



60-130 WATT SWITCHING POWER SUPPLIES

DESCRIPTION

The PUP60/80/130 series of AC/DC switching power supplies are for 60 to 130 watts of continuous output power. They are enclosed in a 94V-1 rated polyphenylene-oxide case with an IEC 320 inlet to mate with interchangeable cord for world-wide use. An on/off switch can be added at request. All models meet CISPR 22 and FCC class B emission limits, and comply with UL, CSA, IEC and CE requirements.

FEATURES

- Optional output connectors
- Optional on/off switch
- 100% burn-in at full rated load
- Auto-ranging input
- Overvoltage protection
- Overcurrent protection
- Thermal protection
- Compliant with RoHS requirements

INPUT SPECIFICATIONS

Input voltage :	90 to 130VAC or 180 to 260VAC (auto-ranging)
Input frequency :	47 to 63Hz
Input current :	
PUP60/80 Series:	1.8A (rms) for 115VAC 1.0A (rms) for 230VAC
PUP130 Series:	3.0mA (rms) for 115VAC 1.7A (rms) for 230VAC
Earth leakage current : (Touch current)	0.40mA max. @ 115VAC, 60Hz 0.80mA max. @ 230VAC, 50Hz

OUTPUT SPECIFICATIONS

Output voltage/current :	See rating chart
Output power range :	See rating chart
Ripple and noise :	1% peak to peak maximum
Overvoltage protection :	Provided on output; set at 112-132% of its nominal output voltage
Overcurrent protection :	All outputs protected to short circuit conditions
Temperature coefficient :	All outputs $\pm 0.04\%$ / $^{\circ}\text{C}$ 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

ENVIRONMENTAL SPECIFICATIONS

Operating temperature:	0 $^{\circ}\text{C}$ to +40 $^{\circ}\text{C}$ (PUP60/80 series) 0 $^{\circ}\text{C}$ to +50 $^{\circ}\text{C}$ (PUP130 series)
Storage temperature :	-40 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$
Relative humidity :	5% to 95% non-condensing

PUP60/80/130 SERIES



Safety Standard Approvals :



UL 60950-1, CSA C22.2 NO. 60950-1
File No. E137410



TÜV EN60950-1
Certificate No. S 50096605

GENERAL SPECIFICATIONS

Switching frequency :	60KHz to 75KHz
Efficiency :	70% minimum on $V_o \geq 12V$, 65% minimum on the others
Hold-up time :	
PUP60/80 SERIES:	15 msec minimum at 110VAC
PUP130 SERIES:	10 msec minimum at 110VAC
Line regulation :	$\pm 0.5\%$ maximum at full load
Inrush current :	15 amps @ 115VAC or 30 amps @230VAC, at 25 $^{\circ}\text{C}$ cold start
Withstand voltage :	3000VAC from input to output 1500VAC from input to ground 500VAC from output to ground
MTBF :	PUP60/PUP80 300,000 hours minimum, PUP130 400,000 hours minimum at full load at 25 $^{\circ}\text{C}$ ambient, calculated per MIL-HDBK-217F, excluding DC fan.
EMC Performance (EN55024)	
EN55022:	Class B conducted, Class B radiated
FCC:	Class B conducted, Class B radiated
VCCI:	Class B conducted, Class B radiated
EN61000-3-2:	Harmonic distortion, Class A
EN61000-3-3:	Line flicker
EN61000-4-2:	ESD, $\pm 8\text{KV}$ air and $\pm 4\text{KV}$ contact
EN61000-4-3:	Radiated immunity, 3V/m
EN61000-4-4:	Fast transient/burst, $\pm 1\text{KV}$
EN61000-4-5:	Surge, $\pm 1\text{KV}$ diff., $\pm 2\text{KV}$ com.
EN61000-4-6:	Conducted immunity, 3Vrms
EN61000-4-8:	Magnetic field immunity, 1A/m
EN61000-4-11:	Voltage dips, 30% reduction for 500ms and >95% reduction for 10ms

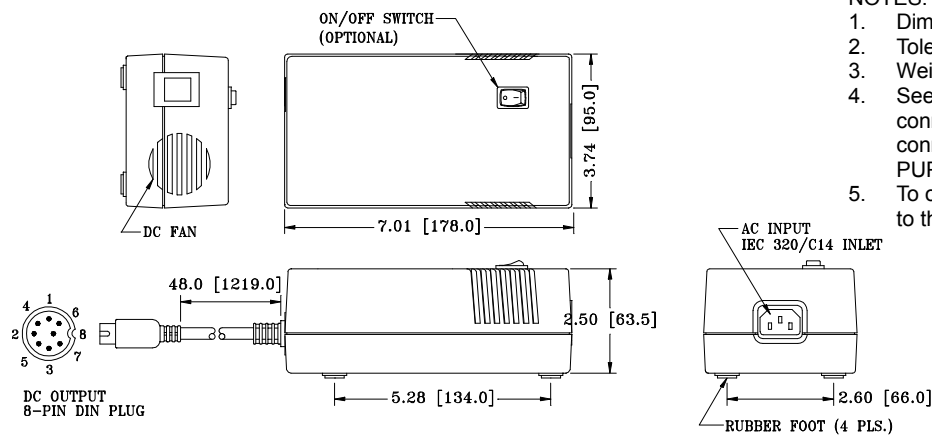
AUTORANGING INPUT PUP60/PUP80/PUP130SERIES

OUTPUT VOLTAGE/CURRENT RATING CHART

MODEL	Vnom.	Output		Tol.	Output Power
		Imin.	Imax.		
PUP60-10	5V	0A	12A	5%	60W
PUP60-10-1	7V	0A	8.6A	5%	60W
PUP60-11	10V	0A	6A	5%	60W
PUP80-12	12V	0A	6.7A	4%	80W
PUP80-13	15V	0A	5.3A	3%	80W
PUP80-13-1	18V	0A	4.5A	3%	80W
PUP80-14	24V	0A	3.4A	3%	80W
PUP80-16	30V	0A	2.7A	2%	80W
PUP80-17	36V	0A	2.3A	2%	80W
PUP80-18	48V	0A	1.7A	2%	80W
PUP130-12	12V	0A	10.8A	5%	130W
PUP130-13	15V	0A	8.6A	4%	130W
PUP130-13-1	18V	0A	7.2A	4%	130W
PUP130-14	24V	0A	5.4A	3%	130W
PUP130-16	30V	0A	4.3A	3%	130W
PUP130-17	36V	0A	3.6A	2%	130W
PUP130-18	48V	0A	2.7A	2%	130W

- NOTES: 1. PUP60 and PUP80 series are without, while PUP130 series are with, built-in fan.
 2. PUP60 series are with remote sense. The other series can also be equipped with remote sense. Please consult factory.

MECHANICAL SPECIFICATIONS



NOTES:

- Dimensions shown in inch [mm]
- Tolerance 0.02 [0.5] maximum
- Weight: 1.0 kgs. (2.2 lbs.) approx.
- See pages 6-19 to 6-26 for optional output connectors. Add the suffix assigned for a selected connector to a wanted model number, e.g. PUP130-14-HA, for ordering.
- To order a model with on/off switch, add suffix "S" to the model number, e.g. PUP130-14-HA-S

PIN CHART

MODEL	PIN	1	2	3	4	5	6	7	8
		PUP60-10 PUP60-11	PUP60-10-1	RETURN	-SENSE	OUTPUT +V	RETURN	OUTPUT +V	RETURN
PUP80-12 PUP80-13-1 PUP80-16 PUP80-18	PUP80-13 PUP80-14 PUP80-17 PUP130-12	RETURN	RETURN	OUTPUT +V	RETURN	OUTPUT +V	RETURN	OUTPUT +V	OUTPUT +V
PUP130-13 PUP130-14 PUP130-17	PUP130-13-1 PUP130-16 PUP130-18								