

# TOTAL POWER INT.

## TPS120 SWITCHING MODE 120W U CHANNEL POWER SUPPLY



### KEY FEATURES

- \*Universal input
- \*Built-in EMI filter
- \*Optional remote sense on main output
- \*Optional constant current charger
- \*Optional  $\pm 12\text{VDC}/\pm 24\text{VDC}/\pm 48\text{VDC}$  input
- \*Optional cover
- \*Optional constant current change (for single output)

### APPLICATIONS

- \*Telecommunications/Business machines
- \*Computer peripherals/Medical instruments
- \*Test & industrial equipments

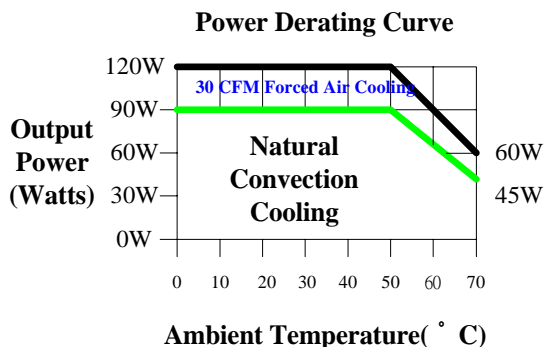
### ELECTRICAL SPECIFICATIONS

#### INPUT

- \*Input range-----90~264 VAC, universal
- \*Frequency-----47~63Hz
- \*Inrush current-----38A typical, Cold start @25°C, 115VAC
- \*Efficiency-----65% ~85% typical at full load
- \*EMI filter-----FCC Class B conducted, CISPR 22 Class B conducted, EN55022 class B Conducted
- \*Line regulation----- +/- 0.5% typical

#### OUTPUT

- \*Maximum power----120W with 30 CFM forced air
- \*Hold-up time -----10ms typical at full load and 115 VAC nominal line
- \*Overload protection-Short circuit protection
- \*Overvoltage protection -----Main output 20% to 40% above nominal output
- \*Ripple/Noise ----- +/- 1% Max. @full load (Optional +/-0.5 % per inquiry)



### EMI & EMC

- \*FCC part 15, Class B
- \*CISPR 22 / EN55022, Class B
- \*VCCI, Class 2
- \*CE, EN61000-3-2 (Class A) and -3 ; EN61000-4-2, -3, -4, -5, -6 and -11

### SAFETY APPROVAL

- \*UL1950 / c UL
- \*Optional CSA 22.2, LEVEL 3 (COMPLY WITH)
- \*TUV EN60950
- \*Optional UL 2601 (EMI Class A)(COMPLY WITH)

### ENVIRONMENTAL

- \*Operating temperature : 0 to 50°C ambient; derate each output at 2.5% per degree from 50°C to 70°C
- \*Humidity: Operating; non-condensing, 5% to 95%
- \*Vibration : 10~55 Hz at 1G 3 minutes period, 30 minutes along X, Y and Z axis
- \*Storage temperature: -40 to 85°C
- \*Temperature coefficient: +/- 0.05% per degree C
- \*MTBF demonstrated: >100,000 hours at full load and 25°C ambient conditions

MODEL	OUTPUT VOLTAGE	ADJUSTMENT RANGE	MAXIMUM OUTPUT CURRENT	PEAK OUTPUT CURRENT(NOTE1)	MINIMUM OUTPUT CURRENT	TOTAL REGULATION(NOTE3)	RIPPLE & NOISE %P-P(NOTE2)	PEAK OUTPUT POWER(NOTE1)
<b>TPS120-10</b>	+5V	±10% Typical	24A	30A	0A	±3%	±1%	150W Typical
<b>TPS120-11</b>	+12V	±10% Typical	10A	12.5A	0A	±3%	±1%	150W Typical
<b>TPS120-12</b>	+15V	±10% Typical	8A	10A	0A	±3%	±1%	150W Typical
<b>TPS120-13</b>	+24V	±10% Typical	5A	6.3A	0A	±3%	±1%	150W Typical
<b>TPS120-14</b>	+48V	±10% Typical	2.5A	3.1A	0A	±3%	±1%	150W Typical
<b>TPS120-15</b>	+13.5V	±10% Typical	8.9A	11.1A	0A	±3%	±1%	150W Typical
<b>TPS120-16</b>	+56V	±10% Typical	2.2A	2.8A	0A	±3%	±1%	150W Typical
<b>TPS120-17</b>	+18V	±10% Typical	6.7A	8.4A	0A	±3%	±1%	150W Typical
<b>TPS120-18</b>	+3.3V	±10% Typical	30A	37.5A	0A	±5%	±1.5%	150W Typical

**DUAL OUTPUT MODEL SELECTION CHART**

<b>TPS120-20</b>	+5 V	±10% Typical	12A	15A	1.2A	±5%	±1%	150W Typical
	+12V	Fixed	5A	6.2A	0.5A	±5%	±1%	
<b>TPS120-21</b>	+5 V	±10% Typical	12A	15A	1.2A	±5%	±1%	150W Typical
	+24V	Fixed	2.5A	3.1A	0.25A	±5%	±1%	
<b>TPS120-22</b>	+5 V	±10% Typical	12A	15A	1.2A	±5%	±1%	150W Typical
	- 5 V	Fixed	12A	15A	1.2A	±5%	±1%	
<b>TPS120-23</b>	+12V	±10% Typical	5A	6.3A	0.5A	±5%	±1%	150W Typical
	- 12 V	Fixed	5A	6.3A	0.5A	±5%	±1%	
<b>TPS120-24</b>	+15 V	±10% Typical	4A	5A	0.4A	±5%	±1%	150W Typical
	- 15 V	Fixed	4A	5A	0.4A	±5%	±1%	
<b>TPS120-25</b>	+3.3V	Fixed	20A	25A	2A	±5%	±1.5%	150W Typical
	+12 V	±10% Typical	1A	1.3A	0.1A	±5%	±1%	
<b>TPS120-26</b>	+ 5 V	±10% Typical	4A	5A	0.4A	±5%	±1%	150W Typical
	+48V	Fixed	2A	2.5A	0.2A	±5%	±1%	

**TRIPLE OUTPUT MODEL SELECTION CHART**

<b>TPS120-30</b>	+ 5V	±10% Typical	12A	15A	1.2A	±5%	±1%	150W Typical
	+12V	Fixed	4.5A	5.6A	0.45A	±5%	±1%	
	- 5 V	Fixed	0.6A	0.8A	0.06A	±10%	±1%	
<b>TPS120-31</b>	+ 5V	±10% Typical	12A	15A	1.2A	±5%	±1%	150W Typical
	+12V	Fixed	4.5A	5.6A	0.45A	±5%	±1%	
	-12V	Fixed	0.6A	0.8A	0.06A	±10%	±1%	
<b>TPS120-32</b>	+ 5V	±10% Typical	12A	15A	1.2A	±5%	±1%	150W Typical
	+15V	Fixed	3.5A	4.4A	0.35A	±5%	±1%	
	-15V	Fixed	0.6A	0.8A	0.06A	±10%	±1%	
<b>TPS120-33</b>	+ 5V	±10% Typical	15A	18.8A	1.5A	±5%	±1%	150W Typical
	+15V	Fixed	3A	3.8A	0.3A	±5%	±1%	
	- 5 V	Fixed	0.5A	0.6A	0.05A	±10%	±1%	
<b>TPS120-34</b>	+ 5V	±10% Typical	14A	17.5A	1.4A	±5%	±1%	150W Typical
	+15V	Fixed	3A	3.8A	0.3A	±5%	±1%	
	-12V	Fixed	0.6A	0.8A	0.06A	±10%	±1%	
<b>TPS120-35</b>	+ 5 V	±10% Typical	11A	13.8A	1.1A	±5%	±1%	150W Typical
	+24V	Fixed	2.5A	3.1A	0.25A	±5%	±1%	
	-12V	Fixed	0.6A	0.8A	0.06A	±10%	±1%	
<b>TPS120-36</b>	+ 5V	±10% Typical	11A	13.8A	1.1A	±5%	±1%	150W Typical
	+12V	Fixed	5A	6.3A	0.5A	±5%	±1%	
	- 12V	Fixed	1A	1.3A	0.1A	±10%	±1%	
<b>TPS120-37</b>	+ 5V	±10% Typical	11A	13.8A	1.1A	±5%	±1%	150W Typical
	+12V	Fixed	3.5A	4.4A	0.35A	±5%	±1%	
	+24V	Fixed	1A	1.3A	0.1A	±10%	±1%	
<b>TPS120-38</b>	+ 5V	±10% Typical	8A	10A	0.8A	±5%	±1%	150W Typical
	+12V	Fixed	3A	3.8A	0.3A	±5%	±1%	
	+48V	Fixed	1A	1.3A	0.1A	±10%	±1%	

MODEL	OUTPUT VOLTAGE	ADJUSTMENT RANGE	MAXIMUM OUTPUT CURRENT	PEAK OUTPUT CURRENT(NOTE1)	MINIMUM OUTPUT CURRENT	TOTAL REGULATION(NOTE3)	RIPPLE & NOISE %P-P(NOTE2)	PEAK OUTPUT POWER(NOTE1)
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**QUAD OUTPUT MODEL SELECTION CHART**

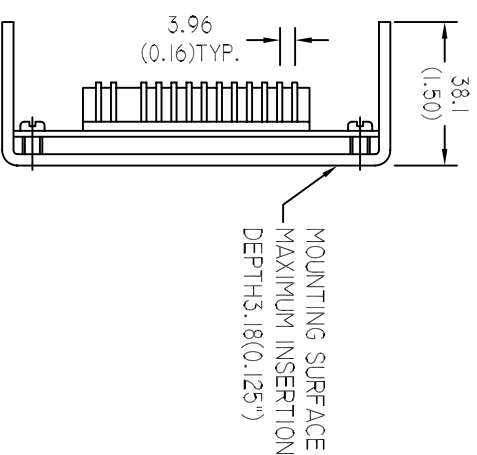
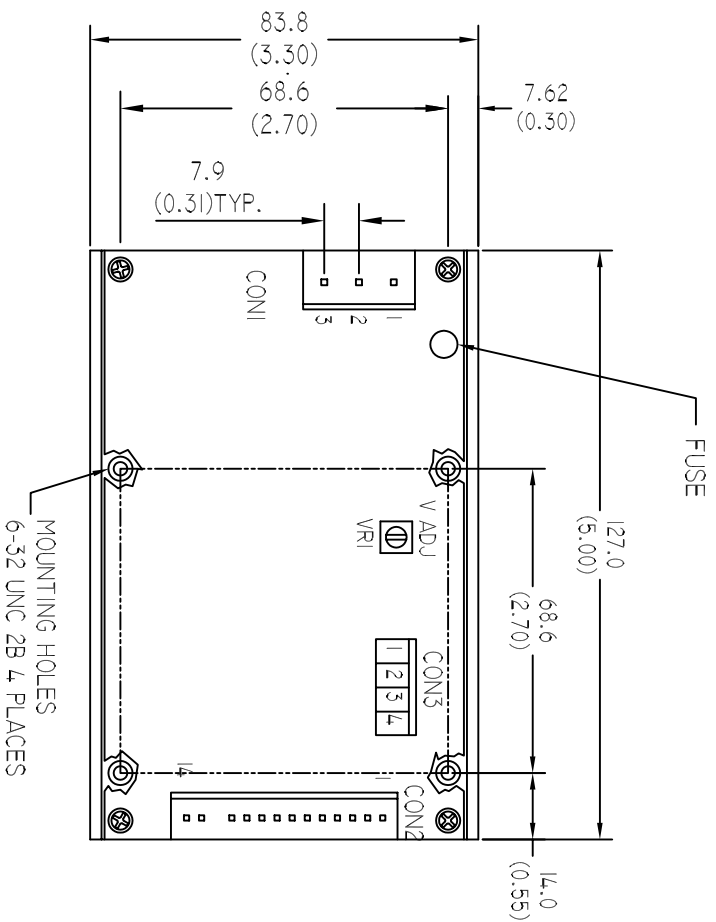
TPS120-40	+5V	±10% Typical	12A	15A	1.2A	±5%	±1%	150W Typical
	+12V	Fixed	4.5A	5.6A	0.45A	±5%	±1%	
	-12V	Fixed	0.5A	0.6A	0.05A	±10%	±1%	
	-5V	Fixed	0.5A	0.6A	0.05A	±10%	±1%	
TPS120-41	+5V	±10% Typical	12A	15A	1.2A	±5%	±1%	150W Typical
	+12V	Fixed	4A	5A	0.4A	±5%	±1%	
	-12V	Fixed	1A	1.3A	0.1A	±10%	±1%	
	-5V	Fixed	1A	1.3A	0.1A	±10%	±1%	
TPS120-42	+5V	±10% Typical	12A	15A	1.2A	±5%	±1%	150W Typical
	+12V	Fixed	3A	3.8A	0.3A	±5%	±1%	
	-15V	Fixed	1A	1.3A	0.1A	±10%	±1%	
	+15V	Fixed	1A	1.3A	0.1A	±10%	±1%	
TPS120-43	+5V	±10% Typical	8A	10A	0.8A	±5%	±1%	150W Typical
	+12V	Fixed	3.5A	4.4A	0.35A	±5%	±1%	
	-12V	Fixed	1A	1.3A	0.1A	±10%	±1%	
	-15V	Fixed	2A	2.5A	0.2A	±10%	±1%	
TPS120-44	+5V	±10% Typical	8A	10A	0.8A	±5%	±1%	150W Typical
	+12V	Fixed	2A	2.5A	0.2A	±5%	±1%	
	-12V	Fixed	1A	1.3A	0.1A	±10%	±1%	
	+48V	Fixed	1A	1.3A	0.1A	±10%	±1%	
TPS120-45	+5V	±10% Typical	8A	10A	0.8A	±5%	±1%	150W Typical
	+12V	Fixed	2A	2.5A	0.2A	±5%	±1%	
	-12V	Fixed	1A	1.3A	0.1A	±10%	±1%	
	+24V	Fixed	2A	2.5A	0.2A	±10%	±1%	
TPS120-46	+5V	±10% Typical	3A	3.8A	0.3A	±5%	±1%	150W Typical
	+12V	Fixed	1A	1.3A	0.1A	±5%	±1%	
	-12V	Fixed	2.5A	3.1A	0.25A	±10%	±1%	
	+36V	Fixed	2A	2.5A	0.2A	±10%	±1%	

- NOTES:** 1) Peak loads for lasting <30 seconds with a maximum 10% duty cycle are acceptable. Please contact us if need special peak load.  
 2) Maximum peak to peak noise expressed as a percentage of output voltage, 20MHz bandwidth, input not less nominal line, 0.1 μF and 47 μF Cap. on outputs.  
 3) Loading test conditions are set for all outputs at minimum, middle and maximum of loads. Special cross loading requirement is welcomed.  
 4) Detailed engineering specification of each model is available for inquiry.  
 5) Special output voltage/current inquiry is welcomed.  
 6) Specifications subject to change without notice.  
 7) 25% derated if 24 VDC input version; 50% derated if 12 VDC input version; 25% derated if additional cover.

# TOTAL POWER INTERNATIONAL

TOLL FREE # 877-646-0900

# TPS120 SERIES



CON1 (CONNECTORS) CONFIGURATION

1	2	3
FG	NEUT(-)	LINE(+)

CON2 (CONNECTORS) CONFIGURATION FOR V<sub>L</sub> ISOLATED

MULTIPLE OUTPUT	1-3	4-7	8-9	10	11	12	13	14
	VI	RET	V2	N/A	V3	KEY	V4/RET	V4

CON3 CONFIGURATION

1	2	3	4
S-	S+	RET	PG

TOLERANCE :  $\frac{\text{MM} \pm 0.5}{(\text{INCH}) \pm 0.02}$

UNIT :  $\frac{\text{MM}}{(\text{INCH})}$

CON2 (CONNECTORS) CONFIGURATION FOR V<sub>L</sub> POSITIVE

MULTIPLE OUTPUT	1-3	4-7	8-9	10	11	12	13	14
	VI	RET	V2	N/A	V3	KEY	RET	V4(+)

CON2 (CONNECTORS) CONFIGURATION FOR V<sub>2</sub> NEGATIVE

MULTIPLE OUTPUT	1-3	4-7	8-9	10	11	12	13	14
	VI	RET	V2	N/A	V3	KEY	V4(-)	RET

CON2 (CONNECTORS) CONFIGURATION FOR V<sub>2</sub> ISOLATED

DUAL OUTPUT	1-3	4-7	8-9	10-14
	VI	RET	V2	NC

CON2 (CONNECTORS) CONFIGURATION

SINGLE OUTPUT	1-5	6-10	11-14
	V(+)	RET(-)	NC

CON1=CONNECTOR,MOLEX#09-65-2068(OR EQUIVALENT)  
 (MATING CONNECT.=MOLEX#09-50-3051)

CON2=CONNECTOR,MOLEX#09-65-2148(OR EQUIVALENT)  
 (MATING CONNECT.=MOLEX#09-50-3141)

CON3=CONNECTOR,MOLEX#22-27-2041(OR EQUIVALENT)  
 (MATING CONNECT.=MOLEX#22-01-3047)

MATING TERMINAL=MOLEX#08-50-0113(OR EQUIVALENT)

ALL MATING TERMINAL=MOLEX#08-50-0106(OR EQUIVALENT)