

# **40-45 WATT ITE POWER SUPPLIES**

# **DESCRIPTION**

The PUP40/PUP45 series of AC/DC wall mount switching power supplies are for 40-45 watts of continuous output power. They are enclosed in a 94V-0 rated polycarbonate case. The PUP40M-12 model is shipped with a selected interchangeable AC plug, and additional types of AC plug can be purchased from the factory. All models meet EN55022, EN55024 and FCC class B emission limits, and designed for ITE applications.

#### **FEATURES**

- Operation altitude up to 5000 meters
- Interchangeable AC plugs for model PUP40M-12
- High efficiency
- Low ripple & noise
- Overvoltage protection
- Short-circuit protection
- 100% burn-in at full rated load
- Compliant with DoE efficiency level VI requirements
- Compliant with RoHS requirements
- Meet LPS

# **INPUT SPECIFICATIONS**

Input voltage: 90-264 VAC Input frequency: 47-63 Hz

Input current: PUP40: 0.75 A (rms) for 115 VAC, 0.5 A

(rms) for 230 VAC

PUP45: 0.85A (rms) for 115 VAC, 0.6 A

(rms) for 230 VAC

Touch current: 100 µA max. @ 264 VAC, 63 Hz

#### **PUP40/PUP45 SERIES**

# **RoHS**



# SAFETY STANDARD APPROVALS



UL 60950-1, CSA C22.2 No. 60950-1 File No. E190414



TÜV EN 60950-1

### **GENERAL SPECIFICATIONS**

Hold-up time: 5 ms minimum at 115 VAC
Turn on delay time: 3 s maximum at 115 VAC

Efficiency: Compliant with DoE efficiency level VI

requirements (see rating chart)

Line regulation: ±1% maximum at full load

Inrush current: 60 A @ 115 VAC or 120 A @ 230 VAC at 25°C

cold start

Withstand voltage: 3000 VAC from input to output

MTBF: 500,000 hours at full load at 25°C ambient,

calculated per SR332

# **OUTPUT SPECIFICATIONS**

Output voltage /current: See rating chart.

Maximum output power: See rating chart.

Ripple and noise: 1% peak to peak maximum

Overvoltage protection: Set at 108% to170% of its nominal

output voltage

Overcurrent protection: Protected to short circuit conditions

Temperature coefficient: ±0.04% /℃ maximum

Transient response: Maximum excursion of 4% or better on

all models, recovering to 1% of final value within 500 us after a 25% step

load change

### **EMC** Performance

EN61000-4-8:

EN55022(CISPR 22) 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 and D

EN61000-3-3: Line flicker

EN61000-4-2: ESD,±8 KV air and ±4 KV contact EN61000-4-3: Radiated immunity, 3 V/m EN61000-4-4: Fast transient/burst, ±1 KV EN61000-4-5: Surge, ±1 KV diff., ±2 KV com. EN61000-4-6: Conducted immunity, 3 Vrms

EN61000-4-11: Voltage dip immunity, 30% reduction for 500

ms, and >95% reduction for 10 ms

Magnetic field immunity, 1 A/m

#### **ENVIRONMENTAL SPECIFICATIONS**

Operating temperature:  $0^{\circ}$ C to  $+40^{\circ}$ C Storage temperature:  $-20^{\circ}$ C to  $+80^{\circ}$ C

Operating humidity: 20% to 80% non-condensing Storage humidity: 10% to 90% non-condensing

# **OUTPUT VOLTAGE/CURRENT RATING CHART**

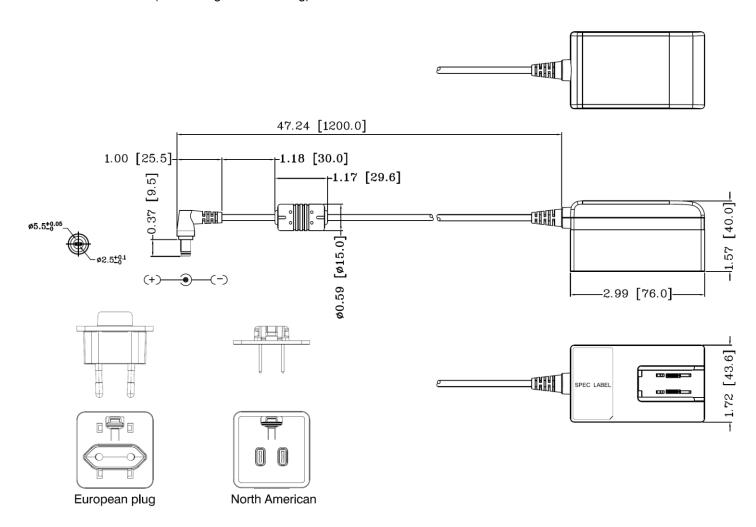
		Average Active					
Model <sup>(1)</sup>	V1	Min. Current	Max. Current	Tol.	Ripple & Noise <sup>(2)</sup>	Max. Output Power	Efficiency (typical) @ 115 / 230 Vac
PUP40M-12	12 V	0 A	3.34 A	±5%	150 mV	40 W	88 /89%
PUP40D-13-2	19 V	0 A	2.11 A	±5%	200 mV	40 W	88 /89%
PUP40E-13-2	19 V	0 A	2.11 A	±5%	200 mV	40 W	88 /89%
PUP45D-13-2	19 V	0 A	2.37 A	±5%	200 mV	45 W	88 /89%
PUP45E-13-2	19 V	0 A	2.37 A	±5%	200 mV	45 W	88 /89%

#### NOTES:

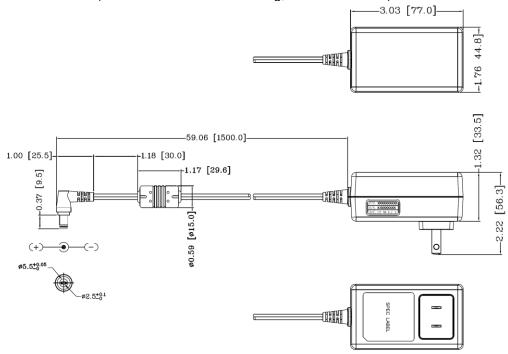
- 1. PUP40M models are for interchangeable AC plugs which are to be ordered separately. PUP40D and PUP45D models are with fixed North American AC plug for safety approval cULus only, and PUP40E/PUP45E models with fixed European AC plug for safety approval TÜV only.
- 2. Ripple and noise is maximum peak to peak voltage value measured at output within 20 MHz bandwidth, at rated line voltage and output load ranges, and with a 47 μF tantalum capacitor in parallel with a 0.1 μF ceramic capacitor across the output.

# **MECHANICAL SPECIFICATIONS**

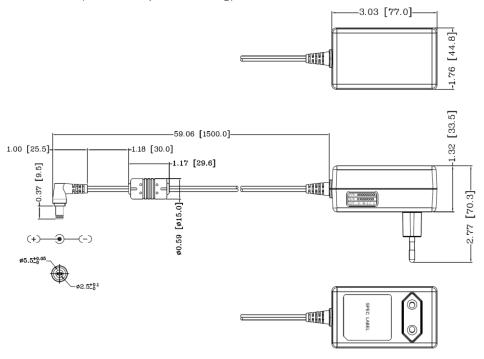
1. PUP40M models (Interchangeable AC Plug)



2. PUP40D & PUP45D models (Fixed North American AC Plug, Non-Polarization)



3. PUP40E & PUP45E models (Fixed European AC Plug)



### NOTES:

- 1. Dimensions shown in inches [mm]
- 2. Tolerance 0.02 [0.5] maximum
- 3. Weight: 168 grams (0.37 lbs.) approx.
- 4. Output connector is 5.5 mm O.D., 2.5 mm I.D., 9.5 mm long barrel female 90° connector, center positive voltage.
- 5. Interchangeable AC plugs can be ordered by referring to the following ordering number:

Туре	European plug	US plug (non-polarization)	UK plug	Australia plug	Korea plug	Argentina plug
Ordering no.	5OE00021	5OE00022	5OE00004	5OE00002	5OE00026	5OE00020