

# Power Supply



The Goliath series of power supplies are designed to meet the increased power demands of the latest performance PC's, Workstations, and entry level Network Servers, where multiple processors, increased memory/cache requirements, and enhanced graphics solutions, are challenging the limits of existing PS2 form factor power supplies. It is available with I/O's that are compliant with Intel's Marlinspike, WTX, and SSI motherboards. It is available in a redundant option for Network Server applications. The series offers optimal performance with no cross regulation, or combined load limitations.

### Standard Features

- High Reliability
- Built-In EMI Filter (VDE Level B)
- Efficiency Compatible with "Energy Star" Systems
- No Cross Regulation or Combined Load Limitations
- Advance Power Fail Warning
- Auto Re-Start after AC Power Fail
- TTL Compatible Power Good Signal
- Low Noise, 80mm Ball Bearing Fan
- Short Circuit, Over Voltage & Current Protection on all Main Outputs.
- High Efficiency +5V Standby Power Supply

### Environmental

Operating Temperature: 10° to 50°C

Storage Temperature: -40° to 70°C

Relative Humidity: 8% to 95%  
@ 10°C to 50°C Non Condensing

### Reliability

MTBF > 200,000 Hours

Please see specification for complete description of product capabilities

### Electrical Specifications

#### Input

Voltage Range: 90 – 140VAC and 180 – 264VAC ( Switch Selectable )

Frequency: 47 – 63Hz

EMI/RFI: Conforms FCC 20780 Part 15 Subpart J, Class B and VDE 0871 Level B CISPIR 22 Class B, CE Compliant

Efficiency: >70% @ Full Load, E- Star Compliant

Leakage Current: <0.75mA @ 240 VAC to GND

On/Off Signal: CMOS compatible: Logic 0 = On, Logic 1 = Off (pull up to +5V Aux)

#### Output

Maximum Continuous Power: 350W @ 50°C

Maximum Surge Power: 450W @ 50°C

Hold-up Time: 10mS Full Load (Nominal Line)

OUTPUT	VOLTAGE	REGULATION	MINIMUM LOAD	MAXIMUM LOAD	PEAK	RIPPLE P-P (max)
1	+3.3V	+5 /-4%	0.5A	28A	-	50mV
2	+5V	+5 /-4%	1A	30A	-	50mV
3	+12V	+/-5%	0.1A	8A	12A	120mV
4	-12V	+/-10%	0A	0.3A	-	120mV
5	-5V	+/-10%	0A	0.3A	-	100mV
6	+5VSB	+/-5%	0A	1A	-	100mV

Airflow provided by an 80mm ball bearing fan. Airflow exhausts the PC chassis.

Over/Under Voltage Protection: Latching type on all outputs reset by cycling on/off control or AC power

Overcurrent/Short Circuit Protection: Latching type on all outputs reset by cycling on/off control or AC power

Power Good Signal: TTL/CMOS compatible see figure 1 for timing, open collector with internal pull up to +5V

### Safety

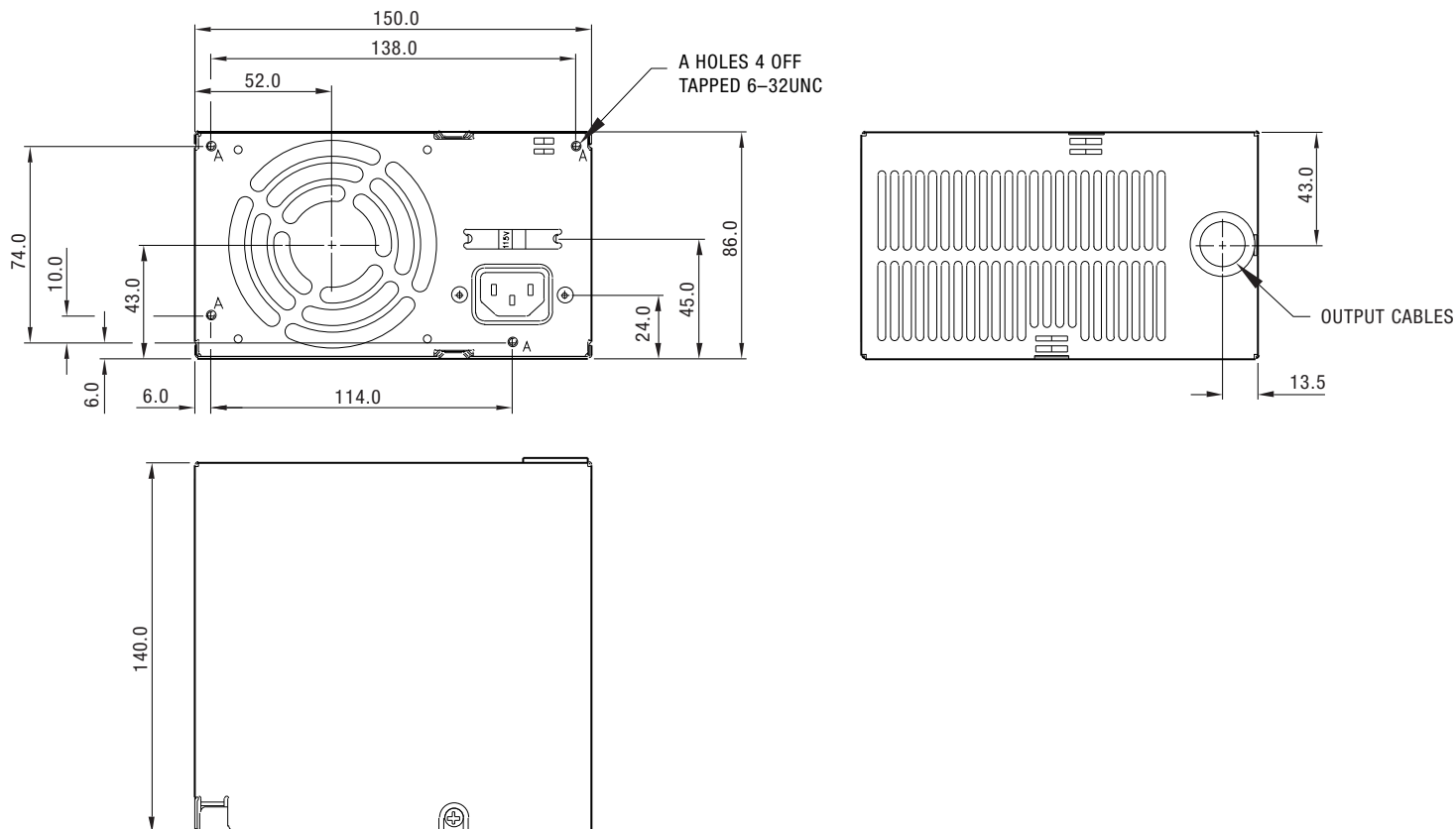
CB, UL, CSA, NEMKO, SEMKO, DEMKO, VDE, FIMKO, TUV, KEMA, IMQ, OVE, CEBEC, BSI, CE

### Certified to:

CB - IEC 950 Including Nordic Deviations

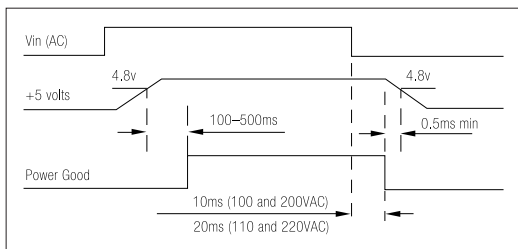


# Model SPS1042 - 350W - PS2 Case



All dimensions are in millimeters

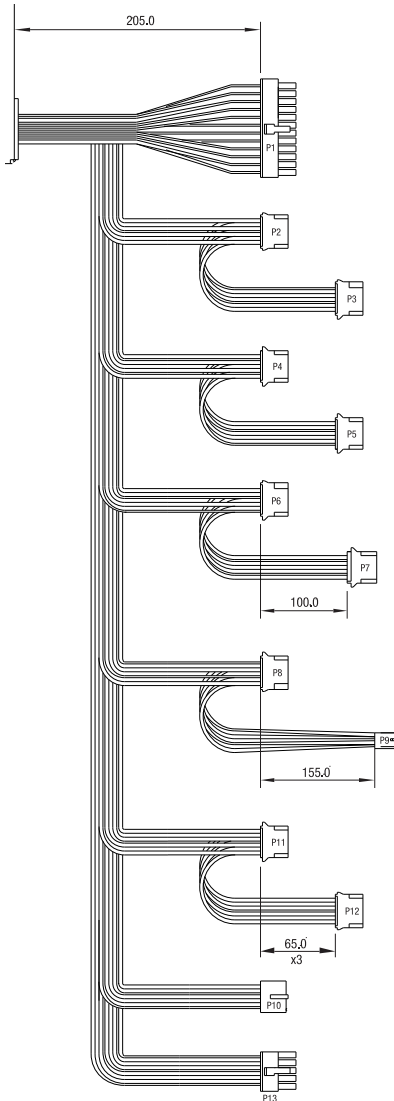
Figure 1. Power Good Timing



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# Model SPS1042 - 350W - PS2 Case

## Connector Option: SSI-EPS



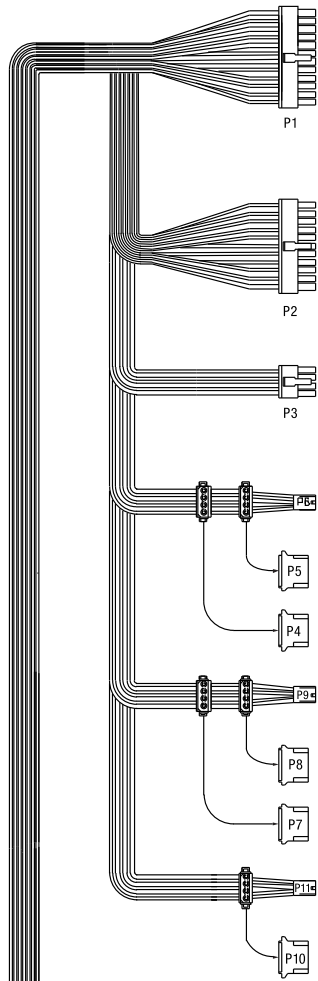
### PIN Assignments

Connector	PIN	Output	PIN	Output	Connector
<b>P1</b>	12	+3.3V	24	Common	Molex 39-01-2240 or equivalent
	11	+12V	23	+5V	
	10	+12V	22	+5V	
	9	+5VSB	21	+5V	
	8	PWR OK	20	NC	
	7	Common	19	Common	
	6	+5V	18	Common	
	5	Common	17	Common	
	4	+5V	16	PS ON	
	3	Common	15	Common	
	2	+3.3V	14	-12V	
	1	+3.3V	13	+3.3V	
	<b>P2</b>	2	Common	4	
1		+12V	3	Common	
<b>P3</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P4</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P5</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P6</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P7</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P8</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P9</b>	1	+5V	3	Common	Amp 17822-4 or equivalent
	2	Common	4	+12V	
<b>P10</b>	1	Common	4	+3.3V	Molex 90331-0010 or equivalent
	2	Common	5	+3.3V	
	3	Common	6	+5V	
<b>P11</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P12</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P13 (option)</b>	5	NC	10	NC	Molex 39-01-2100 or equivalent
	4	NC	9	NC	
	3	3.3V Remote	8	NC	
	2	NC	7	NC	
	1	Fan M (option)	6	NC	

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# Model SPS1042 - 350W - PS2 Case

## Connector Option: WTX Cable



### PIN Assignments

Connector	PIN	Output	PIN	Output	Connector
<b>P1</b>	12	+5V	24	+5V	Molex 39-01-2240 or equivalent
	11	+5V	23	+5V	
	10	Common	22	+5VSB	
	9	Common	21	Common	
	8	Common	20	Common	
	7	Common	19	Common	
	6	Common	18	Common	
	5	+3.3V	17	NC	
	4	+3.3V	16	+3.3V	
	3	+3.3V	15	+3.3V	
	2	+3.3V	14	+3.3V	
	1	+3.3V	13	+3.3V	
<b>P2</b>	11	NC	22	NC	Molex 01-2220 or equivalent
	10	PS-OK	21	PS-ON	
	9	NC	20	FAN M (option)	
	8	NC	19	NC	
	7	-12V	18	NC	
	6	+12V	17	+12V	
	5	Common	16	+12V	
	4	Common	15	Common	
	3	NC	14	NC	
	2	+3V3 SENSE	13	+3V3 SENSE RTN	
	1	+5V SENSE	12	+5V SENSE RTN	
<b>P3</b>	4	NC	8	NC	Molex 39-01-2080 or equivalent
	3	+12V	7	Common	
	2	+12V	6	Common	
	1	+12V	5	Common	
<b>P4</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P5</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P6</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P7</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P8</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P9</b>	2	Common	4	+12V	Amp 171822-4 or equivalent
	1	+5V	3	Common	
<b>P10</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P11</b>	2	Common	4	+12V	Amp 171822-4 or equivalent
	1	+5V	3	Common	

### Standard Cable Lengths

Measured from back face of connector to box ( $\pm 15$ mm)

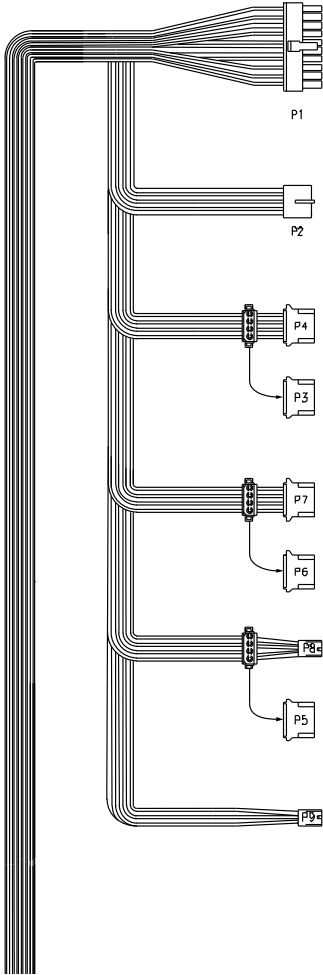
P1-205, P2-205, P3-205, P4-820, P5-975, P6-1130, P7-820, P8-975, P9-820, P10-975, P11-1130

Specifications subject to change without notice

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# Model SPS1042 - 350W - PS2 Case

## Connector Option: Marlinspike



### PIN Assignments

Connector	PIN	Output	PIN	Output	Connector
<b>P1</b>	10	+12V	20	+5V	Molex 39-01-2200 or equivalent
	9	+5VSB	19	+5V	
	8	PS OK	18	-5V	
	7	Common	17	Common	
	6	+5V	16	Common	
	5	Common	15	Common	
	4	+5V	14	PS ON	
	3	Common	13	Common	
	2	+3.3V	12	-12V	
	1	+3.3V	11	+3.3V	
<b>P2</b>	3	Common	6	+5V	Molex 90331-0010 or equivalent
	2	Common	5	+3.3V	
	1	Common	4	+3.3V	
<b>P3</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P4</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P5</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P6</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P7</b>	2	Common	4	+5V	Molex 8981-04P or equivalent
	1	+12V	3	Common	
<b>P8</b>	2	Common	4	+12V	Amp 171822-4 or equivalent
	1	+5V	3	Common	
<b>P9</b>	2	Common	4	+12V	Amp 171822-4 or equivalent
	1	+5V	3	Common	

### Standard Cable Lengths

Measured from back face of connector to box ( $\pm 15$ mm)

P1-435, P2-460, P3-120, P4-240, P5-300, P6-240, P7-430, P8-465, P9-300

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