

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.

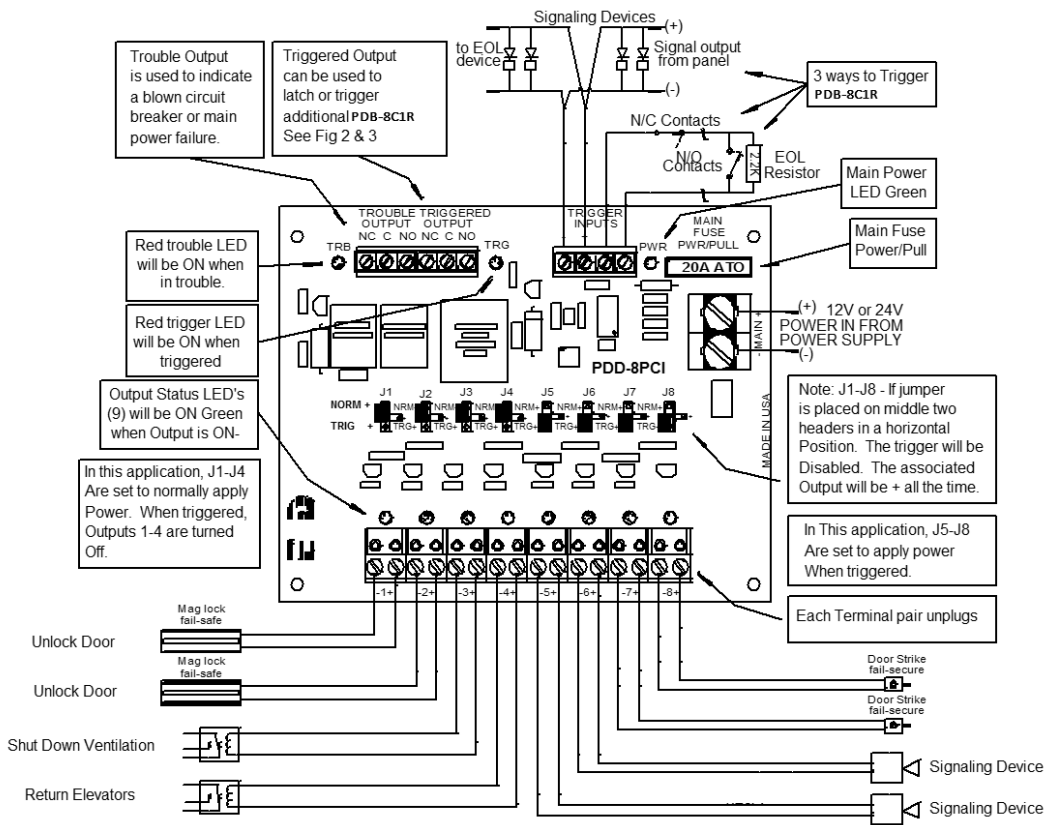
The Trouble Form C Relay drops off Normal if any one of the PTC circuit breakers is tripped, or main power/fuse is lost. The Green (TRB) LED is ON during normal operation, it goes off with trouble. All three relays are Fail-Safe, energized in the normal condition.

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

Specifications	
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
Note: 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
Caution: 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 Ω
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)
UL Approvals	
Note: 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	
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 the unit shall be installed in a suitable enclosure that is listed to UL 603, UL 294, ULC-S318 or ULC-S533.	
Note: 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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