

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-3.3EC8 SPS-3.3 with PDM-8C 8 class II Outputs mounted in 14x9 Enclosure

SPS-6.5EC8 SPS-6.5 with PDM-8C 8 class II Outputs mounted in 14x9 Enclosure

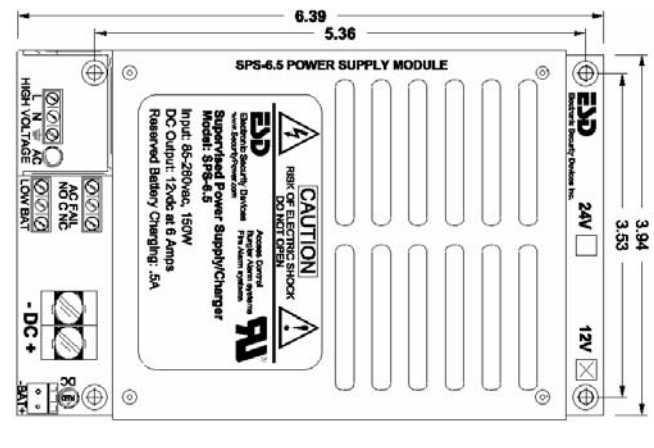
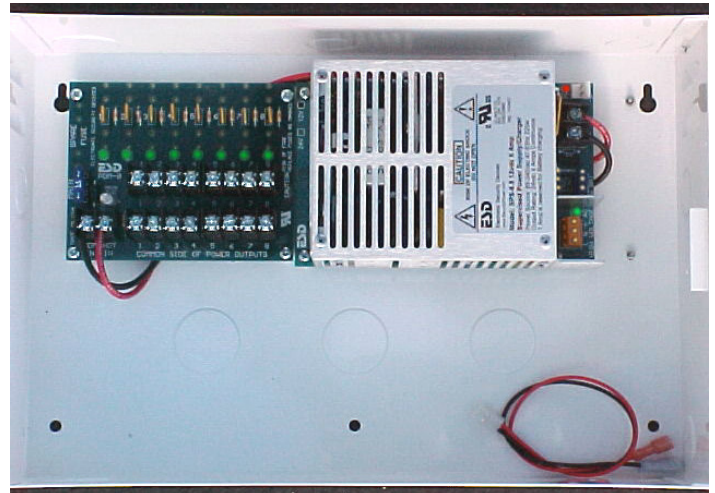
“RT” - Rain Tight NEMA 3 Enclosure

“F” 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-

contained and isolated from the line to all world safety standards. Each power supply weighs less than 1.5 lbs and occupies less than 1/2 of a cubic foot of cabinet space. The SPS-3.3 and SPS-6.5 become an uninterruptible power supply when a stand-by battery(s) is connected with the provided battery cable. These supplies have a special power limiting circuit that allows the battery(s) to be float charged across the output without lock up or chirping on and off. The battery(s) is protected with an automatic resetting circuit breaker and diode for over current and accidental reversed battery hookup. Precision float charging means faster recovery time and longer life for the battery(s). There is no switch over or voltage drop when input power fails. Standby battery(s) can be any capacity between 4 and 40 Amp hours. The SPS-3.3 24VDC is rated for 3 Amps continuous current while



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

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 3rd 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.

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-3.3EC8 with PDM-8C Outputs 1-8 Power Limited
Class II PTC Circuit Breakers rating 720mA
SPS-6.5EC8 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" 2A/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" 2A/120vac
Low battery trip 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.

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
Ts Storage Temperature -40°C – 85°C
Ot 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 option Increases Ot by: 11C
"F" Smart Fan Turn ON 35C
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-3.3EC8/SPS-6.5EC8 weight in enclosure 7.6 lbs
SPS-3.3/SPS-6.5 (module only) size:
..... 6.40H" x 3.95"W 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)
..... 14W" x 9H" 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 294 Access Control, UL 603 Burglar Systems, UL 1076 Proprietary Burglar, UL 1481 Fire Alarm Systems
C603-M1988, ULC C1076, ULC S318 Burglar systems
CSA 22.2 #205 Signal Equipment file # S8102
The sub assemblies are UL Recognized components
The finished products in the enclosure are UL Listed
RoHS Lead Free