Detex Corporation, 302 Detex Drive, New Braunfels, Texas 78130-3045
(830)629-2900 / 1-800-729-3839 / Fax (830)620-6711
E-MAIL: detex@detex.com INTERNET: www.detex.com

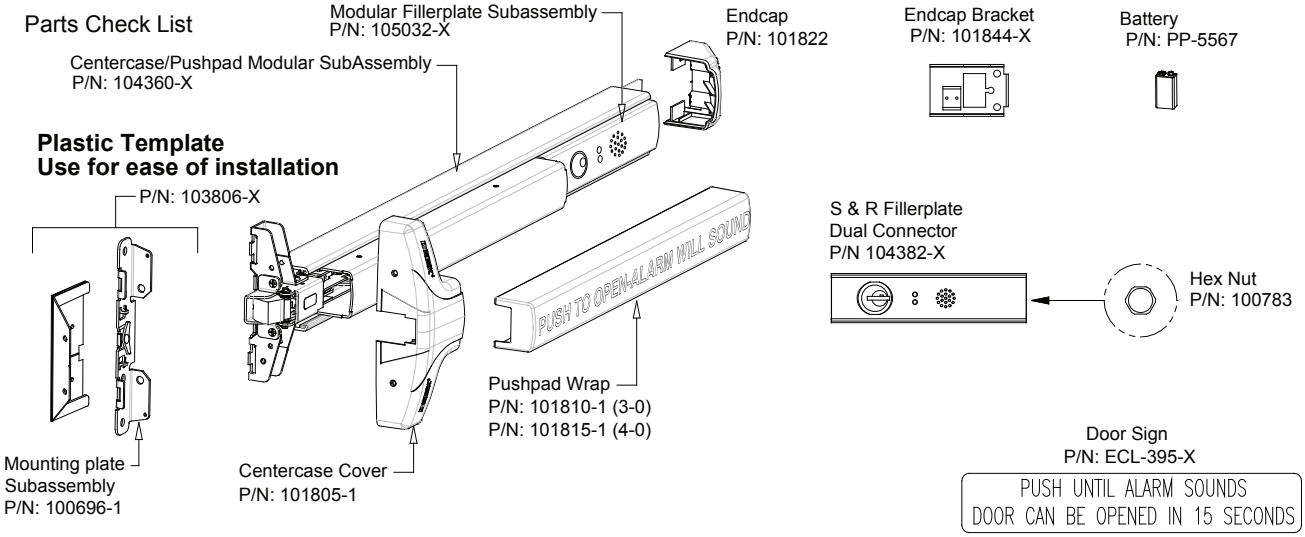
INSTALLATION INSTRUCTIONS FOR ARCHITECTURAL VALUE SERIES® DELAYED EGRESS AND "H" MODELS (HURRICANE)

V40 VALUESERIES® EE

DELAYED

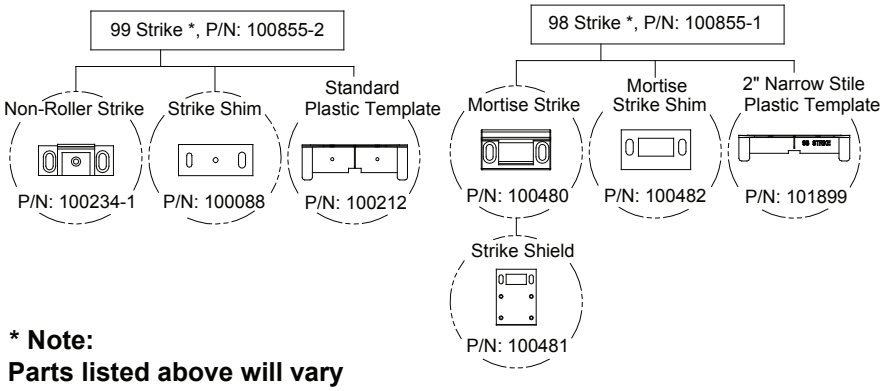
U.S. PATENT NUMBERS:
6009732
6205825B1
6532777B2
INTERNATIONAL PATENT NUMBER:
PCT6009732

Parts Check List

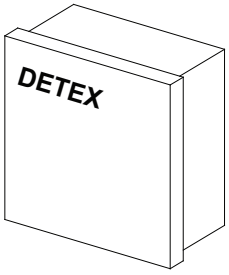


Door Sign
P/N: ECL-395-X

PUSH UNTIL ALARM SOUNDS
DOOR CAN BE OPENED IN 15 SECONDS



Detex Power Supply Catalog No: 90-800
(80-800 Battery back-up power supply available)



*** Note:**
Parts listed above will vary according to product configuration.

***Narrow Stile "NS" option**

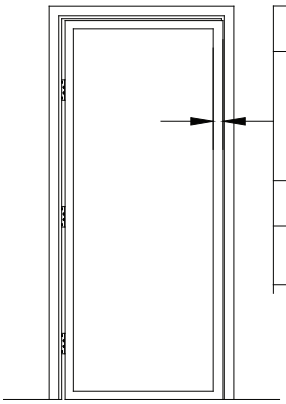
Mortise cylinder not included with device.
Standard Yale type cam required.

See Optional Accessories For:
- **Glass Bead Kit**
- **Sex Nuts**
- **Tamper Kit**
- **Double Door Strike Kit**
- **Key Stop Kit**
- **Narrow Stile Kit**

Owner's Copy

FOR SPECIAL LOCKING ARRANGEMENT:
THIS PRODUCT MUST BE CONNECTED INTO A FIRE ALARM SYSTEM PER NFPA CODE OR OTHER REGULATIONS SO THAT, IN THE EVENT OF FIRE, THE TIME DELAY WILL BE BYPASSED. CONTACT YOUR LOCAL CODE AUTHORITY TO VERIFY COMPLIANCE WITH FIRE AND BUILDING CODES.
THE DELAYED EGRESS DEVICE SHOULD BE ROUTINELY CHECKED FOR PROPER OPERATION AND COMPLIANCE WITH FIRE AND BUILDING CODES

!!!CHECK BEFORE STARTING!!!

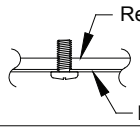


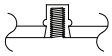
Wide Stile (Surface Strike)
Minimum door stile 4-1/2" (114 mm) Template drawings provide door and frame structural and dimensional specifications for door and frame preparation.
Narrow Stile
2"(51mm) Door Stile requires Mortise strike

Doors and frames with walls having a structural thickness (metal skin plus reinforcement, or solid wood) to engage less than (3) full screw threads, are considered unreinforced for hardware.

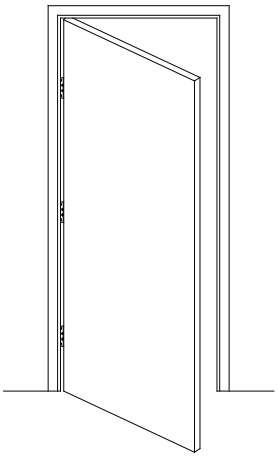
Unreinforced Doors: Use Sex Nuts and Bolts
Unreinforced Frames: Use Blind Rivet Nuts (see sketch)
Fasteners for unreinforced openings are not supplied by Detex.

Reinforced door or frame engages at least (3) screw threads.

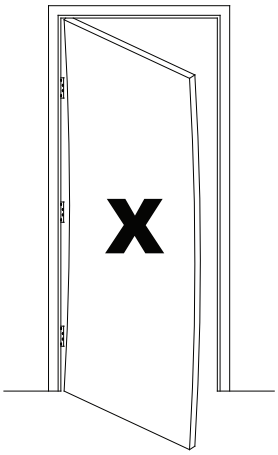




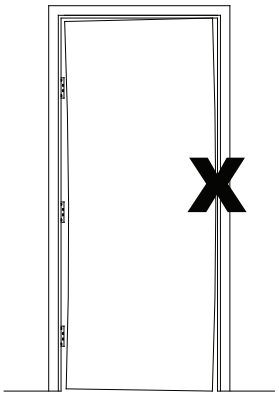
Blind Rivet Nut



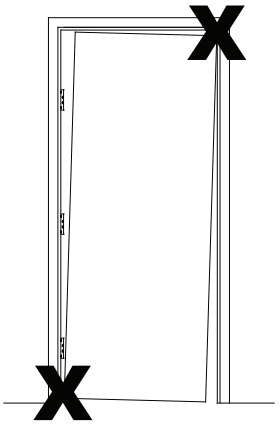
Door Must Swing Freely



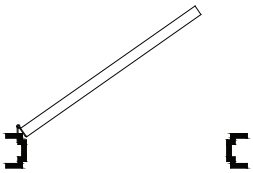
Door Must Not be Warped



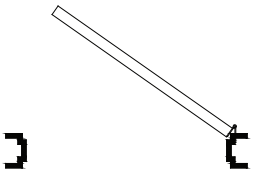
Door Must Not Bind



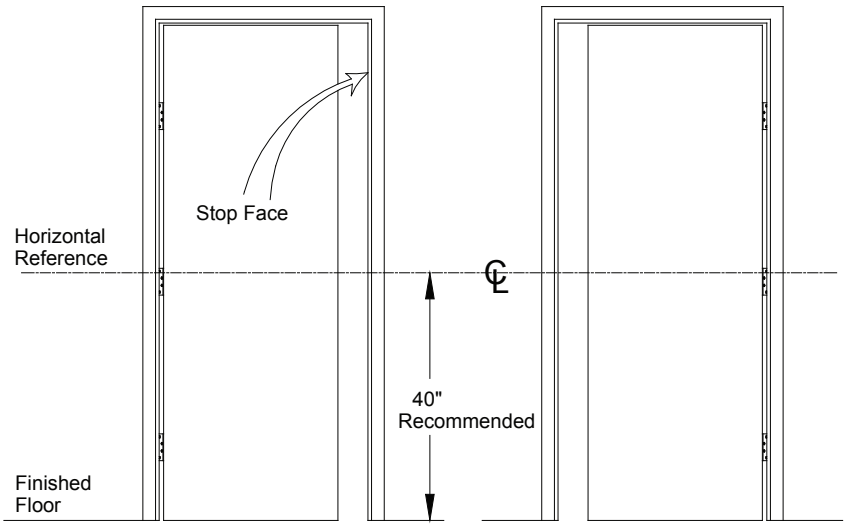
Door Must Not Sag

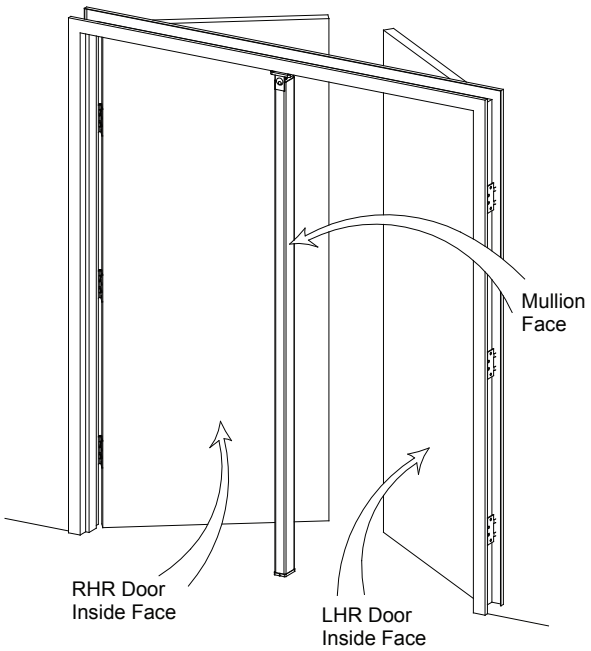


RHR Door

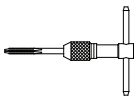
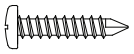


LHR Door



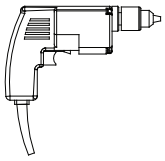


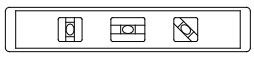
Fastener Table

			Drill Bit	Tap Wrench	Comments
DETEX®					Use Either Machine Screws, Sheetmetal Screws, or Sex Nuts
Machine Screws 	#6-32 x 5/8"	PPH	#36 or 7/64	#6-32 Tap	Used on 98 Strike Shield Mounting Holes
	#6-32 x 3/8"	PPH	-----	-----	Used to Mount Centercase Cover and Endcap
	#10-24 x 5/8"	PPH	#25 or 9/64"	#10-24 Tap	Used on 99 Strike Center Mounting Hole
	#1/4-20 x 1/4"	PPH	-----	-----	Used to Fasten Centercase Unit onto Mounting plate
	#1/4-20 x 1"	PPH	#7 or 13/64"	#1/4-20 Tap	Used on Strike, Mounting plate, and Endcap Mounting Holes
Sheetmetal Screws 	#6 x 1"	PFH	9/64"	-----	Used on 98 Strike Shield Mounting Holes
Self-drilling Screws 	#10 x 1"	PFH	No pilot hole necessary for self-drilling screws	-----	Used on 99 Strike Center Mounting Hole
	#14 x 1-1/2"	PPH		-----	Metal Applications Used on Strike, Mounting plate, and Endcap Mounting Holes
Sex Nut 	#1/4-20	----	9/32" Interior Door Face	-----	Recommended on Fire Rated Wood and Unreinforced Hollow Metal Doors Used on Mounting plate and Endcap Mounting Holes
		----	3/8" Exterior Door Face	-----	
	#10-32	----	13/64" Interior Door Face	-----	Recommended on Fire Rated Wood and Unreinforced Hollow Metal Doors Used on Strike Hook Mounting Holes
		----	5/16" Exterior Door Face	-----	

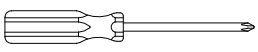
Note: (1) Fastener selection will vary per catalog configuration and kits ordered.
(2) Mortise Cylinder NOT Provided.

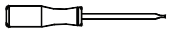
Tools Required

Power Drill 

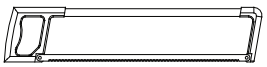
Level 

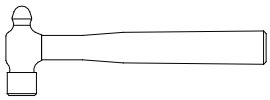
Safety Glasses 

Screw Driver 

Jewelers (Small) Screwdriver 

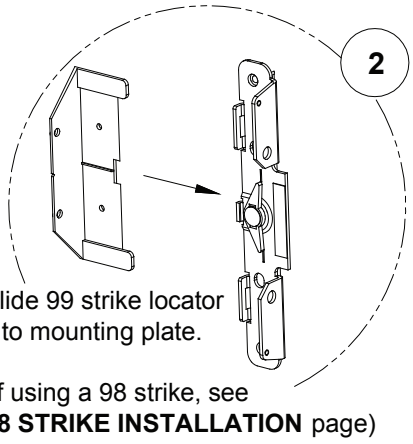
Pencil

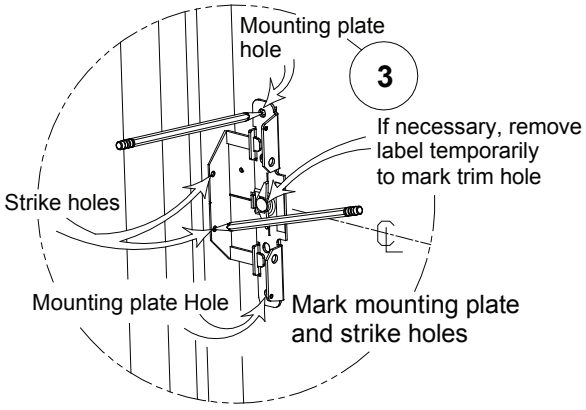
Hack Saw 

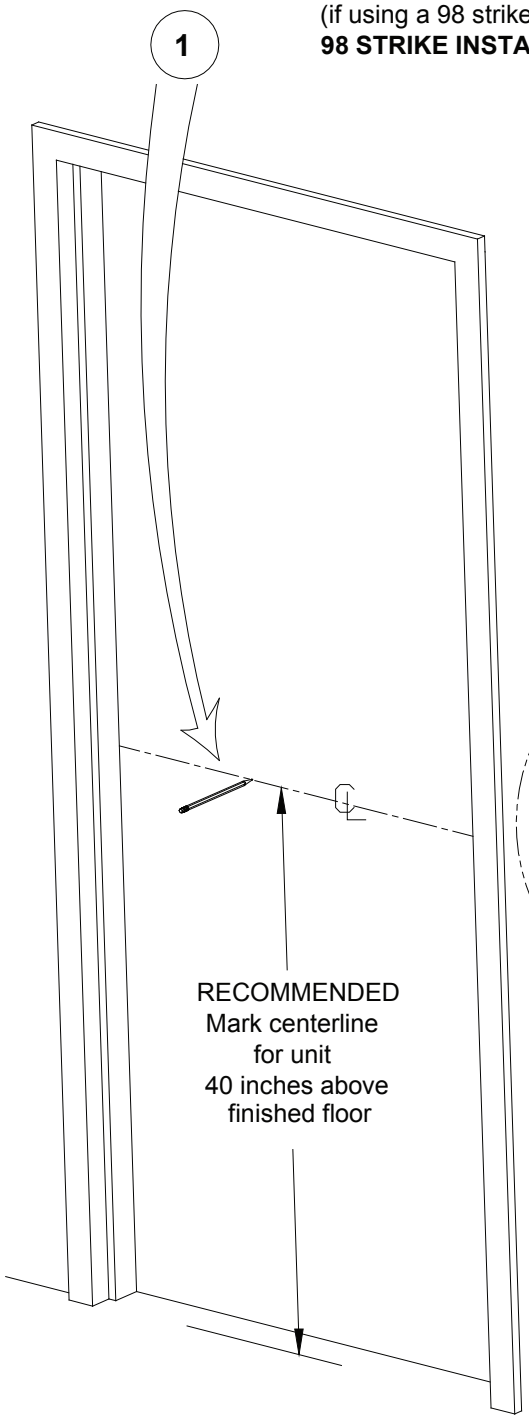
Hammer 

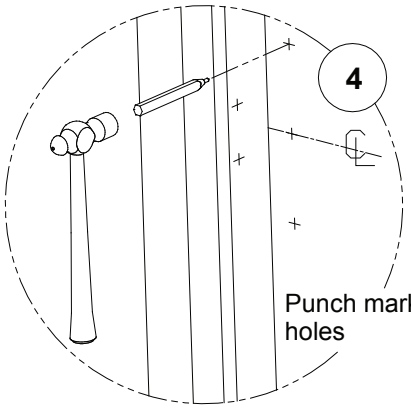
Tape Measure 

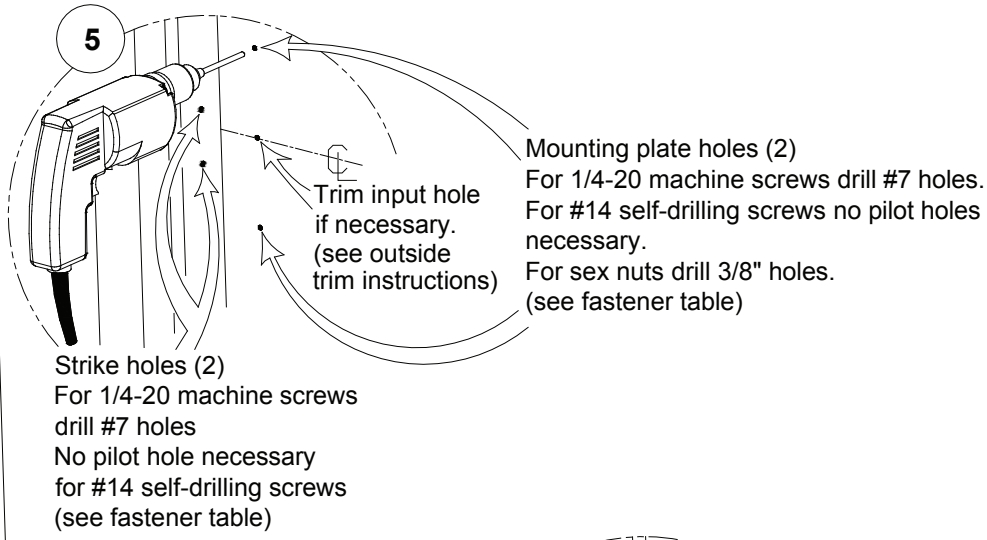
Center Punch 

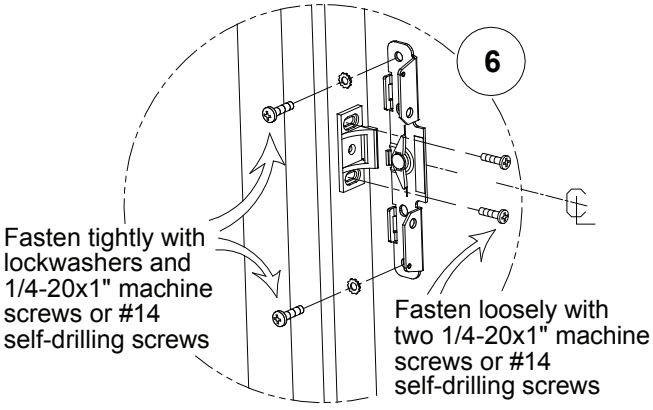

2
Slide 99 strike locator into mounting plate.
(if using a 98 strike, see **98 STRIKE INSTALLATION** page)

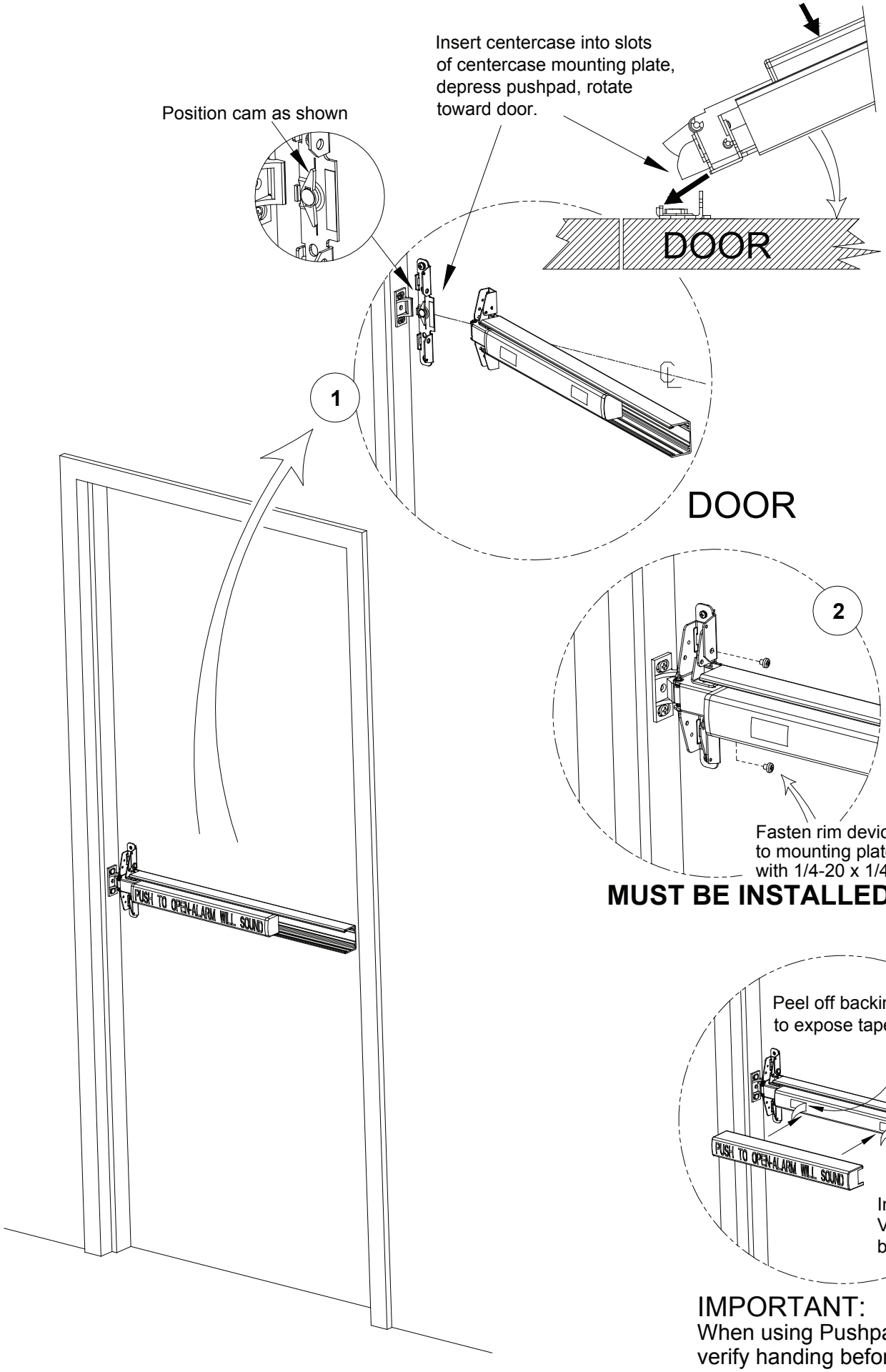

Mounting plate hole
3
If necessary, remove label temporarily to mark trim hole
Strike holes
Mounting plate Hole
Mark mounting plate and strike holes


1
RECOMMENDED
Mark centerline for unit
40 inches above finished floor


4
Punch marked holes


5
Trim input hole if necessary. (see outside trim instructions)
Mounting plate holes (2)
For 1/4-20 machine screws drill #7 holes.
For #14 self-drilling screws no pilot holes necessary.
For sex nuts drill 3/8" holes.
(see fastener table)
Strike holes (2)
For 1/4-20 machine screws drill #7 holes
No pilot hole necessary for #14 self-drilling screws
(see fastener table)


6
Fasten tightly with lockwashers and 1/4-20x1" machine screws or #14 self-drilling screws
Fasten loosely with two 1/4-20x1" machine screws or #14 self-drilling screws

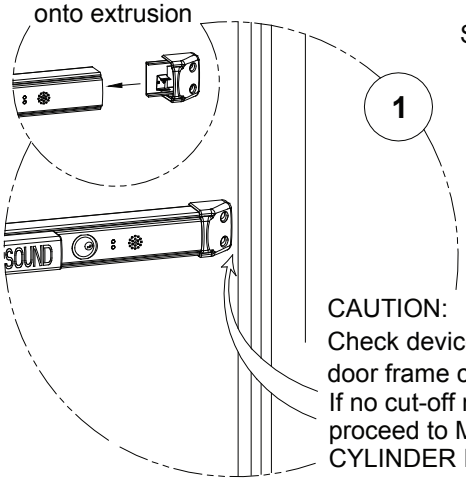


MUST BE INSTALLED!

IMPORTANT:
When using Pushpad Wrap with text verify handing before installing wrap. (LHR handing shown)

CHECKING FOR DEVICE CLEARANCE
(Cut-Off procedure if required)

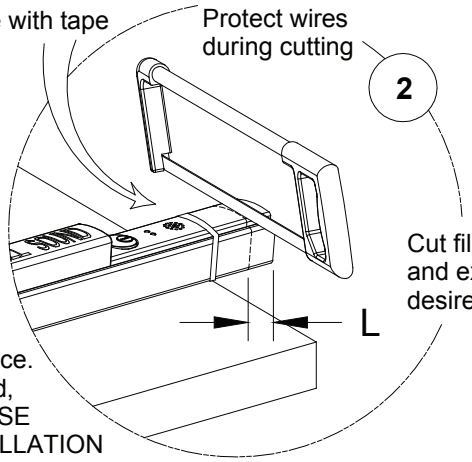
Slide endcap assembly onto extrusion



CAUTION:
Check device and door frame clearance. If no cut-off needed, proceed to MORTISE CYLINDER INSTALLATION

Secure with tape

Protect wires during cutting



Cut fillerplate and extrusion to desired length

Max Cut-Off		
Type	Length (L)	
	36" Unit	48" Unit
Electrified Model	cannot be cut down	6 in

MORTISE CYLINDER INSTALLATION

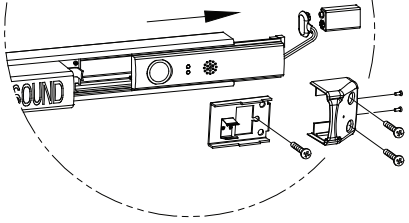
PRECAUTIONARY NOTE:

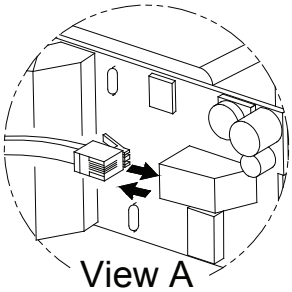
1. See "EE ELECTRICAL OPTIONS" before reinstalling filler plate.

2. Be careful when installing fillerplate assembly not to damage wires.

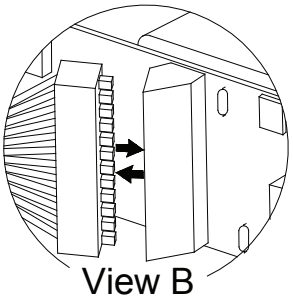
1

Remove endcap, endcap bracket & fillerplate subassembly. Disconnect cable assembly (view A), 12 pin connector (view B), 2 pin connector (view C) and battery

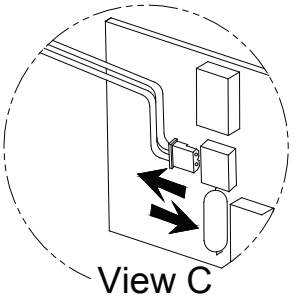




View A
Modular Cable Connection



View B
12 Pin Connection



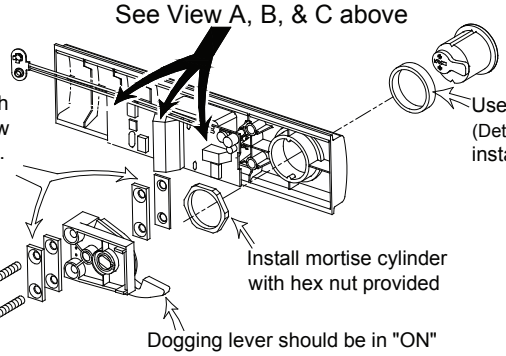
View C
2 Pin Connector

(note: board layout may differ slightly from layout shown)

2 **INSTALLING MORTISE CYLINDER**

See View A, B, & C above

NOTE:
(1) Move placement of spacers to match length of cylinder used to allow smooth rotation of cam.
2) All cylinder spacers must be used, either on top or bottom



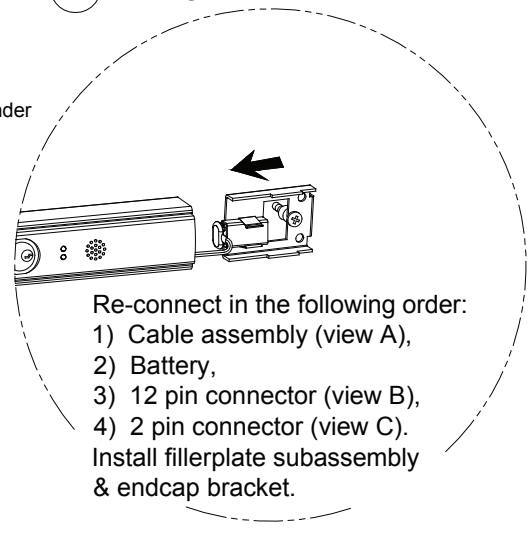
Use optional cylinder collar (Detex p/n: ECL-1595) when installing 7-pin mortise cylinder

Install mortise cylinder with hex nut provided

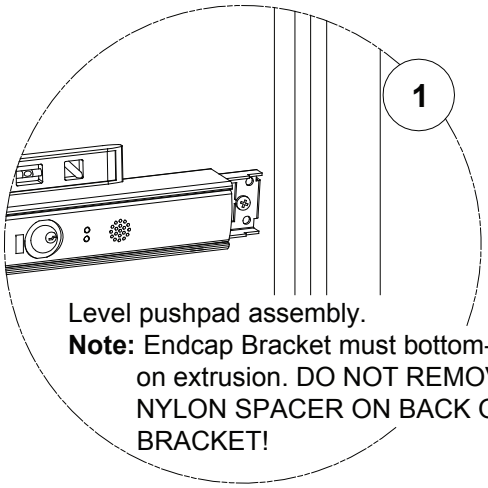
Dogging lever should be in "ON" (CCW) position before sliding back into extrusion

CAUTION:
Tighten with hand tools only. Do not overtighten

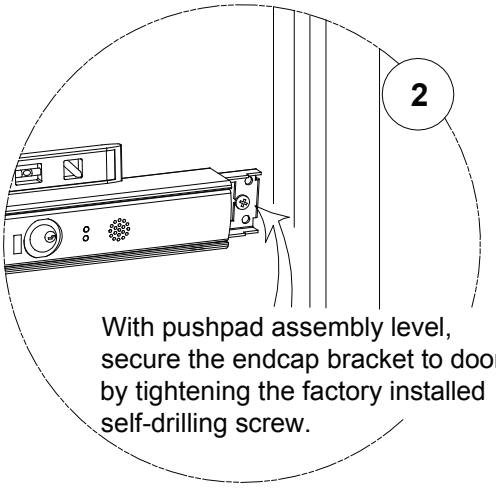
3 **RE-INSTALL FILLERPLATE**



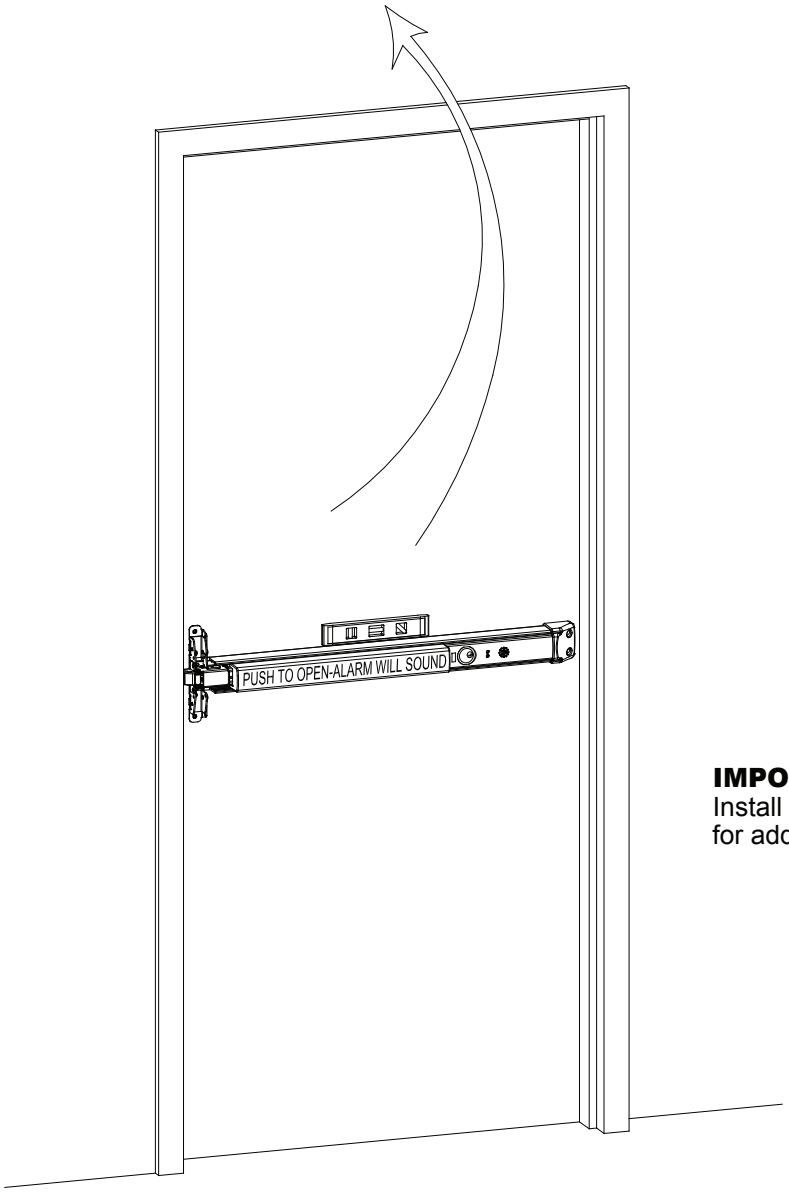
Re-connect in the following order:
1) Cable assembly (view A),
2) Battery,
3) 12 pin connector (view B),
4) 2 pin connector (view C).
Install fillerplate subassembly & endcap bracket.

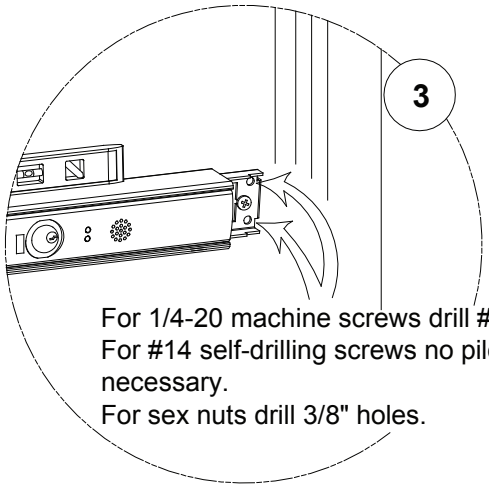


Level pushpad assembly.
Note: Endcap Bracket must bottom-out on extrusion. DO NOT REMOVE NYLON SPACER ON BACK OF BRACKET!



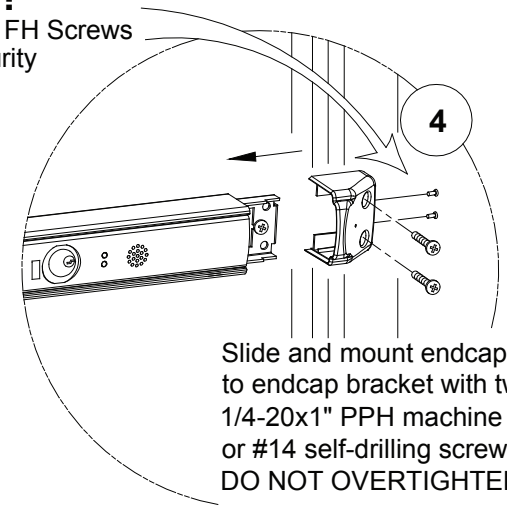
With pushpad assembly level, secure the endcap bracket to door by tightening the factory installed self-drilling screw.





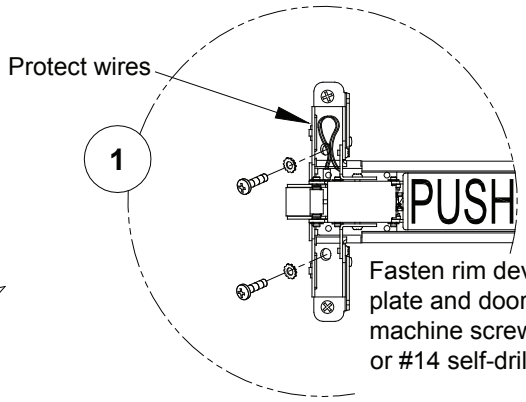
For 1/4-20 machine screws drill #7 holes.
For #14 self-drilling screws no pilot holes necessary.
For sex nuts drill 3/8" holes.

IMPORTANT:
Install (2) 6-32 FH Screws for added security

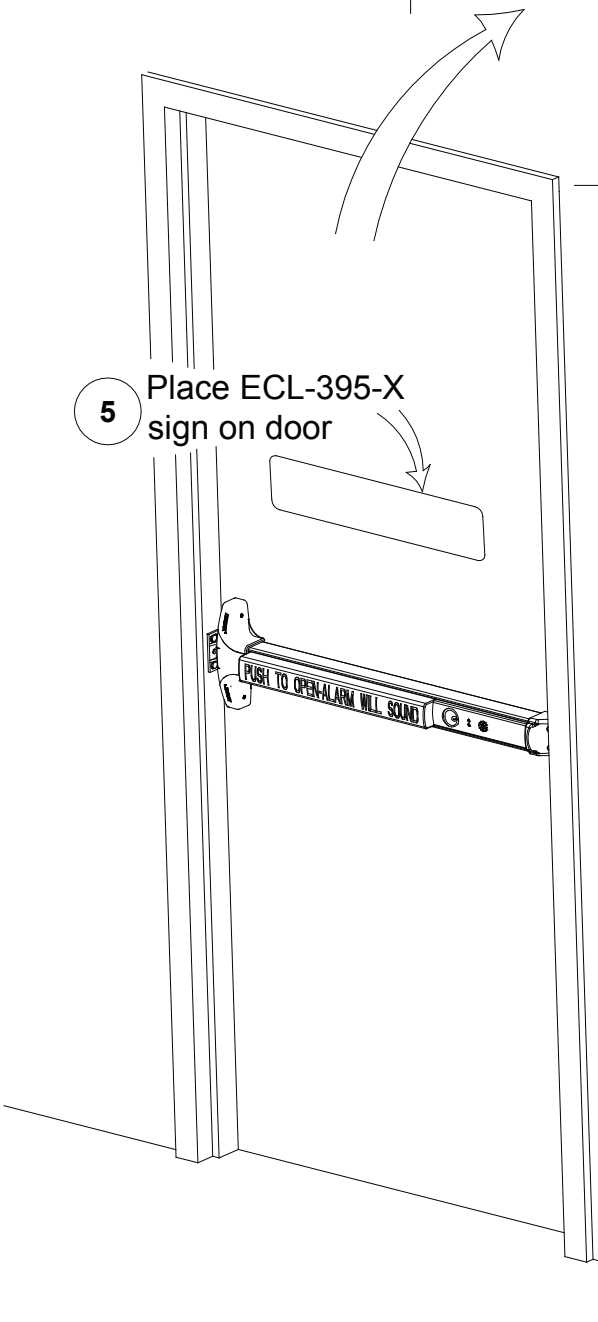


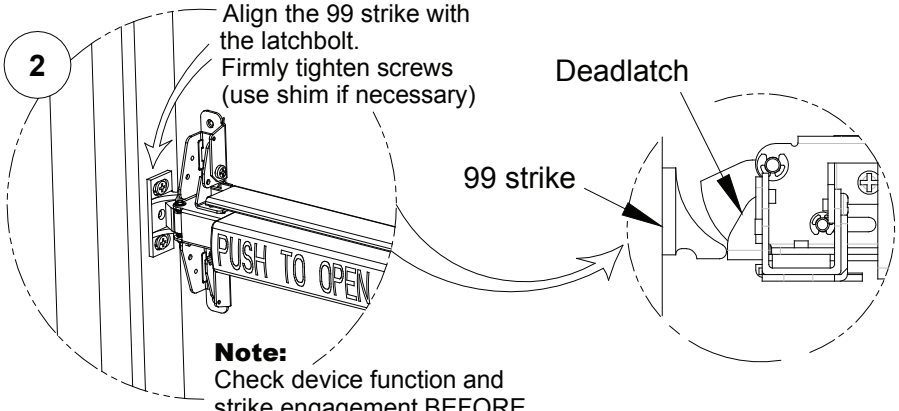
Slide and mount endcap to endcap bracket with two 1/4-20x1" PPH machine screws or #14 self-drilling screws.
DO NOT OVERTIGHTEN

For Hurricane Models
(see Hurricane kit)

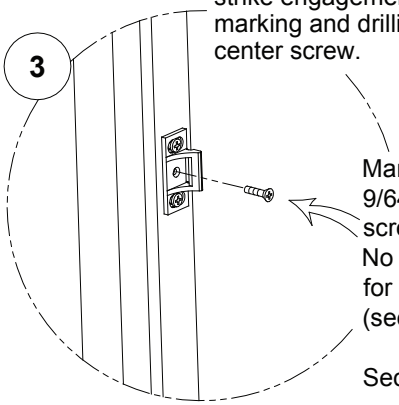


Fasten rim device to mounting plate and door with 1/4-20x1" machine screws(drill #7 holes) or #14 self-drilling screws



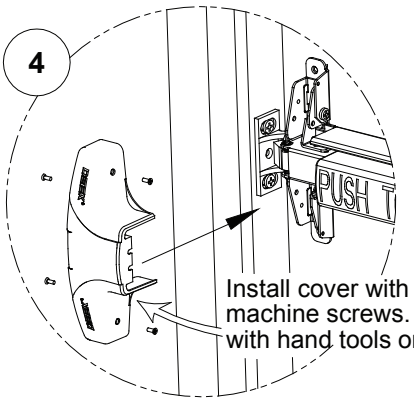


Note:
Check device function and strike engagement BEFORE marking and drilling for center screw.



Mark and drill center hole.
9/64" for 10-24 machine screws.
No pilot hole necessary for #10 self-drilling screws.
(see fastener table)

Secure the 99 strike.



Install cover with 6-32 machine screws. Tighten with hand tools only.

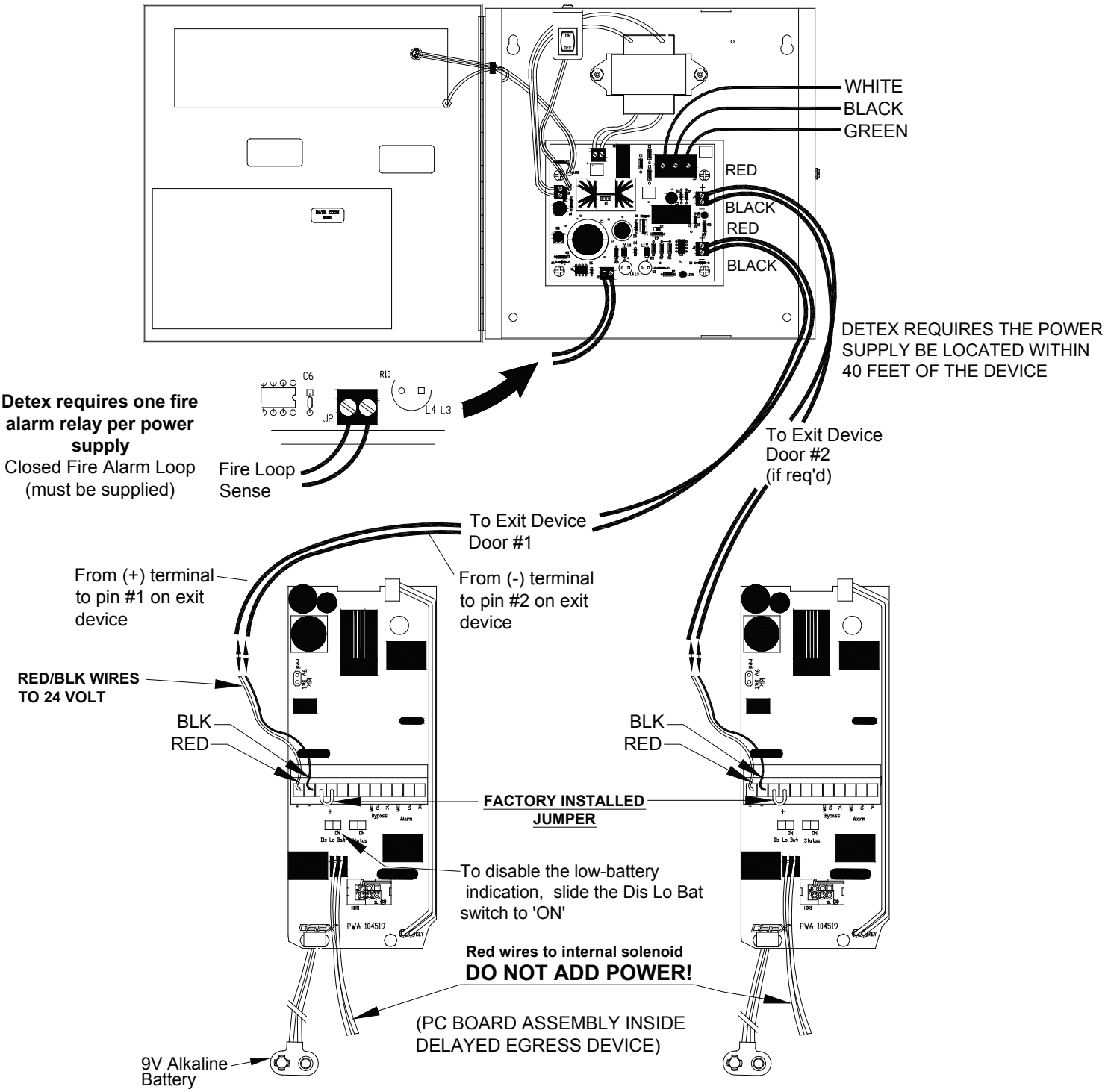
Care and Maintenance:
The Detex Value Series® devices are designed to provide many years of maintenance free service under normal usage. Periodically inspect and lubricate the unit to extend its life.

EE ELECTRICAL OPTION

REQUIRES DETEX POWER SUPPLY

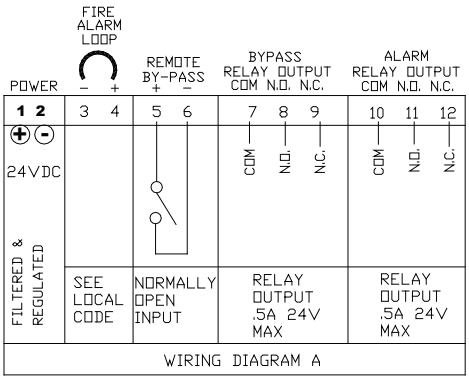
REQUIRED WIRE SIZES:
STRANDED WIRE GAUGE: 18 AWG MIN
MAXIMUM LENGTH OF TWO CONDUCTOR CABLE: 40 FEET

Power Supply with Detex Delayed Egress device

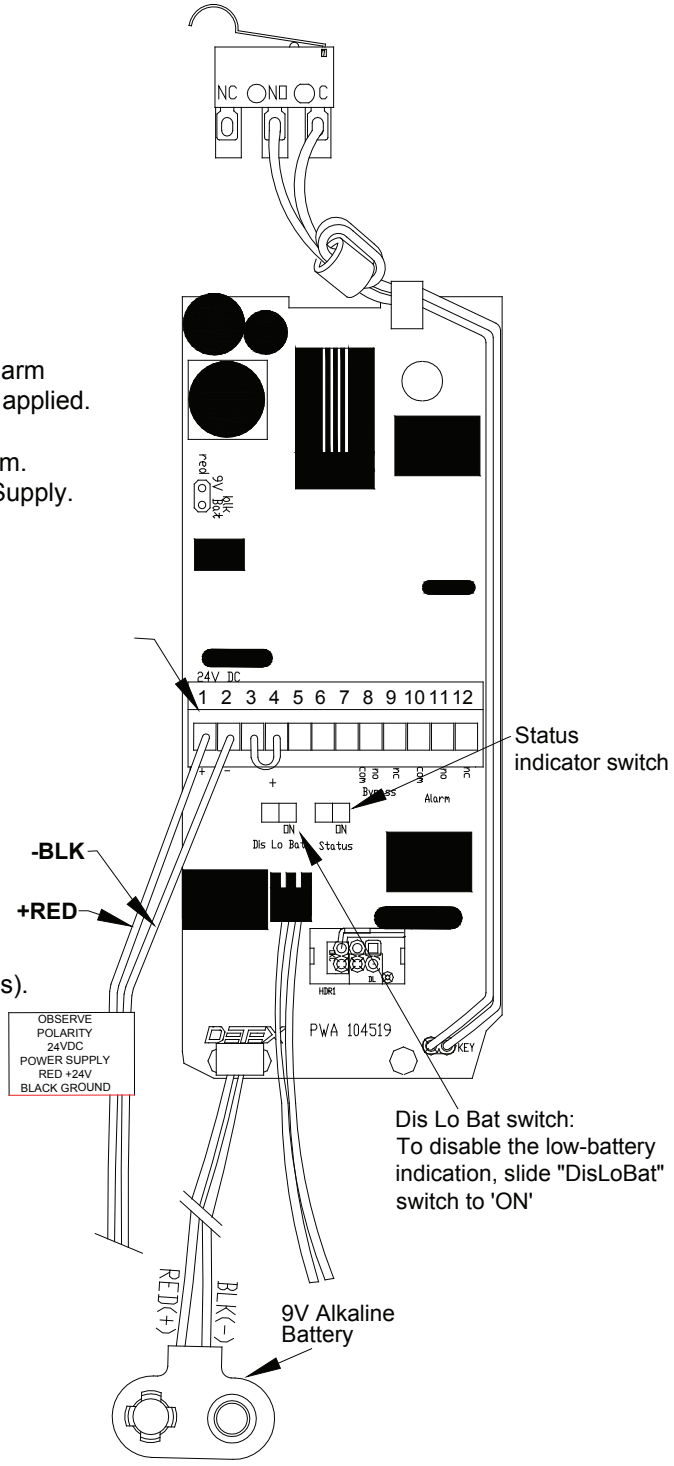


EE ELECTRICAL OPTIONS

L9 = Less 9v battery
SI = Status indicator



POWER REQUIREMENT:
.5 AMPS @ 24 VDC



The key cylinder arming switch must be set to "OFF". To prevent the alarm from sounding during installation, attach battery AFTER main power is applied.

Delayed Egress Device requires a connection to the Fire Alarm System. The fire alarm connection needs to be made **Externally** at the Power Supply. During a fire alarm condition the delayed egress will be by-passed.

MAIN POWER CONNECTION: (1 & 2)
See Power Supply instructions

DETEX REQUIRES USING THE FIRE ALARM CONNECTION IN THE POWER SUPPLY:
CLOSED connection is provided to the fire alarm system when not in-alarm and OPEN when in-alarm. See power supply instructions for details.

REMOTE BY-PASS: (**5 & 6**)
Connect normally open (N.O.) contact.
When the contact is closed momentarily, this will allow the door to open without the alarm sounding. The unit will automatically re-arm in 15 seconds after the door is closed (three quick audible beeps).

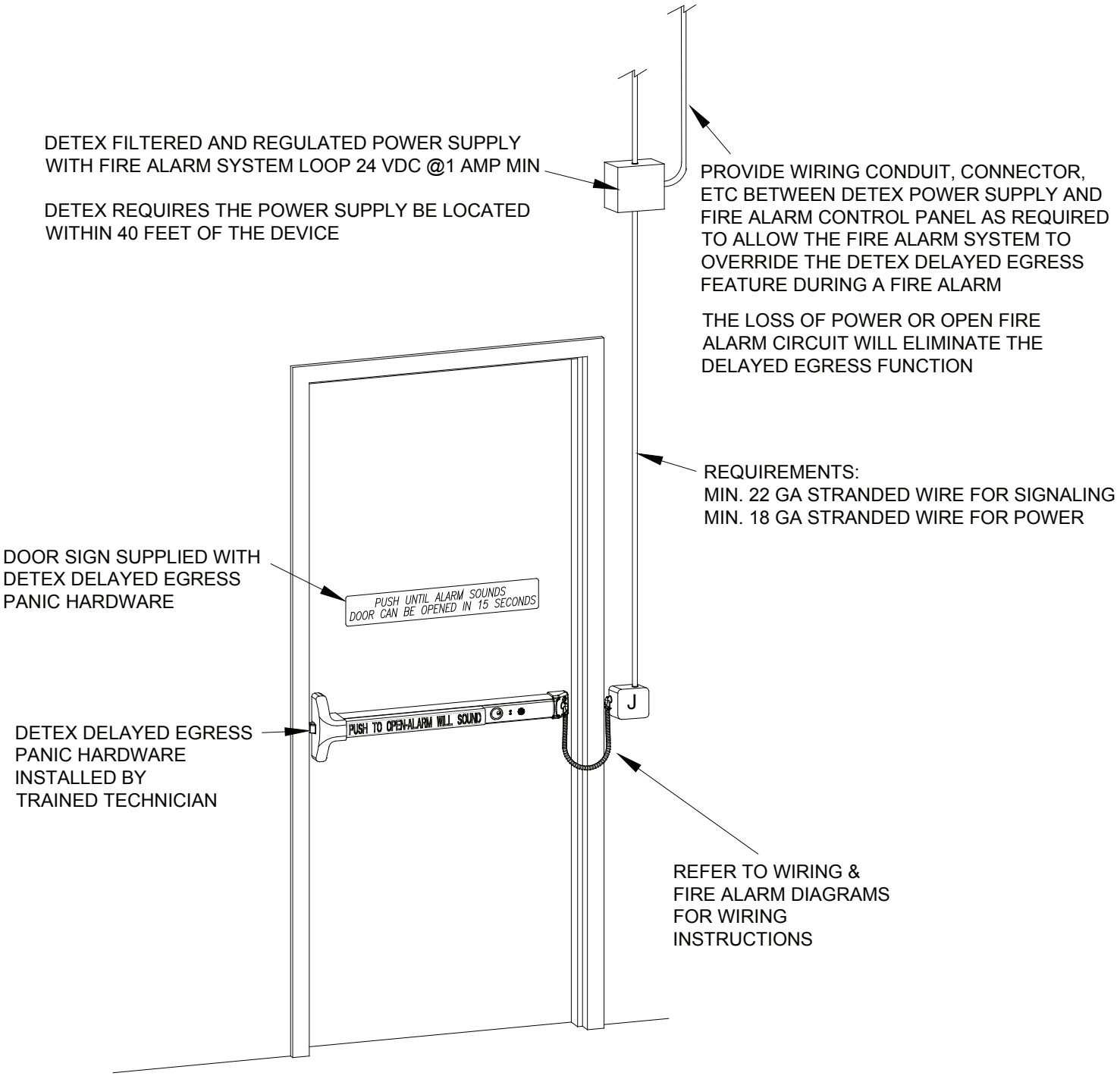
BY-PASS RELAY: (7,8 & 9) DRY contact output.
The BY-PASS relay is energized when the unit is disarmed by the KEY or REMOTE BY-PASS to indicate to a remote indicator that the door is not armed.

ALARM RELAY: (10, 11 & 12) DRY contact output.
The ALARM relay is energized when the unit is sounding its alarm to indicate to a remote indicator that an unauthorized exit has been attempted.

OUTSIDE KEY CONTROL
If the OKC option is used, the outside key bypasses and rearms the alarm.

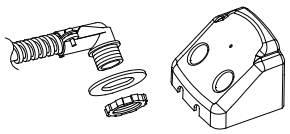
STATUS INDICATOR (SLIDE SWITCH)
ON: Green LED blinks every three seconds when the unit is disarmed.
Red LED blinks every three seconds when the unit is armed.
OFF: No status indication

RISER DIAGRAM

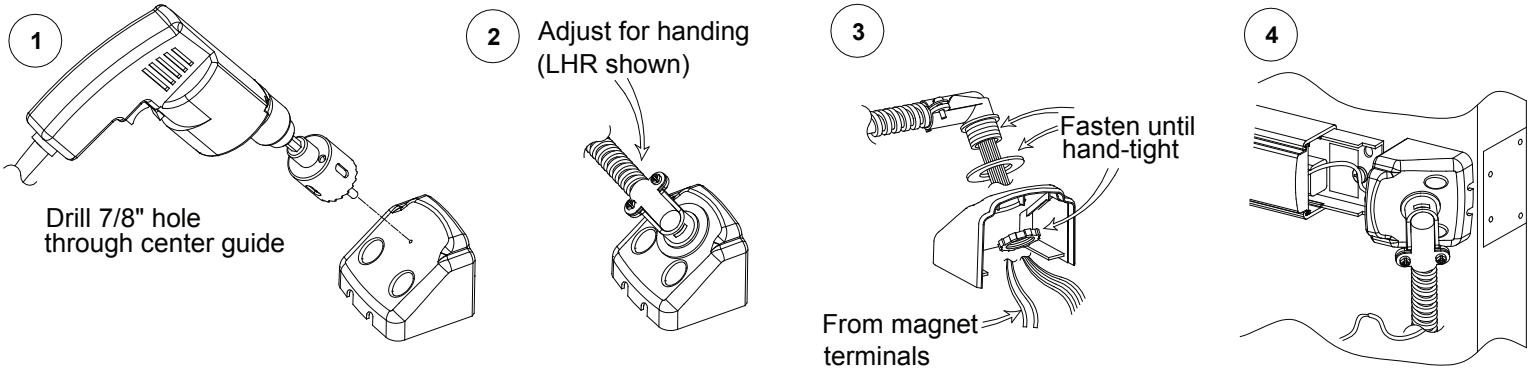


Value Series Flex Conduit/End Cap Kit

p/n: FCV



VALUE SERIES FLEX CONDUIT INSTALLATION

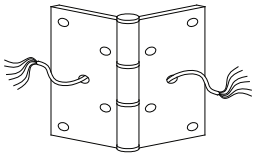


Note: For high traffic areas an electric through-wire hinge or power transfer is recommended.

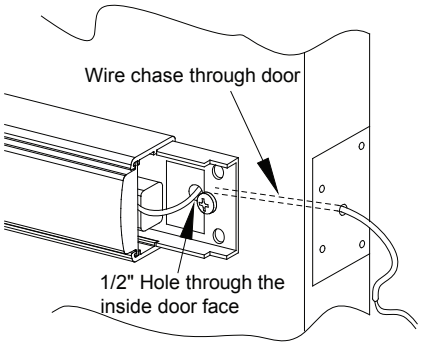
OPTIONAL HARDWIRE TRANSFER KITS

Electric Hinge

Order by finish
p/n: EWH8-X

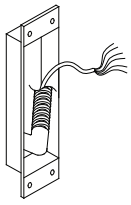


Electric Hinge Endcap Prep

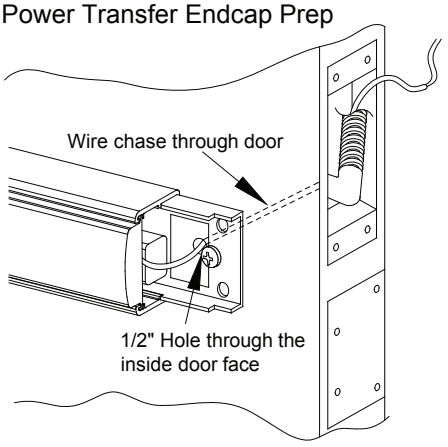


Power Transfer

p/n: PT-5

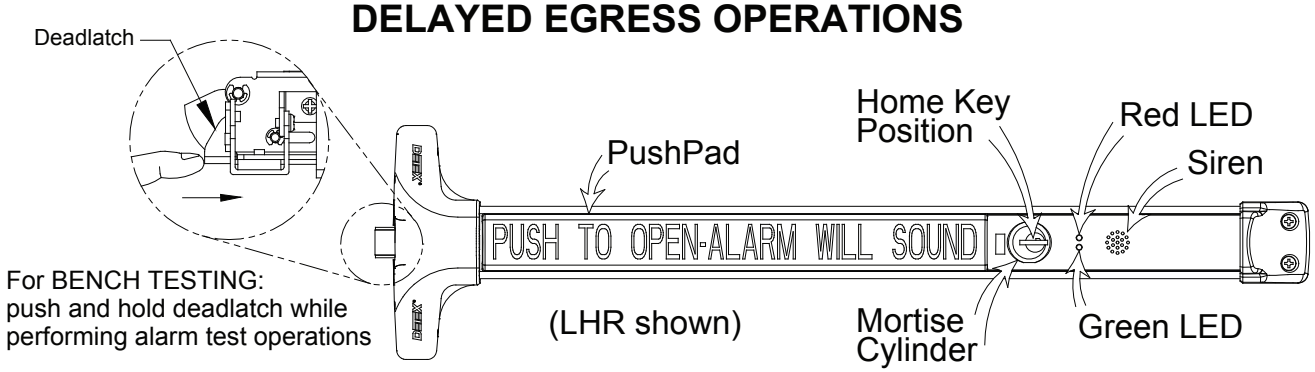


Power Transfer Endcap Prep



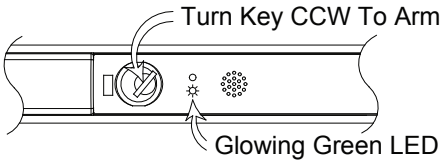
Note: For high traffic areas an electric through-wire hinge or power transfer is recommended.

DELAYED EGRESS OPERATIONS



ARMING AND AUTHORIZED EXIT

With door closed, insert key in the cylinder, turn CCW then back to the home key position and remove it. The red LED blinks twice then the green LED glows continuously. Authorized personnel can exit the door during this rearm cycle. After a 1, 5 or 15 second arming period, the alarm issues three quick beeps and the green LED goes off, indicating that the unit is armed.



DISARMING

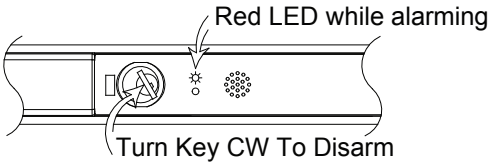
Insert key, turn CW to a stop. Green LED will blink twice to indicate the unit is disarmed.

EXITING UNDER ALARM

To exit, push and maintain pressure on the pushpad. After a one-second delay, (nuisance delay), LED flashes RED and alarm pulses on and off for 15 seconds. After 15 seconds, alarm issues short and long pulses to indicate that you can exit by depressing the pushpad. Alarm sounds continuously and LED is steady RED. Turn key CW to stop alarm.

NUISANCE DELAY

When pushpad is depressed for less than 1 second, alarm will emit a single pulse but will not start delay function.



NORMAL OPERATION

LED COLOR		SIREN SOUNDS	FUNCTION
RED	GREEN		
OFF	ON	THREE CHIRPS	Indicates the unit is in process of arming. The siren will chirp three times to indicate the unit is armed and green LED will turn off
OFF	OFF		This indicates either armed or disarmed
ON	ON		Factory installed jumper removed from 3 & 4 terminals
SLOW BLINKING	OFF	SLOW PULSE	Pushpad is depressed, delay to open started
FAST BLINKING	OFF	FAST PULSE	Delay to open expired
ON	OFF	ON	Delay to open expired, door has been opened
DOUBLE BLINK	OFF	DOUBLE CHIRP	Low Battery - every 45 seconds
BLINK	OFF		Armed - status ON
OFF	BLINK		Disarmed - status ON

BATTERY BACKUP FOR ALARM

A 9-volt battery is included as a backup power source for the alarm siren if power is lost.
To disable low battery indication, slide the DisLoBat switch to 'ON'. See page 16 for location.

LOW BATTERY INDICATION

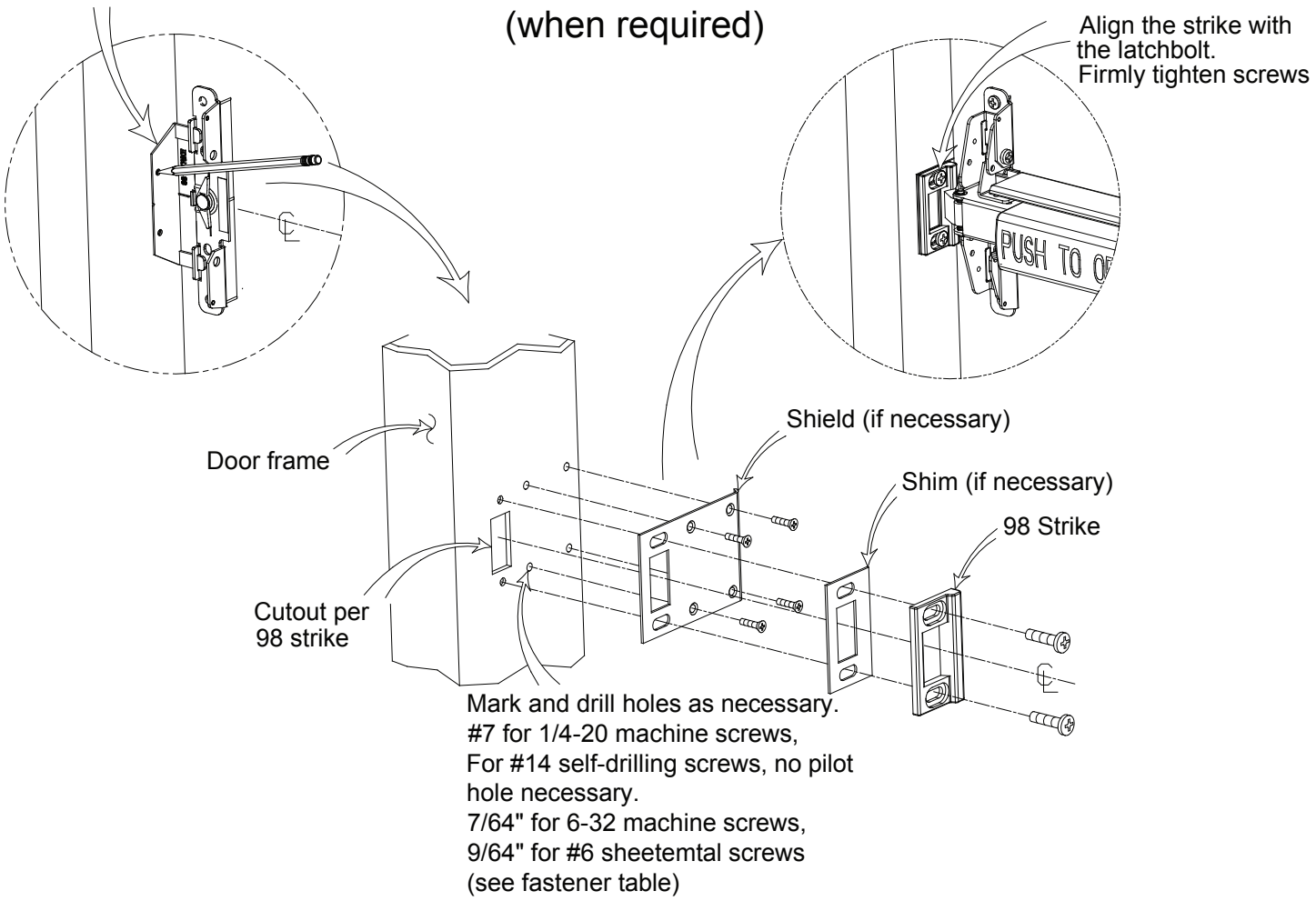
If battery voltage is low(7 volts or less), unit remains armed but LED flashes RED and unit beeps twice every 45 seconds. Replace battery as soon as possible.

TROUBLESHOOTING

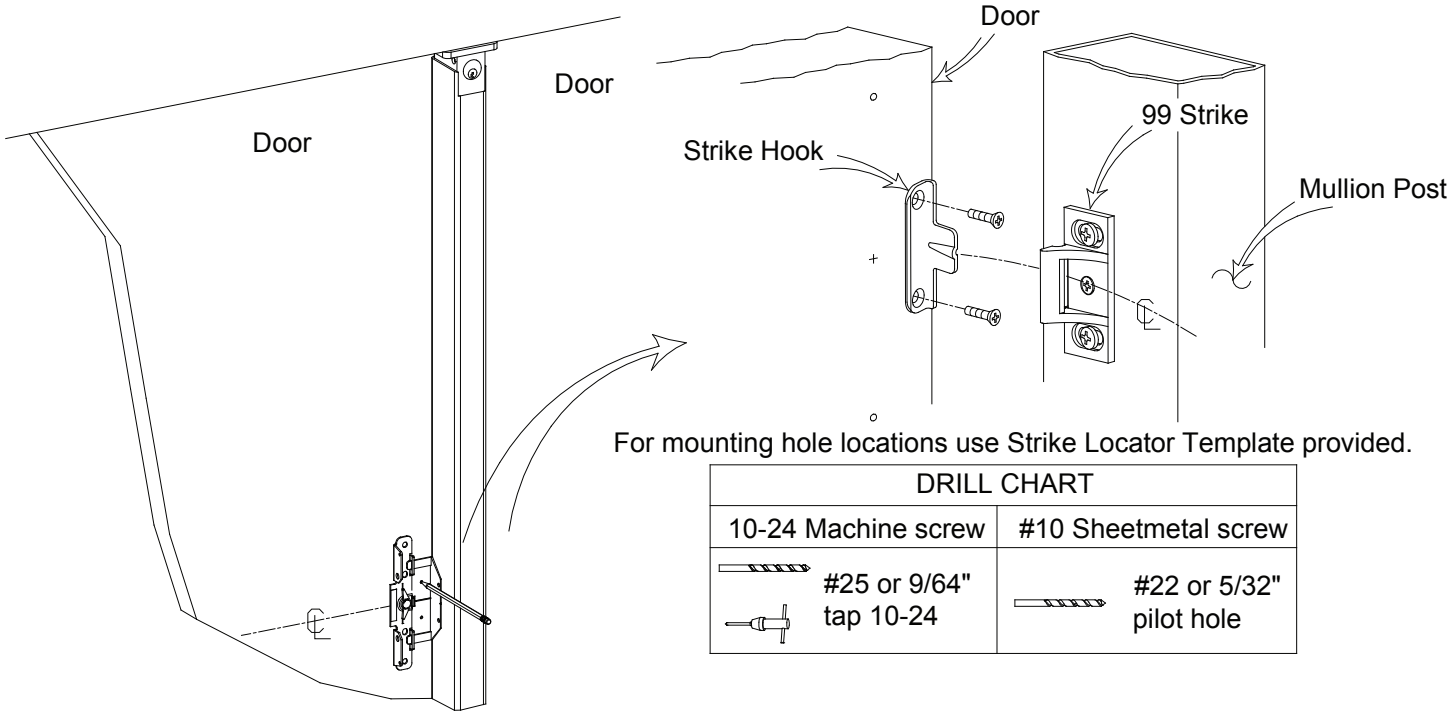
Problem	Probable Cause
Alarm sounds when power is applied:	Turn key clockwise to OFF position.
No green light when key is turned CCW:	Confirm strike is pushing in dead latch. Door must be closed. Confirm 24VDC power on the delayed egress device main board terminals 1(+) & 2(-). Confirm closed fire loop connection on power supply. Confirm cable is plugged in properly. Confirm the mortise cylinder is functioning correctly. Confirm the 2 pin connector on the latch end coming from the pushpad switch is plugged in properly.
No delayed egress:	Confirm closed fire loop connection on power supply. Confirm the 2-pin header with the two red wires are plugged into the delayed egress main board. Confirm 24VDC power on the delayed egress device main board terminals 1&2.
Both red and green lights on:	Factory installed jumper removed from terminals 3 and 4.
Low battery signal- Two chirps every 45 seconds:	Check battery. If no battery is needed, slide DisLoBat switch on delayed egress main board to 'ON'. See electrical pages of instructions.

Technical Support 1-800-729-3839

98 STRIKE INSTALLATION
(when required)



STRIKE HOOK INSTALLATION
(Caution: This installation is required on fire rated door openings with removable mullion.)



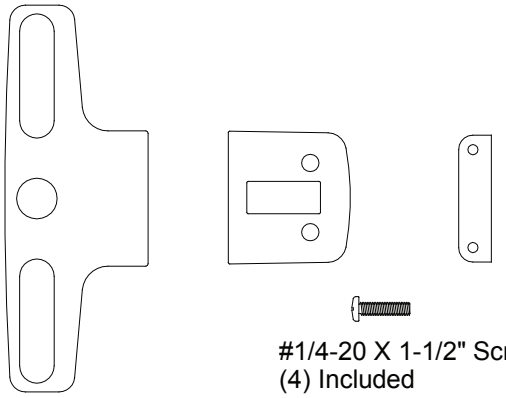
For mounting hole locations use Strike Locator Template provided.

DRILL CHART	
10-24 Machine screw	#10 Sheetmetal screw
#25 or 9/64" tap 10-24	#22 or 5/32" pilot hole

Optional Accessories

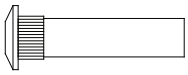
Glass Bead Kit

Catalog No: GB2 - Glass Bead Kit, 40 series
p/n: 101644



#1/4-20 X 1-1/2" Screw
(4) Included

Sex Nut



The #10-32 kit is available in (4) finishes:

Catalog No: SN2	Brushed Brass BHMA 606 Finish
Catalog No: SN2	Oil Rubbed Bronze BHMA 613 Finish
Catalog No: SN2	Brushed Chrome BHMA 626 Finish
Catalog No: SN2	Stainless Steel BHMA 630 Finish

p/n: 101617-X

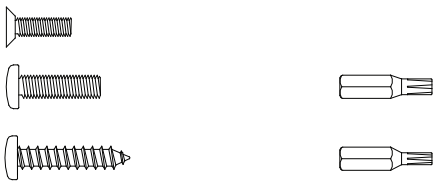
The #1/4-20 kit is available in (4) finishes:

Catalog No: SN1	Brushed Brass BHMA 606 Finish
Catalog No: SN1	Oil Rubbed Bronze BHMA 613 Finish
Catalog No: SN1	Brushed Chrome BHMA 626 Finish
Catalog No: SN1	Stainless Steel BHMA 630 Finish

p/n: 101616-X

Tamper Kit

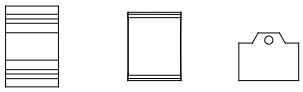
(Security Kit)
Catalog No: SSK3
p/n: 101233



Security Screws Security Pin TORX® Bits provided

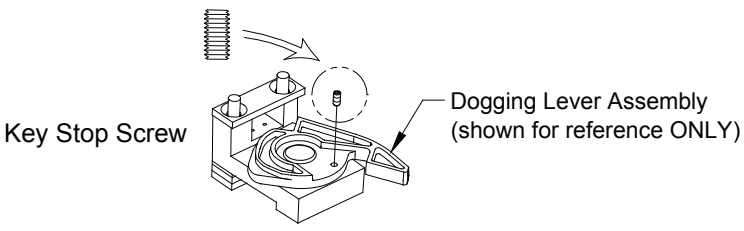
Narrow Stile Door Kit

(Splice Kit may be used with either 3-0 or 4-0 units)
Catalog No: NSK1
p/n: 101879-1 (628 Finish, Clear)
p/n: 101879-2 (711 Finish, Black)



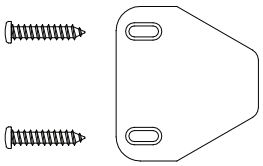
Key Stop Kit

(Momentary Shunt)
Catalog No: KS
p/n: 101867



Double Door Strike Kit

Catalog No: 94
p/n: 102212-1



The following Models in the series were evaluated by UL: Controlled Exit Panic Devices; Model V40. These devices may be suffixed with 01, 02, 03, 08, 09, or 14 followed by A, AN, BN, CN, DN, DNT, DNU, MN, P, PN, or WS, followed by BP2 or BP8 followed by 605, 606, 611, 612, 613, 625, 626, 628, 629, 630, or 711 followed by the RHR or LHR, followed by EE which may be followed by LD or CD, followed by 628 or 711, followed by 98 or 99, followed by 36 or 48.