
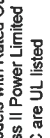


TECHNICAL SALES BULLETIN

PDM-4, PDM-8 & PDM-9 Distribution modules

PDM-4 / PDM-8 / PDM-9

**Multi Output
Low Voltage Power Distribution Modules
Made in the USA with a Life Time Warranty**

- Features/Specifications:**
- Distributes a single AC or DC Input to 4, 8, or 9 protected outputs with fuses or PTC auto resetting 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 Ratings
 - 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 of 1.42 Amps or below are UL Class II Power Limited 
 - PDM-8 & PDM-8C are UL listed 
 - All Input Terminal blocks and output terminal blocks on the PDM-8 module are rated 40A with a wire range of 10 – 28AWG
 - Output Terminal blocks on the PDM-4 and PDM-9 are rated 10A with wire range 14-28AWG
 - 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

Fuse & PTC's Characteristics

Some of our part numbers use the letter "D" to indicate Fuse's and the letter "C" to indicate PTC circuit breakers. Fuse's have the benefits of tripping fast from a fault and have a memory in that the green indicator LED associated with each output will remain off until the fuse is replaced with a new one. Some will argue that a blown fuse will usually require a service call to replace the blown fuse. Typical Fuses trip within 5 seconds with a 200% overload and 4 minutes with a 100% overload.

PTC's, Positive Temperature Coefficient fuses are auto resetting solid state devices. When the PTC heats from an overload, it switches from a short circuit to a high resistance state. After the PTC cools down the device will return to it's low resistance normal state. If the normal load is pretty low compared to the rating, the device will auto reset by itself, other wise the load may have to be

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PDM-4, PDM-8 & PDM-9

removed for up to 2 minutes for the device to cool and return to its normal state.

There are a couple of more serious issues that must be considered when selecting a PTC.

1. A voltage spike from an unprotected electric lock can damage a PTC output. Some type of voltage suppression, such as our SN-1, should be utilized at each device that can create a high voltage spike.
 2. The thermal delay of a PTC can cause a high current to flow until the faulted output is tripped. If the power supply on the input of the distribution board can not deliver the demand, the other normal outputs could see a power drop. To reduce this problem, it is recommended that you use only default "C" options listed.
- The PTC current rating is to hold that current at 130 degrees Fahrenheit. A typical trip time for a 400% overload would be about 8 seconds.

Ordering details for Distribution Modules

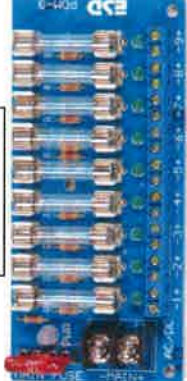
PDM-4-FFF	4 Fused Outputs with power switch and status LED's.
PDM-4C-CCC	4 PTC Circuit Breaker Outputs with power switch and status LED's
PDM-8-MMM-	8 Fused Outputs with ATO Main/power pull fuse, status LED's and 1500 watt surge protector.
FFF	
PDM-8C-MMM-	8 PTC Circuit Breaker Outputs with ATO Main/power pull fuse, status LED's and 1500 watt surge protector.
CCC	
PDM-9-MMM-	9 Fused Outputs with ATO Main/power pull fuse and status LED's.
FFF	
PDM-9C-MMM-	9 PTC Circuit Breaker Outputs with ATO Main/power pull fuse and status LED's
CCC	
FFF	FFF = Fuse Rating in Amps (x xx) standard 3agc Size: (050 = 500ma); (100 = 1A); (200 = 2A); (300 = 3A); (400 = 4A); (500 = 5A)
Fuse 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)
CCC	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) (400 = 40A)
Circuit Breaker options	
MMM	
Main Fuse options	



PDM-4
PDM-4C
PDM-8
PDM-8C
SECURITY
SIGNALLING




PDM-9
PDM-9C
Below
Are NOT UL Listed



Electronic Security Devices
2200 N MacArthur Drive
Tracy, CA 95376

06/20/06 © Technical Literature and Full name specifications subject to change
Products@pdmtechnicals.com

Manufacturers of High Quality Security Devices
Phone: (209) 225-7140 Fax: (209) 229-7145
ESD@SecurityPower.com www.SecurityPower.com

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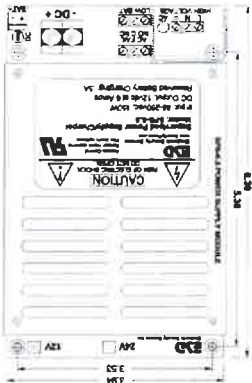
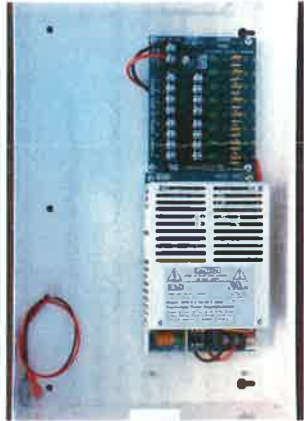
SPS-36 Series Supervised Power Supply Charger

- SPS-3.3 24VDC – 3.3A - Supervised Power Supply/Charger module
- SPS-6.5 12VDC – 6.5A - Supervised Power Supply/Charger module
- SPS-3.3E 24VDC module mounted in Enclosure
- SPS-6.5E 12VDC module mounted in Enclosure
- SPS-3.3E/C8 SPS-3.3 with PDM-8C 8 class II Outputs mounted in 14x9 Enclosure
- SPS-6.5E/C8 SPS-6.5 with PDM-8C 8 class II Outputs mounted in 14x9 Enclosure

“RT” - Rain Tight NEMA 3 Enclosure
 “P” - adds Smart Fan inside module for extreme duty
Made in the USA with a Lifetime Warranty

- Features:**
- Super Clean Linear Performance
 - Universal Input: 85vac-260vac Tolerates Brownouts
 - Self Contained No External Transformer Required
 - Precision Battery Charging and Output Regulation.
 - C Models have PDM-8C 8 class II Power Limited Outputs with PTC Circuit Breakers
 - Indicating LED's for AC, DC Power, and Each Output on PDM-8C Board
 - AC Fail Alarm Form C Contacts
 - Low Battery Alarm Form C Contacts
 - Battery Cut-off Relay Prevents Deep Discharge
 - Battery is Float Charged for Faster Charging with No Switch Over or Drop when AC fails.
 - Thermally Protected
 - Short Circuit Protection
 - Plug-in Battery Cable is Provided

- Description**
- The SPS-3.3 and SPS-6.5 are part of our SPS-36 Series Linear performance power supplies. They are clean, efficient, heavy duty, low frequency off-line switching power supplies with precision battery charger and power supervision. These supplies are so clean that they can be used anywhere a linear or switching supply is recommended. The filtering and switching systems we use are very similar to what you would find on high quality computers. Even though the SPS-3.3 (24V) and the SPS-6.5 (12V) are both 100 watt power supplies utilizing the same printed wiring board, we offer separate 12V and 24V models for optimum performance. The universal input of 85vac to 260vac allows them to be used anywhere in the world without adjustments to the power input. To tolerate brownouts, the SPS-6.5 and SPS-3.3 will remain operational down to 60vac. The SPS-3.3 and SPS-6.5 are fully self-



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

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SPS-36 Series Supervised Power Supply Charger Continued

The SPS-6.5 12VDC is rated for 6 Amps continuous current. The SPS-3.3 24VDC has 300ma reserved for battery charging, while the SPS-6.5 has 500ma reserved. The PDM-8C (C8 option) distribution board adds 8 class II power limited outputs. Power Supervision uses 3 relays and electronics to indicate 3 levels of the stand by battery(s). The AC Fail relay is triggered by detecting a small drop in DC output and provides a form C contact set to indicate the AC has failed

Specifications

AC Input: 3P Terminal block in high voltage barrier Line, Neutral, and Earth Ground

AC Input 85-260vac/47-63Hz/150W

Universal AC Input does not require any selection switching

Earth ground terminal must be connected to earth ground.

AC LED Indicator LED Green

AC Line Fuse Link - Inside unit for catastrophic failure. This fuse is not field replaceable. A blown fuse would be indicated by the AC LED off with AC power applied.

DC Output 2P Terminal block 28-12awg

Nominal Voltage SPS-3.3/SPS-6.5 24/12vdc

Typical Voltage SPS-3.3/SPS-6.5 27.30/13.65vdc

Total Output continuous SPS-3.3/SPS-6.5 3A/6A

SPS-3.3E/C8 with PDM-8C Outputs 1-8 Power Limited Class II PTC Circuit Breakers rating 720mA

SPS-6.5E/C8 with PDM-8C Outputs 1-8 Power Limited Class II PTC circuit breakers rating 1.50A

Typical Output Ripple & Noise SPS-3.3/SPS-6.5 Peak to Peak 50mV/25mV

Current Overload Protection Electronic & PTC's

Battery PTC Protection SPS-3.3/SPS-6.5 3A/6A

Main Power DC LED adjacent to battery connector... Red

Switching Frequency 27KHz

Supervisory Functions:

AC Fail Contacts: 3P Terminal block - annunciates AC fail - "C" contacts "NO, O, NC" 24V/120vac

Three position AC fail terminal block is marked "NO, C, NC" are shown in the Normal, energized, AC On condition. Note: AC fail is detected by a slight drop in DC output voltage. Relay trip point is approximately 99% battery capacity.

Low battery Output: 3P Terminal block - annunciates Low battery "C" contacts "NO, O, NC" 24V/120vac

Low battery tip SPS-3.3/SPS-6.5 22.0/11.0 VDC

AC fail, Low Battery, and Battery cut-off Relays are normally energized for fail-safe operation.

Battery Disconnect trip points 24/12V 20.0/10.0

Battery Cutoff Internal relay contacts 15A

Battery Charging: (Header plug marked (BAT+))

The battery charger is precision set to float charge 12V or 24V sealed, gel, AGM, or wet lead acid batteries. Two 12V batteries are connected in series for 24V. The (AH) Amp hour capacity may be anything between 4AH and 200 AH. UL evaluated with 40 AH.

and the supply is running on standby batteries. The LOW BAT relay provides a form C contact set to indicate the battery(s) is low. Either of these form "C" contacts, can be used to signal a buzzer and/or other signaling device. A 3 relay with electronics is used to disconnect the battery(s) at the end of its service limit, preventing deep discharge that can damage the battery(s). All three relays are normally energized for fail safe operation.

The Amp Hour recharge rate equals:

DC Output Amps Rating – DC Load Amps + .5

See charge/discharge table on instructions.

Environmental:

Humidity 95% RH Non Condensing

Temperature -40°C – 85°C

Operating Temperature Range 100% rating:

OT Power module only -20 – 44°C

OT with E-1485 Enclosure on wall -20 – 35°C

each 3% load reduction increases OT by +1°C

"F" Smart Fan Turn ON 11°C

"F" Smart Fan Turn ON 33°C

Over temp inside module (DC output is reduced) 71°C

OT Module with /F option & 50% load -20- 64°C

Mechanical Characteristics:

SPS-3.3/SPS-6.5 weight (module only) 1.5 lbs

SPS-3.3E/C8/SPS-6.5E/C8 weight in enclosure 7.6 lbs

SPS-3.3/SPS-6.5 (module only) size: 6.40" x 3.95" x 2.35"D

SPS-3.3/SPS-6.5 module mounting holes center to center (4 holes) 5.36" H x 3.54" W

"E" Enclosure size (inside dimensions) 14" W x 9" H x 3.5" D

"E" Enclosure mounting holes center to center (4 holes) 12.74" x 6.98"

Note: For knock out and mounting locations, see graphic drawing of SPS-6.5E on Installation Instructions



Approvals:
 EMI conducted and radiated EN61204-3 Class A
 UL 284 Access Control, UL 603 Burglar Systems, UL 1076 Proprietary Burglar, UL 1481 Fire Alarm Systems
 CSA 603-M1988, UL C1076, UL C S318 Burglar systems
 CSA 22.2 #205 Signal Equipment the # S8102
 The sub assemblies are UL Recognized components
 The finished products in the enclosure are UL Listed
 RoHS Lead Free

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