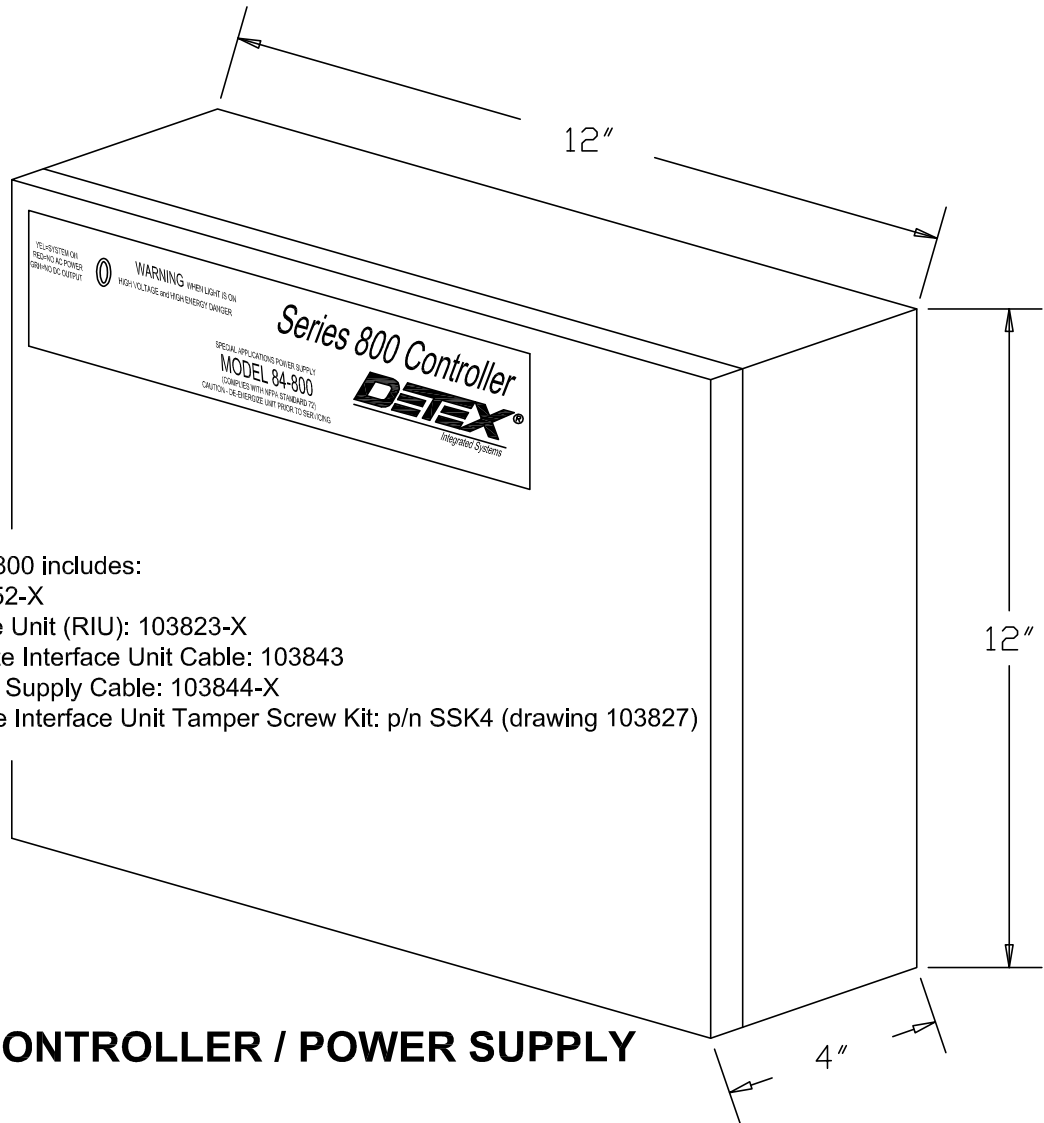




Detex Corporation, 302 Detex Drive, New Braunfels, Texas 78130-3045
(830)629-2900 / 1-800-729-3839 / Fax 1-800-653-3839 / Text: 1-830-481-6433 / INTERNET: www.detex.com

INSTRUCTIONS FOR 84-800 SYSTEM

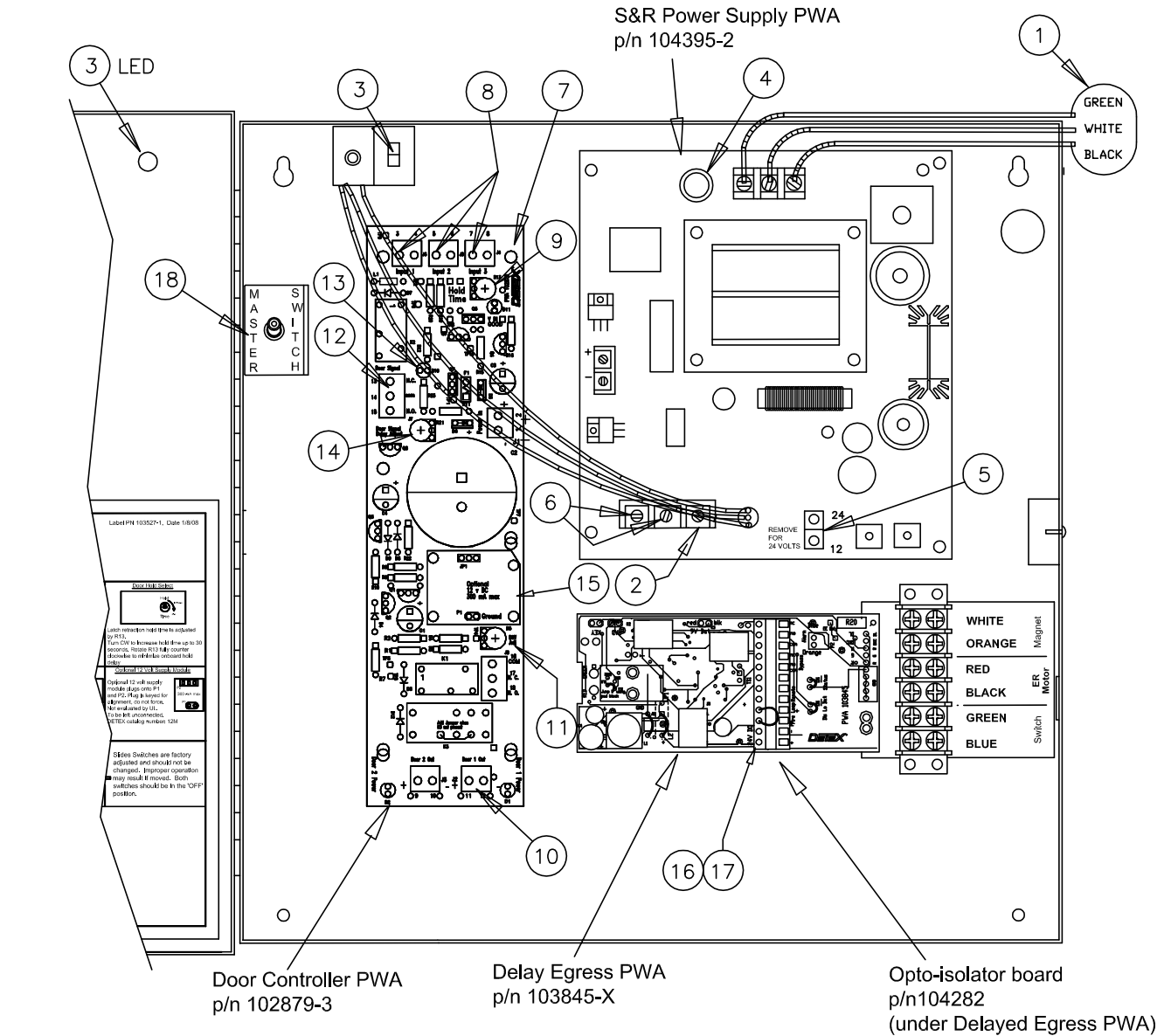
Top level p/n: 84-800
Top level dwg #: 103530



Part number 84-800 includes:
Controller: 103852-X
Remote Interface Unit (RIU): 103823-X
EExER to Remote Interface Unit Cable: 103843
EExER to Power Supply Cable: 103844-X
Optional: Remote Interface Unit Tamper Screw Kit: p/n SSK4 (drawing 103827)

84-800 CONTROLLER / POWER SUPPLY

Description of use:
**For use with single door Delayed Egress
with Latch Retraction devices (EExER)**
Input requirements 120v @ 1 amp
For International orders:
Input requirements 240v @ .4 amps



DETEX Model 84-800
Connection Diagram and Instructions

**WARNING! DEVICE MAY CYCLE WHEN FIRST POWERED UP.
KEEP HANDS AND FINGERS CLEAR OF MOTOR AND CAM.**

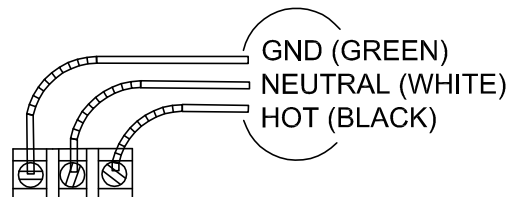
MAIN POWER PANEL

The 84-800 is a controller / power supply. The power supply boards are configured for 24VDC.

Refer to the appropriate drawing for connections and adjustments. All connections and adjustment must be made with the power supply de-energized **AND** main power switch (item 3) in the OFF position.

1: MAIN POWER CONNECTION.

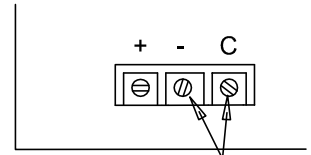
Observe correct terminal connections. Color code requires connections made per NFPA72. Leave circuit de-energized while installing and servicing unit.



2: FIRE LOOP CONTROL.

Connect the two wires from the building fire system relay to these terminals. The power supply will operate normally as long as the connection between the (-) and (C) is maintained. When the building fire alarm system opens the circuit, the power supply de-energizes the output voltage. The fire loop uses 24 volt sense voltage.

NOTE: Each power supply should have an Independent fire alarm relay.

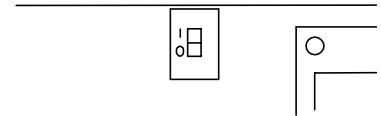


Closed fire alarm loop. Must be supplied.

3: MAIN ON-OFF SWITCH.

This switch can be used to de-energize the power supply for service and adjustments. High voltage is still present inside the enclosure as long as the main power feed is energized, so caution should still be used when service is performed using this switch.

I = ON, O = OFF

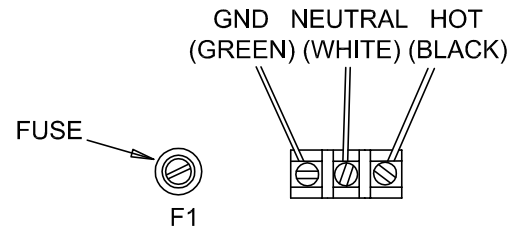


Yellow LED = SYSTEM OK
Green LED = NO DC OUTPUT
No LED = No AC input

4: 1.5 AMP TIME DELAY FUSE (5 x 20mm).

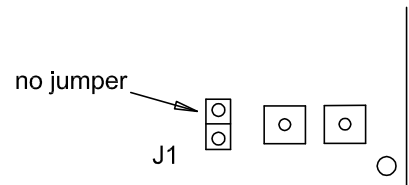
This is intended to protect the device against high current loads and is part of the AC input circuit.

Detex p/n is 104267-2.
Bussman p/n is GMD-1.5A
Littlefuse p/n is 023901.6HXP

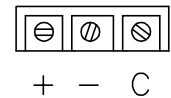


5: OUTPUT VOLTAGE.

Factory set for 24volts.



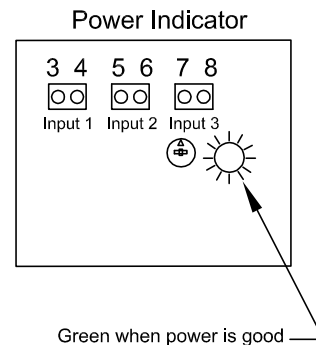
6: OUTPUT TERMINALS are pre-wired at factory.



DOOR CONTROLLER PWA

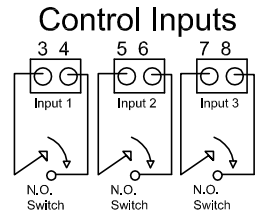
7: POWER GOOD INDICATOR.

This LED will glow green if 24 volts is supplied to the controller board.



8: ACCESS CONTROL INPUTS.

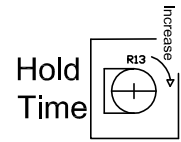
These require a normally open dry contact. The door latch will activate and hold once the circuit between the terminals of inputs 1, 2 or 3 is made.



Door Hold Select

9: DOOR HOLD DELAY ADJUST.

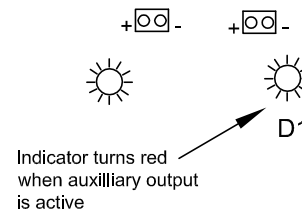
This potentiometer adjusts the length of time the latch is held retracted once the input switch is released. Turn clockwise to increase the latch hold time up to a maximum of about 30 seconds. **TROUBLESHOOTING INFO: When adjusted to minimum, latch retraction may not function properly.**



Auxiliary Output Indicator

10: AUXILIARY OUTPUT INDICATOR.

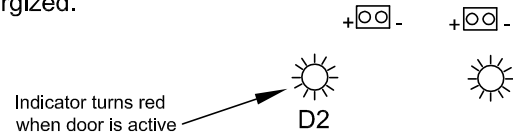
D1 glows red when the auxiliary output is active.



Door 1 Output Indicator

11: DOOR 1 OUTPUT ACTIVITY INDICATOR.

D2 glows red when the output voltage to the latch retraction device is energized.



12: DOOR OPERATOR.

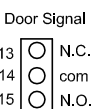
Jumper J7 is connected to a relay. It can be used to signal a door opener or other device that the latch is retracted. It is delayed and goes active after the latch retraction occurs. The amount of the delay is .5 to 3 seconds and is adjusted by Item 14.

Door Operator Signal



Terminals are connected to a SPDT dry contact relay

Terminal 13 is normally closed
Terminal 14 is common
Terminal 15 is normally open



13: DELAY EGRESS TO LATCH RETRACTION DIFFERENTIAL ADJUST.

R5 is used to adjust the delay between the delay egress release and ER latch retraction. The delay is factory adjusted and should work correctly for most applications. The delay is adjustable from .25 to 1 second by R5. This is factory set and should not require adjustment. If a longer delay is needed, turn R5 clockwise.



14: DOOR OPERATOR DELAY ADJUST.

R21 is a potentiometer that adjusts the delay between the latch retraction & the operator signal. Turn clockwise to increase this delay.

Door Operator Signal Delay

Door operator signal is triggered after latch retraction and time is adjustable from 0.5 to 3 seconds

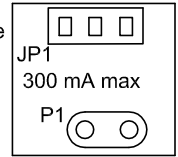


15: OPTIONAL 12 VOLT POWER MODULE.

An optional 12 volt power supply module is available where a 12 volt DC source is needed in addition to 24 volts. See the kit instructions for more information. 300 mA max current draw. (Not evaluated by UL)

Optional 12 Volt Supply Module

Optional 12 volt supply module plugs onto P1 and JP1. Plug is keyed for alignment, do not force. Order DETEX catalog number: M12



**WARNING! DEVICE MAY CYCLE WHEN FIRST POWERED UP
KEEP HANDS AND FINGERS CLEAR OF MOTOR AND CAM**

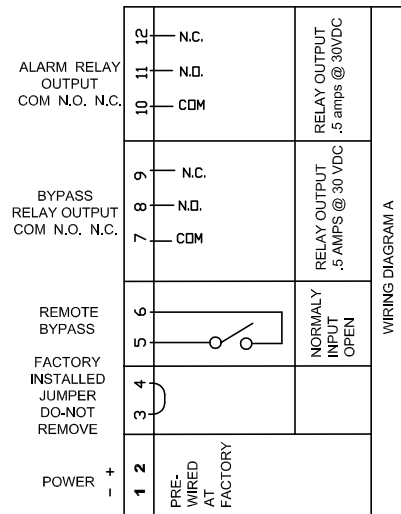
DELAYED EGRESS CONNECTION BLOCK

16: BYPASS RELAY OUTPUT: (7, 8, and 9)

The BYPASS relay output is energized when the unit is disarmed by the KEY or REMOTE BYPASS to indicate to a remote indicator that the door is not armed.

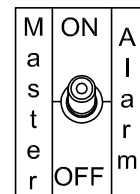
17: ALARM RELAY OUTPUT: (10, 11 and 12)

The ALARM relay output is energized when the unit is sounding its alarm to indicate to a remote indicator an unauthorized exit has been attempted.



18: MASTER SWITCH.

This switch is intended for service and setup use. When it is set to "ON" the LED tip will glow red. This indicates the delayed egress and exit alarm are set to normal control and function. When set to "OFF", the delayed egress and alarm functions are bypassed and the LED tip will glow green.



19. DELAYED EGRESS CIRCUIT BOARD.

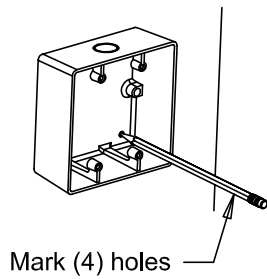
There is an arming delay of 15 seconds (other times are factory optional) between the unit being placed in the armed state and the delay egress becoming active.

NOTE:

18 AWG wire is recommended for power circuits.
22AWG wire is recommended for signalling circuits.

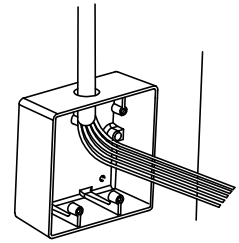
REMOTE INTERFACE INSTALLATION INSTRUCTIONS

1 Mark Box Location:
(surface installation shown)



2 Pick best knockout location for routing wires.

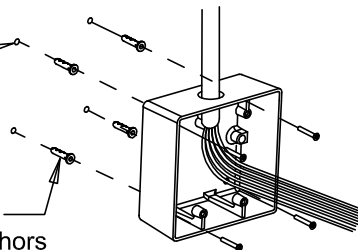
3 Route wires through knockout.



4 Mount box

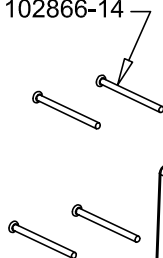
Recommended drill size
for anchors: 1/4 diameter

Press-in
wall anchors

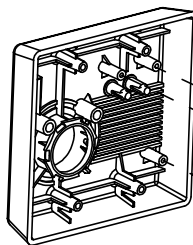


**BACK BOX MUST BE
GROUNDED PER
NFPA 70**

#6-32x1-1/2"
Machine screw
P/N: 102866-14



Cover
P/N: 105430-1 (Gray), 105430-2 (Black)



#4-20x1-1/4" Plastite screw (qty 3)
P/N: PP-5374-48

Tamper bracket
P/N: 102701

#4-20x1-1/4" Plastite screw (qty 1)
P/N: PP-5374-48

Cylinder nut
P/N: 100783

RIU Circuit board kit
P/N: 105083

Cam assembly kit
P/N: 102660-1

#8-32 Truss HD screw
P/N: 102627-15

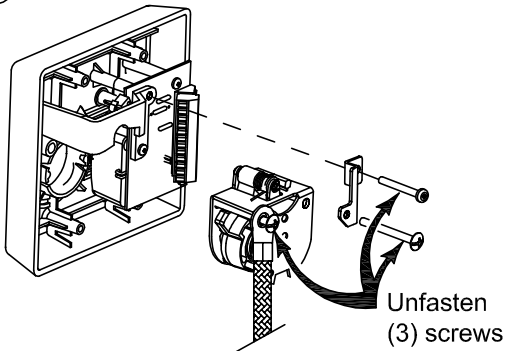
Ground Strap
P/N: 104448

NOTE: Switch and cam assembly
not used with dummy cylinder.

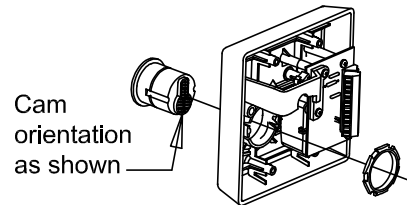
Figure 1. Parts breakdown depiction

5 ASSEMBLE the REMOTE INTERFACE (103823-X)

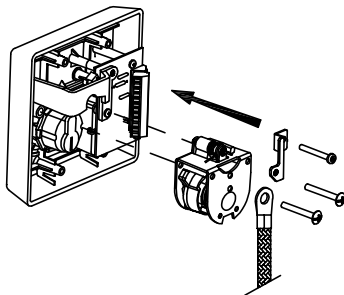
5a Remove cam assembly from cover



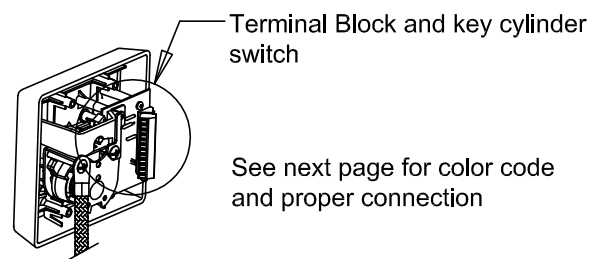
5b Install mortise or dummy cylinder with cylinder nut provided (standard Yale cam)



5c Re-install cam assembly

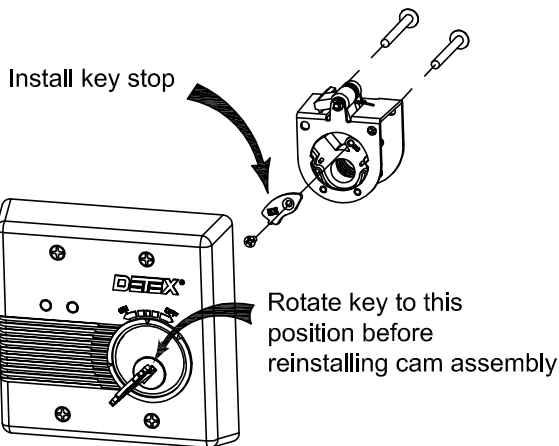


5d Install wiring functions (Table 1)



6 KEY STOP INSTALLATION (if required) - Optional

(Key stop set screw included in hardware kit)



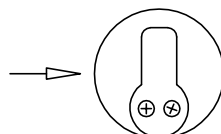
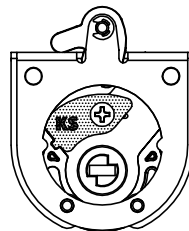
Hardware Kit

P/N: 103824

Includes Keystop parts

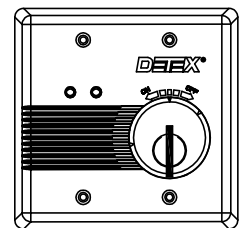
P/Ns: 105770-1 (KS), 105770-2 (KS2),

& screw P/N 101976-1

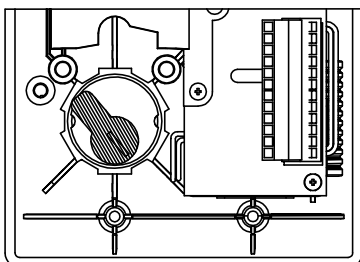


Front View KEY STOP POSITIONS

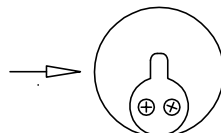
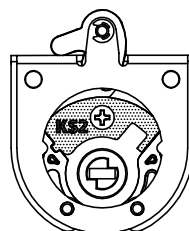
"ON" position
(Key can be removed)



"OFF" position
(Key cannot be removed)

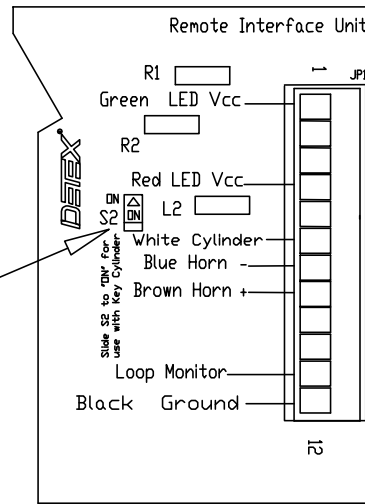


Back View



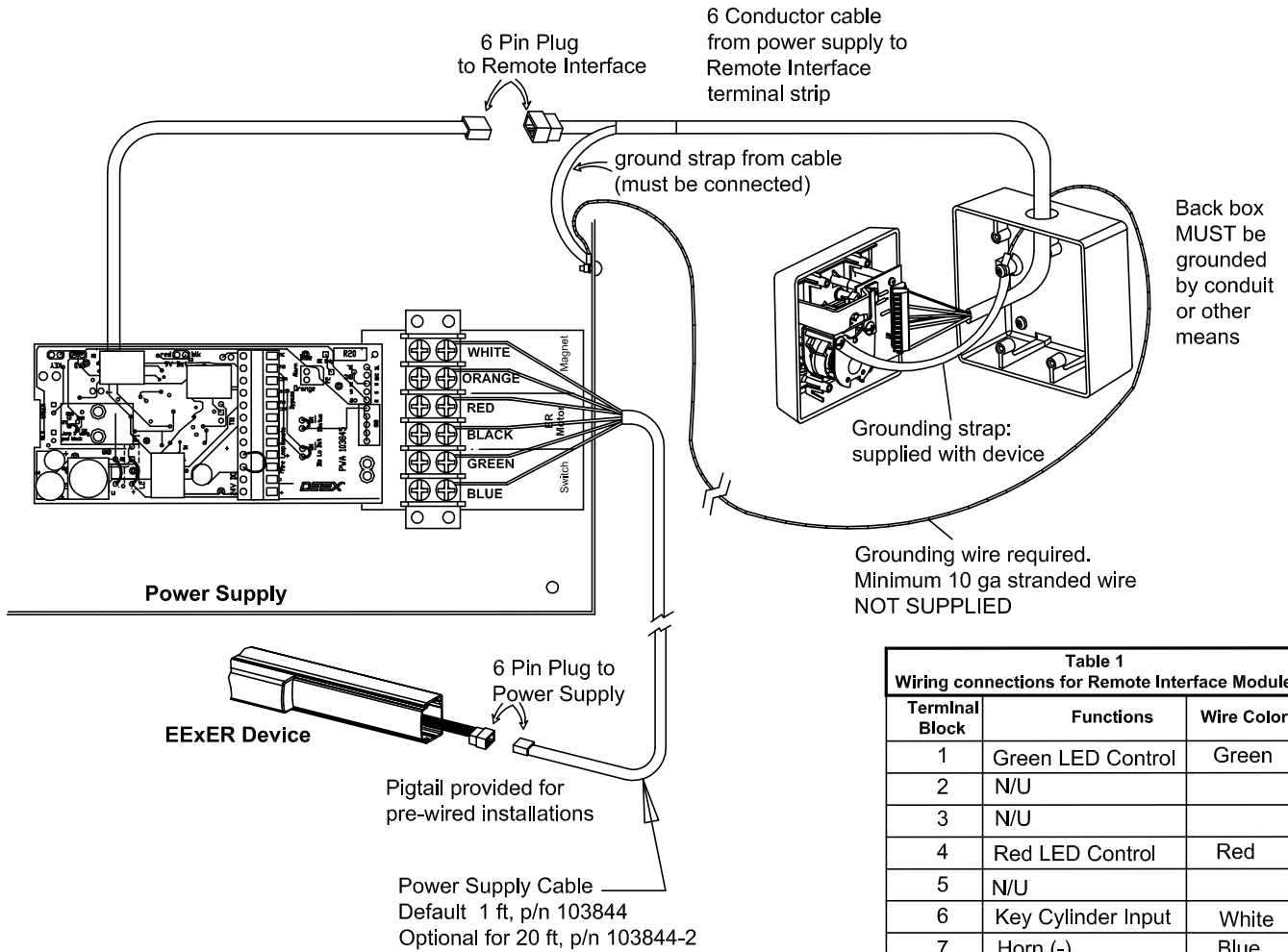
7 SELECT S2 POSITION (if required)

Slide S2 to "ON" for use with key cylinder, "OFF" for use with dummy cylinder



RUI circuit board kit
p/n 105083

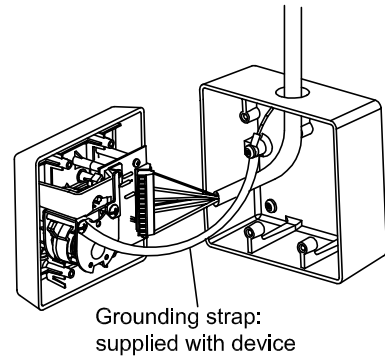
8 CONNECT WIRES FROM CABLE TO TERMINAL BLOCK



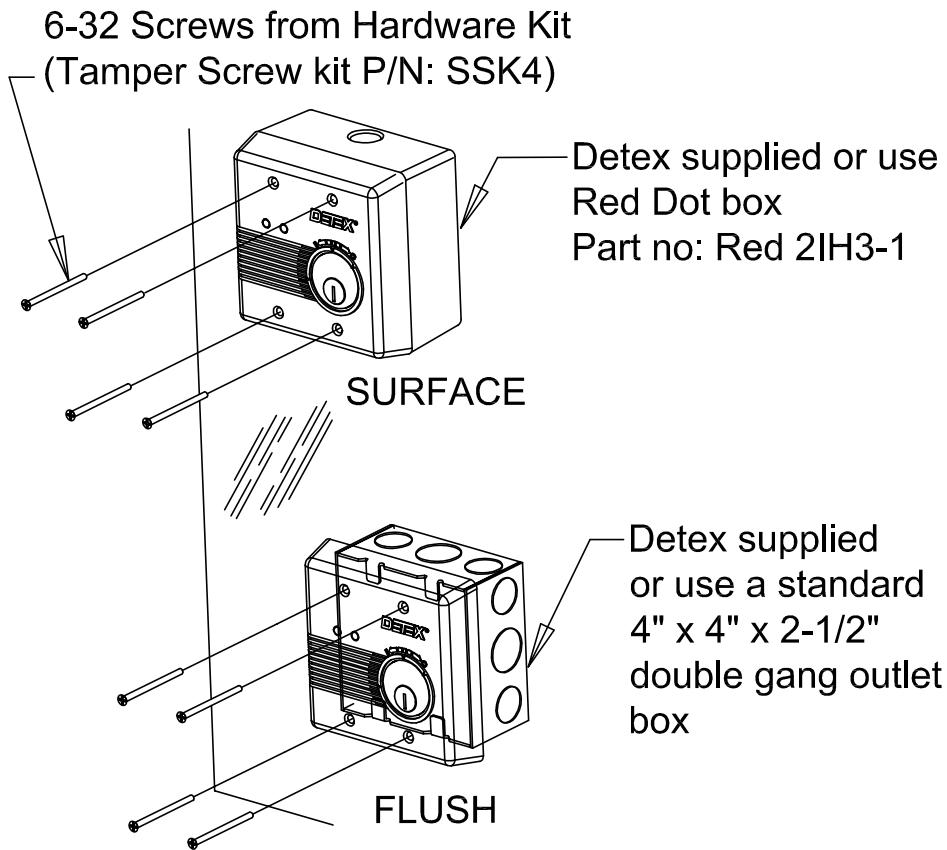
Terminal Block	Functions	Wire Color
1	Green LED Control	Green
2	N/U	
3	N/U	
4	Red LED Control	Red
5	N/U	
6	Key Cylinder Input	White
7	Horn (-)	Blue
8	Horn (+)	Brown
9	N/U	
10	N/U	
11	N/U	
12	Ground	Black

Terminal Block Connections

9 VERIFY GROUND STRAP CONNECTION



10 Install device with (4) #8-32 machine screws



NOTE: The Electric Latch Retraction (ER) function is operated by an external entry/exit control device (such as card reader) that is connected to the power supply. Install per Manufacturers instructions.

DELAYED EGRESS OPERATIONS

Home Position:

Key can only be removed at 12 o'clock



To Arm (on):

Rotate key to 8 o'clock



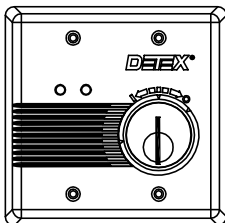
To disarm (off):

Rotate key to 2 o'clock position



With **Key Stop** installed,

key only rotates between 12 & 2 o'clock:



Key at 2 o'clock disarms

Key at 12 o'clock arms

Key can only be removed with unit armed

ARMING AND AUTHORIZED EXIT

With the door closed, insert key in the cylinder of the remote interface, turn CCW, then back to home key position and remove. Two red LED flashes occur, then green LED glows. Authorized personnel can exit the door during this rearm cycle. After a 15-second arming period, alarm issues three quick beeps and LED goes off, indicating the unit is armed (see table 3 for status options).

If a key cylinder is not used, the device is set to an armed state by default and only the three system control inputs on the ER control board (uses a normally open dry contact, closed to activate) can be used to bypass the alarm.

DISARMING

Insert key, turn CW to a stop. Green LED will blink twice to indicate the unit is disarmed, (see table 3). Device will operate as a normal exit device. If the key cylinder is not used, closing the contacts of one of the three system control inputs will activate the latch retraction mechanism and bypass the alarm. **Upon release of the input contact, the latch will release, and the 15 second arming delay timer will start. The unit will issue three beeps, indicating the unit is now armed.**

EXITING UNDER ALARM

To exit, push and maintain pressure on the pushpad. After a one second delay, (nuisance delay), LED flashes RED and alarm pulses on and off for 15/30 (not field programmable). After 15/30 seconds, alarm issues short and long pulses to indicate that one can exit by depressing the pushpad. Alarm sounds continuously and LED is steady red. Turn key CW to stop alarm or initiate authorized access. In case of fire, the fire alarm over-rides the 15/30 second delay and the door opens without delay when pushpad is pushed. The alarm will not sound since the power to the system is turned off in response to the fire alarm.

RESETTING THE ALARM

Turn key CW to reset the alarm. See the arming procedure above to rearm the device. If the key cylinder is not used the alarm must be reset by using one of the three system control inputs on the ER control board. The latch will retract and the alarm will turn off. Upon release of the system control input contact & retract time, the unit will start the 15 second arming delay timers, and will automatically rearm at the end of that time. In case of fire, the fire alarm overrides the 15 or 30 second exit delay and the door opens when the pushpad is pressed. The alarm will not sound since the power to the system is turned off in response to the fire alarm.

NUISANCE DELAY

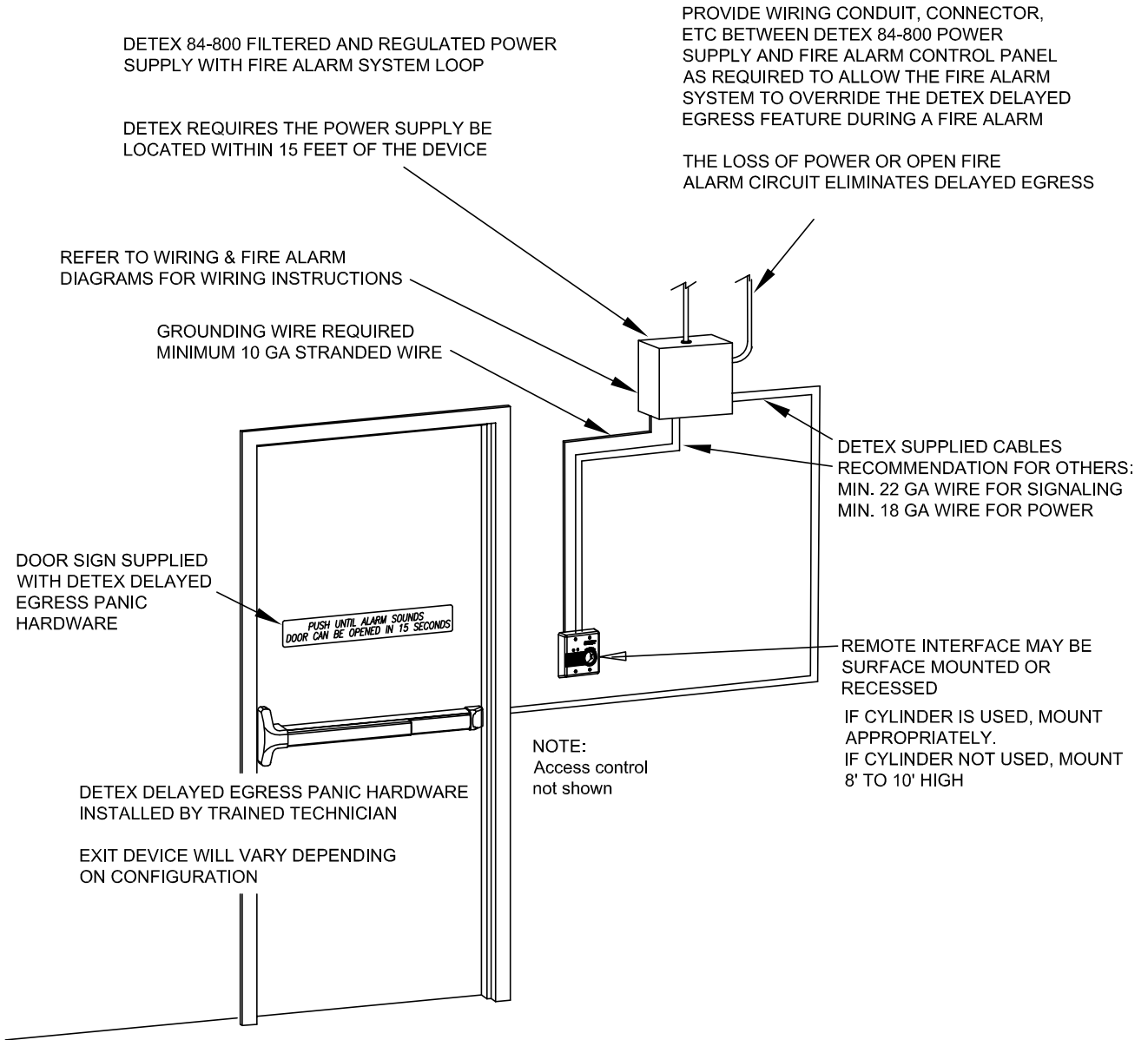
When pushpad is depressed for less than 1 second, alarm will emit a single pulse but will not start delay function.

NORMAL OPERATION

TABLE 3

LED COLOR		SIREN SOUNDS	FUNCTION
RED	GREEN		
OFF	ON	THREE CHIRPS	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
SLOW BLINKING	OFF	SLOW PULSE	Pushpad is depressed, delay to open started
FAST BLINKING	OFF	FAST PULSE	Delay to open expired, door unlocked
ON	OFF	ON	Delay to open expired, door has been opened
SHORT BLINK (3 SEC)	OFF	OFF	Unit is armed.
OFF	SHORT BLINK (3 SEC)	OFF	Unit is disarmed.

RISER DIAGRAMS AND POWER TRANSFER OPTIONS



TROUBLE SHOOTING

Problem	Probable cause
No exit delay, alarm does not pulse.	No power to/from power supply; no fire loop connection.
No green light when key is turned CCW.	Check connections on cables.
No exit delay, alarm pulses.	Magnet wires not connected to circuit board.
Latch fails to retract	Increase door hold release R13 (item 9)
Device motor fails to complete cycle	1. Increase door hold release R13 (item 9). 2. Check eye bolt adjustment. (See delay device instructions)
Delay egress does not arm	On RIU device, if using a dummy cylinder, S2 must be set to "OFF"

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