

# TOTAL POWER INT'L

TPS150 SWITCHING MODE 130W U CHANNEL POWER SUPPLIES



## ELECTRICAL SPECIFICATIONS

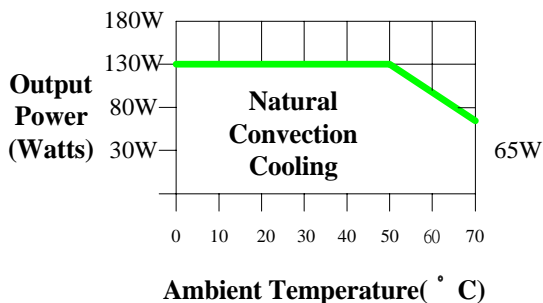
### INPUT

- \*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	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>SINGLE OUTPUT MODEL SELECTION CHART</b>								
TPS150-10	+5V	±10% Typical	26A	42A	0A	±3%	±1%	210W Typical
TPS150-11	+12V	±10% Typical	11A	17.6A	0A	±3%	±1%	210W Typical
TPS150-12	+15V	±10% Typical	8.7A	13.9A	0A	±3%	±1%	210W Typical
TPS150-13	+24V	±10% Typical	5.5A	8.8A	0A	±3%	±1%	210W Typical
TPS150-14	+48V	±10% Typical	2.7A	4.3A	0A	±3%	±1%	210W Typical
TPS150-15	+36V	±10% Typical	3.6A	5.8A	0A	±3%	±1%	210W Typical
TPS150-16	+56V	±10% Typical	2.35A	3.8A	0A	±3%	±1%	210W Typical
TPS150-17	+18V	±10% Typical	7.25A	11.6A	0A	±3%	±1%	210W Typical
TPS150-18	+3.3V	±10% Typical	26A	41.6A	0A	±5%	±1.5%	210W Typical
<b>DUAL OUTPUT MODEL SELECTION CHART</b>								
TPS150-20	+5 V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+12V	Fixed	6.3A	10.1A	0.63A	±5%	±1%	
TPS150-21	+5 V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	+24V	Fixed	3.3A	5.3A	0.33A	±5%	±1%	
TPS150-22	+5 V	±10% Typical	15A	24A	1.5A	±5%	±1%	210W Typical
	- 5 V	Fixed	15A	24A	1.5A	±5%	±1%	
TPS150-23	+12V	±10% Typical	6.3A	10.1A	0.63A	±5%	±1%	210W Typical
	- 12 V	Fixed	6.3A	10.1A	0.63A	±5%	±1%	
TPS150-24	+15 V	±10% Typical	5A	8A	0.5A	±5%	±1%	210W Typical
	- 15 V	Fixed	5A	8A	0.5A	±5%	±1%	
TPS150-25	+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%	
TPS150-26	+ 12V	±10% Typical	7.1A	11.4A	0.71A	±5%	±1%	210W Typical
	+ 24V	Fixed	2.7A	4.3A	0.27A	±5%	±1%	
TPS150-27	+ 10.3V	±10% Typical	6.3A	10.1A	0.63A	±5%	±1%	210W Typical
	+ 24V	Fixed	3.6A	5.8A	0.36A	±5%	±1%	
TPS150-28	+ 5V	±10% Typical	20A	32A	2A	±5%	±1%	210W Typical
	+ 3.3V	Fixed	14.5A	23.2A	1.45A	±5%	±1.5%	
<b>TRIPLE OUTPUT MODEL SELECTION CHART</b>								
TPS150-30	+ 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%	
TPS150-31	+ 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%	
TPS150-32	+ 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%	
TPS150-33	+ 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%	
TPS150-34	+ 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%	
TPS150-35	+ 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%	
TPS150-36	+ 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%	
TPS150-37	+ 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%	
TPS150-38	+ 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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<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%	

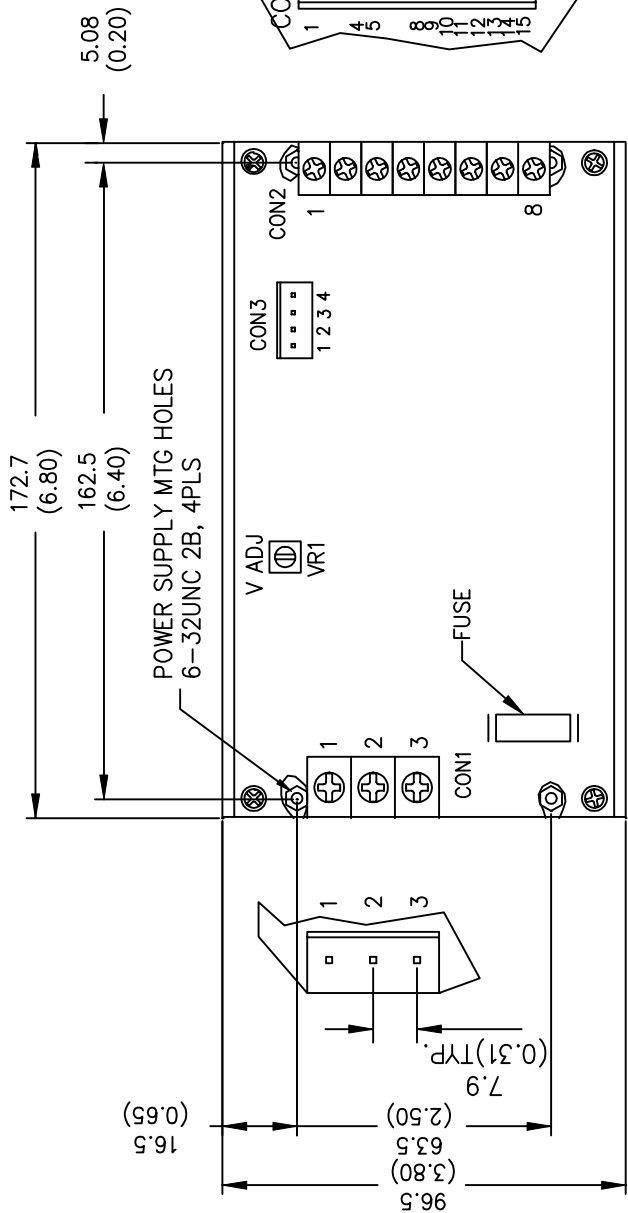
- NOTES:**
- 1) Peak loads for lasting <30 seconds with a maximum 10% duty cycle are acceptable. Please contact us if need special peak load.
  - 2) Maximum peak to peak noise expressed as a percentage of output voltage, 20MHz bandwidth, 0.1 μF and 47 μF Cap. on outputs.
  - 3) Loading test conditions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



16.5  
 (0.65)

96.5  
 (3.80)

63.5  
 (2.50)

7.9  
 (0.31) TYP.

172.7  
 (6.80)

162.5  
 (6.40)

5.08  
 (0.20)

POWER SUPPLY MTG HOLES  
 6-32UNC 2B, 4PLS

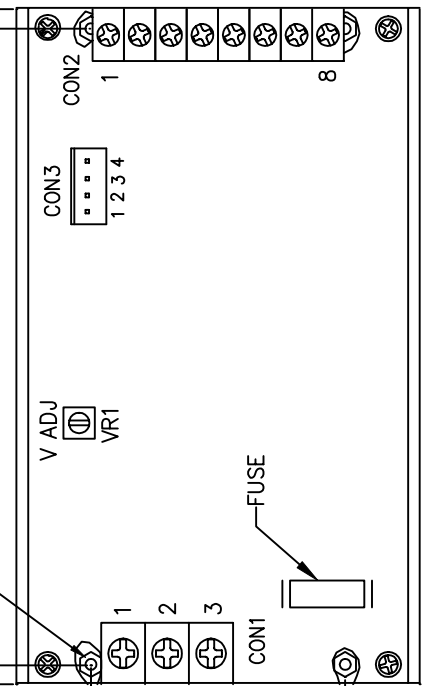
V ADJ  
 VR1

FUSE

CON1

CON3

CON2



38.1  
 (1.50)

3.96  
 (0.16)

8.25  
 (0.32)

MOUNTING SURFACE  
 MAXIMUM INSERTION  
 DEPTH 3.18(0.125")

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	V4RET	V4	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	V4RET	V4

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