

# TOTAL POWER INT'L

TPS150 SWITCHING MODE 130W U CHANNEL POWER SUPPLIES



## ELECTRICAL SPECIFICATIONS

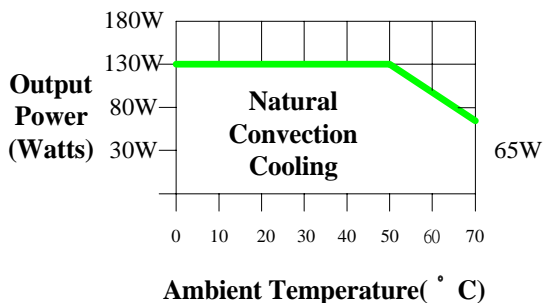
### INPUT

- \*Input range-----90~264 VAC, auto ranging
- \*Frequency-----47~63Hz
- \*Inrush current-----40A 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----130W convection (Refer next page)
- \*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)

**Power Derating Curve**



## KEY FEATURES

- \*Universal input
- \*Built-in EMI filter
- \*Optional remote sense on main output
- \*Optional constant current charger
- \*Optional Power Good signal/Optional cover
- \*Optional±12VDC/±24VDC/±48VDC input

## APPLICATIONS

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

## EMI & EMC

- \*FCC part 15, Class B
- \*CISPR 22 / EN55022, Class B
- \*VCCI ,Class 2
- \*CE,EN 61000-3-2 (Class A) (Optional) and -3;  
EN 61000-4-2,-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

# PPS150 SWITCHING MODE 130W U CHANNEL POWER SUPPLIES

MODEL	OUTPUTVOLTAGE	ADJUSTMENT RANGE	MAXIMUM OUTPUTCURRENT	PEAK OUTPUT CURRENT(NOTE1)	MINIMUM OUTPUT CURRENT	TOTAL REGULATION(NOTE3)	RIPPLE & NOISE %P-P(NOTE2)	PEAK OUTPUT POWER(NOTE1)
<b>TPS150-10</b>	+5V	±10% Typical	26A	42A	0A	±3%	±1%	210W Typical
<b>TPS150-11</b>	+12V	±10% Typical	11A	17.6A	0A	±3%	±1%	210W Typical
<b>TPS150-12</b>	+15V	±10% Typical	8.7A	13.9A	0A	±3%	±1%	210W Typical
<b>TPS150-13</b>	+24V	±10% Typical	5.5A	8.8A	0A	±3%	±1%	210W Typical
<b>TPS150-14</b>	+48V	±10% Typical	2.7A	4.3A	0A	±3%	±1%	210W Typical
<b>TPS150-15</b>	+36V	±10% Typical	3.6A	5.8A	0A	±3%	±1%	210W Typical
<b>TPS150-16</b>	+56V	±10% Typical	2.35A	3.8A	0A	±3%	±1%	210W Typical
<b>TPS150-17</b>	+18V	±10% Typical	7.25A	11.6A	0A	±3%	±1%	210W Typical
<b>TPS150-18</b>	+3.3V	±10% Typical	26A	41.6A	0A	±5%	±1.5%	210W Typical

## SINGLE OUTPUT MODEL SELECTION CHART

<b>TPS150-20</b>	+5 V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+12V	Fixed	6.3A	10.1A	0.63A	±5%	±1%	
<b>TPS150-21</b>	+5 V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+24V	Fixed	3.3A	5.3A	0.33A	±5%	±1%	
<b>TPS150-22</b>	+5 V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	- 5 V	Fixed	15A	24A	1.5A	±5%	±1%	
<b>TPS150-23</b>	+12V	±10% Typical	6.3A	10.1A	0.63A	±5%	±1%	210W Typical
	- 12 V	Fixed	6.3A	10.1A	0.63A	±5%	±1%	
<b>TPS150-24</b>	+15 V	±10% Typical	5A	8A	0.5A	±5%	±1%	210W Typical
	- 15 V	Fixed	5A	8A	0.5A	±5%	±1%	
<b>TPS150-25</b>	+3.3V	±10% Typical	16.5A	26.4A	1.65A	±5%	±1.5%	210W Typical
	+12 V	Fixed	6.3A	10.1A	0.63A	±5%	±1%	
<b>TPS150-26</b>	+ 12V	±10% Typical	7.1A	11.4A	0.71A	±5%	±1%	210W Typical
	+ 24V	Fixed	2.7A	4.3A	0.27A	±5%	±1%	
<b>TPS150-27</b>	+ 10.3V	±10% Typical	6.3A	10.1A	0.63A	±5%	±1%	210W Typical
	+ 24V	Fixed	3.6A	5.8A	0.36A	±5%	±1%	
<b>TPS150-28</b>	+ 5V	±10% Typical	20A	32A	2A	±5%	±1%	210W Typical
	+ 3.3V	Fixed	14.5A	23.2A	1.45A	±5%	±1.5%	

## TRIPLE OUTPUT MODEL SELECTION CHART

<b>TPS150-30</b>	+ 5V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+12V	Fixed	6A	9.6A	0.6A	±5%	±1%	
	- 5 V	Fixed	0.9A	1.4A	0.09A	±10%	±1%	
<b>TPS150-31</b>	+ 5V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+12V	Fixed	6A	9.6A	0.6A	±5%	±1%	
	-12V	Fixed	0.9A	1.4A	0.09A	±10%	±1%	
<b>TPS150-32</b>	+ 5V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+15V	Fixed	4A	6.4A	0.4A	±5%	±1%	
	-15V	Fixed	1A	1.6A	0.1A	±10%	±1%	
<b>TPS150-33</b>	+ 5V	±10% Typical	21A	33.6A	2.1A	±5%	±1%	210W Typical
	+15V	Fixed	3A	4.8A	0.3A	±5%	±1%	
	- 5 V	Fixed	0.9A	1.4A	0.09A	±10%	±1%	
<b>TPS150-34</b>	+ 5V	±10% Typical	19.2A	30.7A	1.92A	±5%	±1%	210W Typical
	+15V	Fixed	3A	4.8A	0.3A	±5%	±1%	
	-12V	Fixed	0.9A	1.4A	0.09A	±10%	±1%	
<b>TPS150-35</b>	+ 5 V	±10% Typical	13.8A	22.1A	1.38A	±5%	±1%	210W Typical
	-12V	Fixed	0.9A	1.4A	0.09A	±5%	±1%	
	+24V	Fixed	3A	4.8A	0.3A	±10%	±1%	
<b>TPS150-36</b>	+ 5V	±10% Typical	13.8A	22.1A	1.38A	±5%	±1%	210W Typical
	+12V	Fixed	6A	9.6A	0.6A	±5%	±1%	
	- 12V	Fixed	1.5A	2.4A	0.15A	±10%	±1%	
<b>TPS150-37</b>	+ 5V	±10% Typical	13.8A	22A	1.38A	±5%	±1%	210W Typical
	+12V	Fixed	5.4A	8.6A	0.54A	±5%	±1%	
	+24V	Fixed	0.8A	1.3A	0.08A	±10%	±1%	
<b>TPS150-38</b>	+ 5V	±10% Typical	6.7A	10.7A	0.67A	±5%	±1%	210W Typical
	+24V	Fixed	1.8A	2.9A	0.18A	±5%	±1%	
	+12V	Fixed	6A	9.6A	0.6A	±10%	±1%	

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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>TRIPLE OUTPUT MODEL SELECTION CHART</b>								
TPS150-39	+18V	±10% Typical	4A	6.4A	0.4A	±5%	±1%	210W Typical
	-18V	Fixed	4A	6.4A	0.4A	±5%	±1%	
	+5V	Fixed	2A	3.2A	0.2A	±10%	±1%	
<b>QUAD OUTPUT MODEL SELECTION CHART</b>								
TPS150-40	+5V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+12V	Fixed	5.3A	8.5A	0.53A	±5%	±1%	
	-12V	Fixed	0.8A	1.3A	0.08A	±10%	±1%	
	-5V	Fixed	0.8A	1.3A	0.08A	±10%	±1%	
TPS150-41	+5V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+12V	Fixed	4.2A	6.7A	0.42A	±5%	±1%	
	-12V	Fixed	1.5A	2.4A	0.15A	±10%	±1%	
	-5V	Fixed	1.5A	2.4A	0.15A	±10%	±1%	
TPS150-42	+5V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+12V	Fixed	2.7A	4.3A	0.27A	±5%	±1%	
	-15V	Fixed	1.5A	2.4A	0.15A	±10%	±1%	
	+15V	Fixed	1.5A	2.4A	0.15A	±10%	±1%	
TPS150-43	+5V	±10% Typical	9A	14.4A	0.9A	±5%	±1%	210W Typical
	+12V	Fixed	3.5A	5.6A	0.35A	±5%	±1%	
	-12V	Fixed	1.5A	2.4A	0.15A	±10%	±1%	
	-15V	Fixed	3A	4.8A	0.3A	±10%	±1%	
TPS150-44	+5V	±10% Typical	9A	14.4A	0.9A	±5%	±1%	210W Typical
	+12V	Fixed	1.5A	2.4A	0.15A	±5%	±1%	
	-12V	Fixed	1.5A	2.4A	0.15A	±10%	±1%	
	+48V	Fixed	1.5A	2.4A	0.15A	±10%	±1%	
TPS150-45Y	+5V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+12V	Fixed	2A	8.5A	0.2A	±5%	±1%	
	-12V	Fixed	1A	1.6A	0.1A	±10%	±1%	
	+24V	Fixed	1.5A	2.4A	0.15A	±10%	±1%	
TPS150-46	+5V	±10% Typical	4A	6.4A	0.4A	±5%	±1%	210W Typical
	-15V	Fixed	1.25A	2A	0.13A	±5%	±1%	
	+15V	Fixed	0.8A	1.3A	0.08A	±10%	±1%	
	+24V	Fixed	4A	6.4A	0.4A	±10%	±1%	
TPS150-47	+5V	±10% Typical	13A	20.8A	1.3A	±5%	±1%	210W Typical
	+15V	Fixed	1.1A	1.76A	0.11A	±5%	±1%	
	-15V	Fixed	1.1A	1.76A	0.11A	±10%	±1%	
	+48V	Fixed	1.1A	1.76A	0.11A	±10%	±1%	
TPS150-48	+5V	±10% Typical	12.5A	20A	1.25A	±5%	±1%	210W Typical
	+3.3V	Fixed	9A	14.4A	0.9A	±5%	±1.5%	
	+12V	Fixed	2.5A	4A	0.25A	±10%	±1%	
	-12V	Fixed	2.5A	4A	0.25A	±10%	±1%	
TPS150-49	+5V	±10% Typical	12.5A	20A	1.25A	±5%	±1%	210W Typical
	+3.3V	Fixed	9A	14.4A	0.9A	±5%	±1.5%	
	+12V	Fixed	2.5A	4A	0.25A	±10%	±1%	
	+24V	Fixed	1A	1.6A	0.1A	±10%	±1%	

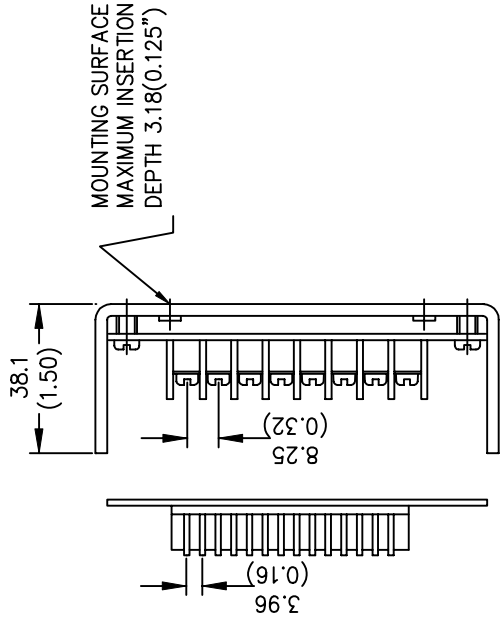
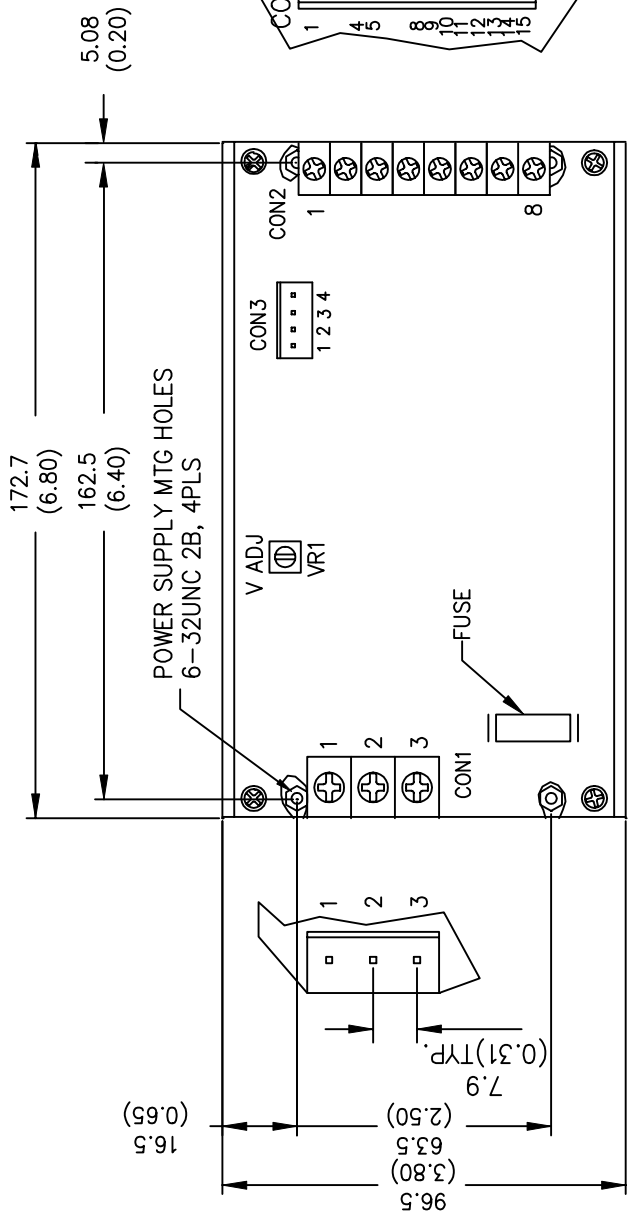
- NOTES:** 1) Peak loads for lasting <30 seconds with a maximum 10% duty cycle are acceptable. Please contact us if need special peak load.  
2) Maximum peak to peak noise expressed as a percentage of output voltage, 20MHz bandwidth, 0.1 μF and 47 μF Cap. on outputs.  
3) Loading test conditions are 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.

# PPS150

TERMINAL BLOCKS  
 CON1: PITCH=9.5 mm  
 CON2: PITCH=8.25 mm

CON1=CONNECTOR, MOLEX#09-65-2058(OR EQUIVALENT)  
 (MATING CONECT.=MOLEX#09-50-3051)  
 CON2=CONNECTOR, MOLEX#09-65-2158(OR EQUIVALENT)  
 (MATING CONECT.=MOLEX#09-50-3151)  
 ALL MATING TERMINAL=MOLEX#08-50-0106(OR EQUIVALENT)

CON3=CONNECTOR, MOLEX#22-27-2041(OR EQUIVALENT)  
 (MATING CONECT.=MOLEX#22-01-3047)  
 MATING TERMINAL=MOLEX#08-50-0113(OR EQUIVALENT)



TOLERANCE :  $\frac{\text{mm} \pm 0.5}{(\text{inch}) \pm 0.02}$   
 UNIT:  $\frac{\text{mm}}{(\text{inch})}$

CON1 ( CONNECTORS ) CONFIGURATION

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

CON1 ( TERMINAL BLOCK ) CONFIGURATION

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

CON2 ( TERMINAL BLOCK ) CONFIGURATION FOR V4 ISOLATED

1	2	3	4	5	6	7	8
Multiple Output	V1	RET	V2	V3	V4	RET	V4

CON2 ( TERMINAL BLOCK ) CONFIGURATION FOR V4 POSITIVE

1	2	3	4	5	6	7	8
Multiple Output	V1	RET	V2	V3	RET	V4	V4(+)

CON2 ( TERMINAL BLOCK ) CONFIGURATION FOR V4 NEGATIVE

1	2	3	4	5	6	7	8
Multiple Output	V1	RET	V2	V3	V4(-)	RET	RET

CON2 ( TERMINAL BLOCK ) CONFIGURATION

1-4	5-8	
Single Output	V1(+)	RET(-)

CON2 ( CONNECTORS ) CONFIGURATION FOR V4 ISOLATED

Multiple Output	1-4	5-10	11	12	13	14-15
Multiple Output	V1	RET	V2	V3	V4	RET

CON2 ( CONNECTORS ) CONFIGURATION FOR V4 POSITIVE

Multiple Output	1-4	5-10	11	12	13	14-15
Multiple Output	V1	RET	V2	V3	RET	V4(+)

CON2 ( CONNECTORS ) CONFIGURATION FOR V4 NEGATIVE

Multiple Output	1-4	5-10	11	12	13	14-15
Multiple Output	V1	RET	V2	V3	V4(-)	RET

CON2 ( CONNECTORS ) CONFIGURATION

Single Output	1-8	9-15
Single Output	V1(+)	RET(-)

CON3 CONFIGURATION

1	2	3	4
S-	S+	RET	PG