

PDB-8C8R and 8F8R

ASSA ABLOY

Access Control Distribution Board

Installation Instructions and Operating Manual

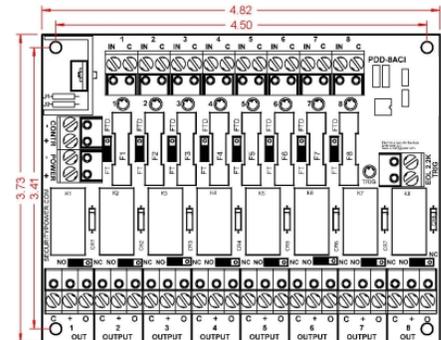
The global leader in door opening solutions

PDB-8F8R/8C8R Power Distribution for Access Control with Fire Interface module Controls and Distributes Power with 8 Control Relays with an EOL Fire trigger Interface Power Interface for Access Control, CCTV, Fire, and general low voltage system control

Features:

- 8 Heavy duty Relays with individual Inputs and Status LED's
- Each Relay Input can be Activated from Low Current Open Collector, Normally Closed or Normally Open Switch
- EOL End of Line Resistor Fire Interface Master Trigger de-energizes all Output Relays that are Enabled
- Universal 12 – 28VDC power input(Nominal 12-24VDC)
- 8C8R is Class 2 Power Limited
- Class 1 wiring required for 8F8R unless powered by a UL 294 or 603 or ULC S318 or ULC S533 listed power supply with class 2 output. There shall be a min of ¼ separation between power limited and non-power-limited circuits.
- Available with Fuses or PTC Circuit Breakers
Each Output may be Individually Configured for:
 - Fire Trigger (FT) Enabled or (FTD) Disabled
 - N/O or N/C Option Configures the Relay Switched Output
- Each Output 1-8 has a protected, continuous Output and a Relay controlled Output
- Control Power and Main Lock Power may be Isolated (Separate Power Supplies) at Users Option

Note: Dual/separate power source configuration has not been evaluated by UL and cannot be configured for UL Listed products



Description / Instructions

The PDB-8F8R is a versatile, compact way to distribute and control power for Access Control Systems with Fire Alarm Interface. The PDB-8F8R is an 8 position power distribution board with individual Relays with input (IN) control for each output (OUT). An EOL resistor trigger input (TRIG), will force all output relays to de-energize that are selected (FT). In a typical installation, the TRIG would be connected to a Fire Alarm panel via a set of contacts. When the Fire Alarm trips, all enabled relays would be forced to be de-energized to unlock electric doors, shut down air systems, and or return elevators to ground floor.

Input / Output Terminals, Jumpers and LED Details and Specifications

Control Power (- CONTR +) Two position un-pluggable terminal block is used to power the coils of the relays. The control voltage must be between 12 and 28 VDC. Each relay energized will draw 20ma of current. By default, Control Power and Main Power are connected together with jumpers J1 & J2 so no connection would be made here unless you were using Dual/separate power as described below. Note Dual/separate power source configuration has not been evaluated by UL and cannot be configured for UL Listed products.

Main Power (- POWER +) Two position un-pluggable terminal block provides the power to the outputs to be distributed and power to Control through J1 & J2. In a normal application, the Power must be between 12-28VDC and would be connected here.

Dual/Separate Power J1 & J2 Jumpers Note Dual/separate power source configuration has not been evaluated by UL and cannot be configured for UL Listed products. J1 Connects (-) Power to (-) Control, J2 Connects (+) Power to (+) Control. By default J1 & J2 are connected together. When J1 & J2 are cut, you must supply 12 to 24VDC to Control power See Dual/Separate Power application figure below.

Inputs (1-8 IN C) Eight, two position un-pluggable terminal blocks. When IN & C are shorted together, the like number output relay will energize. Each relay can also be energized by an open collector that is common to the control power, sinking 20ma for each input. Each of the C's (common) are connected to control negative power.

Input LED's (1-8) Whenever an input is active (relay energized) the associated input red LED will illuminate.

FDT/FT (1-8) Jumpers - These are three pin headers adjacent to each fuse with a shunt with handle that shorts the center pin to FTD or FT.

FTD = Fire Trigger Disabled - When selected, the Trigger will not effect that output.

FT = Fire Trigger – When selected Triggering will force that Input Relay to De-Energize.

Dry/Wet Option (1-8 Fuse Models 8F8R) Through a Fuse, the (+ Power) is connected to the swing arm of each Relay to distribute power to its output. Removing the Fuse, removes the power from the relay. The (+) now becomes the Common Swing Arm and the “O” is the N/O or N/C contact as selected with jumper.

Outputs (1-8 OUTPUT C, +, O) Eight, Three position un-pluggable terminal blocks. “C” is Power Common and is connected to (- power). “+” is connected to fused (+ power) and the relay swing arm. “O” is the relay switched output as selected with N/O or N/C selector jumper.

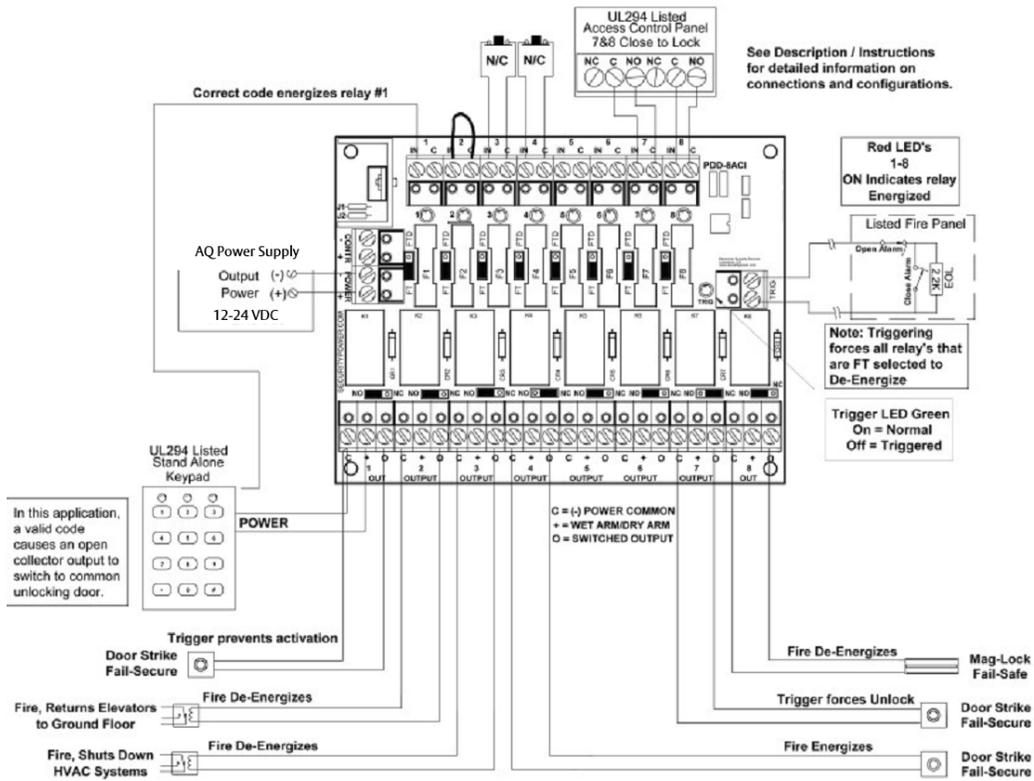
Output Relay Contacts Selector (1-8 NC/NO) Jumpers These 3 pin headers with shunt selectors are located just above each output which selects whether the N/C or N/O contacts are connected to the “O” switched output terminal. With N/C selected, output would be normally ON, or connected to swing arm. With N/O selected, output would turn ON, or close when input is activated.

Fire Alarm Interface Trigger (2.2K EOL TRIG) Two position un-pluggable terminal block. This input must see the 2.2K ohm EOL (End Of Line) resistor to be in the normal condition. The EOL is to be placed in a Listed fire alarm panel. See Fig 1 illustrating that shorting or opening the EOL will cause the PDB-8F8R to trigger.

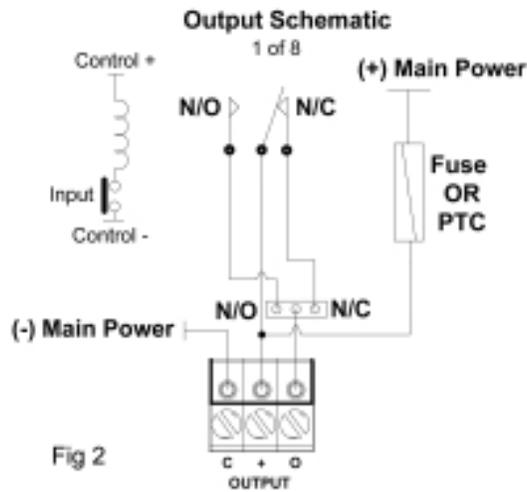
TRIG LED (TRIG) Green LED normally ON. Whenever the Trigger is active the LED will be OFF.

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| Specifications | |
| Control (- CONTR +) | 12-24VDC @ 37mA |
| Normally no connection is made here. Note: Dual/separate power source configuration has not been evaluated by UL and cannot be configured for UL Listed products. | |
| Main Power (-power+) | 12-28VDC (12-24 VDC Nominal) |
| Note: Must cut J1 & J2 when not using 12-24VDC power See Dual/Separate power source configuration | |
| Fused/Wet Outputs (11.2-28V DC operation): | |
| Max. Output Current 2A variants | 2A per port / Total 16A |
| Max. Output Current 1A variants | 1A per port; Total 8A |
| Total Power Supply draw would be equal to the total current of the outputs load plus the module draw of 37mA | |
| Dry Outputs (Models 8F8R only) | 3A, 30VDC; 3A, 250VAC Resistive Load. |
| Terminal blocks un-pluggable | 5mm spacing 14-22 awg |
| Note: Wires should be properly sized based on output load | |
| PTC Rating Outputs 1-8 | 2.5A for 2A variants, 1.1A for 1A variants |
| Glass Fuse Rating Output 1-8 | 2A,250VAC ; 1A,250VAC |
| 2A Replacement: Littelfuse part number 0217002.HXP. 1Amp replacement: Littelfuse part number 0217001.HXP | |
| Caution: For continued protection against risk of fire, replace only with fuse of the same type and having the same electrical ratings. | |
| The fused outputs of the PDB-8F8R are power limited only when connected a UL Listed power-limited power supply | |
| Output Relays 1-8 Dry Contacts are not to exceed | 100VA |
| Trigger Input | 2.2K EOL |
| Operating Temperature | 0° to +49°C |
| Mounting Holes | (4) 3.4" x 4.5" |
| Module Size: | 4.82" w x 3.84h x 1.4" d |
| UL Listings | |
| UL 294 Access Control System Unit | Line Security Level I |
| | Endurance Test Level IV |
| | Standby Power Level I |
| | Attack Test Level I |
| UL 603 Power supplies for Use with Burglar-Alarm Systems | |
| ULC S318 Power supplies for Burglar Alarm Systems | |
| ULC S533 Standard for Egress Door Securing and Releasing Devices | |
| Note: The unit shall be installed in accordance with the National Electrical Code, ANSI/NFPA 70; Canadian Electrical Code, or any other applicable codes. | |
| Note: For UL compliance unit shall be installed in a suitable enclosure that is listed to UL 603 or UL 294 or ULC-S318 or ULC-S533. | |
| Note: All interconnected devices must be UL Listed. | |

PDB-8F8R Typical Applications
 Single Power Source Application Fig 1



Single Power Source Application Fig 1



500-33045_2

ELECTRONIC SECURITY HARDWARE

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