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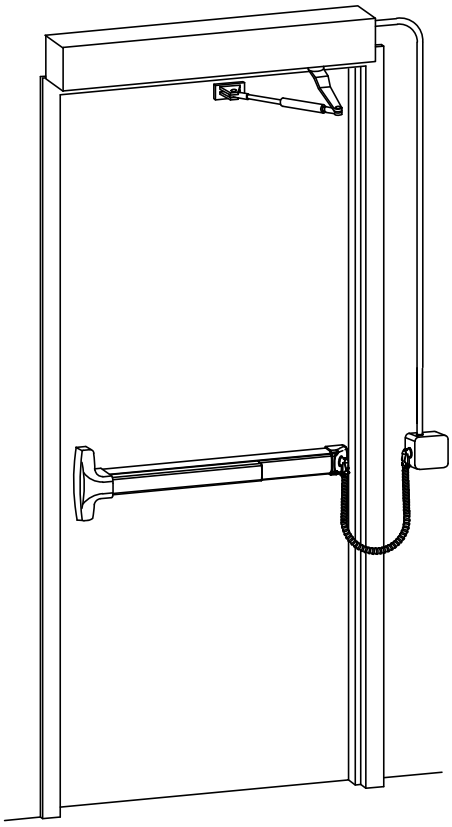
E-MAIL: detex@detex.com INTERNET: www.detex.com

INSTRUCTIONS FOR AOD OPENER W/POWER SUPPLY & ER CONTROLLER



(view for reference only)
(Note: Parts listed will vary according to product configuration)

FILTERED AND REGULATED POWER SUPPLY
INPUT: 120 VAC @ 1.65A MAX @ 60 Hz.

This unit is **NOT** compatible with a ground fault interruper (GFI).
CAUTION: De-energize unit before servicing.
Enclosure provides protection against electric shock and fire. Do not open without removing power. Only trained personnel should operate or service this equipment.

ATTENTION : éteindre l'unité avant l'entretien.

Le couvercle protège contre les chocs électriques et incendies. Ne pas lòuvrir sans préalablement couper l àlimentation. Seul le personnel formé doit opérer ou effectuer

l éntretien de cet équipement.

DETEX Model AOD Opener
w/ Filtered Regulated Power Supply & ER Controller
Connection Diagram and Instructions

The power supply is regulated and filtered. It has an output voltage of 24 volts DC.

Refer to the drawing of the power supply (Figure 1) for connections and adjustments. All connections and adjustment should be made with the power supply de-energized **AND** main power switch (item 3) in the OFF position.

Wiring between the fire control panel and fire loop input to this power supply must be configured for fail safe operation.

This unit is intended to operate with Detex latch retraction door hardware devices. Refer to device instructions for additional details on connections and grounding requirements.

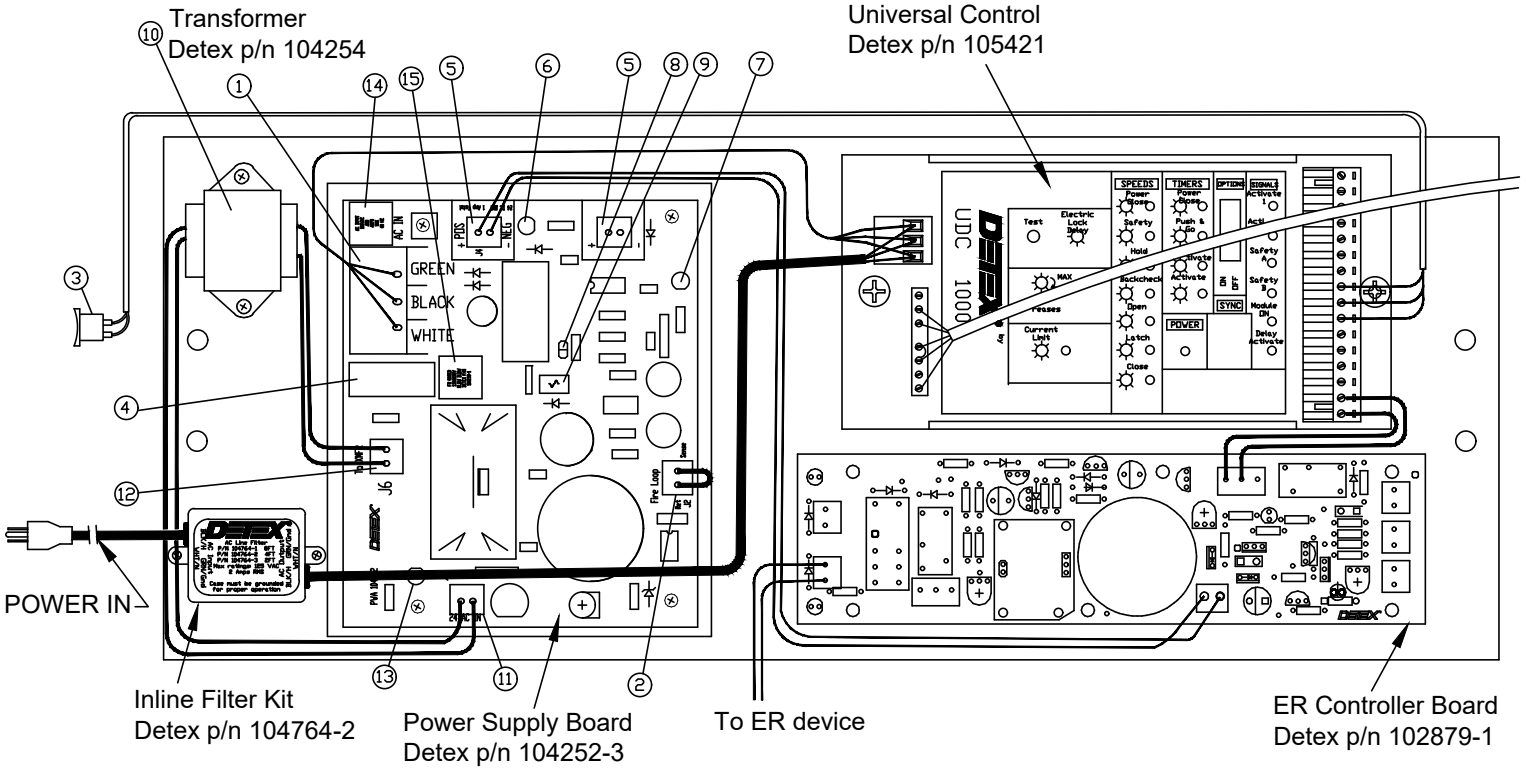
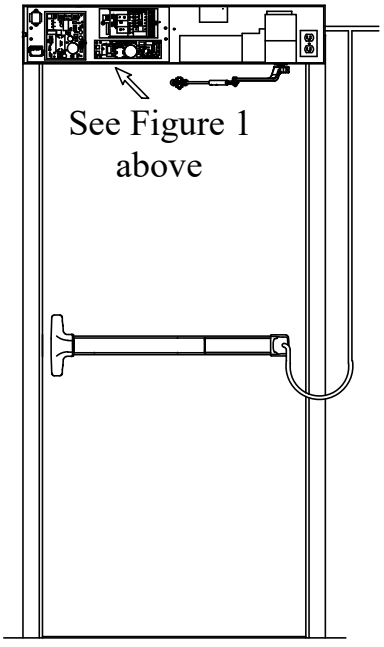


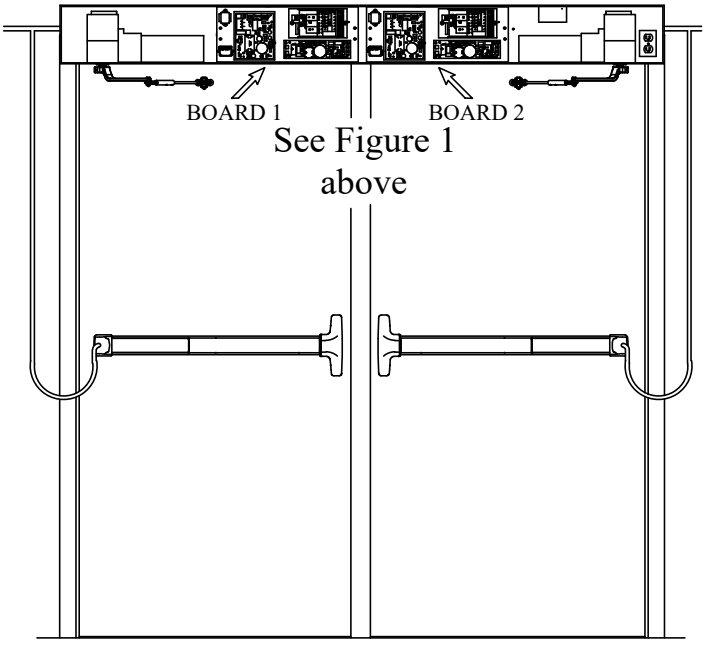
Figure 1.

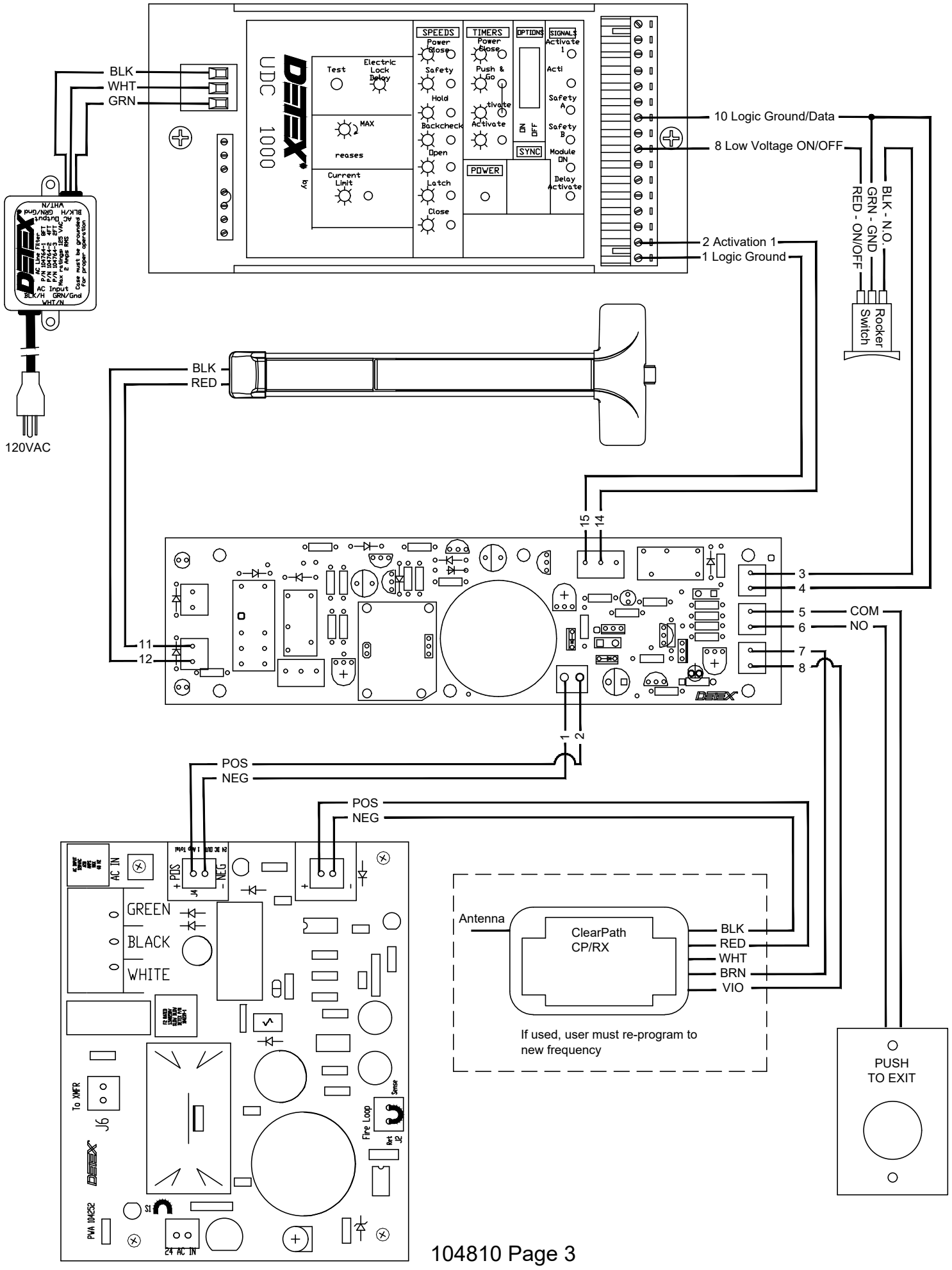
AOD PLATE SUBASSEMBLY DETEX P/N 104775



RECOMMENDED WIRE SIZES:	
WIRE GAUGE	MAXIMUM LENGTH OF TWO CONDUCTOR CABLE
20 AWG	10 FEET
18 AWG	40 FEET

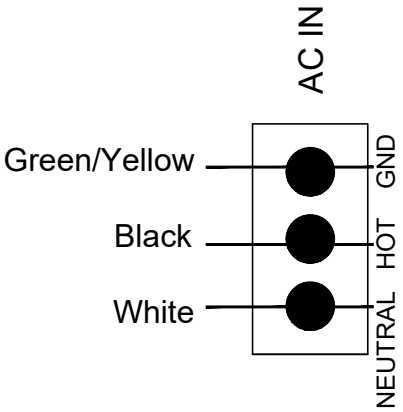
Make all connections per NFPA 72. High and low voltage must use separate knockouts and use either conduit or cable clamps.



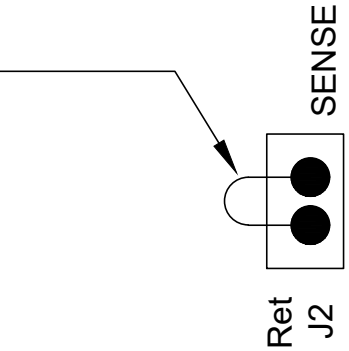

BLK
WHT
GRN
120VAC
UDC 1000
SPEEDS
TIMERS
OPTIONS
SIGNALS
POWER
SYNC
10 Logic Ground/Data
8 Low Voltage ON/OFF
2 Activation 1
1 Logic Ground
BLK - N.O.
GRN - GND
RED - ON/OFF
Rocker Switch
BLK
RED
15
14
3
4
5
6
7
8
COM
NO
11
12
1
2
POS
NEG
POS
NEG
AC IN
GREEN
BLACK
WHITE
Antenna
ClearPath
CP/RX
BLK
RED
WHT
BRN
VIO
If used, user must re-program to new frequency
PUSH
TO EXIT
24 AC IN

REFER TO FIG 1, PAGE 2 FOR ITEMS 1 THRU 15

1: Main Power Connection (J5) Factory Wired.
Observe correct terminal connections. Color code requires connections be made per NFPA72. Leave circuit de-energized while installing and servicing unit.



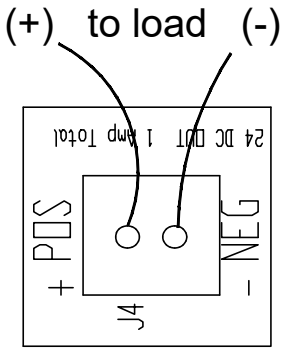
2: Fire Loop Control (J2). (Required on fire doors)
The fire loop control requires a connection be made between the Sense and Ret terminals. Some locking devices require this terminal be connected to the building fire system. For non-fire alarm operation, a jumper wire used to make the connection is supplied by factory. When the connection is made, the power supply outputs 24 VDC at J3 and J4. LED 2 will also light when the circuit connection is made (See Item 7).
If the circuit is open, the output relay is de-energized and the output of the power supply is turned off. The fire loop terminal is polarity sensitive and has an adjustable sense voltage (See Item 8).
The Ret is connected to the circuit board ground.



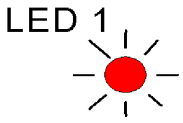
3:

4: Main Power Fuse (F2).
This is a slow blow fuse and protects the main power into the power supply PWA and transformer. If the fuse fails, check and correct the cause of the overload before replacing with GMD 1.5A fuse.

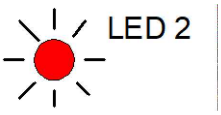
5: Output Terminals (J3, J4). Factory wired.
The power supply outputs 24 volts at a maximum of 1 amp total current. The output is protected by a thermally resetable fuse (F1, Item 9). The output is DC, and the PWA is marked with dual polarity indicators.



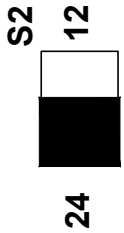
6: Power Output Good (LED 3).
The LED will glow red when the PWA is operating normally and J3 and J4 are energized.



7: Fire Loop Active (LED 2).
The LED will glow red with the Fire Control output terminal is connected correctly.

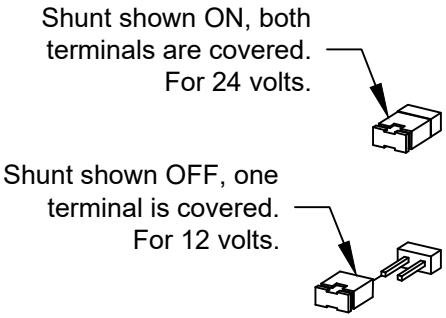


8: Fire Loop Voltage Select (S2).
This switch selects the sense voltage of the fire loop circuit. It is set at the factory to "24", resulting in a sense voltage of 24 volts.
For systems requiring 12 volt sensing, slide the switch to the "12" position.



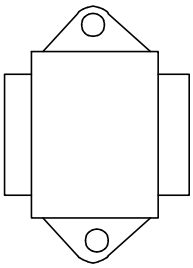
Units may come with slide switches or shunts.

For an OFF position, it is recommended to install the shunt on a single terminal to prevent misplacing the shunt. Pull the shunt straight off to change it's position.

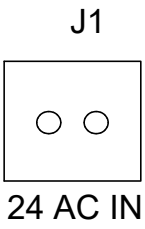


9: 24 Volt DC Thermal Fuse (F1).
This fuse protects the output of the PWA from overloading. It requires no adjustment and will return to proper operation once the cause of the overload is found and corrected.

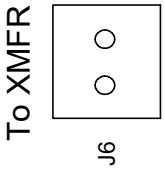
10: Class 2 50 V/A Transformer (T1). 120VAC INPUT/24VDC OUTPUT
This transformer is supplied by Detex and is rated for proper operation with this power supply. Replace with Detex part number 104254.



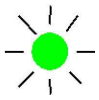
11: 24 Volt AC input (J1) from transformer secondary.
This input is connected at the factory.



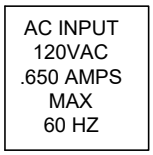
12: Fused high voltage to transformer primary.
This input is connected at the factory. This terminal block has at least 120 VAC live when the AC input at J5 is energized.



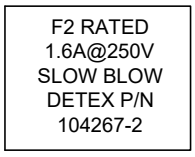
13: LED System Indicator on pwa board.
This Led glows green when the unit is energized, S1 is 'ON' and the PWA inputs are working normally.



14. AC Input Rating:
This is the required AC power input to this power supply.
This unit is NOT compatible with a GFI ground fault breaker.



15. Fuse Rating:
Only replace fuse with the type rating specified by this label.
Only GMD 1.6A Buss or equivalent.



Testing and Trouble Shooting

1. Enclosure provides protection against electric shock and fire. Do not open without removing power.

2. Only trained personnel should operate or service this equipment.

3. The green LED1 (13) indicates High Voltage is being supplied to the power supply board. If there is no light check F2, replace with same rating and type if blown. Check the load and wiring for proper operation if fuse blows again. Also check incoming power source for disconnect or fault.

4. LED 2 (7) indicates the status of the fire loop connection. This connection must be closed for proper operation. If LED 2 (7) does not light, check the following:
   a) J2 terminal connection to the building fire system. An Isolation Relay is recommended.
   b) If an isolation Relay is not used, try reversing the wires on the J2 terminal block. Some building fire systems are polarity sensitive.
   c) Check S2 for proper fire loop sense voltage. S2 is set to 'ON' at the factory for 24 volt DC sense voltage. Set S2 to 'OFF' for 12 volt sense systems.
   d) If code does not require this connection, a jumper wire may be placed across the terminals of J2.

5. When the board is powered, LED 3 (6) will light, indicating the 24 volts DC output is active. If LED 3 is not on, first make sure LED's 1 and 2 are both on, following the listed steps above. If they are both on but LED 3 is off, check for a shorted load or wiring to the load. Remove the load from the J3 (and J4) terminal(s), wait 15 - 30 seconds and see if LED 3 comes on. If so, the load or associated wiring has a short. Correct these faults before reconnecting the power supply.

6. Low line voltage: Low input voltage may effect output voltage.

7. Shorted load: A shorted load will cause the output voltage and current to turn off. Locate and correct cause of fault.

8. WARNING: When replacing F2 fuse, use ONLY a fuse of the same rating and type.

9. The product's compliance to ULC-S319, Electronic Access Control Systems, would be invalidated through the use of any add-on, expansion, memory or other module manufactured or supplied by the manufacturer or manufacturer's representative.

Power Supply Maintenance and Spare Parts

1. Replacement Fuse: Detex part number 104267-2.
2. Replacement transformer: Detex part number 104254.
3. Replacement pwa: Detex part number 104252-3.
4. Replacement universal controller: Detex part number 104793.

NOTE: REFER TO OPERATOR MANUAL FOR INSTALLATION INSTRUCTIONS

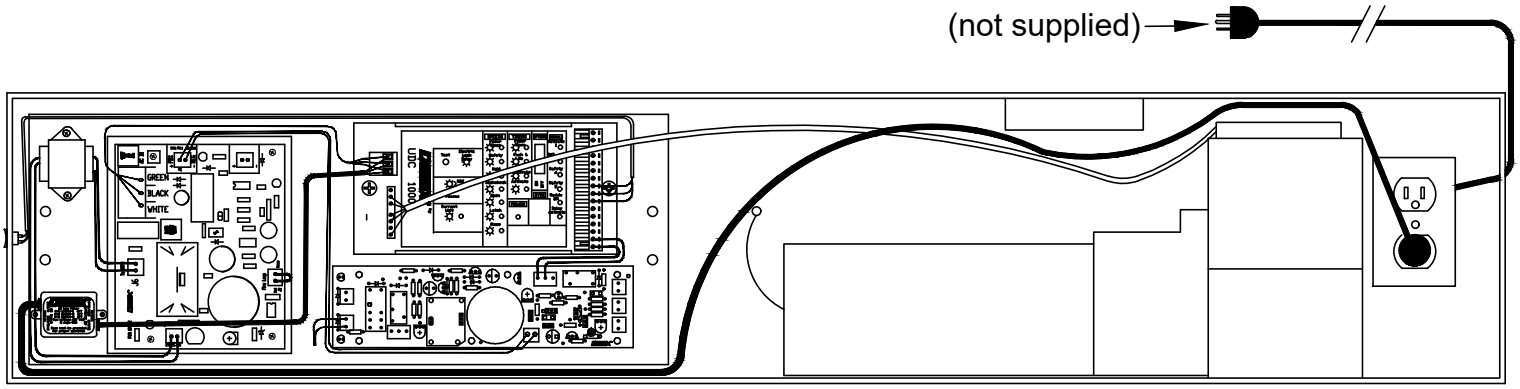
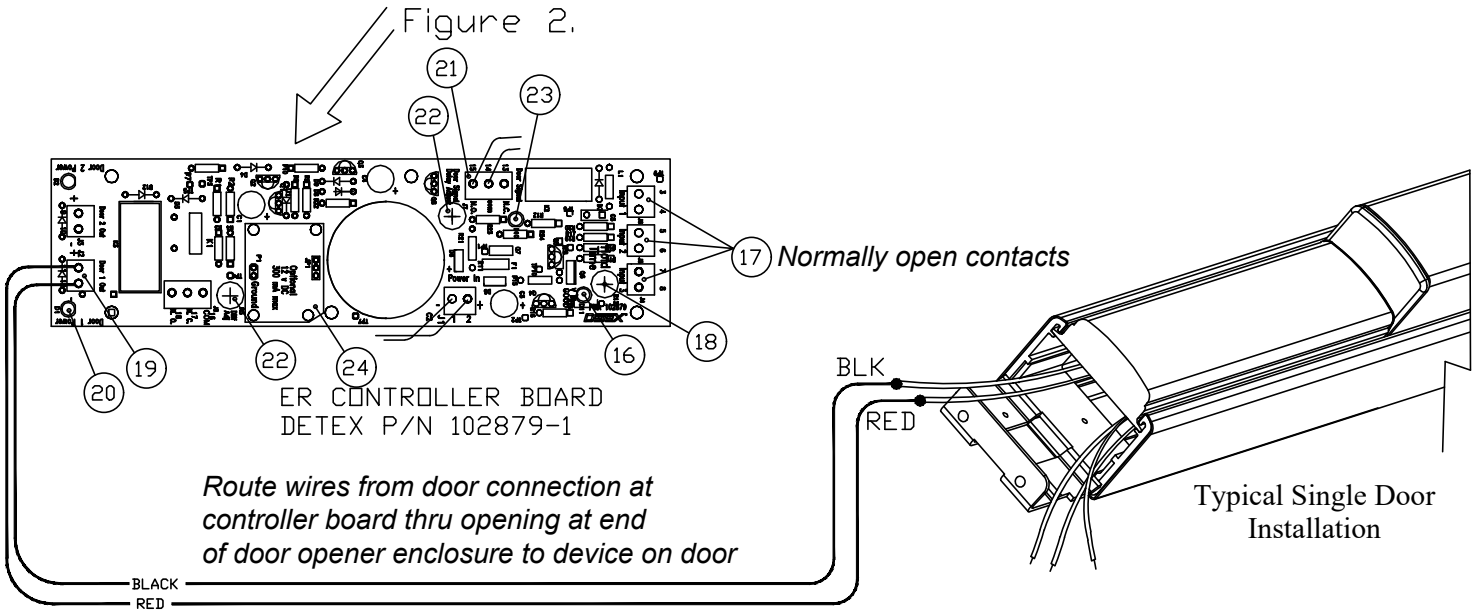
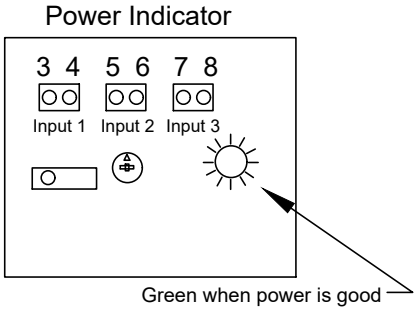


Figure 2.

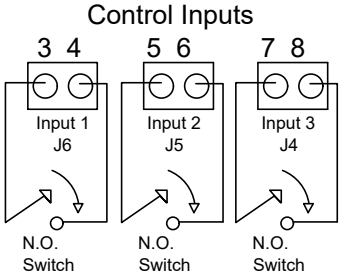


REFER TO FIG 2 FOR ITEMS 16 THRU 24

16: Power Good Indicator. This LED will glow green if 24 volts is supplied to the controller board.

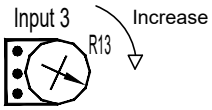


17: Control Inputs. These require a normally open contact. The door latch will activate and hold once the circuit between the terminals of Inputs 1 (J6) , 2 (J5) or 3(J4) is completed.



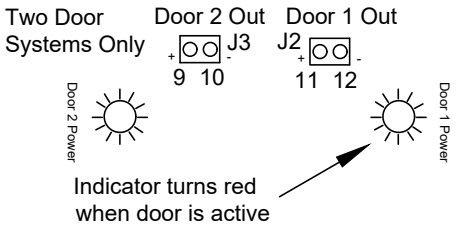
18: Door Hold Delay Adjust. This potentiometer adjusts the length of time the latch is held retracted once the input switch is released. Turn clockwise to increase the latch hold time up to a maximum of about 30 seconds.

Door Hold Select



19: Output to ER Device. This terminal block (J2) is connected to the ER power wires. Observe correct polarity. Red from the ER is positive (terminal 11) and black is negative (terminal 12). The board is also marked + and - at the connections as well.

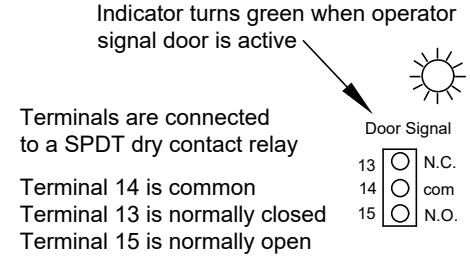
Door Outputs



20: Door Output Activity Indicator. The LED glows red when the output voltage to the latch retraction device is energized.

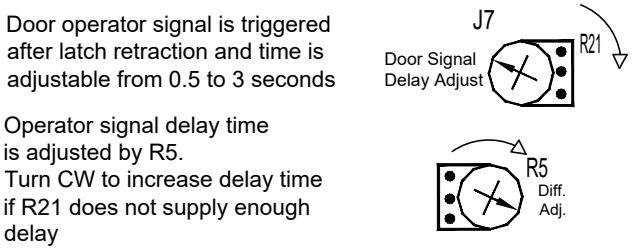
Door Operator Signal and Indicator

21: Door Opener Output. Connector 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 22 below.



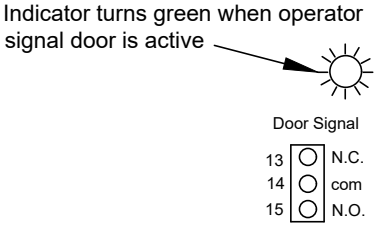
Door Operator Signal Delay

22: Door Operator Delay Adjust. There are two potentiometers that adjust the delay of the operator signal relay. Under normal use, only R21 should be used. Turn clockwise to increase the delay between the door latch retraction and the relay being energized. Turn R5 only if a longer delay time is needed.



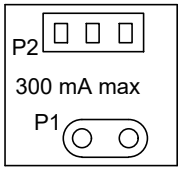
Door Operator Signal and Indicator

23: Door Operator Status Indicator. The status LED will glow green when the relay is energized.



Optional 12 Volt Supply Module

24: 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.



Optional 12 volt supply module plugs onto P1 and P2. Plug is keyed for alignment, do not force. **Order DETEX catalog number: M12**