

# PDB-8C1R and 8F1R

ASSA ABLOY

## Power Distribution Boards

### Installation Instructions and Operating Manual

The global leader in door opening solutions

Distributed Power Control Interface for Fire, Access, HVAC, Elevator, and Security

#### Features:

- 8 Power Limited Outputs with Auto-Resetting
- Circuit Breakers for model 8C1R
- Each Output is Individually Selectable to Turn On, Turn Off, or always ON when Triggered
- Outputs can be triggered with:
  1. Voltage or Reverse polarity (optically isolated)
  2. N/O or N/C switch with supervised EOL
- Form C Contacts (TRIGGERED) and Red LED (TRG) Indicate Trigger Status
- Form C Contacts (TROUBLE) and Green LED (TRB) Indicate:
  1. One of the output circuit breakers is tripped
- Main Fuse Blown or no power on input
- Operates with 12-28VDC; Nominal 12-24VDC
- Each Output pair has a Removable Terminal Block
- Each Output has a Green Status LED
- Main Power has Green Status LED
- Main Power Pull and Fuse
- Lifetime Warranty
- UL Listed Sub Assembly for Access Control and Burglar Alarm Systems



#### Description

The PDB-8C1R power distribution control interface converts a main non-power limited DC power source to 8 power-limited outputs that can be controlled by a (FACP) Fire Alarm Control Panel. For the model PDB-8C1R /8F1R each output can be selectively set (J1-J8) to turn ON or to Turn OFF when triggered by the panel. The FACP or other control system can interface to the PDB-8C1R /8F1R with either of two or both supervised trigger inputs. One trigger is activated with a reverse polarity voltage from a FACP. This trigger is fully isolated with an optical isolator. The other trigger is an (EOL) 2.2K End Line Resistor input which will accept a (N/O) Normally Open switch or a (N/C) Normally Closed switch.

When triggered, the Trigger Transfer Relay removes power from the NORM + bus and transfers it to the TRIG + bus. Jumpers J1-J8 determines which bus each output is connected to. The triggered form C contacts also drop off normal when triggered and the Red (TRG) LED turns on. These contacts can be used to daisy chain other PDB-8C1R, latch, or provide feedback to a system.

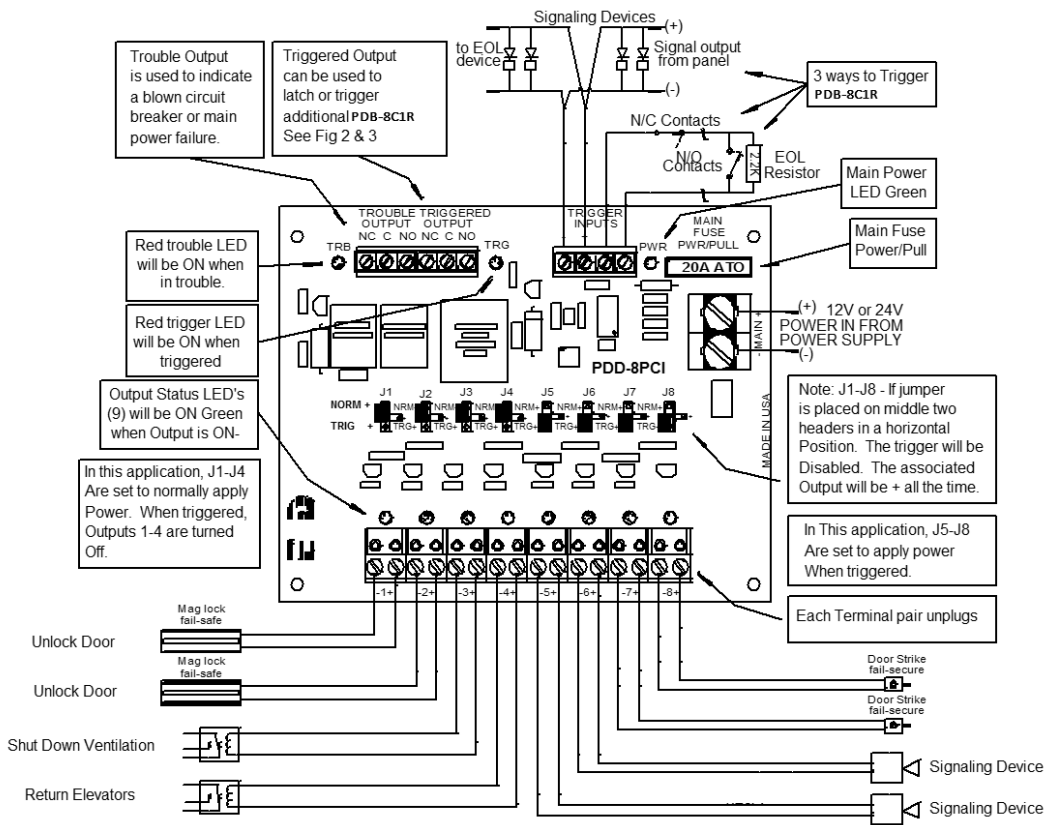
The Trouble Form C Relay drops off Normal if any one of the PTC circuit breakers is tripped, or main power/fuse is lost. The Green (TRB) LED is ON during normal operation, it goes off with trouble. All three relays are Fail-Safe, energized in the normal condition.

Each output has a Green LED that is on when the associated output (-1+ through -8+) is ON.

Typical applications for a Fire Alarm System would include adding remote Bells and enunciators, closing dampers, turning off HVAC fans, unlocking fail secure and fail safe doors, and or returning elevators to first floor.

**Note:** HVAC and Elevator Control has not been evaluated by UL

<b>Specifications</b>	
Input Voltage	12-28 VDC (Nominal 12-24 VDC)
Output Voltage	11.4 - 28 VDC
Current with no load (typical)	149 - 211mA
Outputs 1-8 continuous dutt	1A or 2A per output based on model, 10A maximum
Input Terminal Block Ratings	5mm spacing 14 -28 AWG
Output Terminal Block Ratings	5mm spacing 14 -28 AWG
<b>Note:</b> 1/4" spacing must be maintained between power limited and non power limited wiring , properly size wire based on load	
Main Fuse Rating	15A for 2A variant, 10A for 1A variant
Main fuse type	mini-ATO
<b>Caution:</b> For continued protection against risk of fire, replace only with fuse of the same type and having the same electrical ratings.	
Voltage Trigger	<20% of Input minimum, 24 VDC Max.
Voltage Trigger Isolation	Optical
End of Line Trigger	Trips +/- 50% of 2.2k $\Omega$
Transfer Relay Contacts	10A for 2 Amp variant / 8A for 1A variant
Trouble Form C Contacts	120 VAC 3A / 30 VDC 3A
Triggered Form C Contacts	120 VAC 3A / 30 VDC 3A
Ambient Operating Temperature	+32 to 120F (0 to 49C)
<b>UL Approvals</b>	
<b>Note:</b> UL has only validated the 1A and 2A variants of the PDBs	
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	
UL C S533- Standard for Egress Door Securing and Releasing Devices	
<b>Note:</b> The unit shall be installed in accordance with the National Electrical Code, ANSI/NFPA 70; Canadian Electrical Code, or any other applicable codes	
<b>Note:</b> For UL compliance the unit shall be installed in a suitable enclosure that is listed to UL 603, UL 294, ULC-S318 or ULC-S533.	
<b>Note:</b> Glass fused variants shall either be powered by a UL 294 or 603 or ULC S318 or ULC S533 power supply with a class 2 output or Class 1 wiring must be utilized	



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