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DSPS

DC-DC Mini ATX Power
Supply Specification Sheet
Model ESA-DS



DSPS

Wide DC input

Switching Power Supply

Models: ESA-DS160

ESA-DS200



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TABLE OF CONTENTS

1. INPUT	3
1.1. DC INPUT	3
2. DC OUTPUT - RATED (MAX)	3
2.1. REGULATION	3
2.2. P-P NOISE (NOT TO EXCEED)	4
2.3. OVER POWER PROTECTION	4
2.4. SHORT CIRCUIT PROTECTION	4
2.5. OVER VOLTAGE PROTECTION FOR +5V +24V +3.3V	4
2.6. UNDER VOLTAGE PROTECTION FOR +5V +3.3V	4
2.7. RISE TIME TURN ON DELAY NORMAL LOAD	4
2.8. POWER GOOD SIGNAL	4
3. TOTAL EFFICIENCY (TYPICAL)	4
4. ENVIRONMENTAL	4
4.1. TEMPERATURE RANGE	4
4.2. HUMIDITY:	4
4.3. ALTITUDE	5
4.4. COOLING	5
5. REGULATORY STANDARDS AND REQUIREMENTS	5
5.1. SAFETY MEET :	5
5.2. EMC MEET :	5
5.3. MEAN TIME BETWEEN FAILURE (MTBF)	5
6. MECHANICAL	5
6.1. WIRING	7
6.2. DC INPUT CONNECTOR	7
7. TECHNICAL REVISIONS	7



Introduction:

This specification defines electrical performance and characteristic of DSPS Model ESA-DS200 was designed with reference to the Intel ATX power supply design guide ATX 12V Ver, 2.01 with a wide DC input and based on patented technology.

1. INPUT

1.1. DC INPUT

	Min.	rate	Max.	Units.
Vin Range	8	12~24	32	Vdc

2. DC OUTPUT - rated (max)

Model : ESA-DS160

	+5V	+3.3V	+12V	-12V	+5VSB
Max(A)	15	14	12	0.8	2
W	76				
W	140			9.6	10

Note: Maximum total of output 160W

Model : ESA-DS200

	+5V	+3.3V	+12V	-12V	+5VSB
Max(A)	20	14	14	0.8	2
W	100				
W	180			9.6	10

Note: Maximum total of output 200W

2.1. Regulation

	Min	Nom	Max	Unit
+5V	4.75	5.00	5.25	V
+3.3V	3.14	3.30	3.46	V
+12V	11.40	12.00	12.60	V
-12V	-10.80	-12.00	-13.20	V
+5V SB	+4.75	+5.00	+5.25	V



2.2. P-P NOISE (not to exceed)

+5V	+12V	-12V	+5V SB	+3.3V
50mV	120mV	180mV	65mV	65mV

2.3. Over Power Protection

Total power protection: 115 ~160%

2.4. Short Circuit Protection

Short to ground or cross with each output rails, the Power supply auto shut down.

2.5. Over Voltage Protection for +5V +12V +3.3V

Threshold Voltage: 6.1 13.8 3.9

2.6. Under Voltage Protection for +5V +3.3V

Threshold Voltage: 3.5 2.2

2.7. Rise Time Turn On Delay Normal Load

Rise Time (0.5V to 4.75V): < 17ms

2.8. Power Good Signal

Duration: 150ms - 500ms

3. Total Efficiency (typical)

Typical: 80%(Full Load @ 12Vdc at 25°C)

4. Environmental

The SPS is capable of withstanding the following:

4.1. Temperature range

Operating:0°C to 45°C

Storage: - 40°C to 50°C

4.2. Humidity:

Operating:85% non-condensing

Storage:95% non-condensing



4.3. Altitude

Operating: Up to 2000 meters (max)
Storage: Up to 10000 meters (max)

4.4. Cooling

Single 40mm DC fan in power supply.

5. REGULATORY STANDARDS AND REQUIREMENTS

5.1. Safety meet:

USA:UL-60950—1
CANADIAN:c-UL 60950—1
Europe:CE: (LVD) EN60950

5.2. EMC meet:

FCC part 15 class B (DOC).

EN 55022; EN55024 98;

5.3. MEAN TIME BETWEEN FAILURE (MTBF)

The calculated mean time between failures for the DSPS is greater than 100,000 hours when operate under the following conditions the fans are excepted:

Ambient temperature:25°C
Loading:75% rated load

The calculation refers to the Bellcore Ver. 6.0 Technical Reference "Reliability Prediction procedure for Electrical Equipment".
The fans are exception.

6. MECHANICAL

Dimension : W81.5 x H40.5 x L150 mm

W3.2" x H1.65" x L 6"

DSPS

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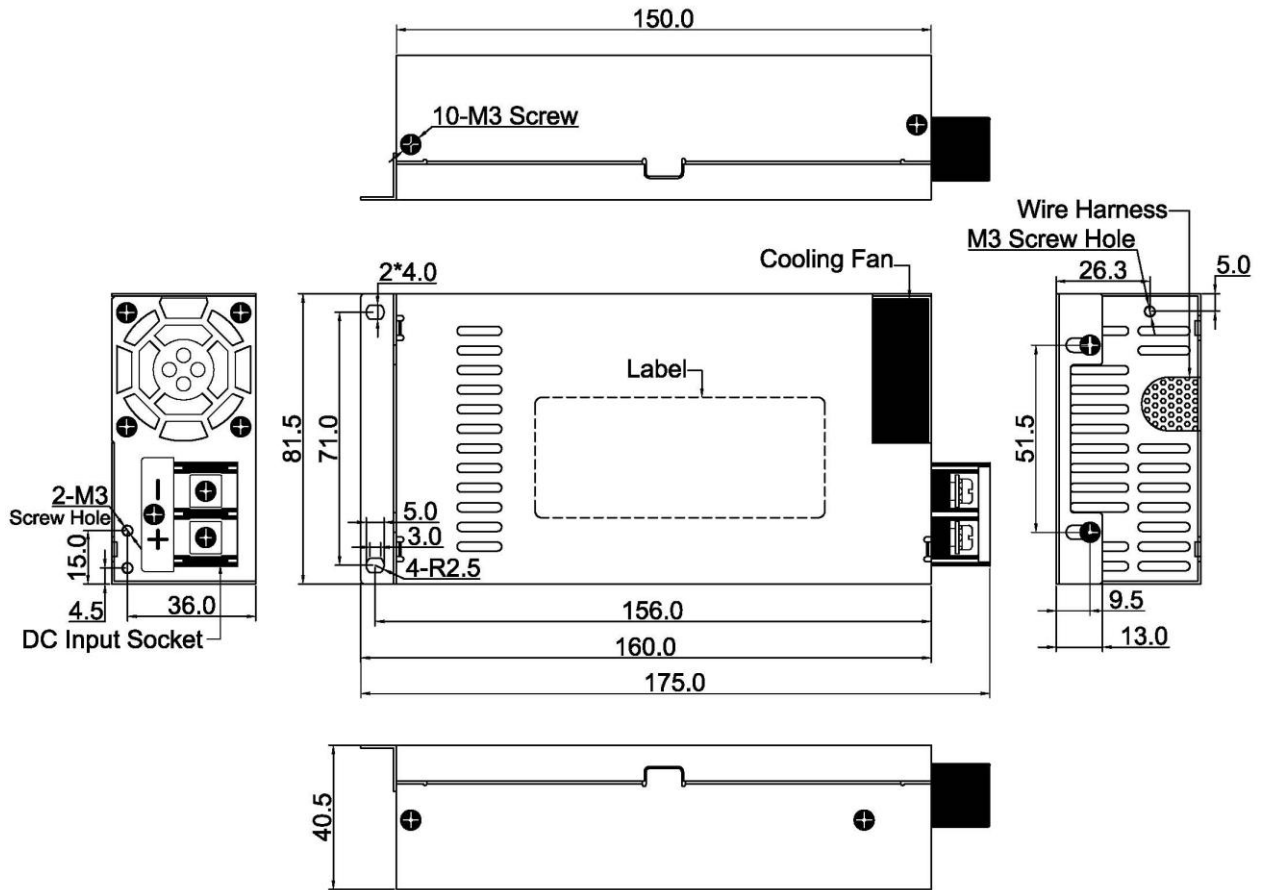


Fig 1



6.1. Wiring

Output wiring of ATX connectors (Fig 2).

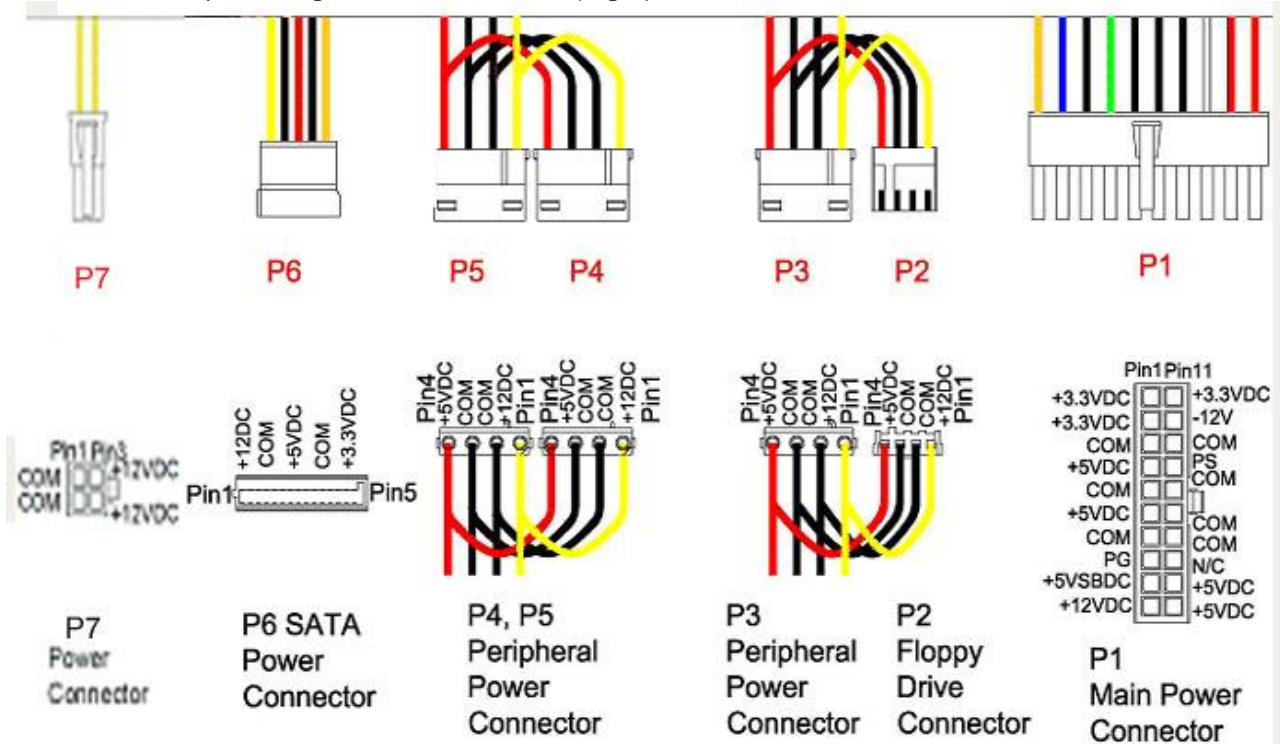


Fig. 2

6.2. DC Input connector

At the rear of the DSPS: 40A/100V screws with washers.

7. TECHNICAL REVISIONS

The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.

8. Ground Isolation Configuration

Checked items apply:

- Input ground isolated from output ground.
- Input ground isolated from chassis.
- Output ground isolated from chassis.
- Common input and output ground isolated from chassis.
- Common input and output ground tied to chassis.

Customer Approval: _____ Date: _____