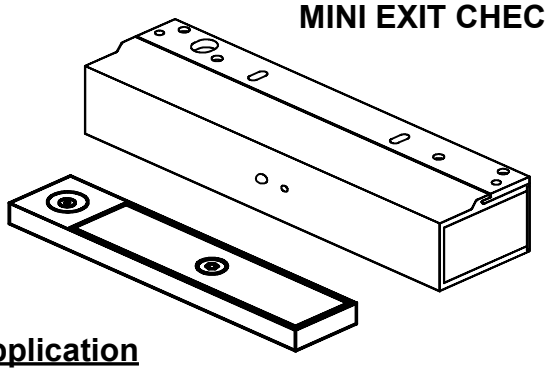
SDC SECURITY DOOR CONTROLS
801 Avenida Acaso, Camarillo, Ca. 93012 • (805) 494-0622 • Fax: (805) 494-8861
www.sdcsecurity.com • E-mail: service@sdcsecurity.com

INSTALLATION INSTRUCTIONS
MINI EXIT CHECK® DELAYED EGRESS EMLOCK®
1581S



PUSH UNTIL ALARM SOUNDS. DOOR CAN BE OPENED IN 15 SECONDS.

KEEP PUSHING. THIS DOOR WILL OPEN IN 15 SECONDS. ALARM WILL SOUND.

California Building Code Compliant

Application

When unauthorized egress is initiated, the Exit Check® delays egress through the door for a period of 15 seconds. Meanwhile, the person exiting must wait allowing personnel or security respond. The door unlocks after the 15 second delay period has elapsed, permitting egress. A signal from the fire/life safety system will release the lock immediately for uninhibited egress in an emergency.

Exit Check® applications include:

- Restricting the egress of patients for their own safety.
- Restricting the egress of commercial center patrons for minimum security application needs.

Standard Features

- Small & Compact Size
- 650 lbs. Holding Force
- 15 Second Exit Delay when activated.
- 1 Second Nuisance Delay
- Subdued Alarm with 2 Distinct Tones:
  - Alarm Activation Intermittent
  - Door Release – Continuous
- Choice of Activation Trigger:
  - Door Movement
  - Exit Device w/ REX Switch
  - Touch Sense Bar w/REX Switch
- Instant Reset from Bypass mode for interfacing with Patient Monitoring Systems.
- Vandal resistant Proximity Sensor Trigger
- Auto Sensing 12/24VDC input power
- Low Power Consumption
- 5 foot Power Cable

Connection for Tandem Option (Pairs of Doors)

Optional Features

- **30** Second Exit Delay
- **DPS** Door Position Switch
- **BAS** Bond Alert Sensor (Internal)
- **Tandem / Slave Cable**
  - 3' Cable – **1581S-TC3**
  - 10' Cable – **1581S-TC10**

Selectable Automatic & Manual Power-Up

Auto Power-Up – Occurs when power is restored and/or the fire panel is restored (Not available on California Versions).

Manual Power-Up – *This is a UBC & California Building Code Compliant Feature* – Only after power restoration and fire panel reset may the lock be reset manually at the opening. A power-up key switch or keypad is required adjacent to the door.

Building & Fire Life Safety Code Compliant

1581SND,NA,NH,NC
IBC International Building Code
IFC International Fire Code
NFPA 101 Life Safety Code
NFPA 1, UFC, Uniform Fire Code
UBC Uniform Building Code
CBC California Building Code
SBC Standard Building Code
1581SBD,BH,BC
BOCA National Building Code compliant
Chicago Building Code compliant

Only the 1581S and the 1581T have been UL listed as "Special Locking Arrangements" to UL standard 294 and NFPA 101.

UL LISTED USA c UL LISTED CANADA

GWXT/GWXT7 Auxiliary Locks
FWAX Special Locking Arrangements

California State Fire Marshal Listed
CSFM #3774-0324:103

1581S Operational Description

The door is closed and secured by latching hardware. The model 1581S Exit Check locks the door in the secured position, and the display shows the unlock delay time.

Activation / Alarmed Release :

Activation of the 1581S Exit Check's 15 second unlock cycle is started by releasing the door latch and applying up to 15 lbs. of pressure to the door causing slight door movement. A short nuisance delay period is then initiated, a pre-activation warning tone is sounded . To prevent false alarms, re-latching the door during the nuisance delay period will silence the pre-activation warning tone and keep the door locked.

Once the nuisance delay period has been exceeded, the Exit Check continues with an irreversible door release cycle. The integral digital countdown display and voice commands continue to inform the person intending to exit of the seconds remaining until unlock and an alarm output is activated to alert personnel of an unauthorized exit. After the 15 second delay cycle has expired, the Exit Check will release the door allowing free egress.

Reset / Relock:

The Exit Check can be manually reset by authorized personnel by closing the door and activating the Reset input.

Request to Exit / Authorized Bypass:

Momentarily actuating the Request to Exit input will initiate the request to exit cycle and unlock the 1581S Exit Check allowing free egress. After the request to exit cycle has expired, the Exit Check will automatically relock.

Leaving the Request to Exit input continuously activated, the 1581S will remain unlocked for extended periods of time. Releasing the Request to Exit input will restart the request to exit cycle and will relock the door after the request to exit time has expired.

(NFPA-101)

The 1581S operation complies with the following building and fire codes: NFPA 101; NFPA 1-UFC; UBC; IBC; IFC; SBC; California Building Code. Listings: UL Listed: Special Locking Arrangements and Auxiliary Locks; California State Fire Marshal (CSFM) Listed.

Option Code	Delay Release Time	Nusiance Time	Reset after Alarm	Lock Status on Power-Up
ND	15 sec Fixed	2 sec Fixed	Manual	Locked or Unlocked Selectable
NH	30 sec Fixed	2 sec Fixed	Manual	Locked or Unlocked Selectable
NC (CBC Compliant)	15 sec Fixed	2 sec Fixed	Manual	Unlocked Fixed

Per BOCA compliance, the Exit Check is manually reset by authorized personnel after an alarm by closing the door and actuating the integral reset key switch or by momentarily closing a contact connected to the remote reset terminals. In addition, reset will be automatically initiated once the door has been opened, then closed and remains closed for 30 consecutive seconds.

(BOCA/Chicago)

The 1581S operation complies with BOCA National Building Code and the Chicago Building Code: UL Listed, Special Locking Arrangements and Auxiliary Locks.

Option Code	Delay Release Time	Nusiance Time	Reset after Alarm	Lock Status on Power-Up
BD	15 sec Fixed	2 sec Fixed	Auto/Manual	Locked or Unlocked Selectable
BH	30 sec Fixed	2 sec Fixed	Auto/MAnual	Locked or Unlocked Selectable
BC	15 sec Fixed	0 sec Fixed	Auto/Manual	Locked or Unlocked Selectable

1581S Specifications

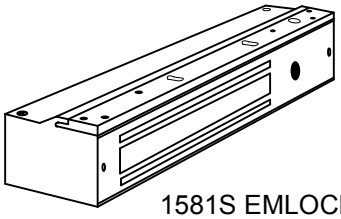
Interior Applications Only
Size: 10"L x 2-1/8"H x 2-3/8"D

Power/Current Requirements:
- 320 mA @ 24VDC
- 500 mA @ 12VDC

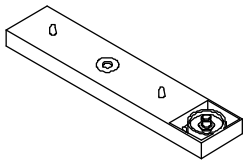
Lock Status Relay Rating: 1 amp @ 30V resistive
DPS Rating: 250 mA @ 30V resistive
BAS Option: Internal
(NOTE: The BAS option works in conjunction with the lock status relay. It does not have a separate output.)

Note:
A key switch, keypad, or push button (see models below) MUST be provided and purchased separately to operate the Reset and Rex Functions.

Included in Package



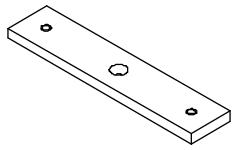
1581S EMLOCK HOUSING ASSY. & MOUNTING PLATE



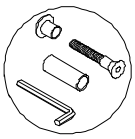
TRIGGER BLOCK ASSY 1580S-11



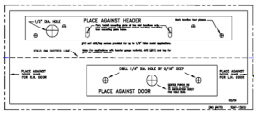
CONTROLLER CABLE ASSEMBLY CA-1581S



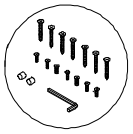
ARMATURE PLATE 1581S-10T



ARMATURE SCREW PACK 1580S-101-C



TEMPLATE TEMP-1581S



EMLOCK SCREW PACK C-1500-RF

Suggested Optional Equipment

Digital Entry



918 Digital Keypad
Two relay outputs:
Relay 1 -Reset;
Relay 2 – Choice of momentary or sustained bypass.

Power Supply



600 Series Power Supply
Field Selectable 12 or 24VDC modular Power Supplies with Fire/Life Safety Emergency Release. Tri-colored LED, separate PTC protected battery charger, and Class 2 Outputs.
602RF 1 Amp
631RF 1.5 Amp
632RF 2 Amp
634RF 4 Amp
636RF 6 Amp

Station Controls, Annunciator Panels, and Consoles



728U
Single station two function key switch control for alarm reset and access or sustained bypass.



101-1A
The single station annunciator is equipped with a tri-colored LED and audible alarm.



101-PAM
Visual & audible annunciation, timed access, sustained bypass and audible mute.



728UL3
Single station two function key switch control for alarm reset and access with a tri-colored LED showing door condition.



101-4AM
Provides visual & audible annunciation with audible mute for up to four openings.



TCC Desk Top : Stations 4, 8, & 12
SDC Annunciator Consoles provide remote annunciation of multiple openings. Stations are specified in sets of four. Control switches are capable of both sustained bypass and timed unlocking.



702RU
Single station one function key switch control for alarm reset.



101-1AK
Visual & audible annunciation and a two function key switch for alarm reset and access or sustained bypass.



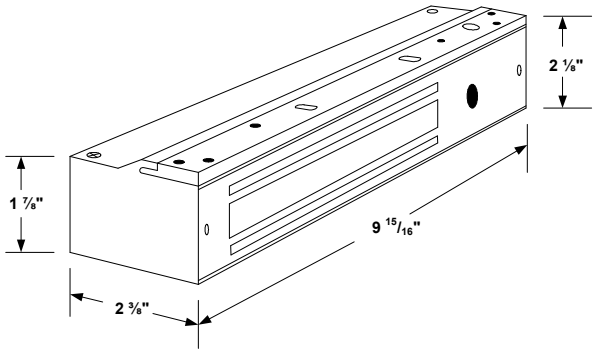
PSB560
Request-to-exit touch sense non-latching bar that will activate the Exit Check® when slight pressure is applied to the bar. For doors without latching.

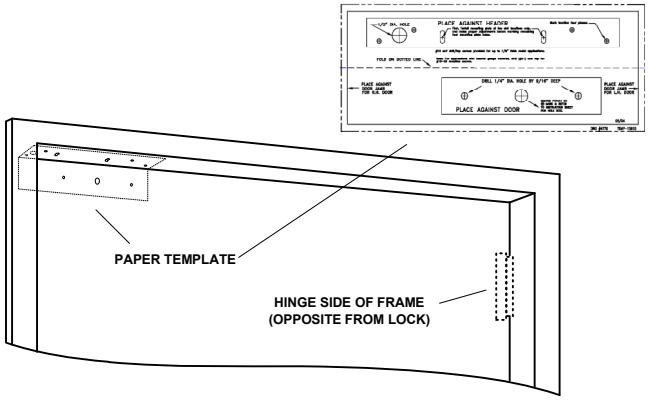
Door and Frame Preparation Instructions

STEP 1. Locate the paper template and fold along the dotted line. Place the folded edge of the template against the door stop and door at the header while against the vertical stop, opposite the hinge side of the door. Tape in place at this position.

STEP 2. As indicated on the paper template, punch the designated hole locations on the frame and armature mounting holes on the door. ***(NOTE: PRIOR TO DRILLING, INSPECT TO SEE IF ANY OF THE HOLES CANNOT BE DRILLED DUE TO THE FRAME OR DOOR CONFIGURATION. A FILLER PLATE OR ANGLE BRACKET MAY BE REQUIRED. SEE PAGE 5.)***

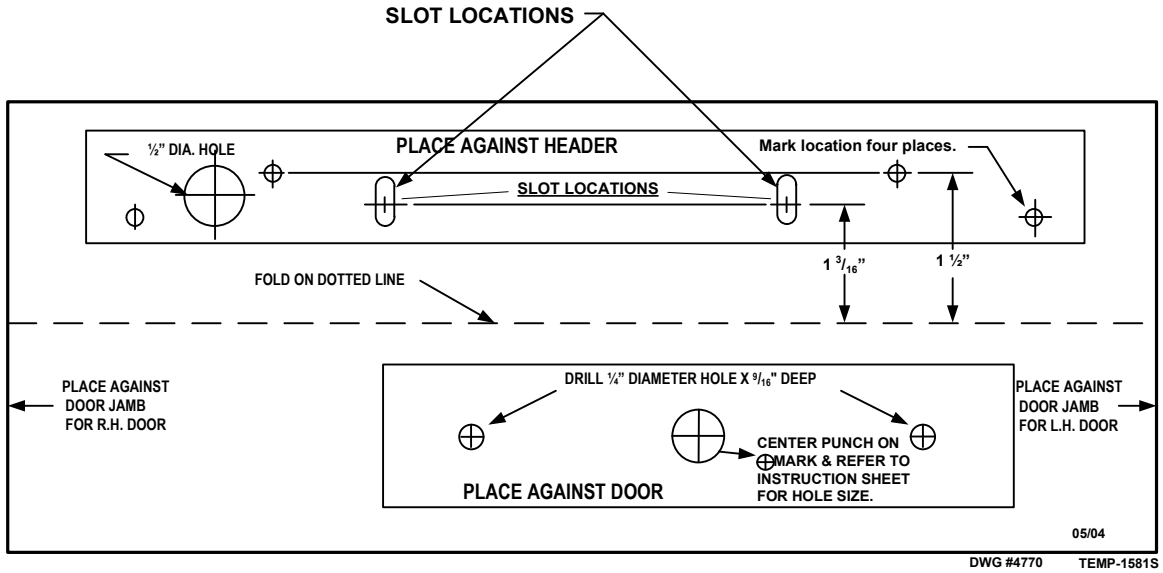
STEP 3. Drill and tap the two 1581S mounting holes as indicated on the paper template. ***(NOTE: READ NOTE ON TEMPLATE WITH REGARD TO SELECTING THE PROPER HOLE SIZE FOR ARMATURE MOUNTING BOLT.)***





Door and Frame reference dimensions

IMPORTANT! – IT IS HIGHLY RECOMMENDED THAT YOU FIRST INSTALL THE MOUNTING PLATE AT TWO SLOT LOCATIONS ONLY. THIS WILL ALLOW YOU TO MAKE PROPER ADJUSTMENTS OF THE LOCK'S POSITION PRIOR TO MARKING, DRILLING AND TAPPING THE FOUR PERMANENT MOUNTING PLATE HOLES.



NOTES:

- **#10 self drill/tap screws provided for up to ⅛" thick metal applications**
- **For applications with heavier gauge material, drill (#21) and tap for #10-32 machine screws.**

ARMATURE MOUNTING INSTRUCTIONS

STEP 1. Mount armature to door. *(See figures 2A, 2B & 2C.)*

STEP 2. Install the mounting plate *(filler plate and/or angle bracket if needed – see figures 1A, 1B & 1C)* to header with only the two screws at the slotted hole locations at this time. Snug the screws down lightly (do not torque) so the mounting plate & lock can be repositioned later.

STEP 3. Temporarily install the lock to the mounting plate with the 1/4-20 socket head screws encased in the lock.

STEP 4. With the lock mounted, close the door so the armature just comes into contact with the face of the lock. If the door is not completely closed as the lock & armature touch, open the door and reposition the lock away from the door as described in step 2. ***(THIS IS TO PREVENT THE DOOR FROM USING THE LOCK AS THE DOOR STOP.)***

STEP 5. Remove the lock from the mounting plate, mark & punch all remaining screw and wiring holes. Drill & tap holes as indicated on the paper template and install all screws.

STEP 6. Reinstall the lock to the mounting plate. At this point, if there is no need to remove the lock for painting or any other reason, install the anti-tamper plugs over the socket head mounting screws, using a soft hammer to avoid damage to the lock case.

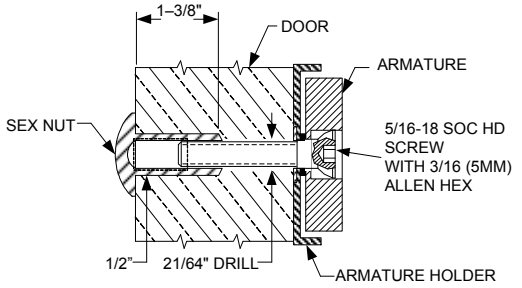


Figure 2A – SOLID DOOR

Drill exactly 3/8" through the door. From sexnut side of door, drill ½" diameter hole 1-3/8" deep. Mount armature to door with hardware provided per Figure 2A.

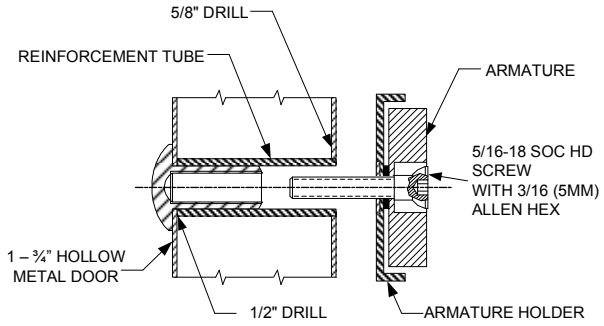


Figure 2B – HOLLOW METAL DOOR

From sexnut side of door, drill exactly 1/2" hole through one metal thickness only. From armature side of door, drill 5/8" hole to insert reinforcement tube. Press in sexnut & reinforcement tube all the way and mount armature to door using hardware provided per Figure 2B.

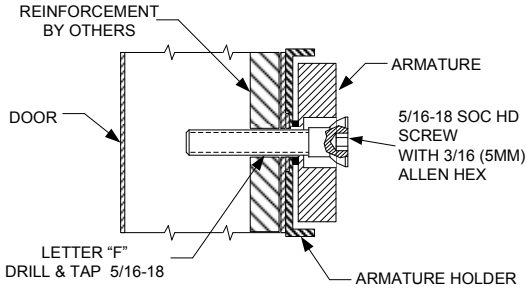


Figure 2C – REINFORCED ALUMINUM OR HOLLOW METAL DOOR

Use letter "F" drill and tap for 5/16-18 machine screw. Mount armature to door with hardware provided per Figure 2C.

REGULAR, FILLER PLATE & ANGLE BRACKET DETAILS

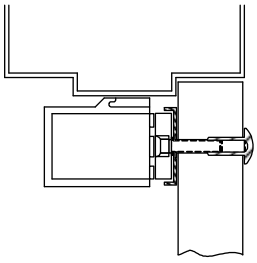


Figure 1A
REGULAR

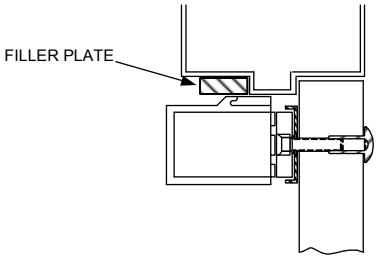


Figure 1B
WITH FILLER PLATE

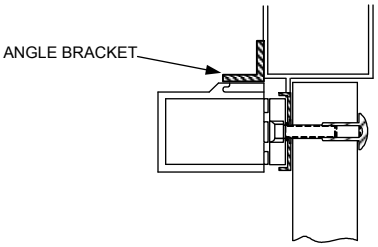
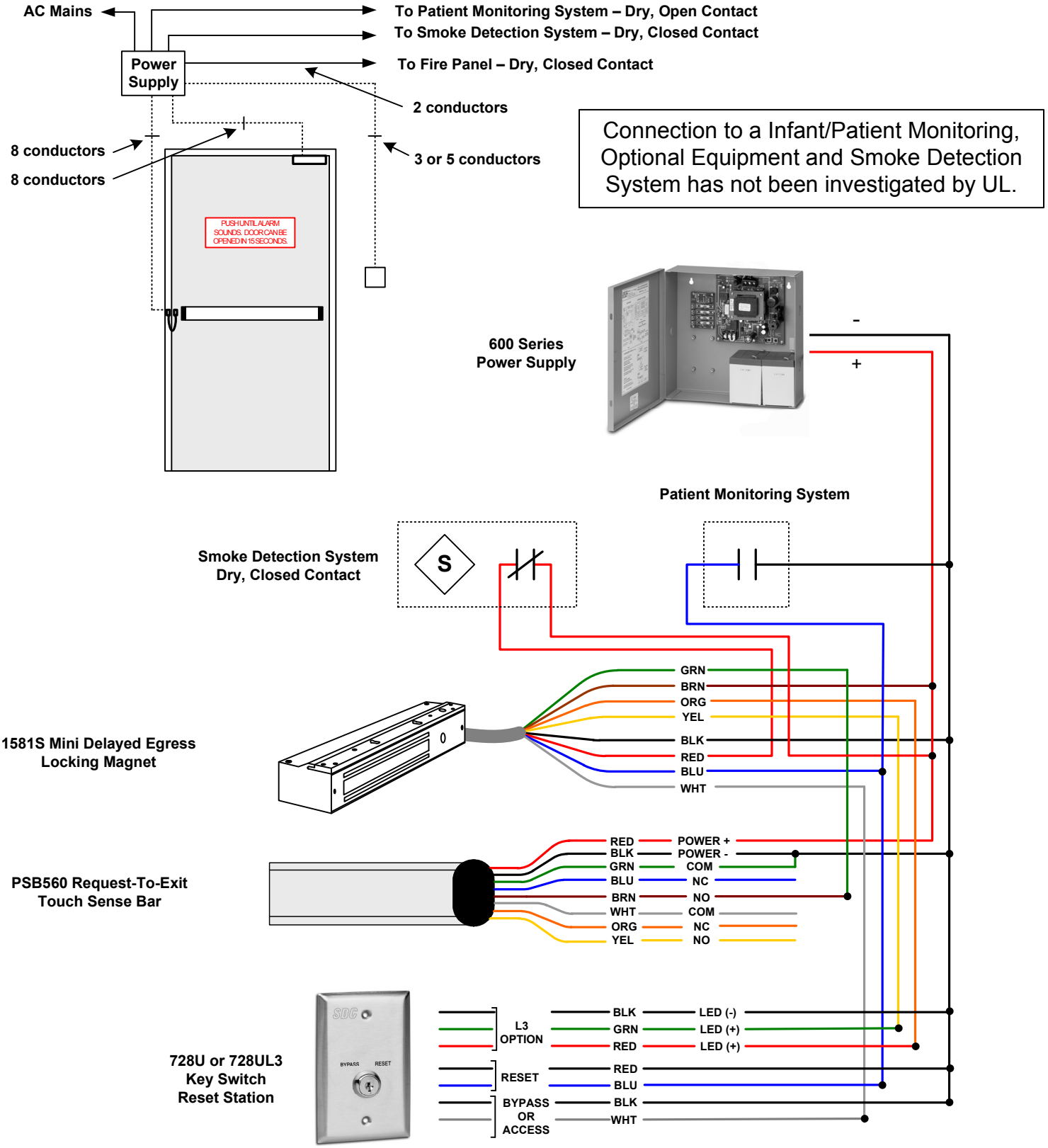


Figure 1C
WITH ANGLE BRACKET

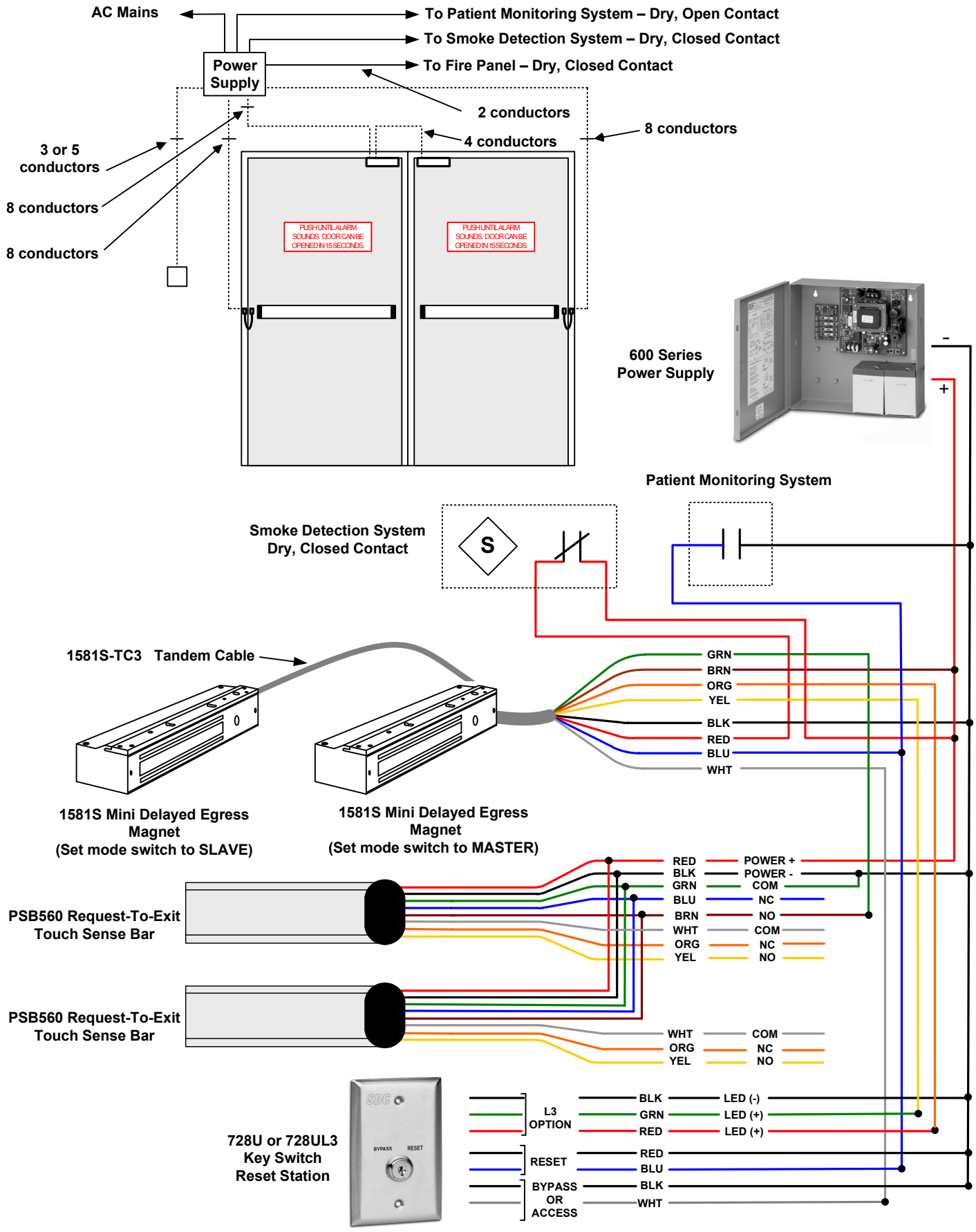
System Wiring – Single Door

WARNING:
APPLICATION OF VOLTAGE TO THE DRY CONTACT INPUTS OF THIS UNIT WILL CAUSE PERMANENT DAMAGE AND VOID THE WARRANTY

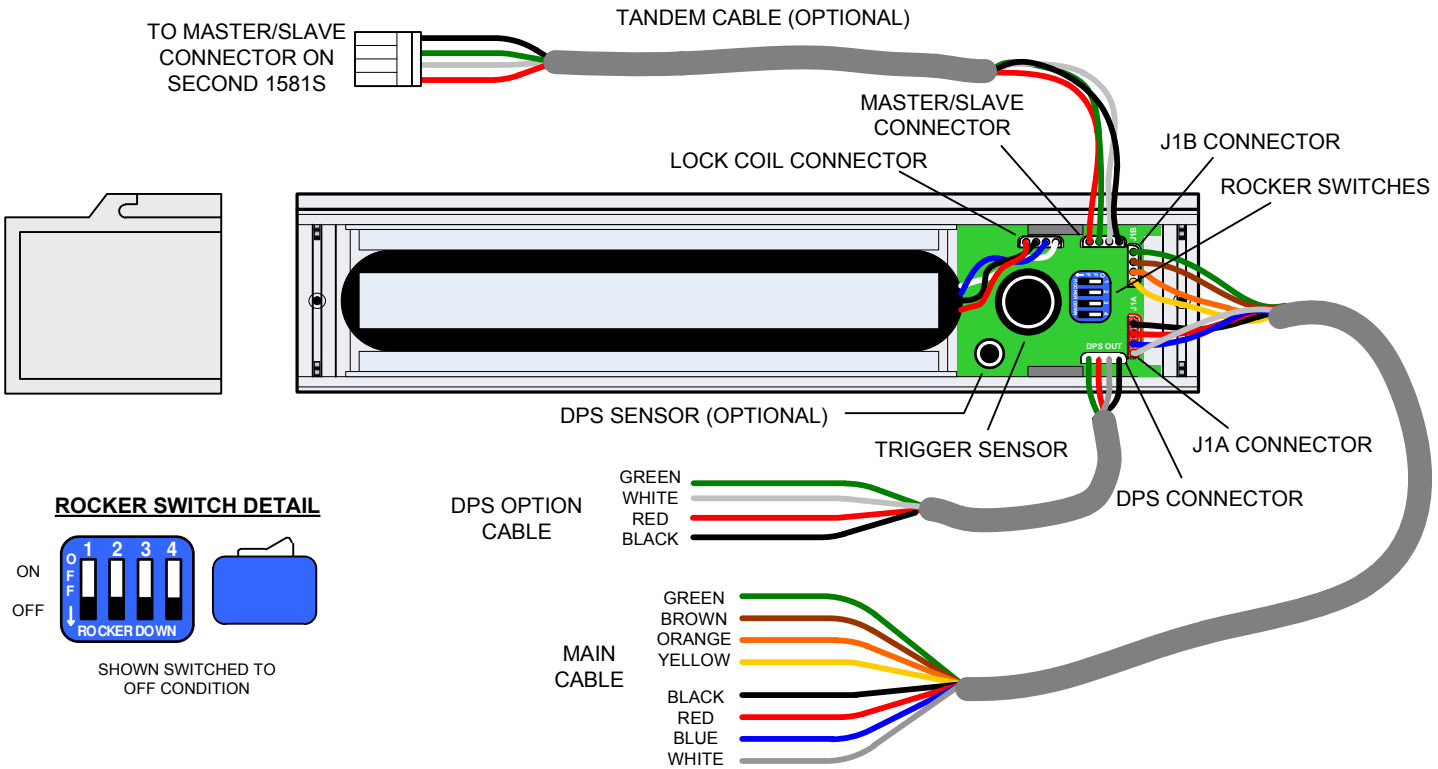


System Wiring – Pair of Doors

WARNING:
APPLICATION OF VOLTAGE TO THE DRY CONTACT INPUTS OF THIS UNIT WILL CAUSE PERMANENT DAMAGE AND VOID THE WARRANTY



WIRING DETAILS & FUNCTIONS (ALL OPTIONS SHOWN)



WIRING & CABLE CONNECTIONS

CONNECTOR	WIRE	CONTROL / FUNCTION	INPUT / OUTPUT	DESCRIPTION
J1B CONNECTOR	GREEN	REMOTE TRIGGER	INPUT	MOM GROUND TO (-) POWER USING DRY CONTACT
	BROWN	RELAY – COMMON	OUTPUT	SPDT DRY CONTACT OUTPUT TO REMOTE
	ORANGE	RELAY – N/C WHEN IN ALARM	OUTPUT	CONTROL ANNUNCIATOR, LED OR ALARM SYSTEM
	YELLOW	RELAY – N/O WHEN SECURE	OUTPUT	MONITOR – RATING: 1 Amp @ 30 VOLTS RESISTIVE
J1A CONNECTOR	BLACK	POWER (-)	INPUT	REGULATED 12/24 VDC (-) POWER
	RED	POWER (+)	INPUT	REGULATED 12/24 VDC (+) POWER
	BLUE	RESET	INPUT	MOM GROUND TO (-) POWER - DRY CONTACT
	WHITE	REQUEST TO EXIT (REX) & CONT. BYPASS	INPUT	(REX) MOM GROUND TO (-) POWER - DRY CONTACT (CONT. BYPASS) AA GROUND TO (-) POWER – DRY CONTACT
M/SL CONNECTOR	RED GREEN WHITE BLACK	CABLE FOR TANDEM LOCK CONNECTION (OPTIONAL)	INTERCONNECT	INTERCONNECT CABLE INTERFACING TWO 1581S UNITS (MASTER & SLAVE) FOR PAIRS OF DOORS. (CABLE MUST BE ORDERED SEPARATELY).
DPS OPTION CONNECTOR	GREEN	SPARE	-	
	WHITE	SWITCH – COMMON	OUTPUT	RATING: .250 mA @ 30 VOLTS RESISTIVE
	RED	SWITCH – N/C	OUTPUT	
	BLACK	SWITCH – N/O	OUTPUT	
BAS OPTION	INTERNALLY WIRED SENSOR. WILL TRIGGER ALARM IF HOLDING FORCE IS BELOW NORMAL.			

ROCKER SWITCH SETTINGS

SWITCH #	FUNCTION	OFF	ON	DESCRIPTION
1	REX TIME	1 SECOND	10 SECONDS	INTERNAL RELOCK TIME DELAY WHEN USING REMOTE REX CONTROLS
2	POWER-UP OPTION **	DISABLED **	ENABLED	MANUAL RESET ON POWER-UP REQUIRED WHEN DISABLED & AUTO RESET ON POWER-UP WHEN ENABLED**
3	REMOTE TRIGGER	DISABLED	ENABLED	ENABLES REMOTE TRIGGER FOR EXTERNAL ACTIVATION OF DELAYED EGRESS ALARM
4	MASTER / SLAVE	MASTER	SLAVE	DESIGNATES LOCK AS MASTER OR SLAVE FOR TANDEM APPLICATION – CABLE REQUIRED

** auto reset not available on some versions

Lock Operation and Adjustment Instructions

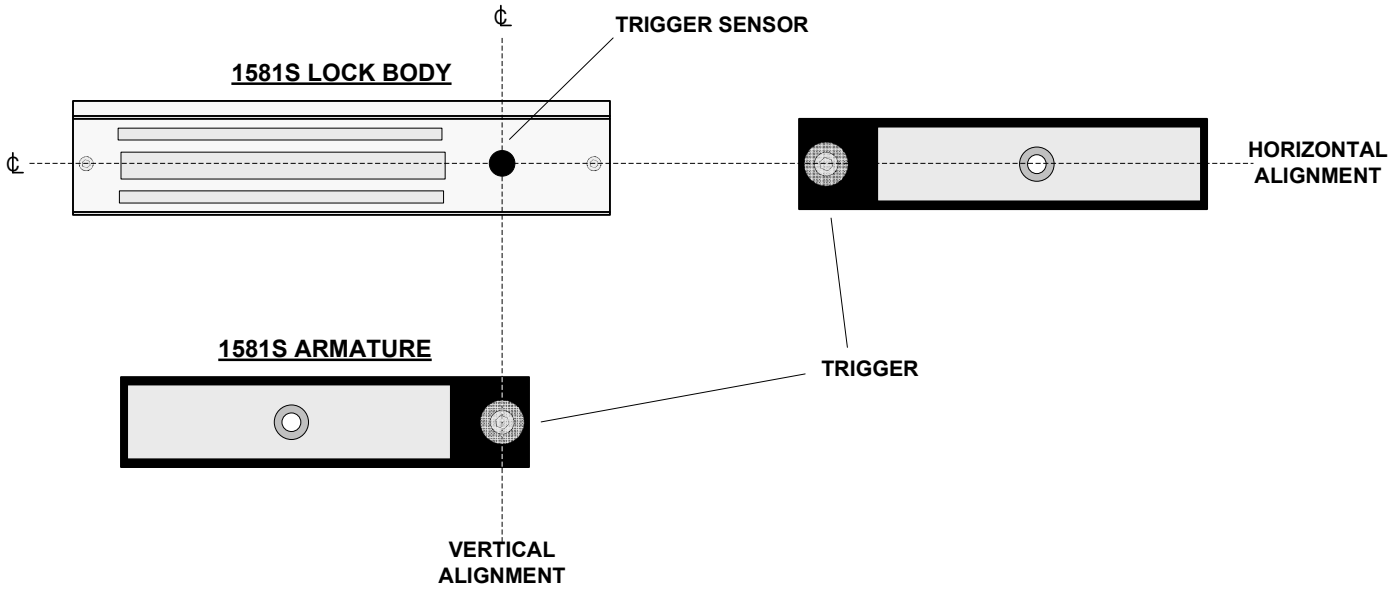
STEP 1. After the lock has been mounted to the door and frame per the provided template, make all wiring connections to the lock. At a minimum, this will be the power and reset inputs (black, red & blue conductors). It is important that the reset input (blue conductor) be connected to a normally open momentary dry contact switch (i.e. 928 Digital Keypad or 728 Key Switch) for initial setup adjustments as well as to reset the lock to a secure status after it has been activated.

STEP 2. With all wiring connections completed, re-install the lock cover onto the lock. Ensure that the trigger sensor is aligned with the hole in the cover. The sensor is preset at the factory to slightly project through the cover. **WARNING: DO NOT ATTEMPT TO ADJUST THE TRIGGER SENSOR LENGTH. AS THIS WILL RESULT IN DAMAGE TO THE SENSOR AND VOID THE WARRANTY.**

STEP 3. Slowly swing the door closed and visually observe the position of the armature trigger as it approaches the trigger sensor on the lock. If the provided mounting template was used during the lock and armature installation, the trigger & sensor should align with one another both horizontally and vertically. . **IMPORTANT: CORRECT OPERATION OF THIS LOCK DEPENDS ON THE TRIGGER SENSOR BEING ABLE TO DETECT THE TRIGGER WHEN THE DOOR IS CLOSED. A PROXIMITY ADJUSTMENT CAN BE MADE TO THE TRIGGER FOR FINE TUNING. THIS IS EXPLAINED IN STEP 4.**

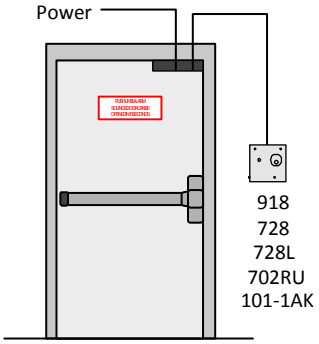
STEP 4. **NOTE: BEFORE STARTING THIS NEXT STEP, YOU WILL NEED TO BE ABLE TO ACTIVATE THE ALARM RESET INPUT.** After alignment has been verified, close the door and apply power to the lock. Push on the door. The LED should be flashing *green*, indicating that the lock is in the Manual Power Up mode. Reset the lock at this time. The lock should now secure the door and the LED should be steady *green*. You may change the mode to Auto Power Up by setting the #2 dipswitch to the ON position. Now when you first apply power, you will see a solid green light and the door will be secure without having to reset the lock.

STEP 5. Activation of the 1581S can be made by door movement or an external trigger. When using the door movement method, activation is achieved through the way the armature hardware is designed. When someone unlatches the door and applies up to 15 lbs. pressure, the lock will hold onto the armature while simultaneously letting the trigger/door move away from the lock/trigger sensor. Sensitivity in the detection of the trigger movement can be adjusted for optimum sensitivity & performance. This adjustment can be made by using the 5mm hex wrench provided with the lock. The center of the trigger or "target" is spring loaded and can be screwed in and out of the armature thus either decreasing or increasing the space between itself and the sensor. The "spring" feature of the target is to prevent damage from direct contact with the trigger sensor. Depending on the accuracy of the alignment, the trigger does not have to physically touch the sensor to operate correctly.

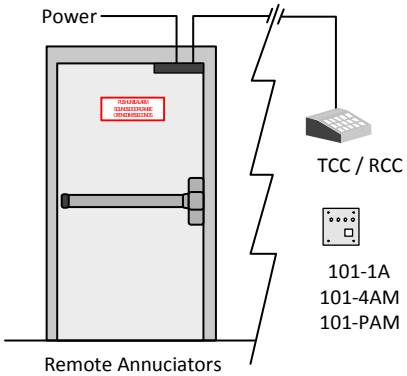


Systems Applications Reference

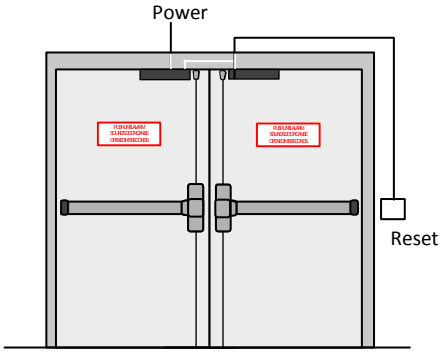
Activation by applying pressure to doors with latching hardware:



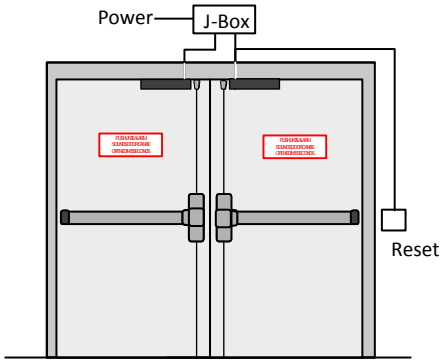
Wall Mount Reset Station
Required with 1581SND



Remote Annuciators
and Control Panels

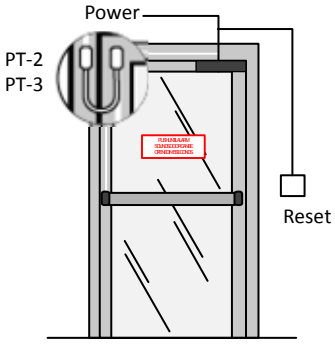


Pair of doors with two locks and required
TC-3 cable for power and slave operation
Pushing either door triggers
the delayed release of both doors.

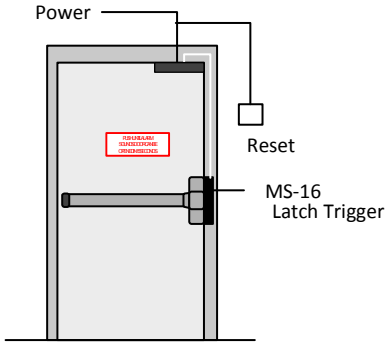


Pair of doors with two locks and required
TC-10 cable for power and slave operation
Pushing either door triggers
the delayed release of both doors.

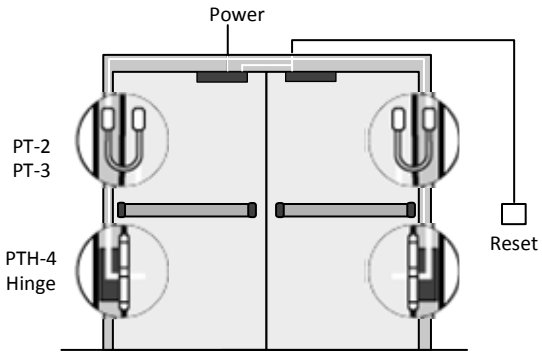
Activation by a remote trigger for doors with or without latching hardware:



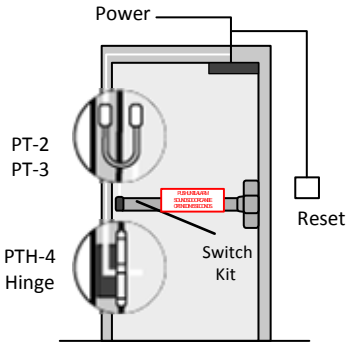
Sense Bar Trigger Non-Latching
PSB560, MSB550



Latch Monitoring Strike Trigger
For Mortise Exit Devices



Pair of doors with two locks and required
TC-3 cable for power and slave operation
Sense Bar Trigger Non-Latching
PSB560, MSB550



Latching Exit Device with
Built-in Switch Kit Trigger