

SPS-3ES shown below

- SPS-3** 12/24vdc 3A/1.5A Supervised Power Supply /Charger module
- SP-3** 12/24vdc 3A/1.5A Power Supply/Charger module
- SP-3V** 12/24vdc adjustable 3A/1.5A CCTV Power Supply module
- “ES”** adds any of the modules mounted in our 8”x9” Enclosure
- “E”** adds any of the modules mounted in our 14”x9” Enclosure
- “ACI”** adds PDD-8ACI 8 input/output Access Control Relays with EOL Fire Interface module
- “PCI”** adds PDD-8PCI 8 output distribution with EOL Fire Transfer
- “FT”** adds PDD-FT Fire Transfer Rely with EOL Interface
- “8C”** adds PMD-8C, 8 output distribution board with PTC’s  
See comments regarding PTC’s on PDM Distribution [Tech Sales](#)
- “D8”** adds PDM-8, 8 output distribution board with fuses
- SP-3VESD8** 12v/24vdc 3A/1.5A CCTV power supply with 8 fused outputs in our 8”x9” Enclosure

All made with a Lifetime Warranty in the USA



**Features SPS-3, SP-3 & SP-3V:**

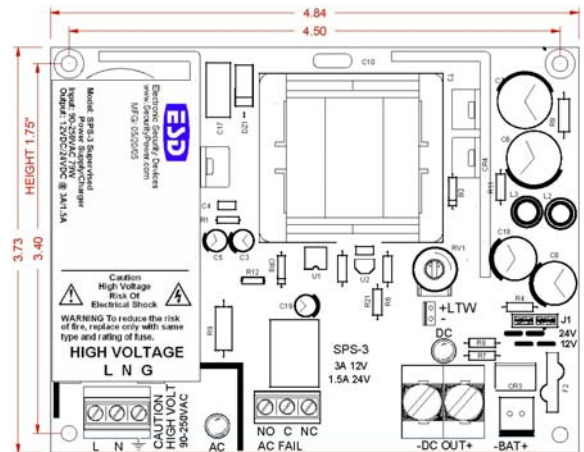
- **Small – Self Contained – Efficient**
- **Universal AC Input 90-250vac**
- **Excellent Brown Out Capability Operational from 60-264vac**
- **12vdc 3A/24vdc 1.5A Selectable Continuous Duty**
- **All Outputs are Class II power limited**
- **Very Clean Output that will operate most readers**
- **Input and Output Surge Protected**
- **Power Limited Output with Thermal Protection**
- **AC and DC LED’s**
- **SP-3V CCTV model DC output is adjustable**

**SP-3 Power supply with Battery Charger (adds)**

- **Precise Battery Regulation for all sealed Lead Acid Battery(s)**
- **Battery Online, No Drop or Switch Over with AC Power Fail**
- **Reverse Battery Protection**
- **Comes with quick plug in battery cable assembly**

**SPS-3 Supervised Features (adds)**

- **UL and cUL tested to standards UL 603 Power Supplies Burglar, UL 294 Access Control and ULC-S318-96 Canadian Standard for Power supplies for Burglar Alarm Systems**
- **AC Fail Relay “C” Contacts Indicates AC Power Status**
- **LTW Limited Time Warning of stand by battery(s)**
- **Low Battery Disconnect (Battery Cut-off)**



**Description**

The SP-3V, SP-3, & SPS-3 are heavy duty self contained, efficient clean off-line switching power supplies that are selectable between 12vdc at 3 Amps, and 24vdc at 1.5 Amps. With the universal AC input, these supplies may be connected anywhere in the world with no plug-in transformer or any alterations. These power supplies have exceptional brown out capability with operation down to 60vac. The SP-3V has an adjustable output with no battery charger and is intended to be used where no standby power is

required. All of the supplies have an extensive filtering system that provides a very clean DC output that can power most readers and sensitive equipment. They also have power limited and thermally protected outputs. All outputs are class II power limited. All faults are self restoring.

The SP-3 and SPS-3 both have a precision lead acid battery(s) charger that obtains maximum battery life while providing a 12vdc or 24vdc uninterruptible power



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06/25/09 © Technical Literature jdb SPS-3 specifications subject to change  
sp-3/sp3TechSales.doc

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## SPS-3 12v/24v Series Power Supply continued

supply. The SP-3 & SPS-3 are protected against Battery(s) reversal, shorting or overloading.

Before connecting AC and battery(s), set 12v/24v selector jumpers to the desired voltage. **Caution**, damage will occur if jumpers are moved with DC output load or Battery connected. Confirm proper voltage before connecting devices.

The SPS-3 has the additional supervisory features of a set of form "C" relay contacts that indicates AC power status, and a special electronic circuit that limits the output current to provide class II power limiting and load disconnect when battery(s) is depleted.

### Specifications

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

Safety block with recessed hardware insulation that will accept up to 12AWG

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

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

AC Input Rating ..... 90-250vac/130W 50/60Hz

AC Input Operational ..... 60-264vac

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

The AC indicator is a bi-color green and red led.

#### AC Line Fuse

Fuse: ..... 5 x 20mm 2A 250v fast

#### DC VOLTAGE SELECTOR JUMPER J1

The selector jumper J1 selects the voltage to 12v or 24vdc. As marked on the PCB, jumping 1&2 and 3&4 sets the supply to 12v. Jumping 2&3 sets the supply to 24vdc. **CAUTION** To prevent damage, remove DC load and battery(s) connections before switching selector J1 jumpers

#### DC OUTPUT: 2P Terminal block

Output voltage Nominal ..... 12vdc/24vdc

Output voltage Typical ..... 13.65/27.30

SP-3V Adjustable ..... 12 – 13.5vdc/24-27vdc

Output continuous current 12v/24v ..... 3A/1.5A

Output ripple & noise @ 80% load ..... 10mv rms Typ

Current Overload Short Circuit Protection ..... Yes

Thermal runaway Protection ..... Yes

*Current Overload and Thermal shutdown will auto-restart without removing load.*

All Outputs are Class II Power limiting ..... Yes

SP-3 Class II Power limiting ..... No

SPS-3 Class II Power limiting ..... Yes

Switching Frequency ..... 132KHz

DC LED Indicator (Adjacent to DC Output) ..... Red

#### SPS-3 Supervised added features:

Low Battery Disconnect 12v/24v ..... 9/18v

#### AC Fail contacts: 3P Terminal block

AC Fail "C" contacts rating ..... 2A/120vac

*Three position AC fail terminal block marked "NO, C, NC" are shown in the Normal, energized, "AC ON" condition.*

#### LTW Limited Time warning for stand by batteries

Header 2 position .1" spacing (+ -) ..... - sinks up to 3ma

#### Battery Charging: (Header plug marked [-Bat+])

##### SP-3 & SPS-3 only

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. A 12" battery cable assembly is provided that plugs from module to battery. Red (+) 12vdc, Black (-) Neg.

Optional 36" battery cable (1) P/N: ..... WA-36IBAT

Battery(s), any type of lead acid ..... 12v 4AH-40AH

UL evaluated with 7AH sealed lead acid battery(s)

Battery(s) PTC self resetting Circuit Breaker ... 3A PTC

Battery(s) Reverse hookup protection ..... Yes

To estimate the recharge time in hours for depleted battery(s), multiply the AH rating times 4 (AH x 4). As an example, a 24v system with two depleted 12v 7AH batteries would take about 28 hours to re-charge. See <http://www.securitypower.com/an3batby.pdf> for battery standby selection table.

#### 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-89 Enclosure on wall ..... -20 – 33°C

each 3% load reduction increases Ot by ..... +1°C

Over temp shut down Mosfet Jt Temp ..... 150°C

#### Mechanical Characteristics:

Module Dimensions ..... 4.84"Lx3.73"Wx2"H

*Height includes 5/8" standoffs, not provided with module only.*

Mounting Holes Center to Center ..... 4.50"W x 3.41"H

SPS-3 module only Weight ..... 10oz

SPS-3ES (SPS-3 in small enclosure) ..... 8" x 9" x 3.50"

SPS-3ES (with enclosure) Weight ..... 4.7Lbs

#### Approvals:



SP-3V, SP-3, & SPS-3 meet safety UL1950 & EN60950

SPS-3 Series power supplies are UL for listed for Access Control & Burglar Alarm systems UL294 UL603 & ULC5302)

RoHs Lead Free