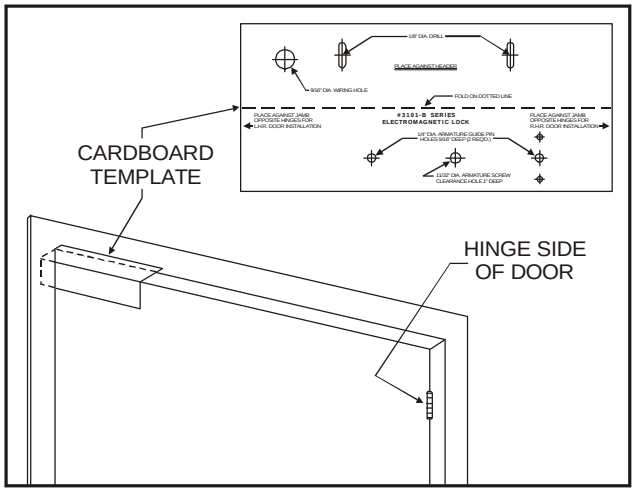
USING THE TEMPLATE

1. Fold the template on the dotted line to form a 90 degree angle. Scoring the template with a straight edge and a screwdriver will make it fold easier.

2. With the door in the closed and latched position place the template against the header and door with one edge against the vertical strike jamb and tape in place.

3. Transfer all hole locations to both the door and header with a center punch, then remove the template from the door.

4. Referring to the template drill two 1/8" dia. lock mounting holes and one 9/16" dia. wiring hole in the top of the frame, at the transferred locations.



5. Drill the remaining transferred holes in the face of the door to accept the Armature following the instructions on page 4 for your specific door type.

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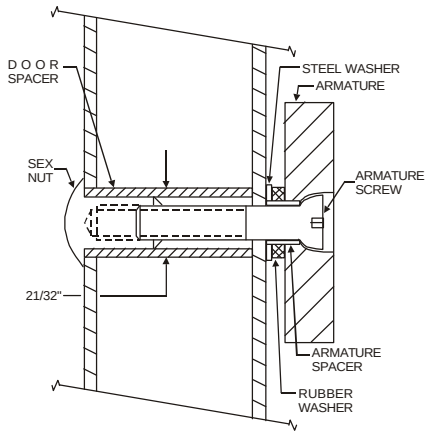
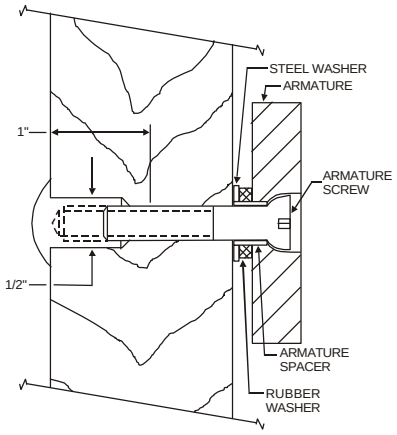
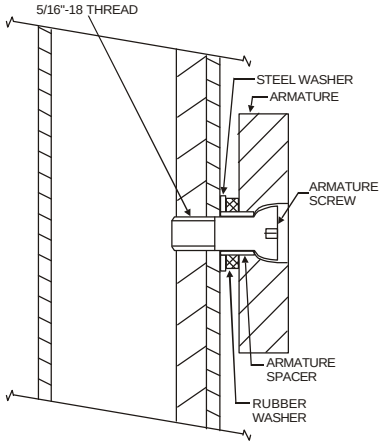
INSTALLATION INSTRUCTIONS

MOUNTING THE ARMATURE ASSEMBLY

From the three illustrations below select the one that resembles your door type and follow the instructions for drilling the Armature mounting screw hole. Drill two (2) 1/4" dia. holes 9/16" deep at the Anti-Spin Pin locations (See Template).

GLASS AND ALUMINUM OR HOLLOW METAL DOOR	SOLID CORE DOOR	REINFORCED DOOR
		
Drill an 3/8" diameter hole through the door. From the sex nut side only enlarge the 3/8" hole to 21/32" diameter.	Drill an 3/8" diameter hole through the door. From the sex nut side drill 1/2" diameter hole to 1" depth.	Drill a 17/64" diameter hole and tap for 5/16-18 thread

Locate the two 3/16" dia. Anti-Spin Pins from the hardware kit. Place the Armature face down on a soft surface (i.e. the shipping carton) and drive the pins into the holes provided. Refer to the illustrations above to select the correct hardware and mount the Armature to the door. Firmly tighten the Armature mounting screw with a 3/16" hex wrench. **Failure to properly secure the Armature to the door could result in serious injury or possible security breach.**

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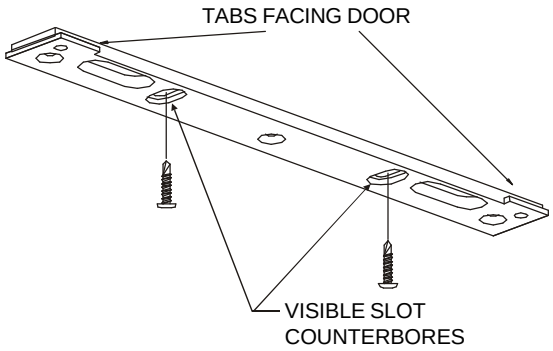
MODEL #3101B-ETR
DELAY EGRESS SYSTEM
INSTALLATION INSTRUCTIONS

MOUNTING THE LOCK

1. Before installation begins remove the rear Electronics Cover, End Cover and Access Cover (see page 13 for parts locations). In the upper inside corners of the lock housing are located two #1/4-28 set screws. Using the 1/8" ball head hex wrench loosen **(do not remove)** the two set screws until the Fas-Trak Baseplate is free (Fig. "C"). Remove the Fas-Trak.

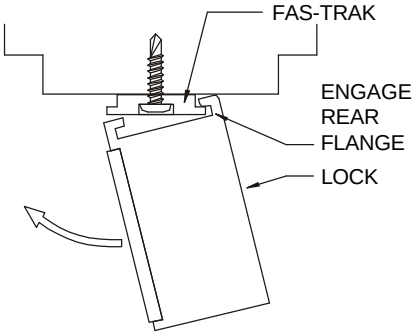
2. Place the Fas-Trak against the header with the slot counterbores visible and the tabs facing the door (Fig. "A"). Attach the Fas-Trak to the header at both slotted hole locations, with two #10 x 1" tek screws. Tighten the screws just snug enough to allow for final adjustment.

FIG. "A"



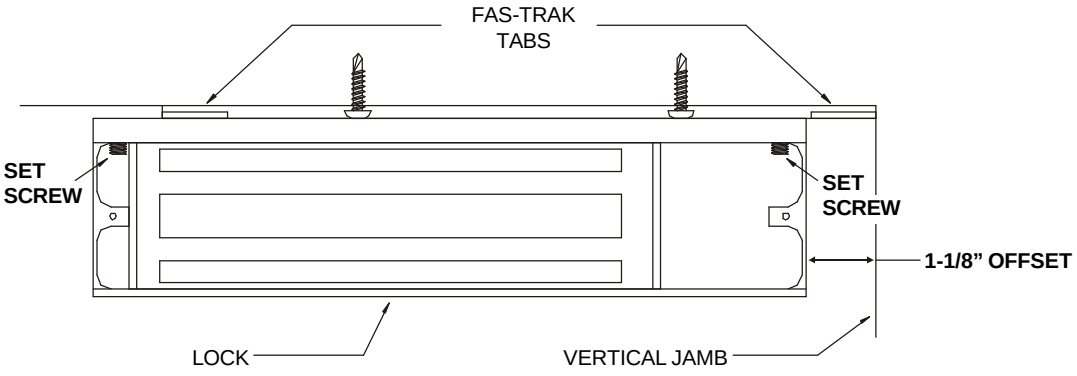
3. Temporarily mount the lock to the Fas-Trak by offsetting the lock 1-1/8" from the jamb (Fig. "C") and tipping the front of the lock down engaging the rear flange of the Fas-Trak (Fig. "B"). Rotate the lock up allowing one tab to pass through the corresponding notch in the top of the lock housing. Slide the lock into position. Close and latch the door. Check that the armature and lock faces make full contact. If any adjustment is required gently tap the housing with a soft mallet until full contact is achieved. Open the door, remove the lock from the Fas-Trak and tighten both slot screws. Drive three #10 x 1" tek screws into the header using the Fas-Trak as a physical template. Screw heads must not project above the Fas-Trak.

FIG. "B"



4. Any roughed-in wiring may be brought in at this time through the slotted wiring holes. Re-install the lock on the Fas-Trak. Firmly tighten both housing set screws with the 1/8" ball head hex wrench. Re-install the End Cover and Access Cover. **If the lock wiring and set-up are not being done at this time replace the electronic cover and see that these instructions are left for the electrical installer.**

FIG. "C"



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MODEL #3101B-ETR
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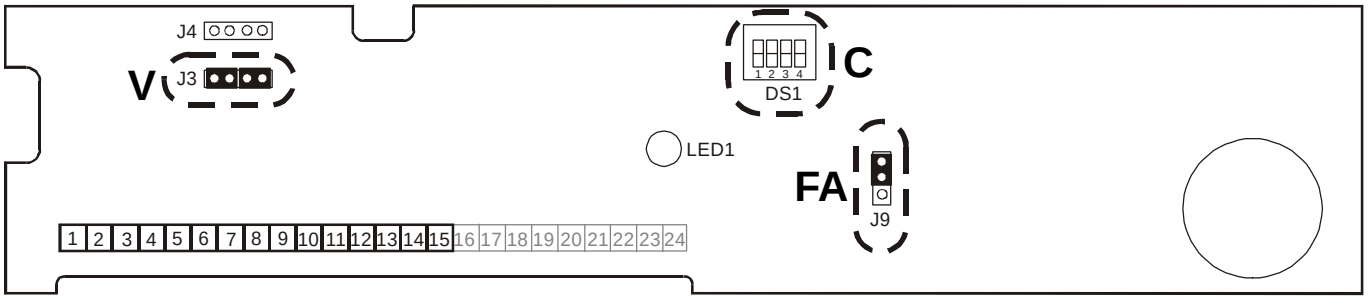
INSTALLATION INSTRUCTIONS

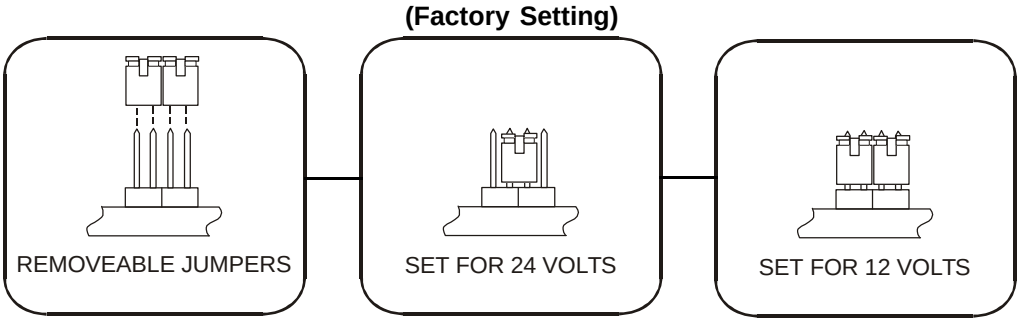
BASIC SET-UP

1. Remove the Electronics Cover to expose the circuit board assembly.



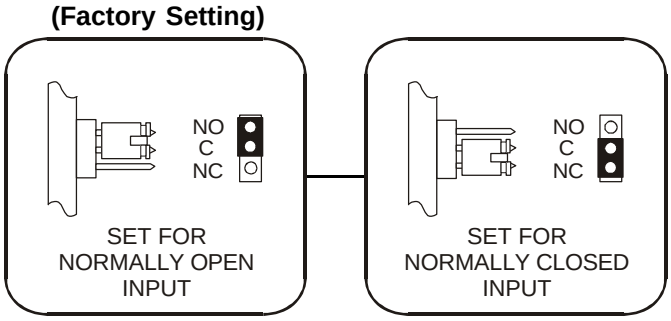
2. V - Voltage Selection

Check that the voltage selection jumper (J3) is properly set to match your input power. Note that all locks are factory set for 24 volts.



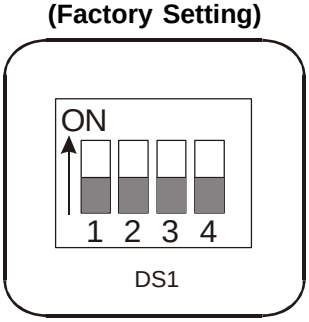
3. FA - Fire Alarm Control

Check that the fire alarm control jumper (J9) is properly set to match your fire panel input contacts. If fire panel tie-in is not required leave jumper at factory setting (N.O.).



4. C - System Selector Switches

The selector switches (DS1) that control major system functions are factory set to the OFF position for basic lock operation. Switch 1 is not used . Switches 2, 3 and 4 are only used for options described on page 9.



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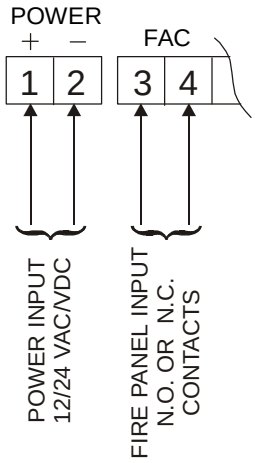
BASIC WIRING

Basic hook-up is shown below. For other system features hook-up see “Option Wiring” (page 10).



Terminals 1& 2 - Power Input. May be 12 or 24 Volts, AC or DC. Current requirement is 0.75 Amps for 12 Volts and 0.5 Amps for 24 Volts (check voltage selection jumpers “V” - page 6).

Terminals 3 & 4 - Fire Panel Input. May be normally-open (N.O.) or normally-closed (N.C.) dry contacts from fire panel (check fire alarm control jumper “FA” - page 6).

When the fire panel trips, the 3101B-ETR will release, the audible will sound a constant tone and the bi-color LED (LED1) will change to green. When the fire panel is reset, the lock will reset and lock.

NOTE: DO NOT APPLY POWER TO TERMINALS 3 & 4 OR DAMAGE WILL OCCUR.

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INDICATOR DESCRIPTIONS

COLOR	STATUS
RED	LOCKED
GREEN	UNLOCKED
BLINK RED	DELAY EGRESS

LED1 - BI-COLOR LED INDICATOR
(Located at center of circuit board.)
Indicates system status.

Also monitors door movement during egress sensor adjustment.

COLOR	STATUS
RED	NORMAL
BLINK RED	TROUBLE

LED2 - WATCHDOG LED INDICATOR
(Located upper right corner of circuit board.)
Troubleshooting indicator.

Monitors proper operation of the microprocessor.

AUDIBLE INDICATION MODES	
CONDITION	**SIGNAL**
ACTIVATION OF DELAY EGRESS	One second pulse rate during delay cycle. Steady tone after delay until reset.
FIRE ALARM RELEASE	Steady tone until fire alarm contacts are reset.
OPTIONAL REMOTE AUTHORIZED BYPASS (TERMINALS 7 & 8)	Steady tone during release time (selectable). One second pulse rate if door held open past relock time, (requires reset).
FACTORY SERVICE REQUIRED	Steady tone. Watchdog LED pulses at 1.5 second rate simultaneously.
POOR MAGNETIC BOND (DYNASTAT OPTION)	Rapid pulse rate until problem is corrected. Only functional with Dynastat Force Sensor Option.

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MODEL #3101B-ETR
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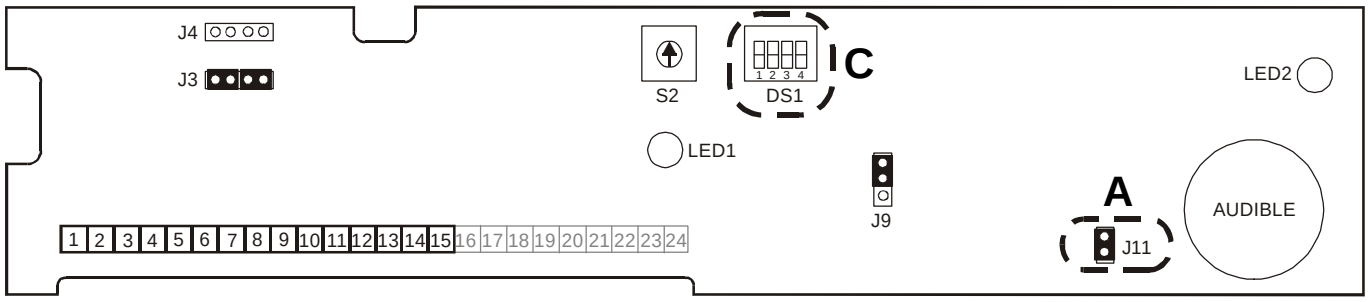
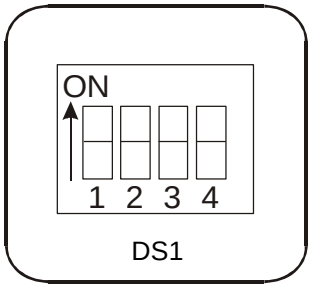
INSTALLATION INSTRUCTIONS

OPTIONAL SET-UP



1. C - System Selector Switches

Set the System Selector Switches (DS1) to address your specific system requirements.

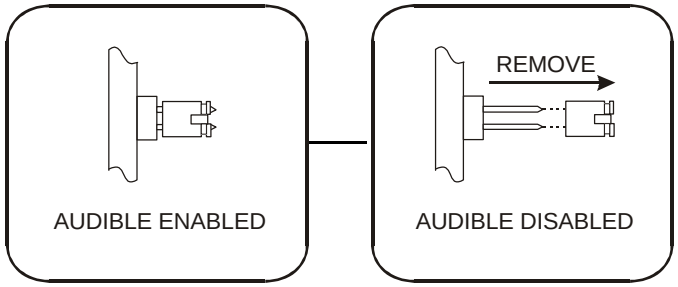


SWITCH	FUNCTION	MODE SETTINGS	
		OFF	ON
1	FACTORY SET	**NORMAL**	----------
2	BYPASS AUDIBLE	**DISABLED**	ENABLED
3	NUISANCE DELAY	**1 SEC.**	3 SEC.
4	EGRESS DELAY	**15 SEC.**	30 SEC.

2. A - Audible Selector

The on-board audible is normally enabled for local signaling of lock and alarm status. To completely disable the audible remove jumper (J11).

(Factory Setting)



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MODEL #3101B-ETR
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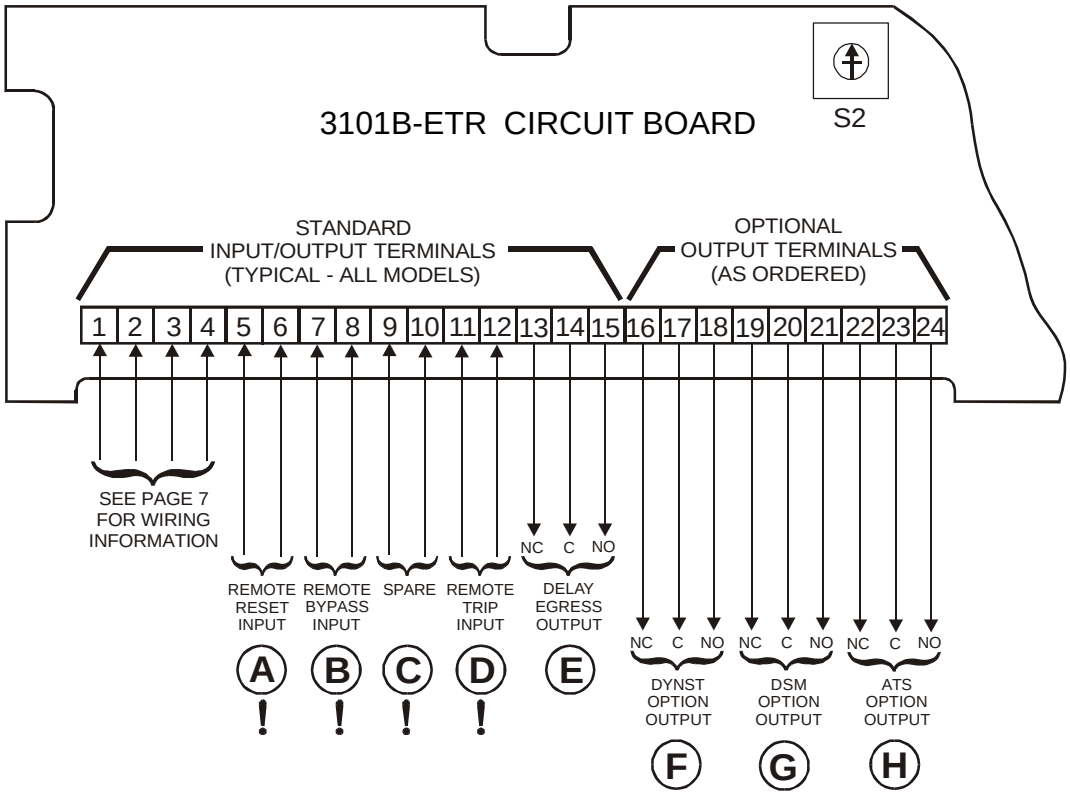
INSTALLATION INSTRUCTIONS

OPTION WIRING



! WARNING: DO NOT APPLY POWER TO INPUTS MARKED " ! " OR DAMAGE WILL OCCUR.

INPUT DESCRIPTIONS	
(A)! REMOTE RESET INPUT Momentarily closing a normally-open dry contact across terminals 5 & 6 will reset and re-lock the 3101-B following delayed egress and re-closure of door.	**(C)! SPARE** Do not use.
(B)! REMOTE BYPASS INPUT Momentarily closing a normally-open dry contact across terminals 7 & 8 will immediately release the lock without alarm. The door will remain unlocked for a period of time controlled by on-board adjustable timer S2. To increase the delay rotate timer S2 clockwise - range is 1 to 75 seconds.	**(D)! REMOTE TRIP INPUT** Momentarily closing a normally-open dry contact across terminals 11 & 12 will initiate delayed egress.

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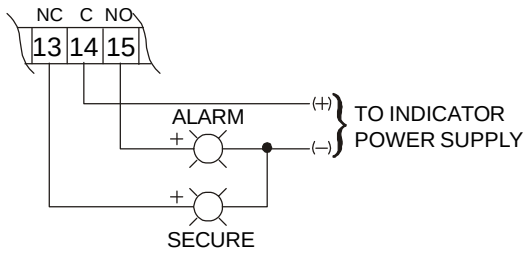
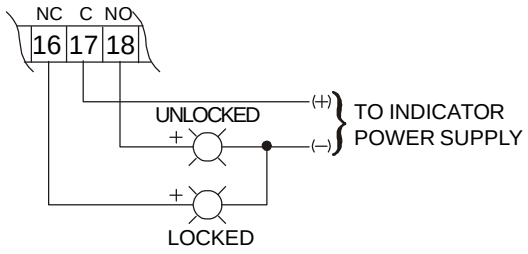
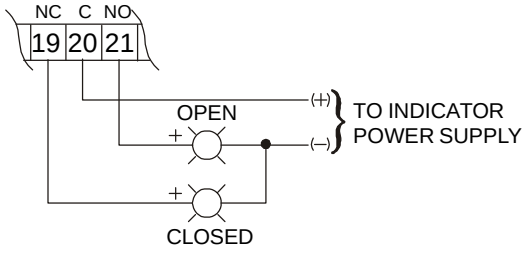
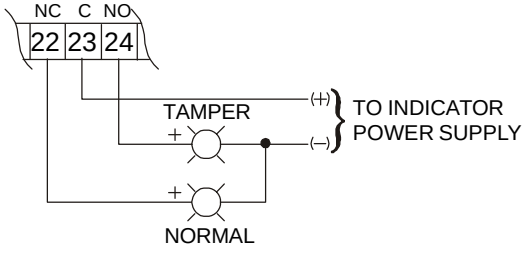
OPTION WIRING

MONITORING OUTPUT DESCRIPTIONS	TYPICAL WIRING
(E) DELAY EGRESS OUTPUT Delay egress alarm monitoring. SPDT dry relay contacts rated 1Amp @ 24 Volts Contacts change state upon initiation of delayed egress and remain in that state until door is closed and reset.	 NOTE: INDICATORS ARE NOT INCLUDED
(F) DYNST OPTION OUTPUT Dynastat bond sensor monitoring. SPDT dry relay contacts rated 1Amp @ 24 Volts Contacts change state to signal lock status as either locked or unlocked.	 NOTE: INDICATORS ARE NOT INCLUDED
(G) DSM OPTION OUTPUT Door position sensor monitoring. SPDT dry relay contacts rated 0.5Amp @ 24 Volts Contacts change state to signal physical door position as either closed or open.	 NOTE: INDICATORS ARE NOT INCLUDED
(H) ATS OPTION OUTPUT Anti-Tamper Switch monitoring. SPDT dry relay contacts rated 0.5Amp @ 24 Volts Contacts change state to signal removal of the lock electronics cover.	 NOTE: INDICATORS ARE NOT INCLUDED

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MODEL #3101B-ETR
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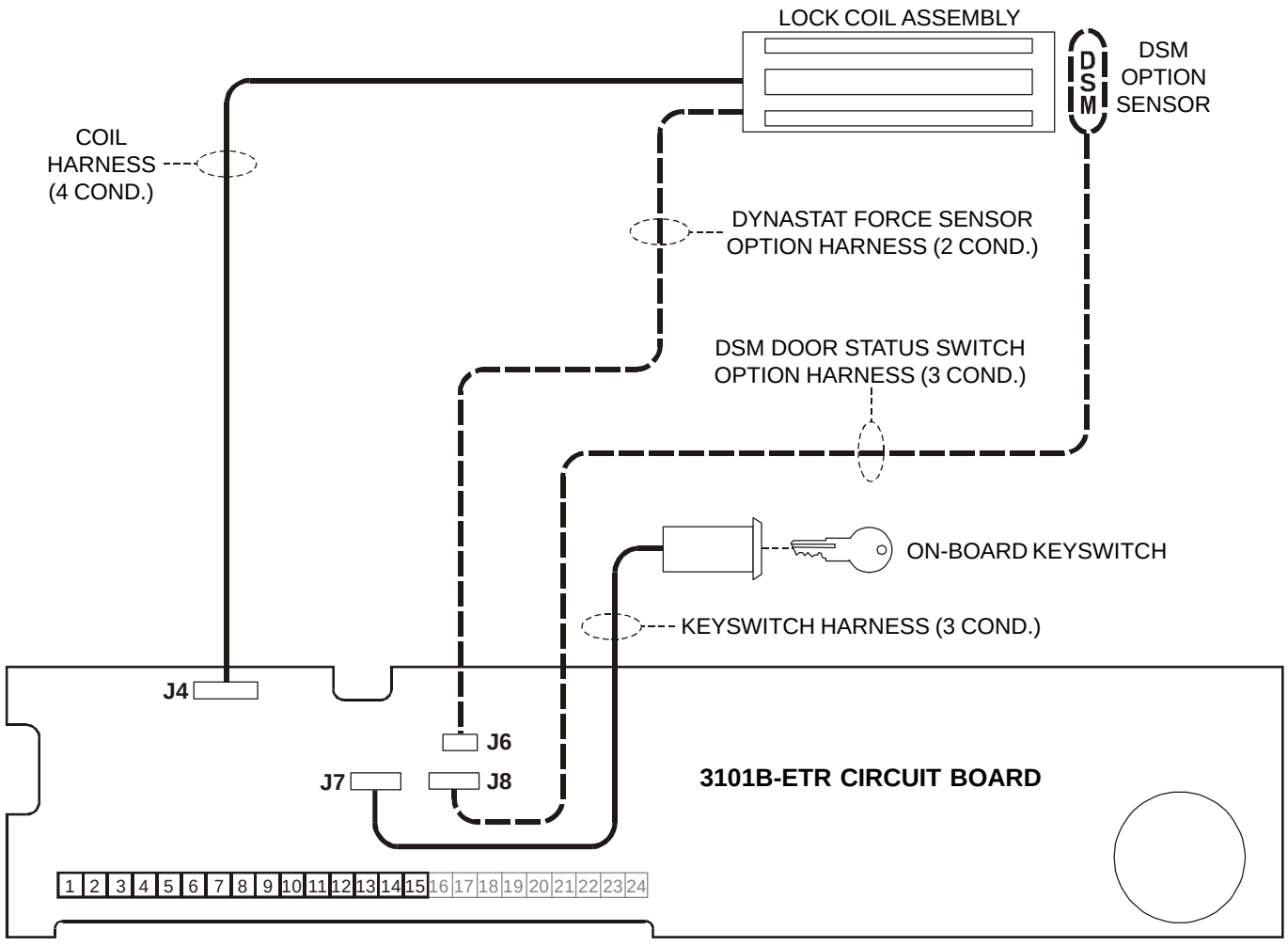
FACTORY WIRING



NOTES:

1. **Harnesses J6 and J8 are only present if the 3101B-ETR is equipped with the DYNST - Dynastat Force Sensor and DSM - Door Status Switch Options.**

2. **Observe polarity when re-connecting the J7 and J8 harness connectors. Orient these connectors with respect to harness wire colors as follows:**

J7	**WHT**	**BLK**	**BLU**		**J8**	**GRN**	**WHT**	**RED**

3. **Harness connectors J4 and J6 are not polarity sensitive.**

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MODEL #3101B-ETR
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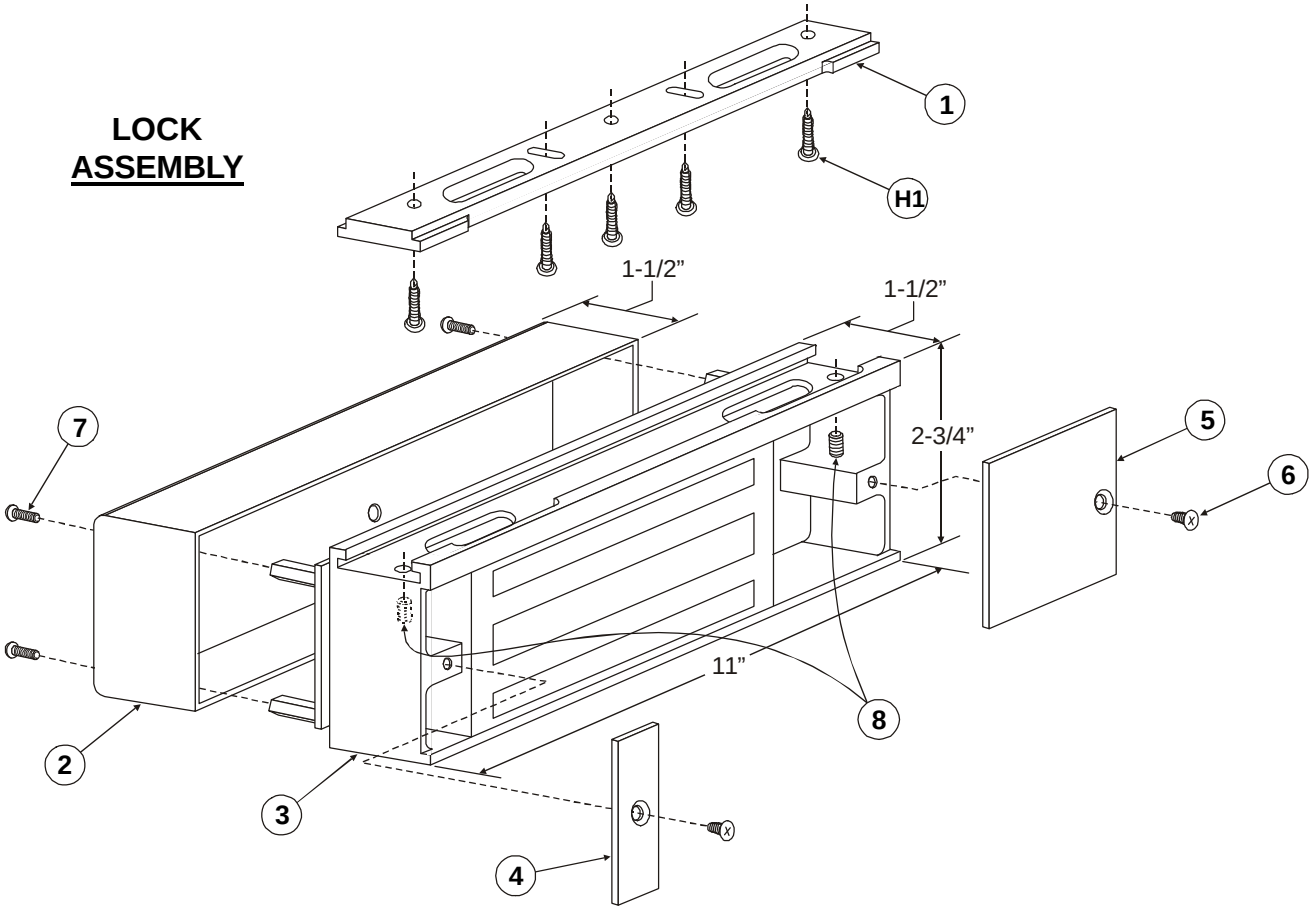
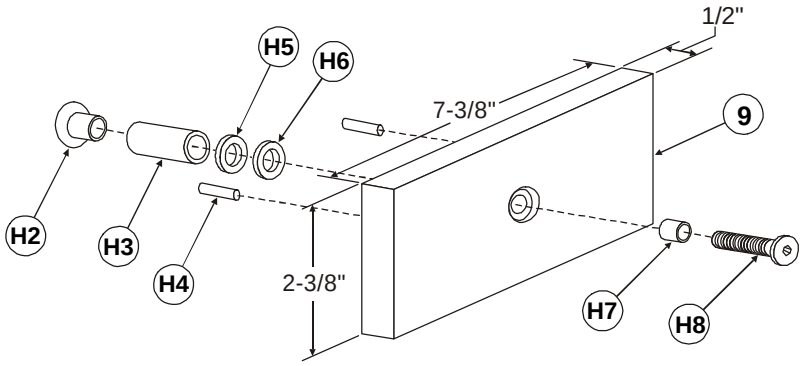
INSTALLATION INSTRUCTIONS

EXPLODED PARTS VIEW

LOCK ASSEMBLY



ARMATURE



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EXPLODED PARTS VIEW LEGEND

LOCK ASSEMBLY		
ITEM	**DESCRIPTION**	**PART NO.**
1	Fas-Trak Baseplate	300011
2	Electronics Cover	300353
3	Lock Assembly	Consult Factory
4	End Cover	300011
5	Access Cover	300009
6	Access/End Cover Screw	300608
7	Electronics Cover Screw	700058
8	Fas-Trak Set Screw	300604

ARMATURE		
ITEM	**DESCRIPTION**	**PART NO.**
9	Armature	300013

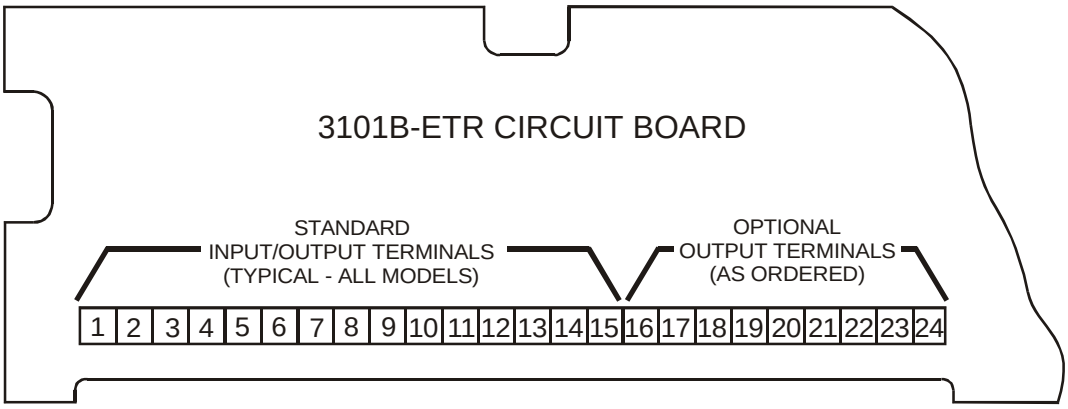
HARDWARE KIT		
ITEM	**DESCRIPTION**	**PART NO.**
H1	Baseplate Mounting Screw	Hardware Kit P/N 301054
H2	Sex Nut	
H3	Door Spacer	
H4	Armature Anti-Spin Pin	
H5	Flat Steel Washer	
H6	Rubber Washer	
H7	Armature Spacer	
H8	Armature Mounting Screw	

DynaLock
705 Emmett Street • Bristol, CT 06011-2728
Phone:(860)582-4761 • Fax:(860)585-0338

MODEL #3101B-ETR
DELAY EGRESS SYSTEM
INSTALLATION INSTRUCTIONS

INSTALLATION NOTES

Sketch in all field connections to external system devices specific to your installation, for future reference.



PLEASE DELIVER THIS MANUAL AND THE KEYS TO THE END-USER UPON COMPLETION OF THE 3101B-ETR INSTALLATION

FOR PRODUCT SUPPORT AND PARTS ORDERING INFORMATION CONTACT:

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FWAX Special Locking Arrangements