V40

**Value Series® EM**

Delayed Egress

**Parts Check List**

- Modular Fillerplate Subassembly
  - P/N: 105033-X
- Endcap
  - P/N: 101822
- Plastic Template
  - Use for ease of installation
  - P/N: 103806-X
- Pushpad Wrap
  - P/N: 101810-1 (3-0)
  - P/N: 101815-1 (4-0)
- Centercase Cover
  - P/N: 101805-1
- Mounting plate Subassembly
  - P/N: 100696-1

**U.S. Patent Numbers:**

- 6009732
- 6205825B1
- 6532777B2

**International Patent Number:**

- PCT/6009/732

**9V Battery**

- P/N: PP-5667

**S & R Fillerplate Subassembly**

- P/N: 104383-X

**Electromagnetic Lock**

- P/N: 102450-X

**Detex Power Supply Catalog No.:**

- 90-800
  - (80-800 Battery back-up power supply available)

**99 Strike**, P/N: 100865-2

- Non-Roller Strike
  - P/N: 100234-1
- Strike Shim
  - P/N: 100088
- Standard Plastic Template
  - P/N: 100212

**98 Strike**, P/N: 100865-1

- Mortise Strike
  - P/N: 100480
- Mortise Strike Shim
  - P/N: 100482
- 2" Narrow Stile Plastic Template
  - P/N: 101699
- Strike Shield
  - P/N: 100481

**Door Sign**

- P/N: ECL-395-X

**PUSH UNTIL ALARM SOUNDS**

**DOOR CAN BE OPENED IN 15 SECONDS**

*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.

**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.

RHR Door
LHR Door

Horizontal Reference
Stop Face
40" Recommended

Finished Floor

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

RHR Door Inside Face
LHR Door Inside Face

Mullion Face
## Fastener Table

<table>
<thead>
<tr>
<th></th>
<th>Drill Bit</th>
<th>Tap Wrench</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Machine Screws</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#6-32 x 5/8&quot; PPH</td>
<td>#36 or 7/64</td>
<td>#6-32 Tap</td>
<td>Used on 98 Strike Shield Mounting Holes</td>
</tr>
<tr>
<td>#6-32 x 3/8” PPH</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>#10-24 x 5/8” PPH</td>
<td>#25 or 9/64&quot;</td>
<td>#10-24 Tap</td>
<td>Used on 99 Strike Center Mounting Hole</td>
</tr>
<tr>
<td>#1/4-20 x 1/4&quot; PPH</td>
<td>---</td>
<td>---</td>
<td>Used to Fasten Centercase Unit onto Mounting plate</td>
</tr>
<tr>
<td>#1/4-20 x 1” PPH</td>
<td>#7 or 13/64&quot;</td>
<td>#1/4-20 Tap</td>
<td>Used on Strike, Mounting plate, and Endcap Mounting Holes</td>
</tr>
<tr>
<td><strong>Sheetmetal Screws</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#6 x 1” PFH</td>
<td>9/64&quot;</td>
<td>---</td>
<td>Used on 98 Strike Shield Mounting Holes</td>
</tr>
<tr>
<td><strong>Self-drilling Screws</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#10 x 1” PFH</td>
<td>No pilot hole necessary for self-drilling screws</td>
<td>---</td>
<td>Used on 99 Strike Center Mounting Hole</td>
</tr>
<tr>
<td>#14 x 1-1/2” PPH</td>
<td>---</td>
<td>---</td>
<td>Metal Applications Used on Strike, Mounting plate, and Endcap Mounting Holes</td>
</tr>
<tr>
<td><strong>Sex Nut</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>#1/4-20</td>
<td>9/32” Interior Door Face</td>
<td>---</td>
<td>Recommended on Fire Rated Wood and Unreinforced Hollow Metal Doors Used on Mounting plate and Endcap Mounting Holes</td>
</tr>
<tr>
<td></td>
<td>3/8” Exterior Door Face</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>#10-32</td>
<td>13/64” Interior Door Face</td>
<td>---</td>
<td>Recommended on Fire Rated Wood and Unreinforced Hollow Metal Doors Used on Strike Hook Mounting Holes</td>
</tr>
<tr>
<td></td>
<td>5/16” Exterior Door Face</td>
<td>---</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** (1) Fastener selection will vary per catalog configuration and kits ordered.  
(2) Mortise Cylinder NOT Provided.
Slide 99 strike locator into mounting plate.

(if using a 98 strike, see 98 STRIKE INSTALLATION page)

1. RECOMMENDED
   Mark centerline for unit
   40 inches above finished floor

2. Mounting plate hole
   If necessary, remove label temporarily to mark trim hole

3. Strike holes
   Mounting plate hole
   Mark mounting plate and strike holes

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)

6. Strike holes (2)
   For 1/4-20 machine screws drill #7 holes
   No pilot hole necessary for #14 self-drilling screws
   (see fastener table)

   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
1. Position cam as shown.

2. Insert centercase into slots of centercase mounting plate, depress pushpad, rotate toward door.

3. Fasten rim device to mounting plate with 1/4-20 x 1/4" PPH.

MUST BE INSTALLED!

3. Peel off backing to expose tape.

Install Pushpad Wrap. Verify wrap is secured by snapping in place.

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

Align filler plate FLUSH to extrusion prior to cutting

Secure with tape

Protect wires during cutting

Cut filler plate & extrusion to desired length

Max Cut-Off

<table>
<thead>
<tr>
<th>Type</th>
<th>Length (L)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electrified Model</td>
<td>can NOT be cut down</td>
</tr>
<tr>
<td>36&quot; Unit</td>
<td>6&quot;</td>
</tr>
<tr>
<td>48&quot; Unit</td>
<td></td>
</tr>
</tbody>
</table>

MORTISE CYLINDER INSTALLATION
PRECAUTIONARY NOTE:

1. Be careful when installing filler plate assembly not to damage wires.
2. See "EM ELECTRICAL OPTIONS" before reinstalling filler plate.

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

View A
Modular Cable Connection

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

View B
12 Pin Connection

INSTALLING MORTISE CYLINDER
See View A & B 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

CAUTION:
Tighten with hand tools only. Do not overtighten

Install mortise cylinder with hex nut provided

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

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

RE-INSTALL FILLERPLATE

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

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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
Refer to electromagnetic lock instructions after step 4 below. (packaged with electromagnetic lock)

5. Place ECL-395-X sign on door

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

2. Align the 99 strike with the latchbolt. Firmly tighten screws (use shim if necessary)

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

4. Secure the 99 strike.

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

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

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.
EM 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

Detex requires one fire alarm relay per power supply
Closed Fire Alarm Loop (must be supplied)

Fire Loop Sense

To Exit Device Door #1
From (+) terminal to pin #1 on exit device

To Exit Device Door #2 (if req'd)
From (-) terminal to pin #2 on exit device

RED/BLK WIRES TO 24 VOLT

BLK RED

FACTORY INSTALLED JUMPER

To disable the low-battery indication, slide the Dis Lo Bat switch to 'ON'

Orange and Blue wires to MAGNET DO NOT ADD POWER!

(PC BOARD ASSEMBLY INSIDE DELAYED EGRESS DEVICE)

9V Alkaline Battery
EM ELECTRICAL OPTIONS
L9= Less 9V battery
SI= Status Indicator

POWER REQUIREMENT:
.4 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 AND 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)
Normally open (N.O.)
When the contact is closed momentarily, the door can be opened 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
DETEx FILTERED AND REGULATED
POWER SUPPLY WITH FIRE ALARM SYSTEM LOOP
24 VDC @1 AMP MIN

DETEx REQUIRES THE POWER SUPPLY BE LOCATED
WITHIN 40 FEET OF THE DEVICE

DETEx MAG LOCK SUPPLIED
WITH DETEx DELAYED EGRESS
PANIC HARDWARE

PROVIDE WIRING CONDUIT, CONNECTOR,
ETC BETWEEN DETEx POWER SUPPLY
AND FIRE ALARM CONTROL PANEL AS
REQUIRED TO ALLOW THE FIRE ALARM
SYSTEM TO OVERRIDE THE DETEx DELAYED
EGRESS FEATURE DURING A FIRE ALARM

THE LOSS OF POWER OR OPEN FIRE
ALARM CIRCUIT WILL ELIMINATE THE
DELAY EGRESS OPERATIONS

DOOR SIGN SUPPLIED
WITH DETEx DELAYED
EGRESS PANIC
HARDWARE

REQUIREMENTS:
MIN. 22 GA STRANDED WIRE FOR SIGNALING
MIN. 18 GA STRANDED WIRE FOR POWER

DETEx DELAYED EGRESS
PANIC HARDWARE
INSTALLED BY
TRAINED TECHNICIAN

REFER TO WIRING &
FIRE ALARM DIAGRAMS
FOR WIRING
INSTRUCTIONS
VALUE SERIES FLEX CONDUIT INSTALLATION

1. Drill 7/8" hole through center guide

2. Adjust for handing (LHR shown)

3. Fasten until hand-tight

4. From magnet terminals

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

Power Transfer Endcap Prep

Electric Hinge Endcap Prep

Wire chase through door

1/2" Hole through the inside door face

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. LED glows green. Authorized personnel can exit the door during this rearm cycle. After a 1, 5 or 15 second arming period, alarm issues three quick beeps and 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. 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. In case of fire, the fire alarm over-rides the 15 second delay and the door opens without delay when the pushpad is pushed.

NORMAL OPERATION

<table>
<thead>
<tr>
<th>LED COLOR</th>
<th>SIREN SOUNDS</th>
<th>FUNCTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>RED OFF</td>
<td>GREEN ON</td>
<td>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</td>
</tr>
<tr>
<td>OFF OFF</td>
<td>OFF ON</td>
<td>This indicates either armed or disarmed</td>
</tr>
<tr>
<td>ON ON</td>
<td>SLOW BLINKING OFF</td>
<td>Factory installed jumper removed from terminals 3 &amp; 4</td>
</tr>
<tr>
<td>SLOW BLINKING OFF</td>
<td>SLOW PULSE</td>
<td>Pushpad is depressed, delay to open started</td>
</tr>
<tr>
<td>FAST BLINKING OFF</td>
<td>FAST PULSE</td>
<td>Delay to open expired</td>
</tr>
<tr>
<td>ON OFF</td>
<td>DOUBLE BLINKING OFF</td>
<td>Delay to open expired, door has been opened</td>
</tr>
<tr>
<td>DOUBLE BLINKING OFF</td>
<td>DOUBLE CHIRP</td>
<td>Low Battery - every 45 seconds</td>
</tr>
<tr>
<td>BLINK OFF</td>
<td>OFF ON</td>
<td>Armed - status ON</td>
</tr>
<tr>
<td>OFF BLINK</td>
<td></td>
<td>Disarmed - ON</td>
</tr>
</tbody>
</table>

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 "DisLoBat" switch to 'ON'. See EM ELECTRICAL OPTIONS page.

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

<table>
<thead>
<tr>
<th>Problem</th>
<th>Probable cause</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alarm sounds immediately when power is applied:</td>
<td>Make sure the key cylinder arming switch is set to 'OFF'.</td>
</tr>
</tbody>
</table>
| 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 the two black wires on the center case are plugged into the 2-pin header on the center case circuit board.  
Confirm cable is plugged in properly.  
Confirm the morse cylinder is functioning correctly. |
| No delayed egress: | Confirm closed fire loop connection on power supply.  
Confirm 24VDC power on the delayed egress device main board terminals 1(+) & 2(-).  
With the unit armed there should be (30-38VDC without load) on the orange (+) and blue (-) wires.  
The armature plate needs to float. See mag-lock instructions.  
The orange wire needs to be wired to terminal 1 in the mag-lock. The blue wire needs to be wired to terminal 3 in the maglock. |
| Both red and green lights on: | Factory installed jumper removed from terminals 3 & 4. |
| Low battery signal- Two chirps every 45 seconds: | Check battery. If no battery is needed, slide "DisLoBat" switch to on.  
See electrical pages of instructions. |
98 STRIKE INSTALLATION

(when required)

Mark and drill holes as necessary.
#7 for 1/4-20 machine screws,
For #14 self-drilling screws, no pilot
hole necessary.
7/64" for 6-32 machine screws,
9/64" for #6 sheetmetal screws
(see fastener table)

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.

<table>
<thead>
<tr>
<th>DRILL CHART</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-24 Machine screw</td>
</tr>
<tr>
<td>#25 or 9/64&quot; tap 10-24</td>
</tr>
</tbody>
</table>

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Optional Accessories

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

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

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: 101617-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

Key Stop Screw

Dogging Lever Assembly
(shown for reference ONLY)

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 EM, which may be followed by LD or CD, followed by 628 or 711, followed by 98 or 99, followed by 36 or 48.