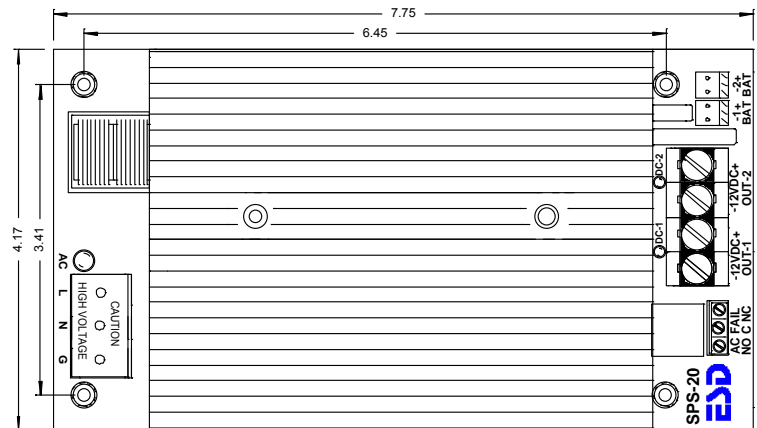


**SPS-20 Supervised Power Supply/Charger 12vdc 20Amp/24vdc 10Amp**  
 Life Time Warranty – Quality Manufactured in the USA



**SPS-20 Features:**

- The SPS-20 has two 12vdc 8Amp rated Outputs that can be connected in Parallel or Series to provide 12vdc, 24vdc, or 12vdc & 24vdc.
- Outputs 1 and 2 are fully isolated, Independent Power Supplies.
- Efficient Off-Line Switching Power Supply
- Self Contained, No External Transformer required
- 120/240VAC Selectable AC input
- Extraordinary Brown Out Capability
- Precise Battery Regulation for Lead Acid Battery(s)
- LED's Indicate AC and DC Outputs 1 & 2
- Relay Contacts Indicates AC Power Status
- Battery Online, No Drop or Switch Over with AC Power Fail
- Auto Resetting circuit breaker for battery(s) Over Current Protection with Reverse battery protection
- Electronic Power Limited and Short Circuit Protection on each output
- Each output has Thermal shut down with auto restart



Height from base of PCB to Top of Heat Sink: 2.79"

**Partial list of ordering examples:**

SPS-20	20A 12/24 Power Supply/ Charger Module
SPS-20EL	SPS-20 mounted in a 14" x 14" metal Enclosure.
SPS-20EL w/PDD-8ACI	SPS-20EL With 8 Output Access Control Interface
SPS-20EL w/PDD-8PCI	SPS-20EL With 8 Output Power Control Interface
SPS-20ELD16	SP-20EL with 16 fused outputs
RM-DC1620	Rack Mounted SPS-20 with 16 Outputs. (This has not be evaluated by UL)

**Description**

The SPS-20 supervised power supply with battery charger is two high powered, fully isolated, independent power supplies enclosed in one small self contained aluminum package. Each power supply, outputs 1 and 2, are a nominal 12vdc at 10 Amps with 12v lead acid battery charger. These outputs can be used as separate isolated 12vdc power supplies, or they can be connected in parallel or series to provide 12vdc, 24vdc or both 12vdc and 24vdc at the same time. When outputs 1 & 2 are connected in parallel, the output is 13.75vdc at 20 Amps. When outputs 1 & 2 are connected in series, the output is 27.5vdc at 10 Amps. Because each output is independently regulated, you may draw additional current from the 12V output 1, while using the 24vdc output at the same

time. The 12v current used has to be subtracted from the 10 Amps available on the 24vdc. Figures 1 - 4 illustrate each of these four hookups for the SPS-20. Charging two 12v batteries independently is also a very big benefit for long battery life.

**Specifications/Instructions**

**AC Input: L, N, G - 3P Terminal block**

Safety Cover, snap or hinge is provided

L= Line, N= Neutral, and G = Ground

The G terminal must be connected to Earth Ground.

Optional 3 wire line cord P/N: ..... HA-LC3SZIP

AC input/Hz/Watts default ..... 90-132vac/47-63Hz/400w

AC input/Hz/Watts (set 240) .. 133-250vac/47-63Hz/400w

UL evaluated at 60Hz 120/240vac

6/24/10 © Technical Literature jdb SPS-20 specifications subject to change  
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Electronic Security Devices  
 2200 N MacArthur Drive  
 Tracy, CA 95376

Manufacturers of High Quality Security Devices

Phone: (209) 229-7140 Fax: (209) 229-7145  
 ESD@SecurityPower.com [www.SecurityPower.com](http://www.SecurityPower.com)

## SPS-20 Series Power Supplies continued

**Caution: Never apply 240vac when SPS-20 is set for 120vac this will void warrantee and damage unit.**

The AC input default is 120vac. You may order SPS-20/240 to change the AC default to 240vac, or you can cut the PCB trace marked "CUT 240" on the bottom of the PCB under the input inductor above and toward the inside of the AC input terminal block.

### AC LED Indicator (Next to AC Input Terminal Strip)

The AC indicator is a bi-color green and red led. This led off with AC at the terminals would indicate a blown fuse link. A blown AC fuse link would indicate catastrophic failure and must be returned to the factory for repair.

### AC Status Output Relay: 3P Terminal block

AC fail "C" contacts ..... 2A/120vac  
Three position AC fail terminal block marked "NO, C, NC" are shown in the Normal, energized, AC ON condition.

### DC OUTPUTS: 4P Terminal block (2 per output)

Output-1 & 2 continuous rating ..... 12vdc at 8A ea  
Output 1 & 2 Typical Output Voltage ..... 13.72vdc ea  
Load regulation no load to max ..... .25%Typ  
AC Line regulation 85-136vac/170-264vac ..... .03%Typ  
Each Output ripple & noise at full load ..... 400mv pp  
Current Overload Short Circuit Protection ..... Yes  
Thermal runaway Protection ..... Yes  
Current Overload and Thermal shutdown will auto-restart without removing load.

Ambient operating temperature range .. -30°F to +130°F  
Storage Temperature ..... -60°F to 190°F  
Switching Frequency ..... 66KHz

**DC LED Indicator** (Adjacent to each output pair) ..... Red  
**Battery Standby**

Two 12" battery cable assemblies that plug from SPS-20 to battery are provided. Red (+) 12vdc, Black (-)Neg.

Optional 36" battery cable (1) P/N: ..... WA-36IBAT  
Battery(s), any type of lead acid ..... 12v 4AH-100AH  
Battery(s) recharge1 & 2 ..... 13.72vdc at 2A max  
Battery(s) 1 & 2 recharge PTC self resetting ..... 1.04A  
Battery(s) 1 & 2 discharge PTC self resetting ..... 8A  
Battery(s) 1 & 2 Reverse hookup protection ..... Yes  
In standby mode each battery is limited to 8 Amps of continuous current. When both outputs are connected in parallel, and standby current will be greater than 8 Amps, you must use 2 batteries connecting one to battery 1 and one to battery 2. Paralleling (2) battery cables to (1) battery will not double the current.

Review application note 3, Battery Standby table to calculate battery size.

To estimate the recharge time in hours for depleted battery(s), multiply the AH rating times 1.2. (AH x 1.2). As an example, 2 12v 10AH batteries would take about 12 hours to re-charge.

### Physical

SPS-20 Module Dimensions .. 7.75"L x 4.17"W x 3.23"H  
Height includes 7/16" standoffs

Mounting Holes Center to Center ..... 6.45"W x 3.41"H

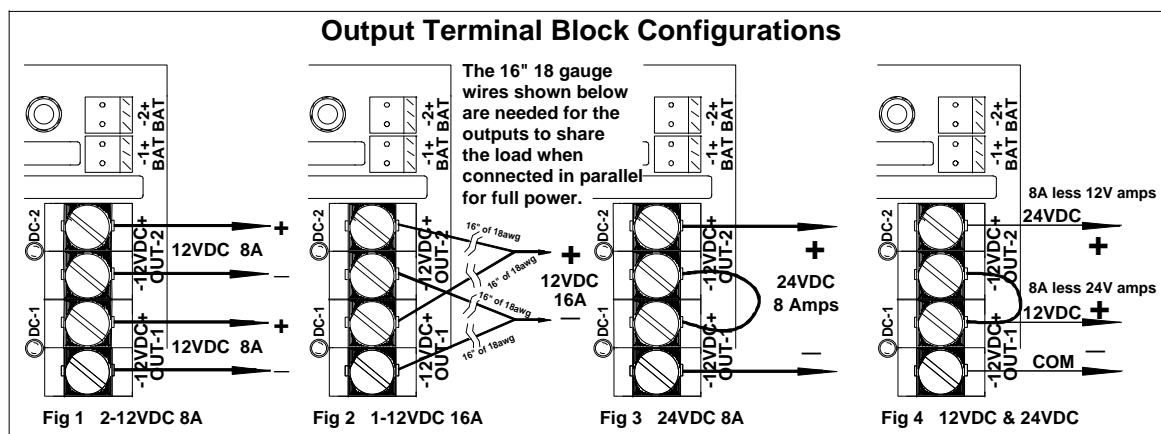
SPS-20 module only Weight ..... 2.4lbs.

SPS-20EL (in Large enclosure) ..... 14" x 14" x 4.75"

SPS-20EL Weight with enclosure ..... 11.4lbs

### Approvals

SPS-20 meets requirements of UL1950 3rd & EN60950  
SPS-20 is UL R/C ..... UL603, UL294



## SPS-20 Series Power Supply continued

### Maintenance

The power supply and stand by battery(s) should be tested at least once a year as follows:

1. Check LED's for normal state. AC ON Green, DC #1 ON Red, and DC #2 ON Red.
2. Check output voltage with normal load. DC Output #1 and DC Output #2 should read between 13.60 and 13.80vdc.
3. Disconnect AC input. AC LED should be off, DC Output LED's #1 and #2 should be ON.
4. Check DC Outputs #1 and #2 to be above 12.0vdc. This checks standby batteries to be operational. Sealed lead acid batteries have a typical life of 3 to 5 years.
5. Re Apply AC and verify AC LED ON.

### Battery Selection

The table below shows typical standby time in hours for various loads and batteries. The table works for either 12vdc or 24vdc. The SPS-20 was evaluated at UL with a 7AH sealed lead acid battery with a 1 hour stand by.

#### Approximate Battery Standby Time Table with a reserve of 3 Amps for 5 minutes for Alarm

Total Output Amps	4Ah Battery Standby	7Ah Battery Standby	12Ah Battery Standby	24Ah Standby	40Ah Standby
.5A	5.5 Hrs	12 Hrs	20 Hrs	40 Hrs	65 Hrs
1A	2.5 Hrs	5 Hrs	9 Hrs	19 Hrs	32 Hrs
1.3A	2 Hrs	4 Hrs	7.2 Hrs	15.5 Hrs	24 Hrs
2A	1 Hrs	2 Hrs	5 Hrs	10 Hrs	15 Hrs
3A	.5 Hrs	1 Hrs	3 Hrs	6 Hrs	9.5 Hrs
4A	.5 Hrs	.8 Hrs	2 Hrs	4 Hrs	8 Hrs
5A	NA	.6 Hrs	1.4 Hrs	3 Hrs	7 Hrs
6A	NA	.4 Hrs	1 Hrs	2 Hrs	4 Hrs

The recharge table below gives approximate recharge times for different loads and battery sizes. The table is based on batteries depleted to battery cut-off and recharged back to approximately 90% capacity.

#### Ordering Guide with fuse sizes

Part Number	Description
PS-1414	(EL) Enclosure – 14" x 14 x 4.75" Power Supply Enclosure
SPS-20EL	SPS-20 Power Supply Charger Module Mounted in a PS-1414 (EL) Enclosure
SPS-20ELD4	SPS-20EL with 1 PDM-4-400 with 4, 4A 3AGC fused outputs
SPS-20ELC4	SPS-20EL with 1 PDM-4C-400 with 4, 3.08A PTC Circuit Breaker Outputs
SPS-20ELD8	SPS-20EL with 1 PDM-8-100-400 with 8 4A 3AGC fused outputs
SPS-20ELD16	SPS-20EL with 2 PDM-8-100-200 with 16 2A 3AGC fused outputs
SPS-20ELC16	SPS-20EL with 2 PDM-8C-150-185 with 16 1.42A PTC Circuit Breaker Outputs - These output are Class II power limited
-1FT	Adding -1FT to part number adds 1 PDD-FT Fire Trigger transfer switch to finished part
-1PCI	Adding – 1PCI to part number adds 1 PDD-8PCI distribution board with Fire Interface to finished part. 8 Circuit Breaker Outputs, rated at 1.23A each.
-1ACI	Adding – 1ACI to part number adds 1 PDD-8ACI Access control interface. 8, 2Amp Fused Outputs.
-1ACIC	Adding – 1ACIC to part number adds 1 PDD-8ACIC Access control interface. 8, Circuit Breaker Outputs, rated at 1.23A
-TS	Adding – TS to part number adds Clip ON N/O Tamper Switch. Close lid to close switch.

**CAUTION Reduce the risk of fire replace fuses as marked**


**Note: Keep a minimum space of ¼" between Power Limited Outputs and non Power Limited wiring**



## SPS-20 Series Power Supply continued

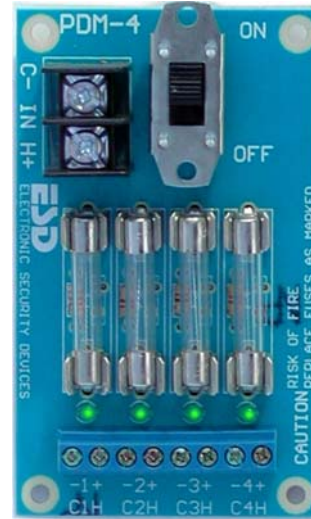
### PDM-4 / PDM-8 / PDM-9 Multi Output Low Voltage Power Distribution Modules Life Time Warranty

#### Features/Specifications:

- Converts a single AC or DC (12 or 24v) Input to 4, 8, or 9 protected outputs with fuses or circuit breakers
- 1500 Watt surge protection on PDM-8 Input rated 22 Amps @ 32 volts AC or DC
- All PTC circuit breaker ratings are holding current at 130°F per UL Standards
- Main Power Green/Red LED Indicates AC, DC or Reversed DC Input on PDM-8 and PDM-9
- Each output has a green status LED indicator
- Main Fuse / Power Pull is standard ATO Automotive size on PDM-8 and PDM-9
- ON / OFF Power Switch on PDM-4
- Circuit Breaker Models with Rated Output 1.42 Amps or below are Class II Power Limited
- PDM-8 & PDM-8C are  LISTED
- PDM-4, PDM-4C, PDM-8, & PDM-8C are UL listed Sub Assemblies suitable for Access Control and Burglar alarm systems
- All Input Terminal blocks and output terminal blocks on the PDM-8 module are rated 40A with a wire range of 10 – 18AWG
- Output Terminal blocks on the PDM-4 and PDM-9 are rated 10A with wire range 16-30AWG
- Size: PDM 4 3.75"H x 2.22"W x 1"D Mounting: 3.41"H x 1.87"W  
Size: PDM-8 3.87"H x 4.84"W x 1"D Mounting: 3.41"H x 4.49"W  
Size: PDM-9 2.20"H x 4.85"W x 1"D Mounting: 1.31"H "C" x 4.49"W
- Quality Manufactured in the USA

#### Ordering details for Distribution Modules

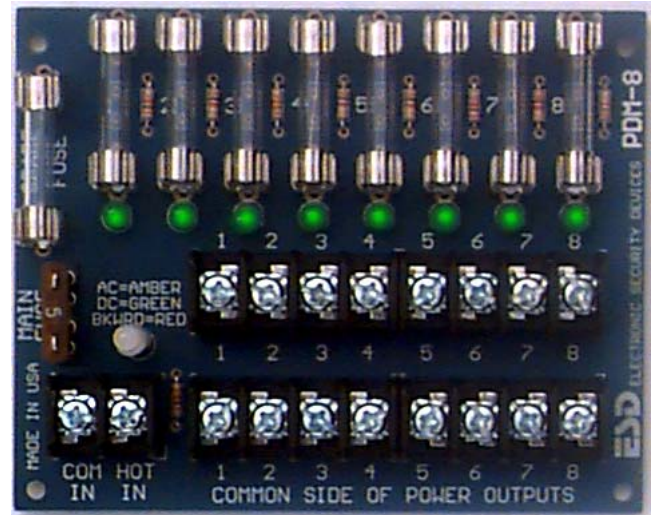
PDM-4-FFF	4 Fused Outputs with power switch and status LED's.
PDM-4C-CCC	4 PTC Circuit Breaker Outputs with power switch and status LED's
PDM-8-MMM-FFF	8 Fused Outputs with ATO Main/power pull fuse, status LED's and 1500 watt surge protector.
PDM-8C-MMM-CCC	8 PTC Circuit Breaker Outputs with ATO Main/power pull fuse, status LED's and 1500 watt surge protector.
PDM-9-MMM-FFF	9 Fused Outputs with ATO Main/power pull fuse and status LED's.
PDM-9C-MMM-CCC	9 PTC Circuit Breaker Outputs with ATO Main/power pull fuse and status LED's
FFF Fuse Options	FFF = Fuse Rating in Amps (x.xx) standard 3age Size: (050 = 500ma); (100 = 1A); (200 = 2A); (300 = 3A); (400 = 4A); (500 = 5A)
CCC Circuit Breaker options	CCC = PTC part number equaling the holding current in Amps at UL rating 50C: (090 = .7A); (135 = 1.04A); (160 = 1.23A); (185 = 1.42A); (250 = 1.93A); (400 = 3.08A); (500 = 3.85A); (600 = 4.62A)
MMM Main Fuse options	MMM = Main Fuse Rating in Amps (xx.x) – Standard Automotive ATO Size: (050 = 5A); (075 = 7.5A); (100 = 10A); (150 = 15A); (200 = 20A); (250 = 25A)



PDM-4  
PDM-4C  
PDM-8  
PDM-8C



UL 294 – Access Control System Unit  
UL 603 – Power Supplies for Use with Burglar-Alarm Systems  
ULC S318-96 – Power supplies for Burglar Alarm Systems  
ULC S533-02 – Standard for Egress Door Securing and Releasing Devices



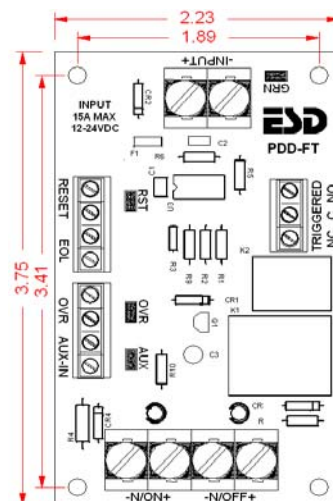
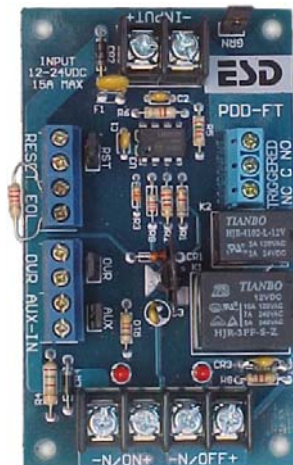
PDM-9  
PDM-9C  
Below  
NOT EVALUATED  
BY UL



## PDD-FT DC Fire Transfer Relay with EOL Trigger

### Features:

- Non Latching or Latching mode
- 12 or 24VDC Operation
- Reverse polarity protected
- Normally ON & Normally OFF Output
- Output LED's indicate condition
- Outputs can be Triggered with:
  1. N/O or N/C Switch with Supervised (EOL)
  2. N/C Switch with (OVR) over ride
  3. N/C Switch with AUX-IN auxiliary
  4. Ground on any trigger input when (GRN Jumper is enabled
- Form C Contacts Indicates Trigger Status
- 12 Amp Transfer Relay Contacts
- Lifetime Warranty - Made in the USA
- UL Listed Sub Assembly for Access Control and Burglar Alarm Systems



### Description

The PDD-FT transfers the input power from the normally ON output pair “-N/ON+” to the normally OFF output pair “-N/OFF+” when triggered. The unit is triggered when the supervised (EOL), end of line resistor is opened or shorted. The triggered form C user contacts indicate the state of the trigger. A typical application of the PDD-FT is to place a distribution board on one or both of the outputs, one of our power supplies on the Input, then connecting the EOL at a fire alarm panel to transfer the power from one distribution board to another when the Fire alarm panel is in the alarm condition. The transferred power would be used to unlock doors, shut down air systems, or return elevators to an exit floor.

### Specifications / Instructions

**Input Power “-INPUT+”:** 2 Pos. Terminal block with self clamping screws will accept multiple 12awg wires – Operates with 12 or 24vdc input. The input current is 70ma to control relays plus whatever output load is. The positive side of the power is connected to the swing arm of the transfer relay which directs the power to the proper output.

**Output Power:** 4 Pos. Terminal block Self clamping screws will accept multiple 12awg wires. “-N/ON+” are normally ON output power. This output is ON when the PDD-FT is not triggered. “-N/OFF+” is normally OFF. This output is ON when this unit is triggered. The transfer relay is rated at 15A@12v and 12A@24vdc.

**Power LED’s:** A red led above each output indicates which output is ON.

**Input Trigger EOL:** 2 Pos. Terminal block – Will accept 14-28awg wire. This input must see the 2.2K ohm end of line resistor to be in the normal set condition. A change in resistance of + or – 60% will cause the trigger relays to drop out in the Triggered mode. This change in resistance is caused by the supervised wire between the EOL at the fire panel and the PDD-FT being shorted or opened. The EOL supervises the pair of wires.

**Input Trigger OVR:** 2 Pos. Terminal block - Will accept 14-28awg wire. This pair is normally closed, can be connected to an override switch. When OVR is open, unit will trigger.

**Input Trigger AUX-IN:** 2 Pos. Terminal block - Will accept 14-28awg wire. This pair is normally closed and can be connected to an auxiliary device. When AUX-IN is open, unit will trigger.

**RESET 2 Pos. Terminal block** – Will accept 14-28awg wire. When this pair is shorted, input triggers do not latch. If pair is open, the input triggers will latch until alarm is corrected and RESET is momentarily closed to reset trigger.

**Jumpers RST – OVR – AUX** are jumpers with handles to short adjacent terminal blocks that are not used. You may move the jumper to one header to open short to enable adjacent terminals.

**Jumper GRN** – This jumper is used to enable ground supervision in the inputs. If the jumper is connected to both headers, and the mounting hole adjacent to jumper is connected to ground with a star washer, a ground on any of the input triggers will cause a trigger.

**Trigger Status Terminal block** - Will accept 14-28awg wire. Form C Contact with a 3 Amp rating will indicate the condition of trigger. C and NO are normally open in the normal energize not triggered state. C and NC are normally closed in the normal energized not triggered state. These contacts may be used to provide feedback to the FACP or other annunciating devices.

The PDD-FT is available as a module or mounted in an enclosure with any of our DC Power Supplies.

Module dimensions ..... 2.23”W x 3.75”L x .8”H  
 Mounting holes dimensions ..... 1.89” x 3.41”  
 Weight: ..... 2.2oz

### UL Approvals for PDD-FT

- UL 294 – Access Control System Unit
- UL 603 – Power supplies for Use with Burglar-Alarm Systems
- ULC S318-96 – Power supplies for Burglar Alarm Systems
- ULC S533-02 – Standard for Egress Door Securing and Releasing Devices

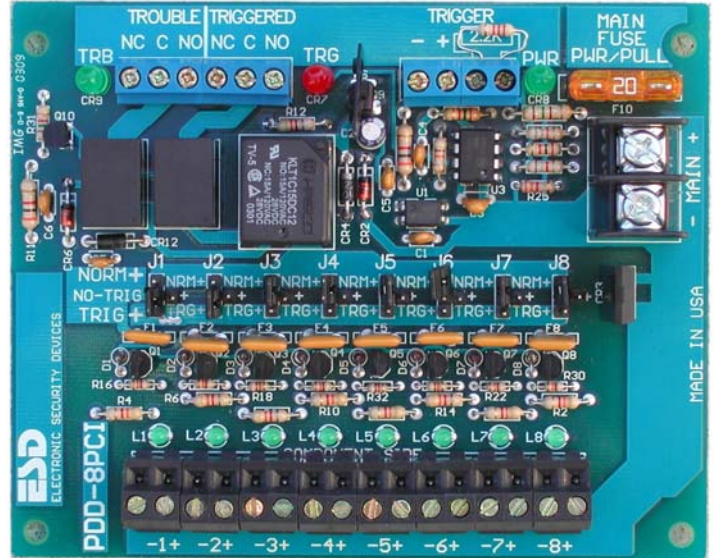
**PDD-8PCI DC Power Distribution with Supervised Interface module**

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



**Features:**

- **8 class II Power Limited Outputs with Auto-Resetting Circuit Breakers**
- **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 (opto 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**
  2. **Main Fuse Blown or no power on input**
- **Operates with 12 or 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 PDD-8PCI power distribution control interface converts a main non-power limited DC power source to 8 class II power-limited outputs that can be controlled by a (FACP) Fire Alarm Control Panel. 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 PDD-8PCI 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 Resister 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 + buss and transfers it to the TRIG + buss. Jumpers J1-J8 determines which buss 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 PDD-8PCI, 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 is ON.

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

The PDD-8PCI is available as a module or mounted in an enclosure with any of our DC Power Supplies.

**Specifications**

Input Voltage ..... 10.5 to 12.4vdc or 22.7 to 25.2vdc  
 Output Voltage ..... same as Input  
 Current, Typical, with No Output Load ..... 90-160mA  
 Outputs 1-8 continuous duty each ..... 1.23 Amps  
 Voltage Trigger ..... 20% < Input min. 30vdc max.  
 Voltage Trigger isolation ..... Optical  
 EOL (End of Line) Trigger ..... Trip +50% of 2.2K Ω  
 Transfer Relay Contacts ..... 15Amps  
 Trouble Form C Contacts ..... 2A 120vac/1A 220vac

Triggered Form C Contacts ..... 2A 120vac/1A 220vac

**UL Approvals**

- UL 294 – Access Control System Unit
- UL 603 – Power supplies for Use with Burglar-Alarm Systems
- ULC S318-96 – Power supplies for Burglar Alarm Systems
- ULC S533-02 – Standard for Egress Door Securing and Releasing Devices

## SPS-20 Series Power Supply continued

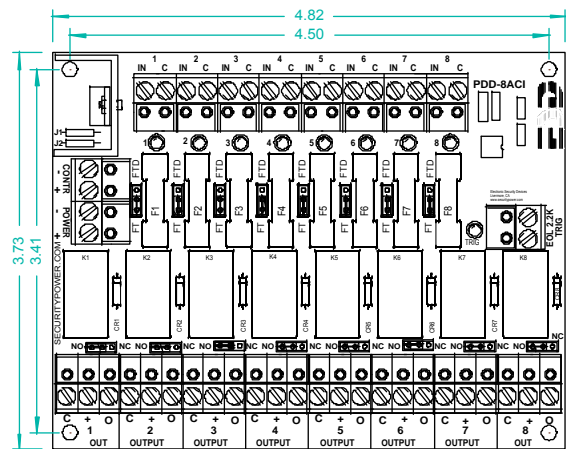
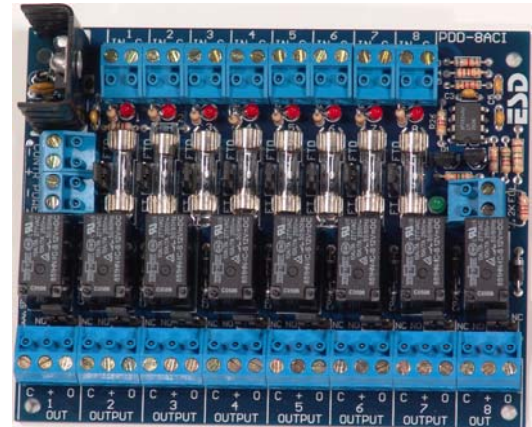
### PDD-8ACI Power Distribution for Access Control with Fire Interface module

Controls and Distributes Power with 8 Control Relays with an EOL Fire trigger Interface

Power Interface for Access Control, CCTV, Fire, HVAC, Elevator, 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 to Unlock Doors or Shut Down Air Systems
- Universal 12 – 24vdc power input
- Available with Fuses or PTC Circuit Breakers
- Each Output may be Individually Configured for:
  - Fire Trigger (FT) Enabled or (FTD) Disabled
  - FUSE model can provide optional Dry Contacts
  - 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
- Outputs on PTC models are Class II power limited
- Output Power can be AC or DC up to 32v
- TRG LED Green Indicates Trigger Status
- Control Power and Main Lock Power may be Isolated (Separate Power Supplies) at Users Option
- All Terminal Blocks are Pluggable by Channel & Function
- Lifetime Warranty



#### Description

The PDD-8ACI is a very versatile, compact way to distribute and control power for Access Control, Security, CCTV, Air Handling, and Elevator Control Systems with Fire Alarm Interface. The PDD-8ACI is an 8 position power distribution board with individual 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 return elevators to ground floor. Any one of the 8 outputs could be utilized to provide a set of (TRIGGERED) form "C" status contacts to daisy chain other PDD-8ACI boards, latch, or provide feedback to a control system. If the feedback contacts had to be dry, you would have to use a Fuse model or use a relay module like a RT-1.

#### Input/Output Terminals, Jumpers and LED Details and Specifications

**Control Power (- CONTR +)** 2 position un-pluggable terminal block is used to power the coils of the relays. The control voltage must be between 10 and 28 volts DC. Each relay energized will draw 20ma of current. By default, Control Power and Main Power are connected together with jumpers J1 & J2. To utilize separate power for the control, J1 & J2 must be cut and suitable power connected to these terminals.

**Main Power (- POWER +)** 2 position un-pluggable terminal block provides the power to the outputs to be distributed. This power input is limited to CONTR. If J1 & J2 are cut and using separate supply for Main Power, then this power could be up to 32 volts AC or DC. On fuse model the limit could be as high as 240v ac or dc observing safety and local electrical codes. Current consumption would be total of each output circuit.

## SPS-20 Series Power Supply continued

**J1 & J2** are jumpers that connect the Control Power, (-contr+) and the main lock power, (-power+) together for easy use of 1 power supply. If you would like to use separate power supplies to fully isolate the control power to the output lock power, then cut Jumpers J1 & J2 located just above Control Power input. If reconnecting J1 & J2 ever becomes necessary, then connect + to + and – to – at the main power and control power input terminal blocks.

**Inputs (1-8 IN C)** Eight, 2 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 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.

**Dry/Wet Option (1-8 Fuse Models)** Through a Fuse, the (+ Power) is connected to the swing arm of each Relay to distribute power to it's 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 OUT C, +, O)** Eight, 3 position un-pluggable terminal blocks. "C" is Power Common and is connected to (- power). (+) is the relay swing arm. SO is the relay switch output as selected with N/O or N/C selector jumper.

**Output Relay Contacts Selector (1-8 NC/NO)** This selector located just above each output selects whether the N/C or N/O contacts are connected to the (O) switch 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)** 2 position un-pluggable terminal block. This input must see the 2.2K ohm end of line resistor to be in the normal

condition. A change in resistance of + or – 60% caused by shorting or opening the EOL will cause the trigger activate, lighting the Trig LED, and de-energize all the enabled relays. The EOL should be placed at the end of the line to supervise the wire run from module to Fire alarm panel.

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

### Trigger Feedback

The PDD-8ACI module does not have a dedicated relay contacts to provide feedback; however any of the 8 outputs can be utilized to provide a trigger status feedback. This feedback can be used to make the trigger latch, provided feedback to control panel, or daisy chain to trigger other PDD-8ACI's.

### Ordering Information

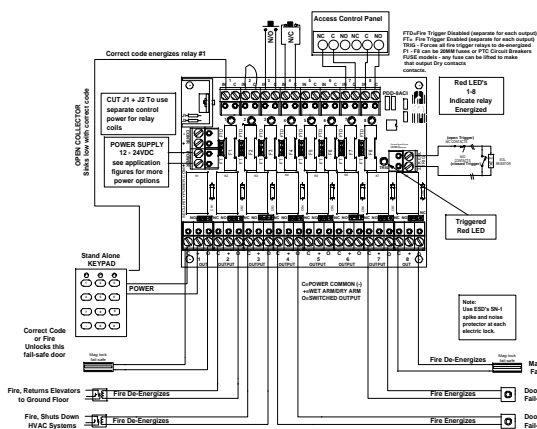
PDD-8ACI "ACI" module only with 2 Amp Fuses

PDD-8ACIC "ACIC" module only with 1.23 Amp PTC's  
SPS-5ELC81ACI SPS-5 power supply in a large enclosure with a PDM-8C distribution board and 1 PDD-8ACI fused module

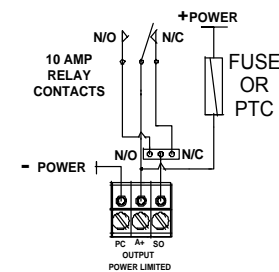
Each ACI takes the space of a standard PDM-8. We do not charge extra for mounting when purchased with a cabinet power supply.

### Specifications

Control (-contr+) 11 - 28vdc @ 160ma (20ma per relay)  
Main Power (-power+) ..... 0–32v ac or dc  
Note: Must cut J1 & J2 when using AC on Main Power  
Power Current ..... Total Output  
Input relay activate current (spike protected)..... 20ma  
Terminal blocks un-pluggable 5mm spacing 14–28 awg  
PTC Outputs 1-8 Power Limited Class II ..... 1.23 Amp  
Fused Outputs 1-8 Non Power Limited ..... 2 Amp  
Output Relays 1-8 Contacts rating ..... 7A 125VAC  
Trigger Input ..... 2.2K EOL  
Operating Temperature ..... -40° ~ +85C  
Mounting Holes (4) 3.4" x 4.5" Weight: ..... 8oz



### Output Schematic



### Installation Instructions:

1. Mount module or system in an appropriate location.
2. Keep a minimum space of 1/4" between any Non Power Limited wires and the Power limited outputs of this device.
3. If you are using a single DC Power Supply, connect it to Power input. When using two power supplies, Cut J1 & J2 and apply DC power to the Control input. When using two power supplies, the main Power can be AC or DC. See Figure 2.
4. Set Wet/Dry Jumpers 1 – 8.
5. Set NO/NC Jumpers 1 – 8.
6. Connect relay Inputs 1 – 8 as required.
7. Connect Output Terminals to devices as required.
8. Connect trigger input. When the marked polarity DC voltage is applied to the trigger input, the trigger LED will come on and all the Output relays will be de-energized.