INSTALLATION INSTRUCTIONS FOR DETEX VALUE SERIES® V40 EM DELAYED EGRESS RIM PANIC HARDWARE, FV40 EM DELAYED EGRESS RIM FIRE EXIT HARDWARE AND "H" MODELS (HURRICANE)

V40
VALUE SERIES®
Delayed Egress

Parts Check List
- Modular Filler Plate Subassembly
  P/N: 105033-X
- Centercase/Pushpad Modular SubAssembly
  P/N: 104374-X
- Plastic Template
  Use for ease of installation
  P/N: 103806-X
- Endcap
  P/N: 101822
- Endcap Bracket
  P/N: 101844-X
- 9V Battery
  P/N: PP-5567
- Hex Nut
  P/N: 100783
- Electromagnetic Lock
  P/N: 102450-X
- 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.

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.

Owner's Copy

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U.S. PATENT NUMBERS:
6009732
6205825B1
6532777B2

INTERNATIONAL PATENT NUMBER:
PCT6009732
**Detex Power Supply Catalog No: 90-800**

**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" (51 mm) Door Stile requires Mortise strike

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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.

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**Recommended**

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

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**Inside Face**

Door Must Not be Warped

Door Must Not Bind

Door Must Not Sag

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**Outside Face**

Door Must Swing Freely

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**Horizontal Reference**

Finished Floor

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RHR Door

LHR Door

---

Stop Face

40" Recommended

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Mullion Face

---

RHR Door Inside Face

LHR Door Inside Face

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Detex Power Supply Catalog No: 90-800
(80-800 Battery back-up power supply available)
No pilot hole necessary for self-drilling screws.

**Recommended on Fire Rated Wood and Unreinforced Hollow Metal Doors.**

**Used on Strike Hook Mounting Holes.**

**Drill Bit**

<table>
<thead>
<tr>
<th>Machine Screws</th>
<th>#6-32 x 5/8&quot;</th>
<th>PPH</th>
<th>#36 or 7/64</th>
<th>#6-32 Tap</th>
<th>Used on 98 Strike Shield Mounting Holes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>#6-32 x 3/8&quot;</td>
<td>PPH</td>
<td>-----</td>
<td>-----</td>
<td>Used to Mount Centercase Cover and Endcap</td>
</tr>
<tr>
<td></td>
<td>#10-24 x 5/8&quot;</td>
<td>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>Self-drilling Screws</td>
<td>#1/4-20 x 1/4&quot;</td>
<td>PPH</td>
<td>#7 or 13/64&quot;</td>
<td>#1/4-20 Tap</td>
<td>Used to Fasten Centercase Unit onto Mounting plate</td>
</tr>
<tr>
<td></td>
<td>#1/4-20 x 1&quot;</td>
<td>PPH</td>
<td>9/64&quot;</td>
<td>-----</td>
<td>Used on Strike, Mounting plate, and Endcap Mounting Holes</td>
</tr>
</tbody>
</table>

**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 |

| Sex Nut | #1/4-20 | 9/32" Interior Door Face | ----- | Recommended on Fire Rated Wood and Unreinforced Hollow Metal Doors |
|         | #10-32  | 13/64" Interior Door Face | ----- | Used on Strike, Mounting plate, and Endcap Mounting Holes |
|         |         | 3/8" Exterior Door Face | ----- | |
|         |         | 5/16" Exterior Door Face | ----- | |

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

**Tools Required**

<table>
<thead>
<tr>
<th>Power Drill</th>
<th>Pencil</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hack Saw</td>
<td></td>
</tr>
<tr>
<td>Level</td>
<td></td>
</tr>
<tr>
<td>Safety Glasses</td>
<td></td>
</tr>
<tr>
<td>Screw Driver</td>
<td>Tape Measure</td>
</tr>
<tr>
<td>Jewelers (Small) Screwdriver</td>
<td>Center Punch</td>
</tr>
</tbody>
</table>
1. RECOMMENDED
   Mark centerline for unit 40 inches above finished floor

2. Slide 99 strike locator into mounting plate.

3. If necessary, remove label temporarily to mark trim hole.

4. Punch marked holes.

5. Trim input hole if necessary. (see outside trim instructions)

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

Strike 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)

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)

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MUST BE INSTALLED!

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

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

### MORTISE CYLINDER INSTALLATION

**PRECAUTIONARY NOTE:**

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

**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

**INSTALLING MORTISE CYLINDER**

See View A & B above

- 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

**RE-INSTALL FILLERPLATE**

- Re-connect in the following order:
  1) Cable assembly (view A),
  2) Battery,
  3) 12 pin connector (view B),
- 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
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.

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

For Hurricane Models
(see Hurricane kit)

1. 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. Place ECL-395-X sign on door

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

Install cover with 6-32 machine screws. Tighten with hand tools only.
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 #2 (if req’d)

To Exit Device
Door #1

From (+) terminal to pin #1 on exit device

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!

(PCM BOARD ASSEMBLY INSIDE DELAYED EGRESS DEVICE)

9V Alkaline Battery

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

REFER TO WIRING & FIRE ALARM DIAGRAMS FOR WIRING INSTRUCTIONS

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

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

DOOR SIGN SUPPLIED WITH DETEX DELAYED EGRESS PANIC HARDWARE

DETEX DELAYED EGRESS PANIC HARDWARE INSTALLED BY TRAINED TECHNICIAN

DETEX DELAYED EGRESS PANIC HARDWARE

RISER DIAGRAM
**Value Series Flex Conduit/End Cap Kit (included)**

**p/n: FCV**

**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.

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**OPTIONAL HARDWIRE TRANSFER KITS**

**Electric Hinge**

Order by finish

**p/n: EWH8-X**

**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.

**Power Transfer**

**p/n: PT-5**

**Power Transfer 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>ON THREE CHIRPS</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>FAST PULSE</td>
<td>Delay to open expired</td>
</tr>
<tr>
<td>SLOW BLINKING OFF SLOW PULSE</td>
<td>Pushpad is depressed, delay to open started</td>
<td></td>
</tr>
<tr>
<td>FAST BLINKING OFF FAST PULSE</td>
<td>Delay to open expired, door has been opened</td>
<td></td>
</tr>
<tr>
<td>ON OFF DOUBLE BLINKING OFF DOUBLE CHIRP</td>
<td>Low Battery - every 45 seconds</td>
<td></td>
</tr>
<tr>
<td>BLINK OFF ARMED - status ON</td>
<td></td>
<td></td>
</tr>
<tr>
<td>OFF BLINK Disarmed - ON</td>
<td></td>
<td></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.
<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>
<tr>
<td>No green light when key is turned CCW:</td>
<td>Confirm strike is pushing in dead latch, door must be closed.</td>
</tr>
<tr>
<td></td>
<td>Confirm 24VDC power on the delayed egress device main board terminals 1(+) &amp; 2(-).</td>
</tr>
<tr>
<td></td>
<td>Confirm closed fire loop connection on power supply.</td>
</tr>
<tr>
<td></td>
<td>Confirm the two black wires on the center case are plugged into the 2-pin header on the center case circuit board.</td>
</tr>
<tr>
<td></td>
<td>Confirm cable is plugged in properly.</td>
</tr>
<tr>
<td></td>
<td>Confirm the mortise cylinder is functioning correctly.</td>
</tr>
<tr>
<td>No delayed egress:</td>
<td>Confirm closed fire loop connection on power supply.</td>
</tr>
<tr>
<td></td>
<td>Confirm 24VDC power on the delayed egress device main board terminals 1(+) &amp; 2(-).</td>
</tr>
<tr>
<td></td>
<td>With the unit armed there should be (30-38VDC without load) on the orange (+) and blue (-) wires.</td>
</tr>
<tr>
<td></td>
<td>The armature plate needs to float. See mag-lock instructions.</td>
</tr>
<tr>
<td></td>
<td>The orange wire needs to be wired to terminal 1 in the mag-lock. The blue wire</td>
</tr>
<tr>
<td></td>
<td>needs to be wired to terminal 3 in the maglock.</td>
</tr>
<tr>
<td>Both red and green lights on:</td>
<td>Factory installed jumper removed from terminals 3 &amp; 4.</td>
</tr>
<tr>
<td>Low battery signal- Two chirps every 45 seconds:</td>
<td>Check battery. If no battery is needed, slide &quot;DisLoBat&quot; switch to on.</td>
</tr>
<tr>
<td></td>
<td>See electrical pages of instructions.</td>
</tr>
</tbody>
</table>
98 STRIKE INSTALLATION
(when required)

Align the strike with the latchbolt. Firmly tighten screws.

98 Strike Locator

Door frame

Cutout per 98 strike

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)

Shield (if necessary)

Shim (if necessary)

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

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

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)

Security Pin TORX Bits provided

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

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

<table>
<thead>
<tr>
<th>Security Screws</th>
<th>Security Pin TORX Bits provided</th>
</tr>
</thead>
</table>

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)

<table>
<thead>
<tr>
<th>Security Screws</th>
<th>Security Pin TORX Bits provided</th>
</tr>
</thead>
</table>

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

<table>
<thead>
<tr>
<th>Key Stop Screw</th>
</tr>
</thead>
</table>

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.