

SPS-3.3M4 24VDC – 3.3A - 4 Outputs, 3 class II Power Limited – Supervised Power Supply/Charger Module
SPS-6.5M4 12VDC – 6.5A - 4 Power Limited Outputs - Supervised Power Supply/Charger Module

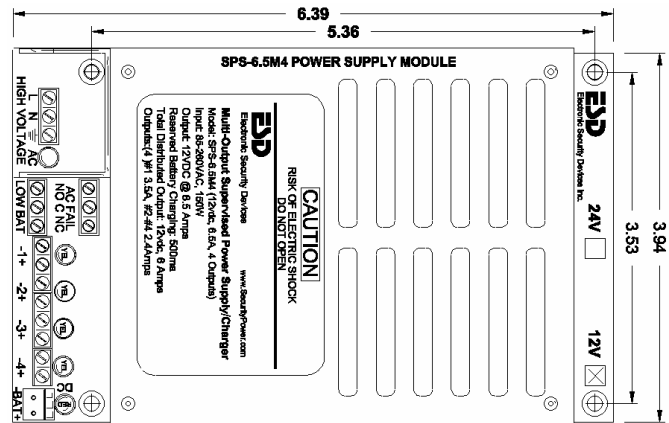
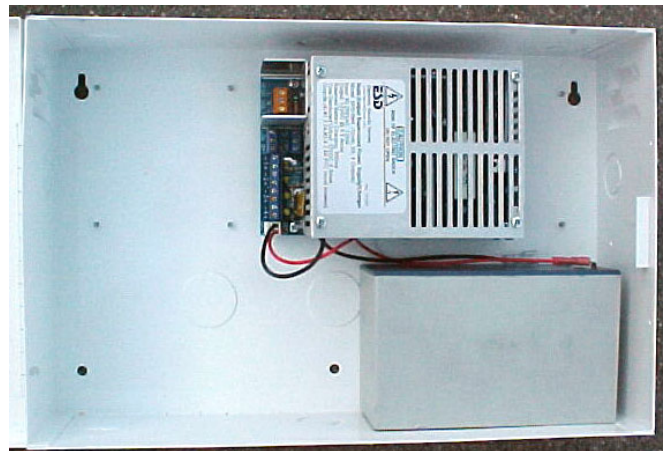
SPS-3.3M4E SPS-3.3M4 mounted in Enclosure
SPS-6.5M4E SPS-6.5M4 mounted in Enclosure
 “RT” -Rain Tight NEMA 3 Enclosure

“F” adds Smart Fan inside module for extended temperature operation

Made in the USA with a Lifetime Warranty

Features:

- Super Clean Linear Performance
- Universal Input: 85vac–264vac Tolerates Brownouts
- Self contained
- No External Transformer Required
- Precision Battery Charging and Output Regulation.
- Four Outputs on Board are Class II Power Limited with PTC Circuit Breakers except Output #1 of SPS-6.5M4 is not Class II
- Indicating LED’s for AC, DC Power, and Each Output
- 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 when AC fails.
- Short Circuit and Thermally Protected
- Plug-in Battery Cable Assembly is Provided
- UL and CUL Listed
- UL603 Burglar Alarm Systems
- UL294 Access Control
- UL1481 & NFPA72 Fire Alarm Systems
- Compliant with EN60950, EN61204-3 Class A



Description

The SPS-3.3M4 and SPS-6.5M4 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-3.3M4 (24V) and the SPS-6.5M4 (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 264vac allows them to be used anywhere in the world without adjustments to the power input. The SPS-3.3M4 and SPS-6.5M4 are operational down to 60vac to tolerate brownouts very well. The SPS-3.3M4 and SPS-6.5M4 are fully self-contained and

isolated from the line and ground to EN1650 world safety standards. The SPS-3.3M4 and SPS-6.5M4 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 batteries 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 200 Amp hours. The SPS-3.3M4 24VDC is rated for 3 Amps of Continuous current while the SPS-6.5M4 12VDC is rated for 6 Amps of continuous current. Power Supervision uses 3 relays

09/12/08 © Technical Literature jdb SPS3.3M4 & SPS-6.5M4 specifications subject to change
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SPS-3.3M4 & SPS-6.5M4 Continued

and electronics to indicate 3 levels of the stand by battery(s). The ACFAIL relay detects a small drop in DC voltage 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 form C contacts 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 from the Power Supply and Load at the end of its service limit, preventing deep discharge that will 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 18-12 gauge

AC Input/Hz/Watts 85-260ac/47-63Hz/150W

AC Input Rating 90-250vac/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 Outputs: 8P Terminal block 28-14 gauge

Nominal Voltage SPS-3.3M4/SPS-6.5M4 24/12vdc

Typical Voltage SPS-3.3M4/SPS-6.5M4 27.3/13.65vdc

Total continuous DC output total of all outputs 1-4

SPS-3.3M4/SPS-6.5M4 3A/6A

Output #1 SPS-3.3M4/SPS-6.5M4 PTC Circuit Breaker continuous rating class II power limited..... 3.5A/1.93A

Note: Output #1 on SPS-6.5M4 is not class II

Output #2-#4 SPS-3.3M4/SPS-6.5M4 Circuit Breaker continuous rating power limited class II.....1.42A/2.4A

DC Output Indicators (4 LED's adjacent to each

output #1 - #4) LED's Yellow

Main DC Power LED Red

Typical Output Ripple & Noise SPS-3.3M4/SPS-6.5M4

Peak to Peak 50mv/25mv pp

Current Overload Protection Electronic & PTC's

Battery PTC protection SPS-3.3M4/SPS-6.5M4 3A/6A

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 Contacts: 3P Terminal block 28-14 awg

annunciates low battery contacts “NO, O, NC” 2A/120vac

Low battery trip point 24/12V 22.0/11.0vdc

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+]) 12”

battery cable provided. 24” and 36” long battery

cables are available

The battery charger is precision set to float charge 12V or 24V sealed, gel, wet, or AGM lead acid batteries. Two 12V batteries are connected in series for 24V. The Amp Hour (AH) capacity must be above 4AH and the practical limit is 200AH. The supplies have been evaluated at UL with a 40 Ah battery.

The Amp Hour recharge rate equals:

DC Output Amps Rating – DC load Amps + .5A

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: +11°C

“/F” Smart Fan turn on Temp 35F

Over temp inside (DC Output is reduced by 1/3) 71°C

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

Mechanical Characteristics:

SPS-3.3M4/SPS-6.5M4 weight (module only) .. 1.5 lbs

SPS-3.3M4E/SPS-6.5M4E weight in enclosure 7.2 lbs

Power module only 6.40H” x 3.95”W x 2.35”D

Mounting holes (4 holes) 5.36”H x 3.54”W

“F” Smart Fan option module (does not change size)

“RT” Rain Tight NEMA 3 outdoor 6”Wx8”Hx4”D

“E” Enclosure dimensions 14W” x 9H” x 3.5”D

mounting holes (4) 12.74” x 6.98”

Note: For knock out and mounting locations, see graphic drawing of SPS-6.5M4E on Installation Instructions



Approvals:

EMI conducted and radiated EN61204-3 Class A, Safety EN60950

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