

## WATT POWER SOLUTIONS

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## WPPS55 Mini ATX Datasheet



The WPPS55 ATX is a true six output 55w dc-dc converter with an Mini ITX form factor. 160(L) x 45(W) x 19.2(H)mm. Component height 18mm. The DC-DC Converter is designed to interface directly into the VIA range of motherboards.

**Input Voltage** 11.4V dc to 12.6V dc.  
**Input Current** 7.5A at 11.4V dc  
**Efficiency** 70%

### Output Characteristics

Nom Voltage	Regulation	O/P Current min	O/P Current max	Ripple and Noise
+3.3V	+/- 5%	0A	2.5A	80mv
+5V	+/-5%	0A	5.0A	80mv
+12V	+/-5%	0A	1A	160mv
-5V	+/-5%	0A	0.2A	80mv
-12V	+/-5%	0A	0.1A	160ma
+5Vsb	+/-5%	0A	1.5A	100mv

20MHZ bandwidth ripple and noise is measure by using 0.1uF CC & 10uF/50v EC bypassed at the output connector.

Regulation shows the % of absolute value of nominal output voltage. Total output power should be 55W maximum.

Cross regulation is measured at 25% to 100% maximum load.

### Overshoot at Turn-on/Turn-off

Any overshoot during turn-on/turn-off should be less than +/-5% of the voltage regulation tolerance. No voltage of opposite polarity shall be present on any output during turn-on or turn-off.

### Temperature Coefficient

The temperature coefficient of all outputs is +/-0.05% per degree C maximum.

### Over Voltage Protection

If any over voltage occurs, the power supply should latch off before any output exceeds its limits shown below:

Nominal voltage	Over voltage range from	Over voltage range to
+3.3V dc	+3.7V dc	+4.1V dc
+5V dc	+5.6V dc	+6.5V dc
+12V dc	+13.3V dc	+14.3V dc

The power supply will not be automatically recovered after the over voltage fault being removed. A manual power reset is necessary.

### Short Circuit Protection

Short circuit occurring on any output should not cause any damage to the power supply, but will shut it down. The power supply will not automatically recover after the overload is removed. A manual reset is necessary.

### Over Load Protection

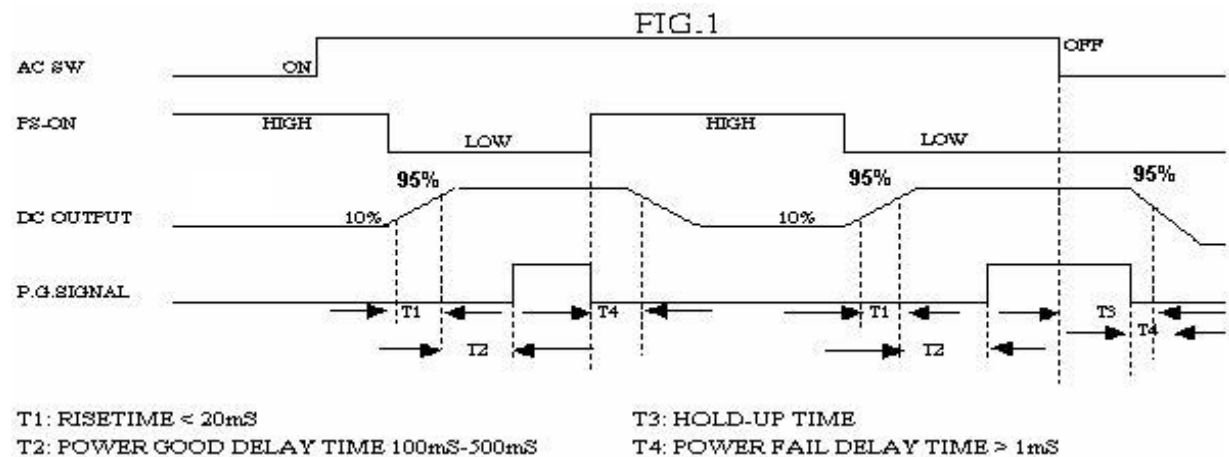
An over load protection will be effected when either of the loadings: +3.3V, +5V, -5V, -12V, +5Vsb exceeds +110% to 160%. The power supply will not automatically recover after the over load is removed. A manual reset is necessary.

### Rise Time

After turn-on, less than 10mS will be needed for the rise of +5V output voltage (measured from 10% point to 95% point on the waveform) to reach its peak.

### Power Good signal

After power-on with nominal DC input, there will be a turn-on delay (between 100mS to 500mS) before the Power Good Signal goes "high" and is present. This is because the +5v output has to reach its minimum sense level of +4.75v. When the power supply is turned off, the Power Good signal goes "low" for at least 1mS, before the +5v output falls below +4.75v.



### Electromagnetic Compatibility (Meets)

Tests for conformance to this requirement will be performed with the host system.

FCC requirements shall comply to meet with the FCC 'Class B' limits.

CE requirements shall comply to meet the 'Class B' requirements of EN55022 & EN55024 for EMS.

### Environment

#### Operating

Temperature range 0-40 degrees C

Relative Humidity 10-90%, non condensing

#### Shipping and Storage

Temperature range -40 to +70 degrees C

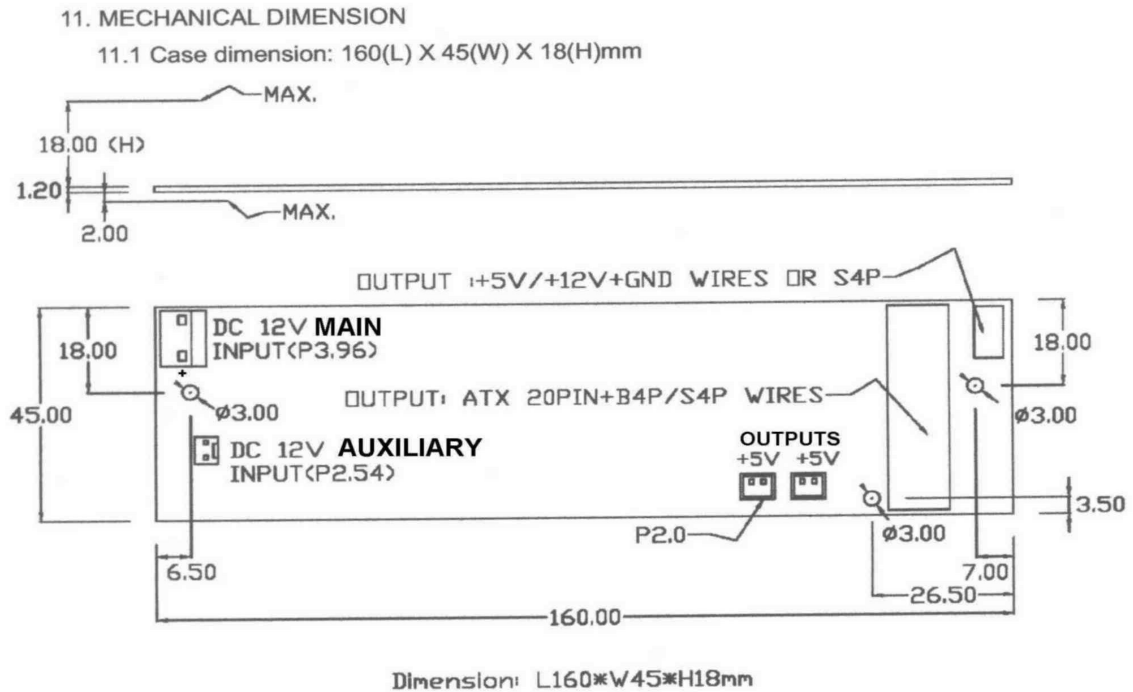
Relative Humidity 5 to 95%, non-condensing.

**Burn-In Test**

100% burn-in tested at maximum load under 40 degrees C (+/-5 degrees C).

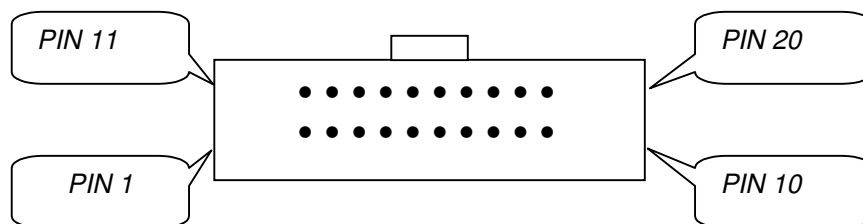
**Reliability : One Year Warranty**

MTBF: 80,000 hours minimum. Maximum load, at 25 degrees C ambient temperature.



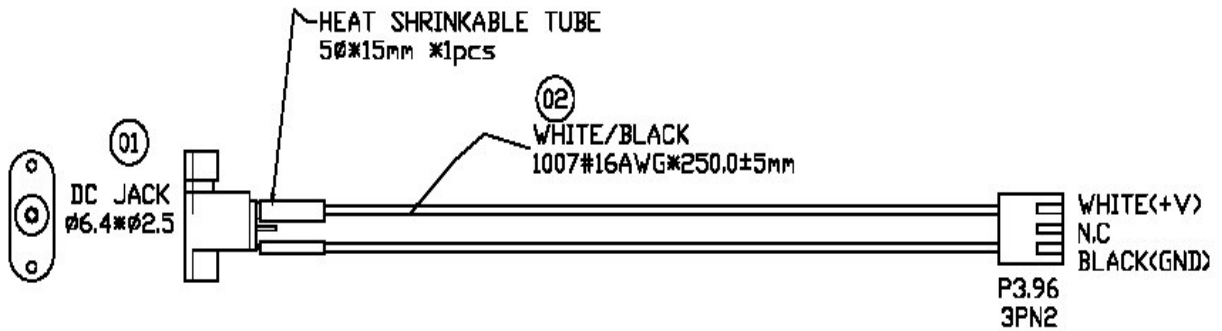
**Pin assignment**

**Flex ATX main power supply connector**



Pin	Signal	Wire	
1	+3.3 VDC	Orange	20AWG
2	+3.3 VDC	Orange	20AWG
3	COM	Black	20AWG
4	+5 VDC	Red	20AWG
5	COM	Black	20AWG
6	+5 VDC	Red	20AWG
7	COM	Black	20AWG
8	POK	Grey	22AWG
9	+5 VSB	Purple	22AWG
10	+12 VDC	Yellow	20AWG

Pin	Signal	Wire	
11	+3.3V VDC	Orange	20AWG
12	-12 VDC	Blue	22AWG
13	COM	Black	20AWG
14	PS-ON	Green	22AWG
15	COM	Black	20AWG
16	COM	Black	20AWG
17	COM	Black	20AWG
18	-5 VDC	White	20AWG
19	+5 VDC	Red	20AWG
20	+5 VDC	Red	20AWG



E & OE. Specification can change without notice.

04-02-04