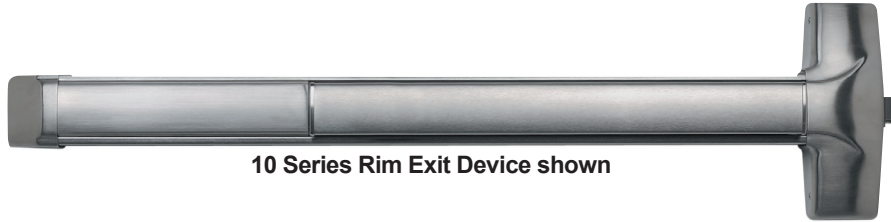




## Electric Latch Retraction with Request to Exit Switch (ER EX)

The ER EX function is designed for entrance and exit doors with panic or fire exit hardware where remote unlocking, remote dogging, access control or automatic door operator is desired.



10 Series Rim Exit Device shown

Available with 10/40 Rim, 30 Mortise, 20/21/50/51 Surface Vertical Rod Devices and 60/61/62/63/70/71/80/81/82/83 Concealed Vertical Rod Devices

### Benefits

- Works with any type of access control system
- Simultaneous pushpad and latch bolt retraction provides smooth surface with no catch points
- Provides a means for remote dogging and lock-down
- Fast and easy installation saves time and money

### Features

- Low voltage with no high current in-rush
- Momentary or maintained latch and pushpad retraction
- Long term dogging capability
- Continuous duty motor for quiet operation - no solenoid
- Simultaneous latch and pushpad retraction

### Mechanical Options

- AL18 - Surface Armored Loop (door/frame mounted)
- FC3EC1 - Flexible 3' Conduit Kit, includes EC1 ramped end cap (specify finish)
- FC10EC1 - Flexible 10' Conduit Kit, includes EC1 ramped end cap (specify finish)
- PT5 - Concealed mortise mount power transfer
- FC3EC2 - Flexible 3' Conduit Kit, includes EC2 flush end cap (specify finish)
- FC10EC2 - Flexible 10' Conduit Kit, includes EC2 flush end cap (specify finish)
- EH8 - Five-knuckle energy transfer hinge - 8 wires

For full list of available mechanical options, see individual device how to order page

### Electrical Options

- Latch Retraction power supplies are required and sold separately
- 81-800 - Power Supply for single door
- 82-800 - Power Supply for pair of doors
- 83-800 - Power Supply for two independent doors
- LX - Latch bolt Signaling (specify ER EX LX)

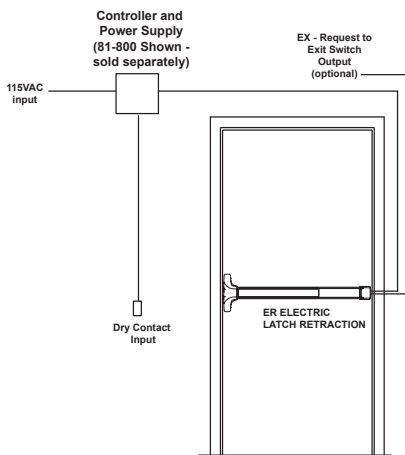
## Technical Information

- Voltage 24VDC
- Wire Run Lengths  
150 foot, 16AWG
- 1A to retract pushpad and latch
- 0.18A to hold pushpad and latch retracted
- 1A power supply - 24VDC Filtered and Regulated Power Supply  
1 ER Device  
2 ER Devices if devices are staggered by 300mSec
- 2A power supply - 24VDC Filtered and Regulated Power Supply  
2 ER Devices  
4 ER Devices if devices are staggered by 300mSec

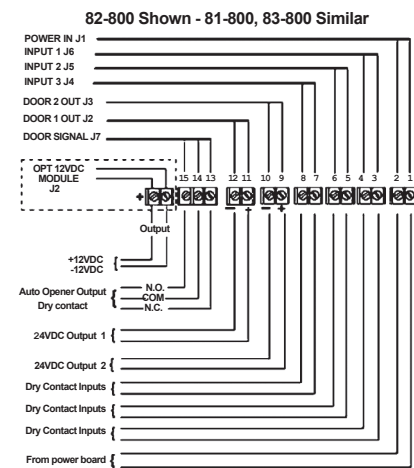
## Device Finishes

605 / US3	Polished Brass	628 / US28	Aluminum Satin	693 / SPBLK	Black, Painted
606 / US4	Brushed Brass	629 / US32	Polished Stainless Steel	695 / SP 313	Dark Bronze, Painted
611 / US9	Polished Bronze				
612 / US10	Brushed Bronze	630 / US32D	Brushed Stainless Steel		
613 / US10B	Oil Rubbed Bronze				

## Riser Diagram



## Riser Diagram



## Listings and Approvals

See individual device (i.e. 10 Series) catalog page for fire and panic listings and windstorm ratings/ approvals

## Detex Limited Warranty

10 Year Mechanical/3 Year Electrical Limited Manufacturer's Warranty

*Where Trust is Built™*  
**DETEx®**  
*Life Safety and Security Door Hardware*

Detex Corporation  
 302 Detex Drive  
 New Braunfels, Texas 78130-3045 USA  
 PH. (830) 629-2900  
 (800) 729-3839  
 FAX (800) 653-3839  
 http://www.detex.com  
 USA Sales:  
 marketing@detex.com  
 International Sales:  
 export@detex.com

 Cancer & Reproductive Harm - www.detex.com/prop65



Detex Corporation, 302 Detex Drive, New Braunfels, Texas 78130-3045  
830-629-2900 / 800-729-3839 / Fax 800-653-3839 / Text photos only: 830-481-6433 / INTERNET: www.detex.com

**ELECTRICAL INSTRUCTIONS FOR DETEX®  
ELECTRIC DOGGING / ELECTRIC LATCH RETRACTION**



**RIM, SVR, CVR & MORTISE**

ED Electric Dogging  
ER ELECTRIC LATCH RETRACTION

Dwg #:	102860 RIM (S.S.)	102880 SVR (S.S.)
	104600 RIM (AL)	104690 SVR (AL)
	103350 MORTISE (S.S.)	105260 CVR (60)
	104695 MORTISE (AL)	105280 CVR (70/80)



**RIM & SVR**

ED Electric Dogging  
ER Electric Latch Retraction

Dwg #: 102870 RIM  
102890 SVR

Table of Contents	Page
Advantex device parts breakdown view & part numbers.....	2
Value Series device parts breakdown view & part numbers.....	3
Device clearance, ER configuration.....	4
ED configuration.....	5
ED connection diagram.....	6
Riser diagram, Hardwire Transfer Options.....	7
Rim device troubleshooting.....	8
Surface Vertical Rod device troubleshooting.....	9

Should you have a Question/Problem with your Detex device please call Detex Technical Support from the job site at 1-800-729-3839 and choose option 2 on our menu. Please do not return the product to the distributor.

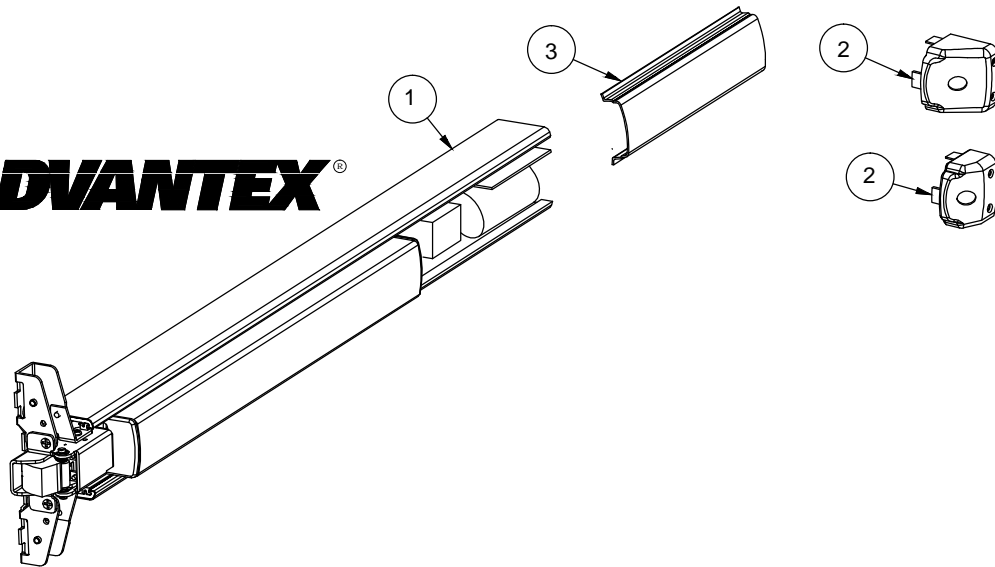
For **WARRANTY** information,  
scan code below or go to  
[www.detex.com/warranty](http://www.detex.com/warranty)

For device installation videos,  
scan code below or go to  
[www.detex.com/videos](http://www.detex.com/videos)



**Owner's Copy**

**ADVANTEX**®



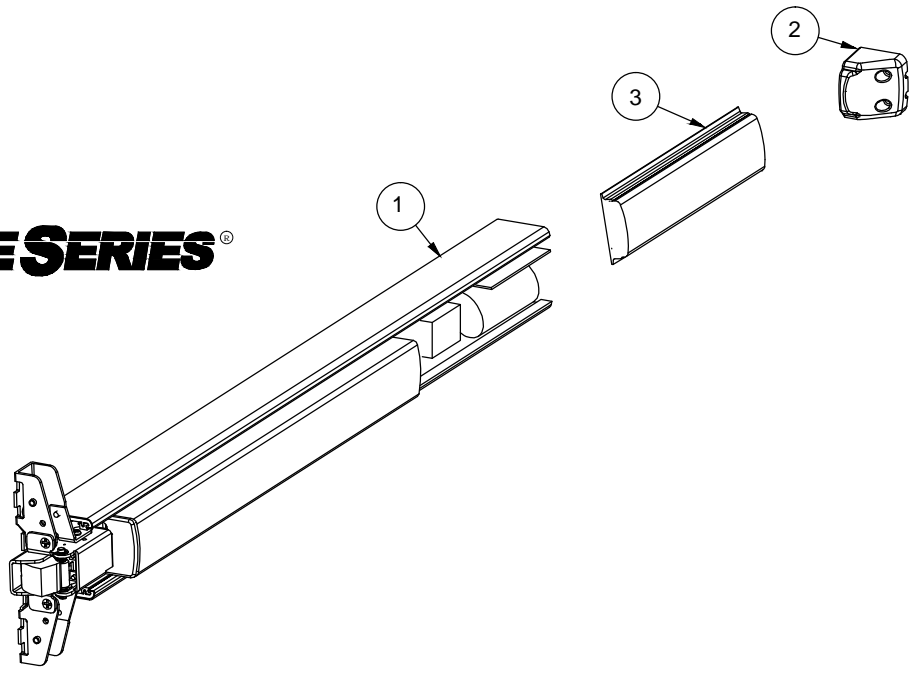
PARTS BREAKDOWN		
Item	Order Part #	Description
1	105500-10	Centercase/Pushpad SubAssembly, 10 series, ER, 36", 630 finish
	105500-35	Centercase/Pushpad SubAssembly, 10 series, ER, 48", 630 finish
	105500-8	Centercase/Pushpad SubAssembly, RHR 20 series, ER, 36", 630 finish
	105500-32	Centercase/Pushpad SubAssembly, RHR 20 series, ER, 48", 630 finish
2	102095-9	EC1 Endcap, Advantex (630 finish prepped for conduit)
	104686-1	EC2 Endcap, Advantex, Aluminum (Aluminum painted 628 finish prepped for conduit)
	104317-9	EC2 Endcap, Advantex Stainless Steel (630 finish prepped for conduit)
3	100860-59	Filler, 10 series, 36" device, 630 finish
	100860-60	Filler, 10 series, 48" device, 630 finish
	100860-146	Filler, 20 series, 36" device, 630 finish
	100860-147	Filler, 20 series, 48" device, 630 finish

Detex Power Supply Catalog No:  
 90-800 ED Single Door application  
 80-800 ED Single Door application  
 81-800 ER Single Door application  
 82-800 ER Double Door application  
 83-800 ER Double Door Independent Operation application

Power Supply / Controller sold separately

Your particular part or configuration may not be shown:  
 Contact Detex technical support at 800-729-3839 (option 2)

**VALUE SERIES®**



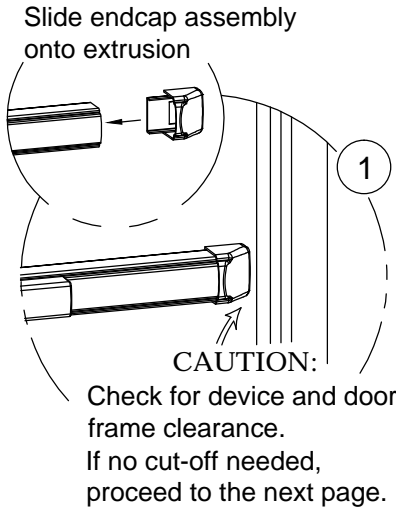
PARTS BREAKDOWN		
Item	Order Part #	Description
1	106900-3	Centercase/Pushpad SubAssembly, V40 series, ER-EX, 36"
	106900-4	Centercase/Pushpad SubAssembly, V40 series, ER-EX, 48"
	106900-5	Centercase/Pushpad SubAssembly, RHR V50 series, ER-EX, 36"
	106900-6	Centercase/Pushpad SubAssembly, RHR V50 series, ER-EX, 48"
2	101822	Endcap, Value Series
3	100408-11	Filler, Value Series, 36" device
	100408-17	Filler, Value Series, 48" device

Detex Power Supply Catalog No:  
 90-800 ED Single Door application  
 80-800 ED Single Door application  
 81-800 ER Single Door application  
 82-800 ER Double Door application  
 83-800 ER Double Door Independent Operation application

Power Supply / Controller sold separately

Your particular part or configuration may not be shown:  
 Contact Detex technical support at 800-729-3839 (option 2)

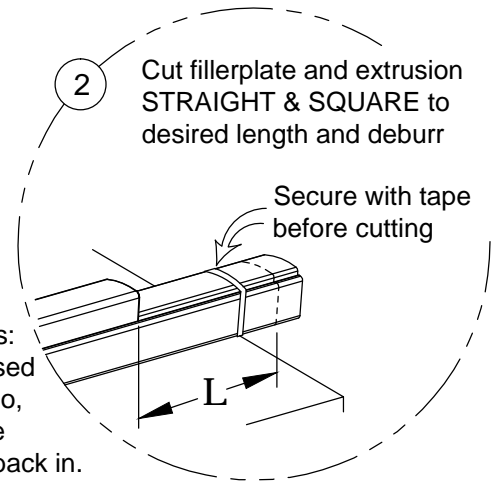
# CHECKING FOR DEVICE CLEARANCE (Cut-Off procedure if required)



(Advantex device shown)

Minimum Fillerplate Length	
Value Series Length (L)	Advantex Length (L)
9"	9"

For aluminum Advantex finish cutdown applications:  
After cutting, the baseplate extrusion can be reversed to place the cut end inside the head cover. To do so, loosen the setscrew inside the aluminum baseplate extrusion and slide extrusion out, reverse, & slide back in. Tighten setscrew.



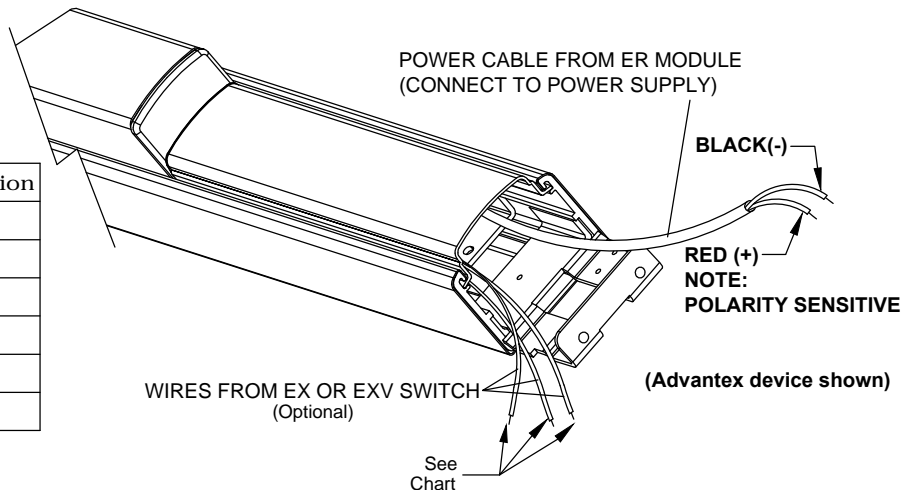
## ER CONFIGURATION

DETEX ER UNITS REQUIRE A 24VDC FILTERED & REGULATED 1 AMP MINIMUM POWER SUPPLY.

DETEX POWER SUPPLY/CONTROLLER: DETEX P/N 81-800-X, 82-800-X, OR 83-800-X.

SEE POWER SUPPLY INSTALLATION INSTRUCTIONS(PACKAGED WITH POWER SUPPLY) FOR COMPLETE INSTALLATION PROCEDURE.

	Amperage	Wire Color	Switch Position
EX	50mA max.	Grey	Closed
		Brown	Common
		Yellow	Open
EXV	3A max.	Grey/Red	Closed
		Brown/Red	Common
		Yellow/Red	Open



### CONNECTIONS FOR THE ER MODEL

The red and black wires should be connected to the power supply control board (81-800, 82-800 or 83-800, depending on the door configuration). See power supply instructions 101339 or 101340 as appropriate for typical connections.

### RETRACTING THE LATCH

The ER device must be connected to a Detex power supply/controller, 81-800, 82-800 or 83-800. With all the connections made according to the power supply instructions, closing the contact will retract the latch. The pushpad will be pulled down as the latch is retracted. The latch is held by an internal dogging assembly until the contact is released/opened.

### HOLDING THE LATCH RETRACTED

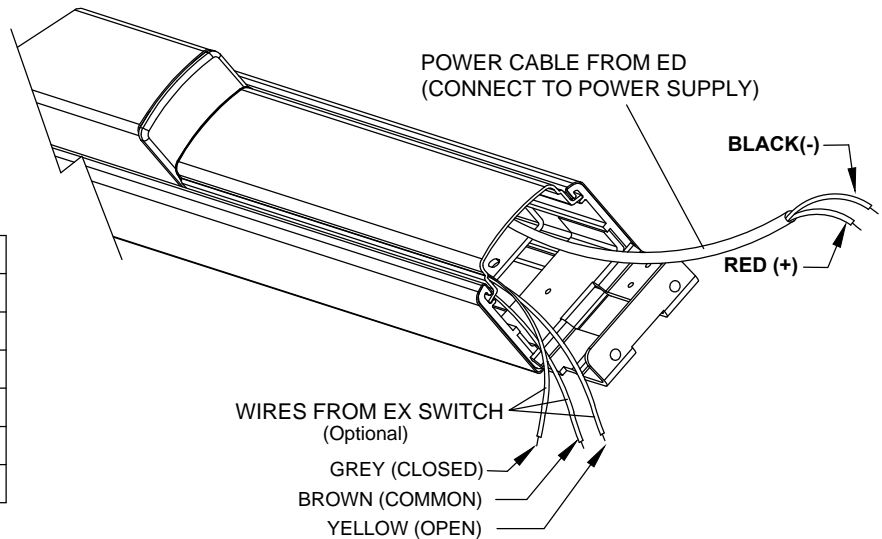
ER model holds the latch retracted as long as the control switch is maintained(closed).

### RELEASING THE LATCH

ER is an electronically dogged latch. Opening the control input switch (or contacts) causes the latching mechanism to release. When an 81-800, 82-800 or 83-800 series Detex power supply is used, there is a slight delay from the opening of the switch contacts to the release of the latch. This delay is intended for external signaling and is described in the power supply instructions.

# ED CONFIGURATION

DETEX ED UNITS MAY BE OPERATED FROM A 24 V AC OR DC SOURCE OR WITH A DETEX POWER SUPPLY  
 (NOTE: FIRE RATED DEVICES MUST USE 80-800-X OR 90-800 POWER SUPPLY)  
 (24VDC@180mA current draw)



	Amperage	Wire Color	Switch Position
EX	50mA max.	Grey	Closed
		Brown	Common
		Yellow	Open
EXV	3A max.	Grey/Red	Closed
		Brown/Red	Common
		Yellow/Red	Open

## CONNECTIONS FOR THE ED MODEL

The ED device can use a transformer or power supply. Use Detex part number PP-5152-2 transformer or approved 24 volt Class 2 equivalent rated at 40 VA or higher. An appropriate switch must be used to control the power to the device. Detex power supply 80-800 or 90-800 may also be used. See ED Connection Diagrams page for a typical installation. Fire rated doors must use the 80-800 or 90-800 power supply. This is because transformers cannot be controlled by the building's fire system. Connections to the building's fire system are described in the power supply instructions.

## RETRACTING THE LATCH

The ED model is electrically dogged, but has no mechanism to retract the latch. Once the switch is activated/closed and power is supplied to the device, press the pushpad to open the door. As the pushpad reaches the proper amount of travel, it will maintain the latch retracted. The pushpad will be held in this position as long as the control switch is maintained (closed).

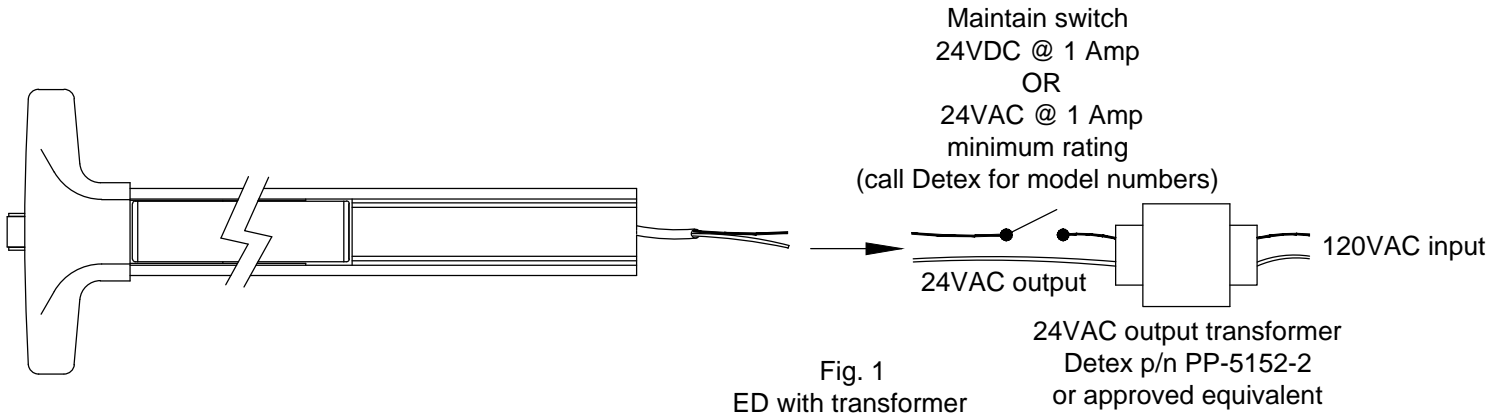
## HOLDING THE LATCH RETRACTED

ED model holds the latch retracted as long as the control switch is maintained (closed).

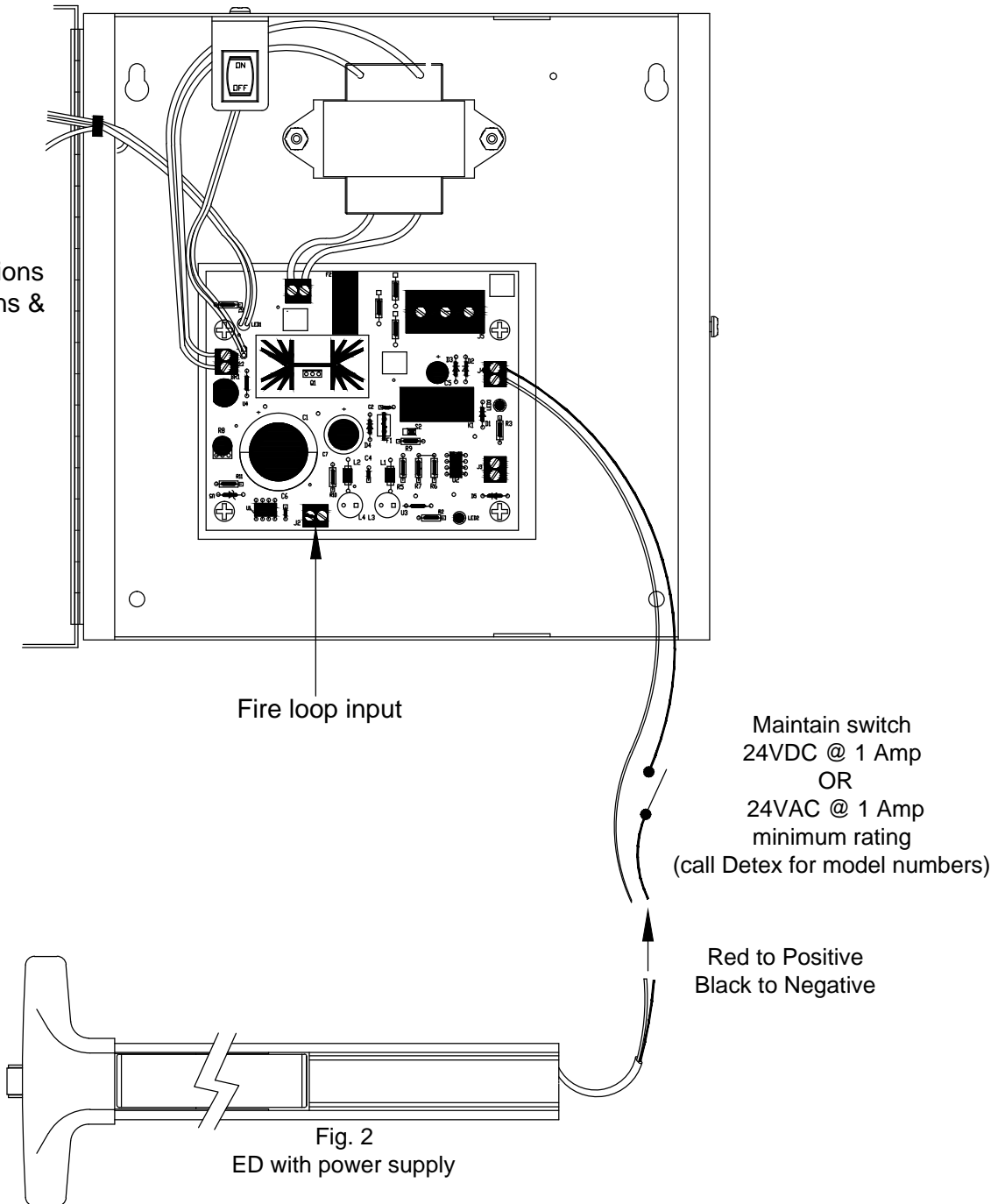
## RELEASING THE LATCH

ED is an electronically dogged latch. Opening the control switch (or contacts) causes the latching mechanism to release the lock.

# Typical ED Connection Diagrams



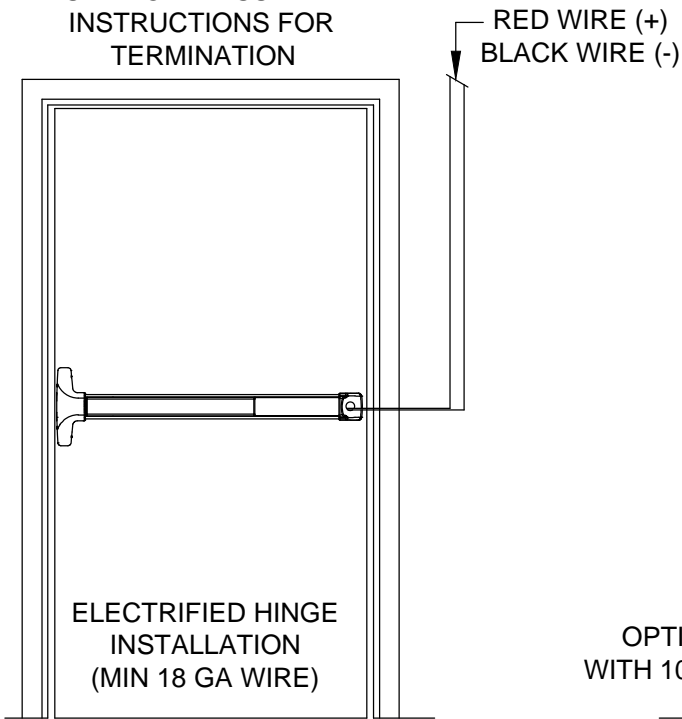
See 90-800-X instructions  
for fire loop connections &  
voltage selection



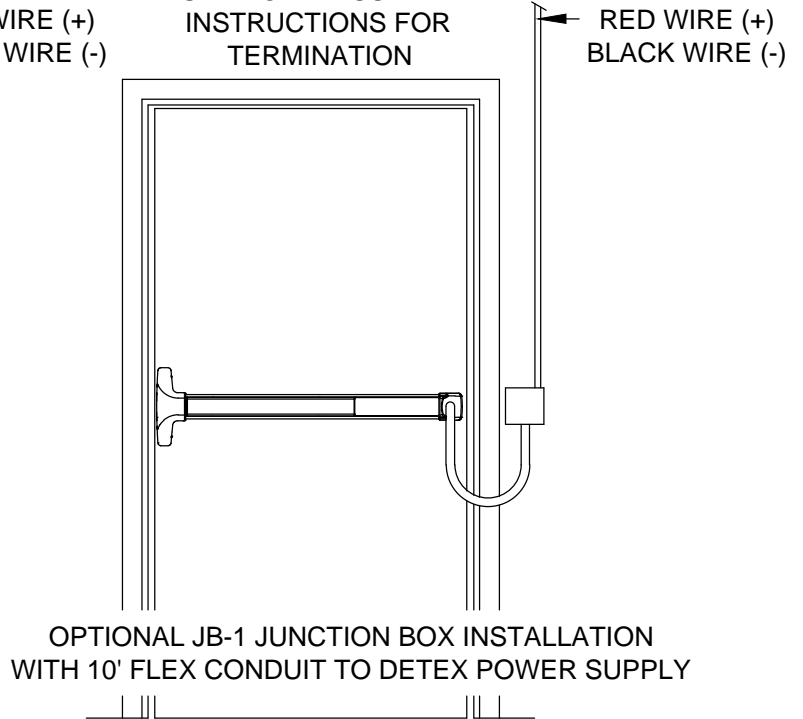


# RISER DIAGRAMS AND HARDWIRE TRANSFER OPTIONS

SEE POWER SUPPLY  
INSTRUCTIONS FOR  
TERMINATION

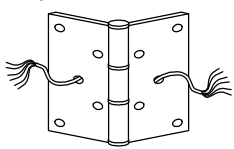


SEE POWER SUPPLY  
INSTRUCTIONS FOR  
TERMINATION

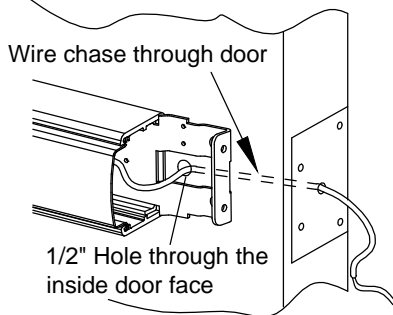


## HARDWARE TRANSFER DETAIL

Electric Hinge  
p/n: EWH8-626

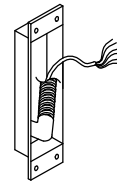


Electric Hinge Prep

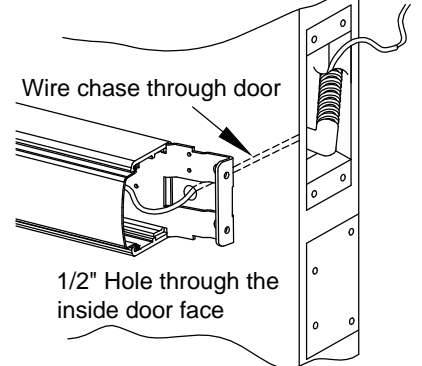


(Advantex shown, Value Series similar)

Power Transfer  
p/n: PT-5 or PT-56C



Power Transfer Prep

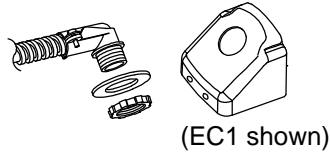


(Advantex shown, Value Series similar)

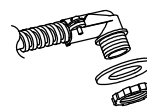
Flex Conduit/End Cap Kit

p/n: FC3EC1 or FC3EC2 for **Advantex**  
(specify finish when ordering)

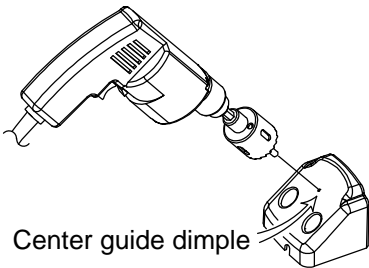
p/n: FC3 for **Value Series**  
(endcap not included)



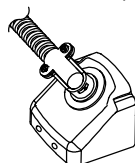
or



① For Value Series only:  
Drill 7/8" hole through.

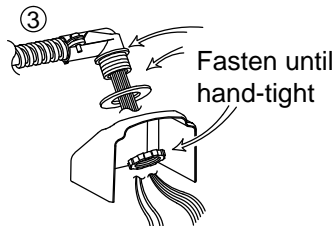


② All devices:  
Adjust for handing  
(LHR shown)

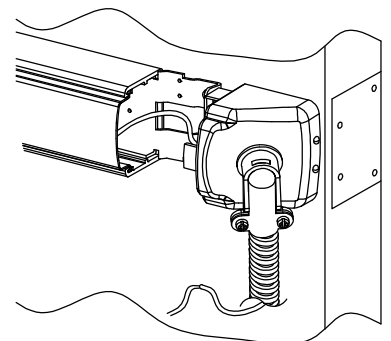


③ Fasten until  
hand-tight

From magnet  
terminals



Flex Conduit Endcap Prep



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

## TROUBLE SHOOTING - RIM DEVICE ER & ED LATCH RETRACTION

Problem	Probable cause & remedy
Latch drags on the strike when pushpad is manually depressed.	<b>Rim device:</b> Panic bar is aligned slightly to close to the strike. Remove the shim plate from the strike.
Latch drags on the strike after removing shim, does not dog unlocked.	Eye bolt needs to be adjusted. See Fig B below.

For further assistance, contact Detex Technical Support at 1-800-729-3839

### EYEBOLT ADJUSTMENT & TEST PROCEDURE

EQUIPMENT NEEDED: Detex Controller (see instructions for connection locations) or 24VDC power supply with leads.

PLACE DEVICE ON TABLE ON IT'S SIDE WITH CENTERCASE TO THE LEFT TO TEST.

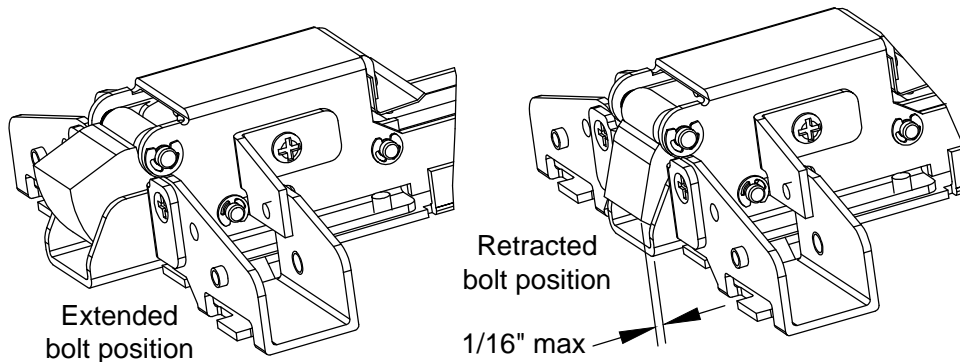
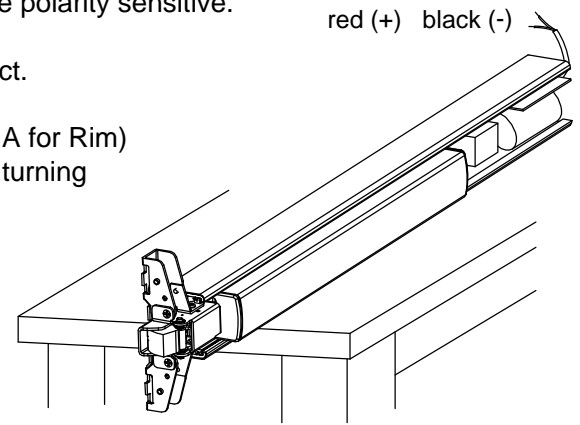
1. Attach power supply to red(+) and black(-) wires on ER module. Wires are polarity sensitive.
2. Keep hands clear of pushpad assembly.
3. Turn power supply ON. Pushpad should pull down and latch should retract.
4. Verify that latch in CENTERCASE is fully retracted.

Latch should not stick out past deadlatch bolt more than 1/16". (See Fig. A for Rim)

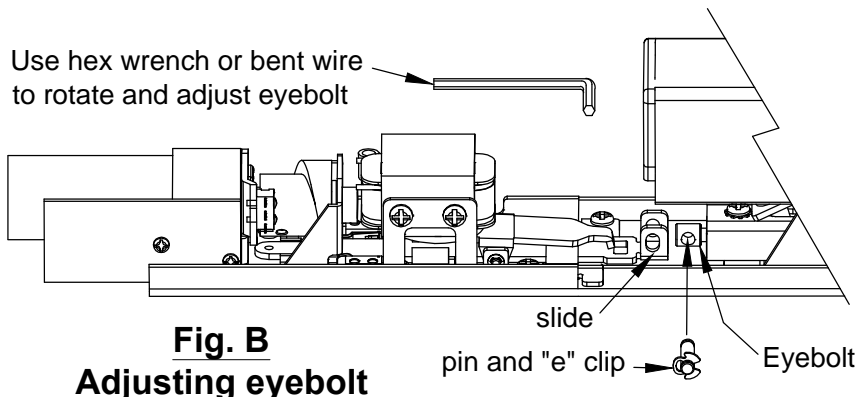
If latch protrudes more than 1/16", remove pin & re-adjust the eyebolt by turning only 1/2 turn at a time (Fig B). Repeat test until 1/16" is achieved.

Turn power supply OFF. This should release the pushpad and latch.

TEST IS COMPLETED.



**Fig. A**  
**Bolt Position**  
**(Rim only)**



**Fig. B**  
**Adjusting eyebolt**

NOTE: Fig. B adjustment should not be required on a new device as they are tested before shipping. Adjustments on replacement modules is to be expected.

## TROUBLE SHOOTING - SVR DEVICE ER & ED LATCH RETRACTION

Problem	Probable cause & remedy
Latch drags on the strike when pushpad is manually depressed.	Top bolt is too long. Remove shim plate or adjust bolt length. See Fig A-2 below.
Latch drags on the strike after removing shim or adjusting Top bolt, does not dog unlocked.	Eye bolt needs to be adjusted. See Fig B below.
During ER operation the holdbacklever catches the latch at a position that is more extended than during manual operation.	Top rod is too short. Screw bolt out to lengthen rod. Recommend only 1/2 turn at a time. See Fig A-2.
During ER operation the motor stalls.	The rod length is too long and is causing the top latch mechanism to jam. Screw bolt in to shorten rod. Recommend 1/4 to 1/2 turn at a time. See Fig A-2 below.

For further assistance, contact Detex Technical Support at 1-800-729-3839

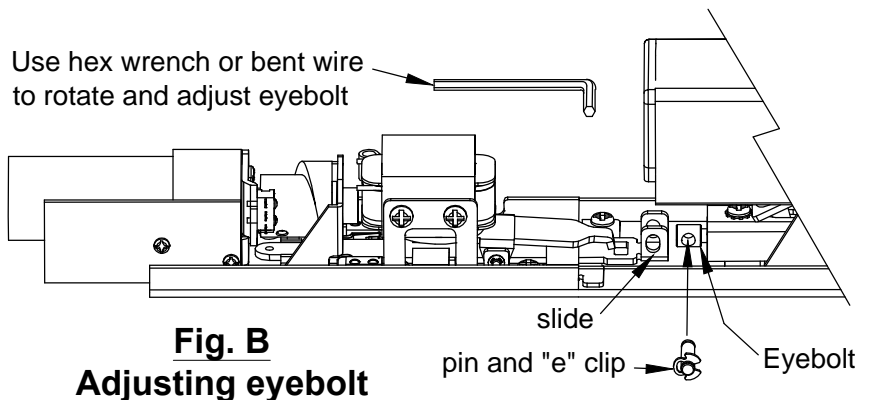
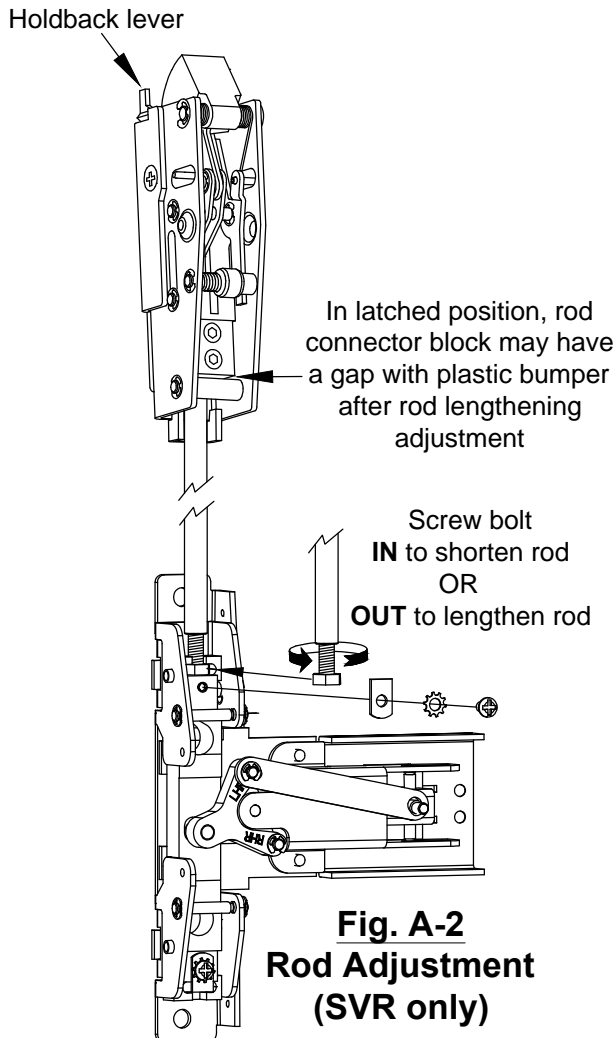
### EYEBOLT ADJUSTMENT & TEST PROCEDURE

EQUIPMENT NEEDED: Detex Controller (see instructions for connection locations) or 24VDC power supply with leads.

#### TEST DEVICE ON DOOR.

1. Attach power supply to red(+) and black(-) wires on ER module. Wires are polarity sensitive.
2. Keep hands clear of pushpad assembly.
3. Turn power supply ON. Pushpad should pull down and latch should retract.
4. Verify that latch in CENTERCASE is fully retracted.

Turn power supply OFF. This should release the pushpad and latch. TEST IS COMPLETED.



NOTE: Fig. B adjustment should not be required on a new device as they are tested before shipping. Adjustments on replacement modules is to be expected.