

## 65 WATT SWITCHING POWER SUPPLIES

### DESCRIPTION

The PU65 series of compact, open PCB constructed, AC-DC switching power supplies are capable of delivering 50 to 65 watts of continuous power. They operate at 85 to 264 VAC input voltage without the need of voltage selection. They are ideally suited for use in CRT terminals, disc drive systems, microprocessor based systems, portable equipment and many other applications. All models meet the safety requirements of UL, CSA and IEC.

### FEATURES

- Recognized or certified by UL, CSA and TÜV
- Small size, light weight
- 100% burn-in
- Wide input range 85 to 264 VAC
- Input surge current protection
- Overvoltage protection
- Overcurrent protection

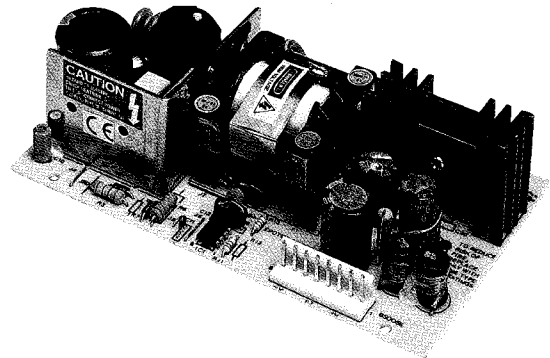
### INPUT SPECIFICATIONS

**Input voltage:** 85 to 264 VAC  
**Input frequency:** 47 to 63 Hz  
**Input current:** 1.60A (rms) for 115VAC  
 1.00A (rms) for 230VAC  
**Leakage current:** 0.47mA max.@ 115VAC, 60Hz  
 0.85mA max.@ 230VAC, 50Hz

### OUTPUT SPECIFICATIONS

**Output voltage/current :** See rating chart  
**Total output power:** 65 watts maximum  
**Ripple and noise :** 1% peak to peak max.  
**Overvoltage protection :** Provided on output #1 only; set at 112-132 % of its nominal output voltage  
**Overcurrent protection :** All outputs protected to short circuit conditions  
**Temperature coefficient :** All outputs +/-0.04%/ °C maximum  
**Transient response :** Maximum excursion of 4% or better on all models, recovering to 1% of final value within 500us after a 25% step load change

### PU65 SERIES



### Safety Standard Approvals:



UL 1950  
File No. E137410



C22.2 No. 950  
File No. LR93632



EN 60950  
Certificate No. R9172041

### ENVIRONMENTAL SPECIFICATIONS

**Operating temperature :** 0°C to +70°C  
**Storage temperature :** -40°C to +85°C  
**Relative humidity :** 5% to 95% non-condensing  
**Derating :** Derate from 100% at +50°C linearly to 50% at +70°C

### GENERAL SPECIFICATIONS

**Switching frequency :** 32KHz +/-5KHz  
**Efficiency :** 70% minimum on single output models with  $V_o \geq 12V$ , 65% minimum on the others  
**Hold-up time :** 10 msec minimum at 110VAC  
**Line regulation :** +/-0.5% maximum at full load  
**Inrush current :** 15 amps @ 115VAC, or 30 amps @ 230VAC, at 25°C and cold start  
**Withstand voltage :** 3000VAC from input to output  
 1500VAC from input to ground  
 500VAC from output to ground  
**MTBF :** 400,000 hours minimum at full load at 25°C ambient, calculated per MIL-HDBK-217F  
**EMI requirements :** Meets conducted limits of (a) FCC Level B (b) EN 55022 Class B  
**Safety requirements :** Meets or Exceeds: (a) UL 1950 (b) CSA C22.2 No. 950 (c) IEC 950 (EN 60950)

# UNIVERSAL INPUT

# PU65 SERIES

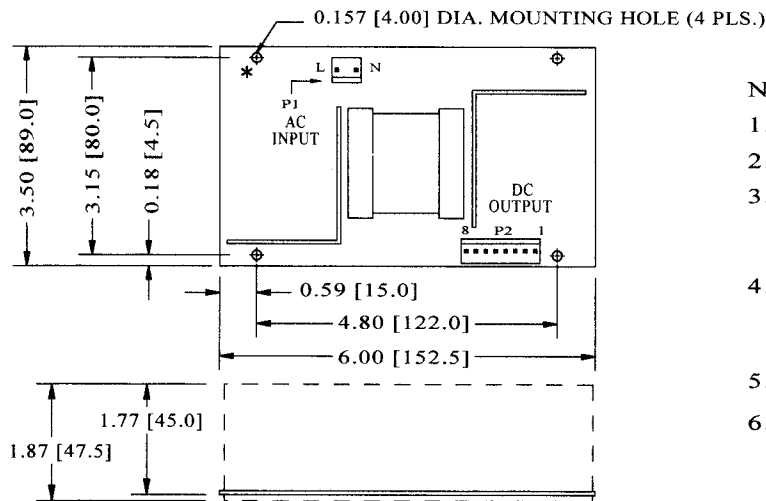
## OUTPUT VOLTAGE/CURRENT RATING CHART

Model	Output #1				Output #2				Output #3				Output #4				Maximum Output Power
	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	Vnom.	Imin.	Imax.	Tol.	
PU65-10	5V	0A	10A	2%	(N/A)				(N/A)				(N/A)				50W
PU65-12	12V	0A	5.5A	1%	(N/A)				(N/A)				(N/A)				65W
PU65-13	15V	0A	4.5A	1%	(N/A)				(N/A)				(N/A)				65W
PU65-14	24V	0A	3.0A	1%	(N/A)				(N/A)				(N/A)				65W
PU65-23	+5V	1A	6.0A	3%	+12V	0.5A	3.0A	5%	(N/A)				(N/A)				65W
PU65-24	+5V	1A	6.0A	3%	+15V	0.4A	3.0A	5%	(N/A)				(N/A)				65W
PU65-25	+5V	1A	6.0A	3%	+24V	0.3A	2.0A	5%	(N/A)				(N/A)				65W
PU65-30	+5V	1A	6.0A	3%	+12V	0.5A	3.0A	5%	-5V	0.1A	0.5A	10%	(N/A)				65W
PU65-31	+5V	1A	6.0A	3%	+12V	0.5A	3.0A	5%	-12V	0.1A	0.5A	10%	(N/A)				65W
PU65-32	+5V	1A	6.0A	3%	+15V	0.4A	3.0A	5%	-15V	0.1A	0.5A	10%	(N/A)				65W
PU65-33	+5V	1A	6.0A	3%	+15V	0.4A	3.0A	5%	-12V	0.1A	0.5A	10%	(N/A)				65W
PU65-35-1	+5V	1A	6.0A	3%	+24V	0.3A	1.2A	5%	-24V	0.2A	1.0A	10%	(N/A)				65W
PU65-39	+5V	1A	6.0A	3%	+24V	0.3A	2.0A	5%	-12V	0.1A	0.5A	10%	(N/A)				65W
PU65-40	+5V	1A	6.0A	3%	+12V	0.5A	3.0A	5%	-12V	0.1A	0.5A	10%	-5V	0.1A	0.50A	10%	65W
PU65-45-1	+5V	1A	6.0A	3%	+15V	0.2A	1.0A	5%	+25V	0.1A	0.75A	10%	-12V	0.1A	1.0A	10%	65W

Notes: (1) All multiple output models may be operated at no-load without damage. At no-load, output voltage tolerance increases to 10%.

(2) Safety agency approvals are for the above listed models in PCB format. To order a model with a metallic L-bracket or box, add suffix "B" for L-bracket format or "C" for enclosed format to the model number (mechanical details shown in page 7-2 ), e.g. PU65-25C.

## MECHANICAL SPECIFICATIONS



### NOTES:

1. Dimensions shown in inch [mm]
2. Tolerance 0.02 [0.5] maximum
3. Input connector mates with Molex housing 09-50-3031 and Molex 2878 series crimp terminal.
4. Output connector mates with Molex housing 09-50-3081 and Molex 2878 series crimp terminal.
5. Weight: 400 grams (PCB format).
6. The "\*" marked mounting hole is for system grounding through a metallic stand-off to the system chassis.

## PIN CHART

MODEL	PIN	1	2	3	4	5	6	7	8
PU65-10	PU65-12	OUTPUT	OUTPUT	OUTPUT	OUTPUT	RETURN	RETURN	RETURN	RETURN
PU65-13	PU65-14	#1	#1	#1	#1				
PU65-23	PU65-24	OUTPUT	OUTPUT	COMMON	COMMON	OUTPUT	OUTPUT	N.C.	N.C.
PU65-25		#1	#1	RETURN	RETURN	#2	#2		
PU65-30	PU65-31	OUTPUT	OUTPUT	COMMON	COMMON	OUTPUT	OUTPUT	OUTPUT	N.C.
PU65-32	PU65-33	#1	#1	RETURN	RETURN	#2	#2	#3	
PU65-35-1	PU65-39								
PU65-40	PU65-45-1	OUTPUT	OUTPUT	COMMON	COMMON	OUTPUT	OUTPUT	OUTPUT	OUTPUT
		#1	#1	RETURN	RETURN	#2	#2	#3	#4