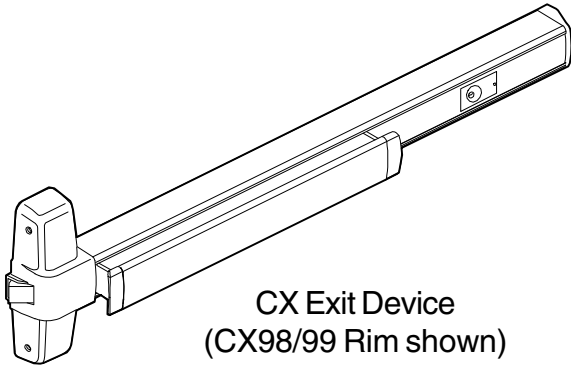


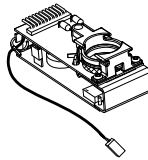
VON DUPRIN®

Installation Instructions – Electrical

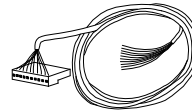
CX33A/35A & CX98/99 THE CHEXIT® Device



CX Exit Device
(CX98/99 Rim shown)



Chexit Module



Cable



Door Sign

GENERAL INFORMATION

The Von Duprin Chexit device is designed for accident hazard or fire exit applications. It meets both life safety and security needs as well as all requirements of NFPA101® for “Special Locking Arrangement” and UBC “Special Egress-Control Devices.”

The Von Duprin Chexit device sounds an alarm and keeps an exit door secured for 15 seconds following an attempt to exit. The Chexit releases immediately upon a fire alarm condition.

ELECTRICAL SPECIFICATIONS

Voltage	24 VDC
Current (Chexit)	0.4 A
Current (Electric mortise)	0.3 A
Current on arming	300-mS 16-A in-rush
External alarm dry contacts (NO and C) ...	24 VDC, 1 A rating
Normally closed inputs	Fire alarm (FA; required)
	External inhibit (EI)
	Door position switch (DPS)

WARNING

Do not exceed rated specifications.

WARNING

The Chexit device must be installed in accordance with these instructions by a qualified electrician.

WARNING

Wiring must be in accordance with all local codes and regulations.



911352-00



PRE-INSTALLATION CHECKLIST


Complete the items on the checklist below before installing the Chexit module. Each component listed should be prepared and installed according to the installation instructions supplied with it.

Mechanical Preparation

- 1. Door and frame have been prepared for power transfer.
- 2. Chexit device has been installed. (See instructions packaged with Chexit device.)
- 3. Trim such as a lever handle, if used, has been installed.
- 4. Suggested: Obtain a 1 1/4" mortise cylinder. (It is easier to install the mortise cylinder during electrical installation than after electrical installation.)


Electrical Preparation

- 1. Read all of these instructions before installing the Chexit module.
- 2. If available, get a wiring diagram for your installation. Otherwise, refer to Figures 2, 3, 5, 7 and Table 1 in "Typical Wiring" and mark the components you use in Table 1.
- 3. Determine the physical location of each component used (see Figure 1, 4, and 6).
- 4. Pull field wiring between component locations and frame side of power transfer (see Figure 1, 4, and 6).

 **IMPORTANT**

The wiring requirements in Table 2 in "Typical Wiring" **must** be followed.

- 5. Mount components and connect them to field wiring (see Figure 2, 3, 5, or 7).
- 6. Connect field wiring to frame side of power transfer. (Route wires through frame back box.)

 **IMPORTANT**

Components **must** be connected to wire colors as shown in Figures 2, 3, 5, and 7 in "Typical Wiring."

- 7. Install frame back box and frame side of power transfer.
- 8. Get requirements for Chexit option switches, record in Table 3 in "Options," and set switches.
- 9. Complete steps 1 through 9 of "Installation."

To install mortise cylinder after electrical installation:

- 1. Remove end cap and end cap bracket (see "Installation" step No. 1).
- 2. Slide cover plate out until knurled ring is visible; install cylinder (see "Installation" step No. 4).
- 3. Complete steps Nos. 4, 6, 7, and 9 of "Installation."

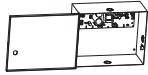
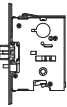

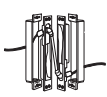




Table 1. Installation Components					
Picture	Component	Function	Optional/Required	Used?	If Not Used...
	24 VDC power supply	Supplies power to Chexit	Required (Von Duprin PS873)	Yes	Required
	E7500 Electric Mortise Lock	Serves as locking device on CXE9975 mortise applications	Required (for CXE9975)	Yes	Required (for CXE9975)
	Building fire alarm (normally closed contacts)	Unlocks Chexit in case of fire alarm	Required	Yes	Required
	Power transfer (EPT-10 shown)	Transfers electrical power through frame to door (wires concealed)	Highly recommended		Use door loop or electric hinge
	External inhibit device (card reader, key switch, etc.) Rim and vertical - (normally closed contacts)	Allows authorized egress or ingress without alarm	Optional (wire multiple external inhibit devices in series)		Connect green wire to white wire
	Electric Mortise Fail safe - (normally closed contacts)	Allows authorized egress or ingress without alarm	Optional (wire multiple external inhibit devices in series)		
	Electric Mortise Fail secure - (normally open contacts)	Allows authorized egress or ingress without alarm	Optional (wire multiple external inhibit devices in parallel)		
	Door position switch (normally closed contacts)	Arms Chexit 2.5 seconds after door closes; sounds alarm if door forced open	Optional		Connect orange wire to white wire
	External horn	Provides louder alarm than Chexit internal horn	Optional		Insulate blue and brown wires separately

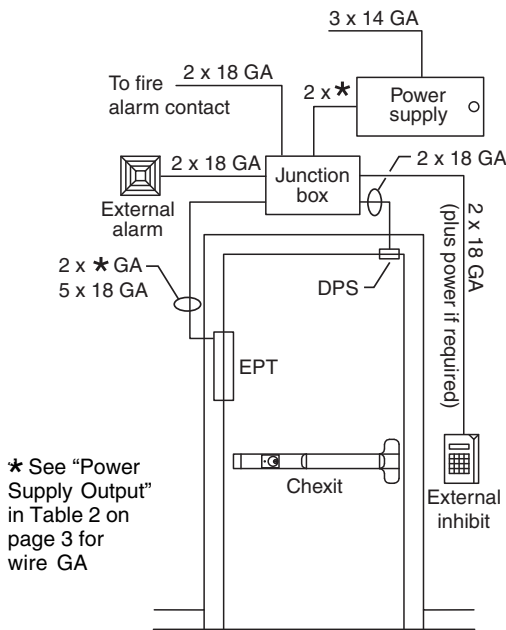
Table 2. Wiring Requirements			
Wiring	Type of Power Transfer (door to frame)	Maximum Wire Length from Power Supply to Power Transfer	Minimum Wire Gauge
Power Supply Input	N/A	Per code	Per code
Power Supply Output (+24 and GND)	EPT-10	100 feet	14 GA
	EPT-10	200 feet	12 GA
	Electric Hinge	75 feet	14 GA
	Electric Hinge	150 feet	12 GA
External Alarm, Fire Alarm, Door Position Switch, External Inhibit Device	EPT-10, Electric Hinge	Not critical	18-22 GA

Table 3. Wire Functions		
Red	+24	Power supply +24 VDC
Blue	C	Common for NO output; 24 VDC, 1 A maximum
Brown	NO	Normally open output; closes during alarm
Violet	CM-	Communication line; used to connect Chexits
Gray	CM+	Communication line; used to connect Chexits
Yellow	FA	Fire alarm input; 0 VDC = fire, 24 VDC = no fire
Orange	DPS	Door position switch input; 0 VDC = door open, 24 VDC = door closed
Green	B	External inhibit input; 0 VDC = Chexit inhibited, 24 VDC = Chexit active
White	SC	Signal common +24 VDC; can be used to power FA, DPS, and EI inputs
Black	GND	Power supply ground

 **IMPORTANT**
The wiring requirements in Table 2 above **must** be followed.

TYPICAL WIRING

Rim/Vertical - Single Door Application



* See "Power Supply Output" in Table 2 on page 3 for wire GA

Figure 1. Component Placement and Wiring Requirements, Single Door

See tables 1, 2, and 3 on page 3 for details regarding components and wire requirements

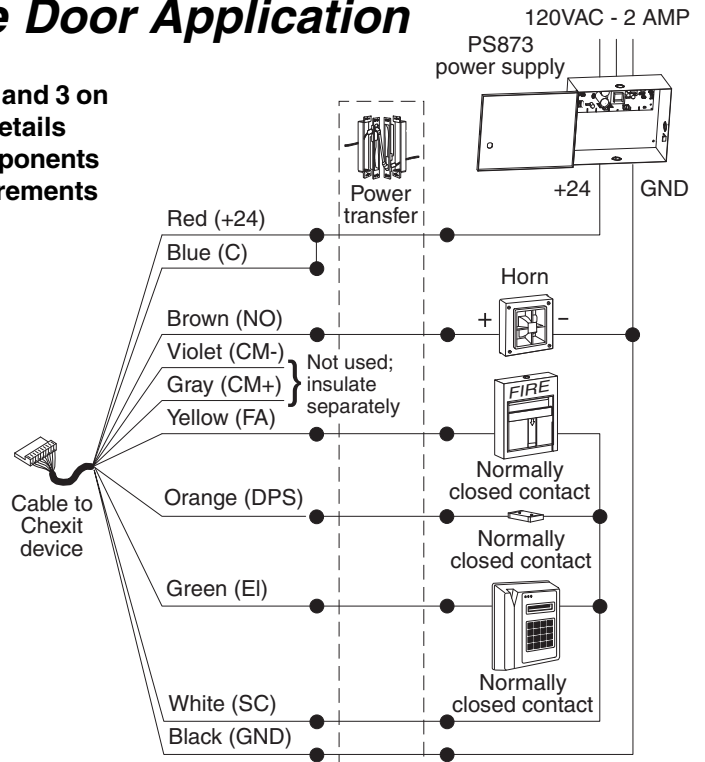


Figure 2. Wiring Connections, Single Door

Rim/Vertical - Double Door Application

In this double door application, both doors open in the same direction and each is equipped with a Chexit. The two Chexits are connected (ganged) by the gray (CM+) and violet (CM-) wires. **(If not used, insulate these wires separately.)** When one Chexit is set into alarm, the other also goes into alarm, and both unlock after 15 seconds. A fire alarm unlocks both doors at the same time. An external inhibit device also unlocks both doors at the same time. After an external inhibit, the door that was used rearms 2 seconds after closing, and the unused door rearms after the full rearm time. **For proper operation, the rearm times of ganged Chexits must differ by at least 2 seconds.**

See tables 1, 2, and 3 on page 3 for details regarding components and wire requirements

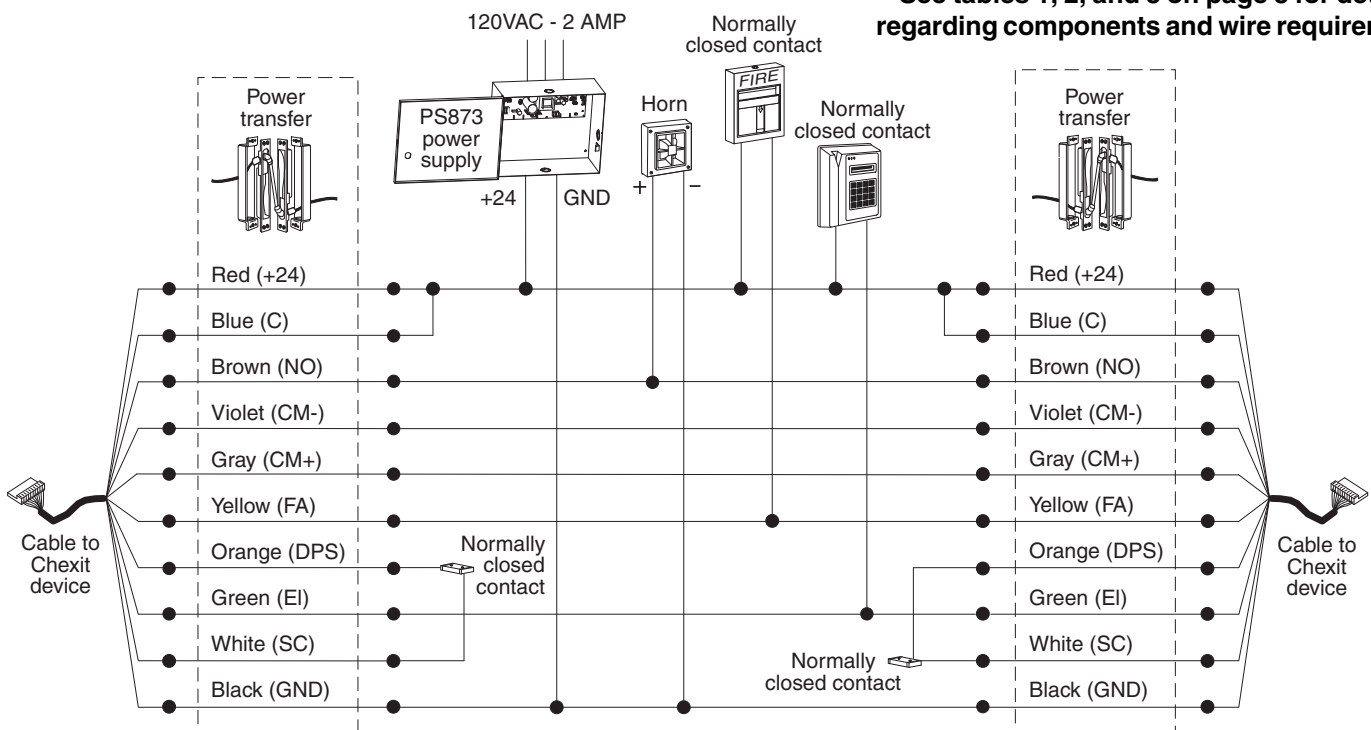


Figure 3. Wiring Connections, Double Doors

TYPICAL WIRING (continued)

Mortise - Fail Secure Application

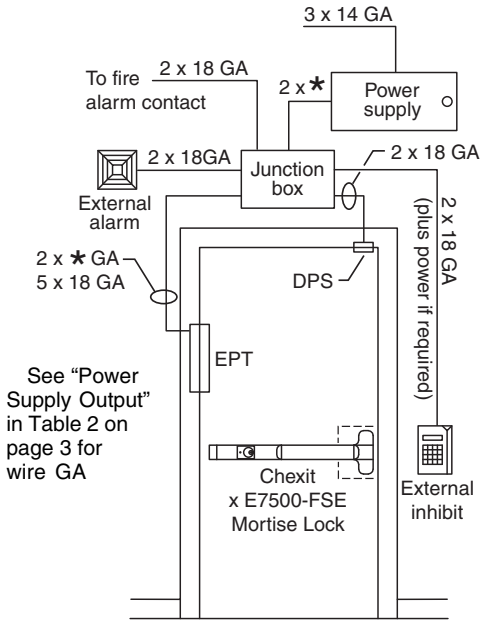


Figure 4. Component Placement and Wiring Requirements for FSE Mortise Applications

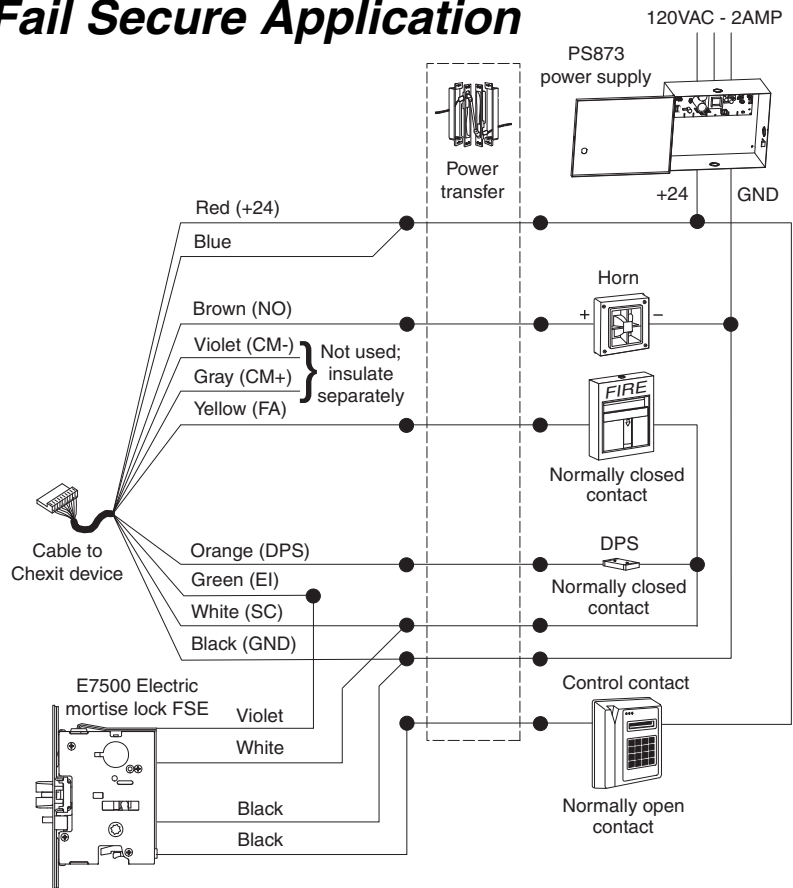


Figure 5. Wiring Connections, Mortise - Fail Secure

Mortise - Fail Safe Application

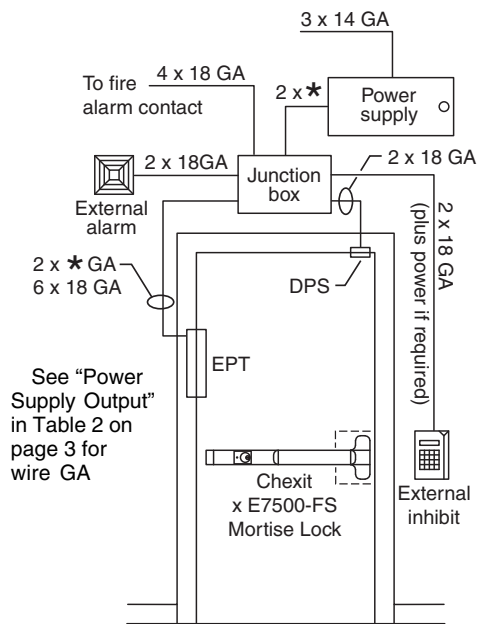


Figure 6. Component Placement and Wiring Requirements for FS Mortise Applications

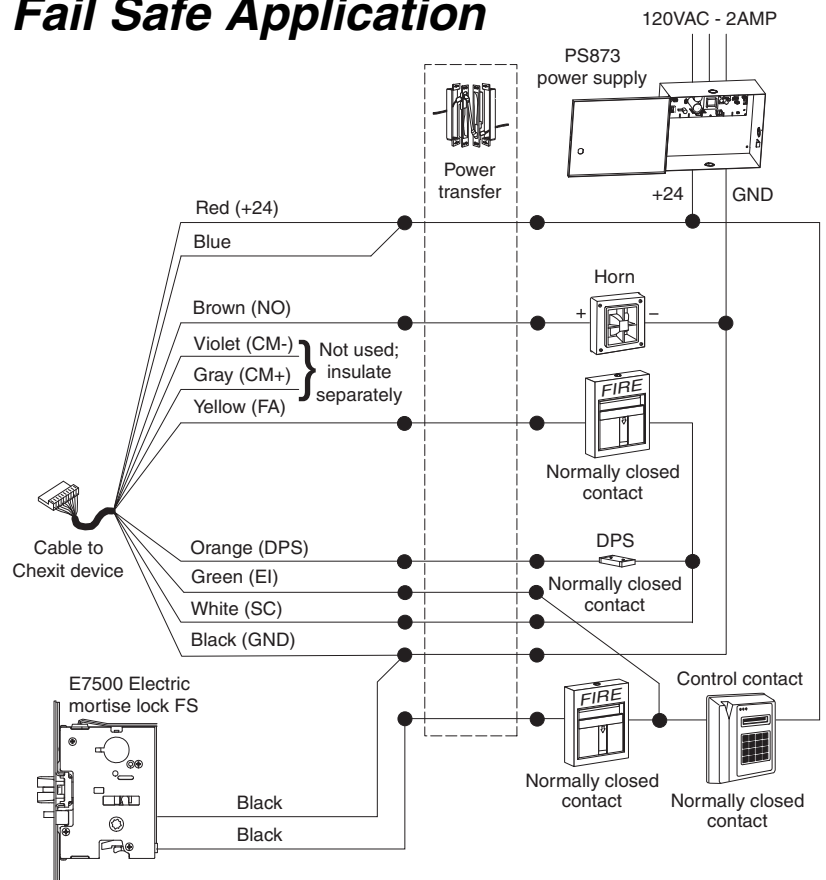
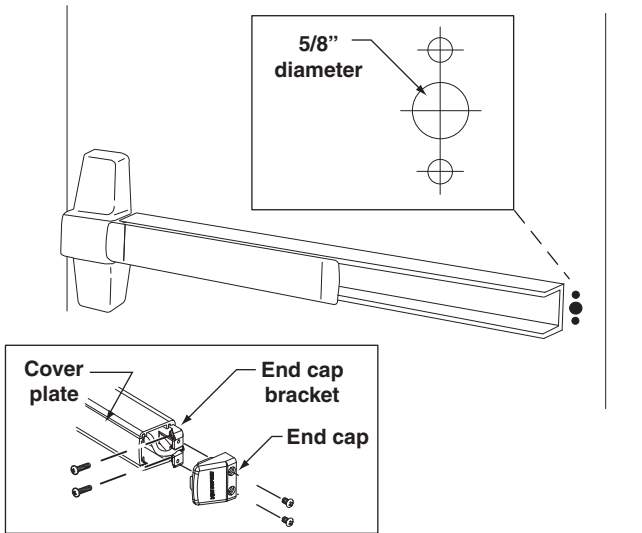


Figure 7. Wiring Connections, Mortise - Fail Safe

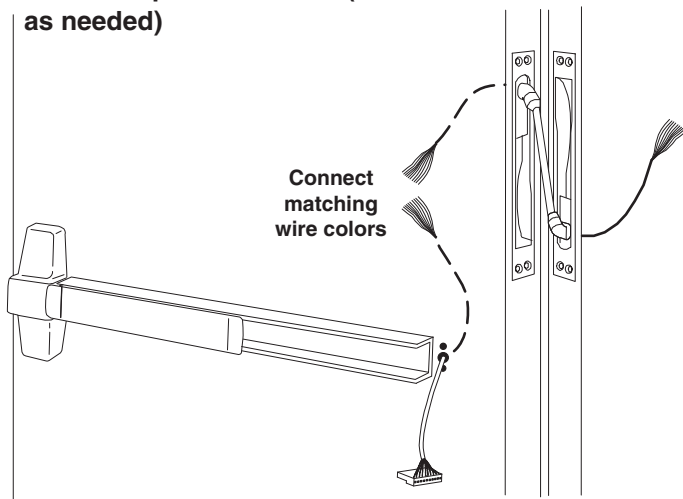
INSTALLATION

NOTE: Turn off power supply before installing cables

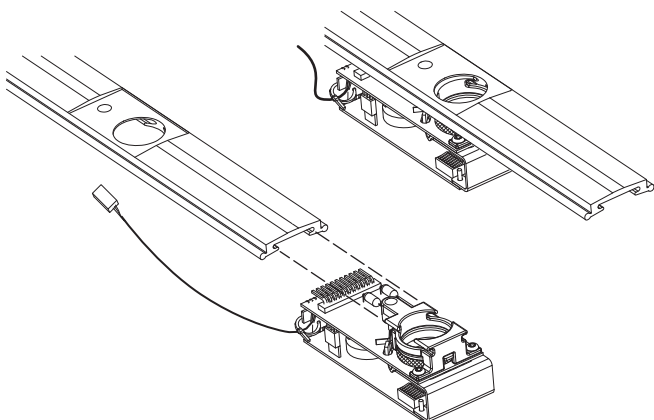
- 1** With end cap and cover plate removed, drill 5/8" diameter wire access hole in surface of door



- 2** Route Chexit cable through hole and connect wires to EPT-10 power transfer (see EPT-10 instructions as needed)



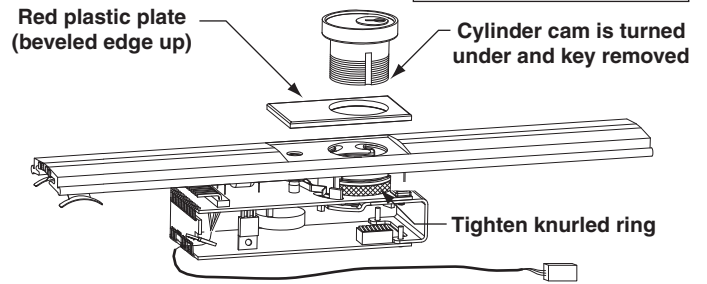
- 3** Slide module into cover plate as shown



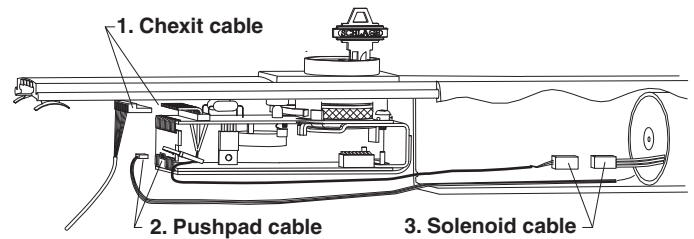
- 4** Install key cylinder, if available

CAUTION

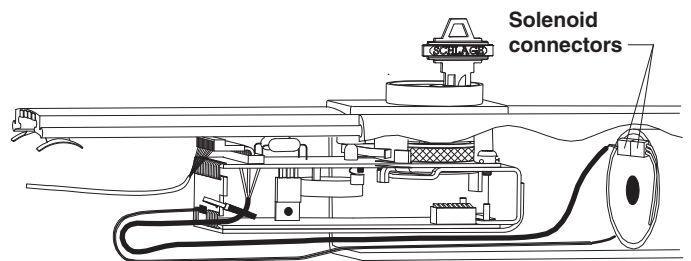
Orient cylinder as shown or unit will not operate



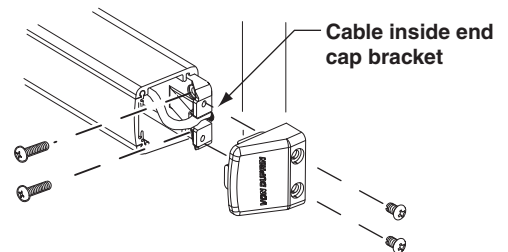
- 5** Slide cover plate half way into place while routing and connecting three cables as shown



- 6** Route three cables as shown while slowly sliding cover plate into place



- 7** Install end cap bracket and end cap



- 8** Remove backing from sign and put sign on door above Chexit device (sign is in cardboard tube)

- 9** Go to "Operation" for testing and troubleshooting

OPERATION

The basic function of a Chexit is to sound an alarm and keep an exit door secured for 15 seconds following an attempt to exit. Test the operation of your Chexit by performing actions Nos. 1 through 6 in the summary below. Make sure your Chexit matches the descriptions in the summary. If it does not, see “Troubleshooting.”

Summary of Chexit Modes					
Action	Mode	Pushpad	Red LED	Alarm	Duration
1. Turn on Chexit with key switch (turn key clockwise)	Rearm	Unlocked	On solid	Off	Rearm time (0-28 seconds)
2. Rearm time expires	Armed	Locked	Slow flash	Off	Continuous
3. Press pushpad	Release delay	Locked	Fast flash	On	15 seconds
4. 15 second release delay expires	Alarm	Unlocked	Fast flash	On	Continuous
5. Turn off keyswitch or activate EI (external inhibit)	Inhibit	Unlocked	Off	Off	Returns to rearm mode when key switch turned on or EI reset
6. Fire alarm contacts open	Alarm	Unlocked	Fast flash	On if option switch No. 8 is off	Continuous (turn off key switch to clear)

The operation of a Chexit with a **door position switch** is the same as described in the summary table, but:

- The Chexit enters **Armed** mode 2.5 seconds after the door position switch contacts close.
- If the door is held open and rearm time expires, the Chexit goes into **Alarm** mode.
- When in **Armed** mode, the Chexit goes into **Alarm** mode if the door position switch contacts open.

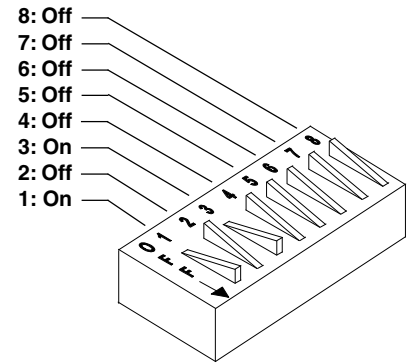
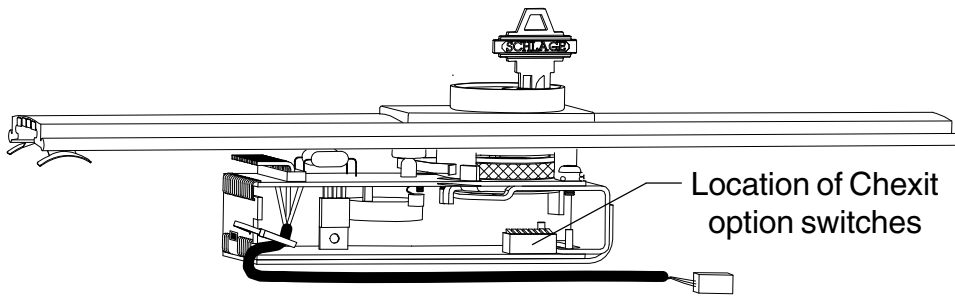
TROUBLESHOOTING

Turn Chexit off, then back on, using key switch. Compare Chexit operation with the following table to identify problems and solutions. After troubleshooting, re-test Chexit using steps under “Operation.”

Symptom	Problem	Solution
Red LED does not light	Power not reaching Chexit	Replace/reset AC fuse/circuit breaker; check power supply input/output voltages; check input voltage at Chexit cable connector
Red LED flashes fast and horn sounds	Fire alarm contacts open	Connect normally closed fire alarm contacts between yellow and white wires
Red LED flashes once	1. External inhibit contacts open 2. External inhibit function not used and wires not terminated properly	1. Connect normally closed external inhibit contacts between green and white wires 2. If external inhibit not used, connect green and white wires together
Red LED on solid then flashes fast and horn sounds	1. Pushpad pressed 2. Pushpad switch disconnected	1. Release the pushpad 2. Connect pushpad switch connectors (see step No. 6 of “Installation”)
Red LED on solid then flashes fast, horn sounds, and solenoid pulls in for one second (two sharp sounds)	1. Door open 2. Door position switch contacts open 3. Door position function not used and wires not terminated properly	1. Close door 2. Connect normally closed door position switch contacts between orange and white wires 3. If door position switch not used, connect orange and white wires together

OPTIONS

Options are set by switches on the Chexit module. Before changing option settings, turn the Chexit off. Changes in option settings take effect when the Chexit is turned on.



Factory settings shown

Table 3. Chexit Options

Option	Function	Settings for Door No: ____
Rearm time	Switches Nos. 1 through 4 set amount of time you have to pass through door after turning on key switch or using an external inhibit device (see table below)	_____ seconds
Nuisance delay	If switch No. 5 is on, the pushpad must be pressed 1 seconds to set off alarm	on off
Nuisance alarm	If switch No. 6 is on, the Chexit horn sounds while pushpad is pressed during nuisance delay; use in accordance with local code	on off
Self-test	If switch No. 7 is on, the Chexit performs a self-test when turned on; this switch must be off for normal operation	on <input type="radio"/>
Local fire alarm	If switch No. 8 is off, the Chexit internal horn sounds during a fire alarm	on off

Rearm Time Switch Settings

Seconds	Switch No. 1	Switch No. 2	Switch No. 3	Switch No. 4
0	off	off	off	off
2	on	off	off	off
4	off	on	off	off
6	on	on	off	off
8	off	off	on	off
10	on	off	on	off
12	off	on	on	off
14	on	on	on	off
16	off	off	off	on
18	on	off	off	on
20	off	on	off	on
22	on	on	off	on
24	off	off	on	on
26	on	off	on	on
28	off	on	on	on
infinite	on	on	on	on

Rearm Time Notes

1. Set the rearm time a few seconds longer than the door will be open so the door closes before the Chexit arms.
2. The Chexit is shipped from the factory with the rearm time set to 10 seconds.
3. When the rearm time is infinite, the Chexit arms when the door position switch detects that the door is closed.
4. When the rearm time is infinite, you must open and close the door after the Chexit is turned on.
5. If a door position switch is used, the Chexit arms 2.5 seconds after the door closes.
6. If you are using a door position switch but you want the full rearm time to expire before the Chexit arms, call Von Duprin at 1-888-371-7331 and get instructions from Electrical Technical Support.
7. For proper operation, the rearm time of each ganged Chexit must differ by at least 2 seconds.