ED-PSU1204

Datasheet

by EDA Technology Co., Ltd

built: 2025-10-16

ED-PSU1204

DC 12V 4A Power Adapter

- a class Ⅱ adapter of single-phase 48.0 watts, single output level power supply
- Reliability level of 50K hours MTBF @ 25°C(rated input voltage，and using the Telcordia SR-332 Issue 3 method)
- DC output voltage must be Safe Extra Low Voltage (SELV) & Limited Power as defined by IEC62368-1
- Pre-installed UK, US, AU or EU standard plugs
- Natural convection cooling
- Simple design philosophy

Specifications

Input Parameters	
Rated input voltage	100-240Vac
Operating range	90-264Vac
Rated input frequency	50/60Hz(±3Hz)
Rated input current	≤1.5A
Power Consumption (no-loading)	≤0.1W
Primary current protection	An adequate internal fuse on the AC input line is provided
Configuration	2 Conductor

Output Parameters	
Nominal DC output voltage	+12.0V
Minimum load current	0A
Rating load current	4.0A
Peak load current	/
Rating output power	48.0W
Line regulation	

Output Parameters	
	The line regulation is less than ±5% while measuring at rated load and ±10% of input voltage changing.
Load regulation	The load regulation for +12.0Vis less than ±5%, at measured output load from 10% to 100% rated load.
Ripple and noise	• 200 mVp-p • Measurement Conditions: ◦ Add 0.1uF/50V ceramic capacitor and 10uF/50V aluminum electrolytic capacitor across the output terminal. ◦ Measured with 20MHz Bandwidth Oscilloscope.
Average efficiency	• 87.77% minimum • Measurement Conditions: ◦ Input voltage: 115V/60Hz and 230V/50Hz ◦ Output current: 100%, 75%, 50%, 25%
Turn on delay time	4000 mS max, at nominal input AC voltage and full load.
Rise time	The supply shall have a start-up rise time of less than 20 mS to rise to within regulation limits for all DC outputs.
Hold up time	8 mS minimum at nominal input 100Vac minimum voltage and full load.
Output over-shoot	Less than 10% of nominal voltage value.
Over-voltage protection	The output voltage shall be clamped by internal protection.
Short-circuit protection	• The adapter shall not be damaged by short the DC output to Ground. • The adapter shall resume normal operation when a short circuited fault condition is removed.
Over current protection	The output shall be protected against the over current conditions.

Mechanical Characteristics	
Plastic case	UL94V-0
Weight	About 210g
Dimensions	93mm x 33mm x 57.5mm
Color	BlackK
Input pin	International Pin (one of UK, US, AU or EU types)
Output connector	• DC plug type: 5.5×2.5×9.5mm (Fork and Groove) • Polarity: Center “+”
Cable	• Length: 1.5m • Standards: VW-1 80℃ 300V 1185 3.5Q 18AWG BLACK • Environmental Requirements: PAHS REACH ROHS PROP65

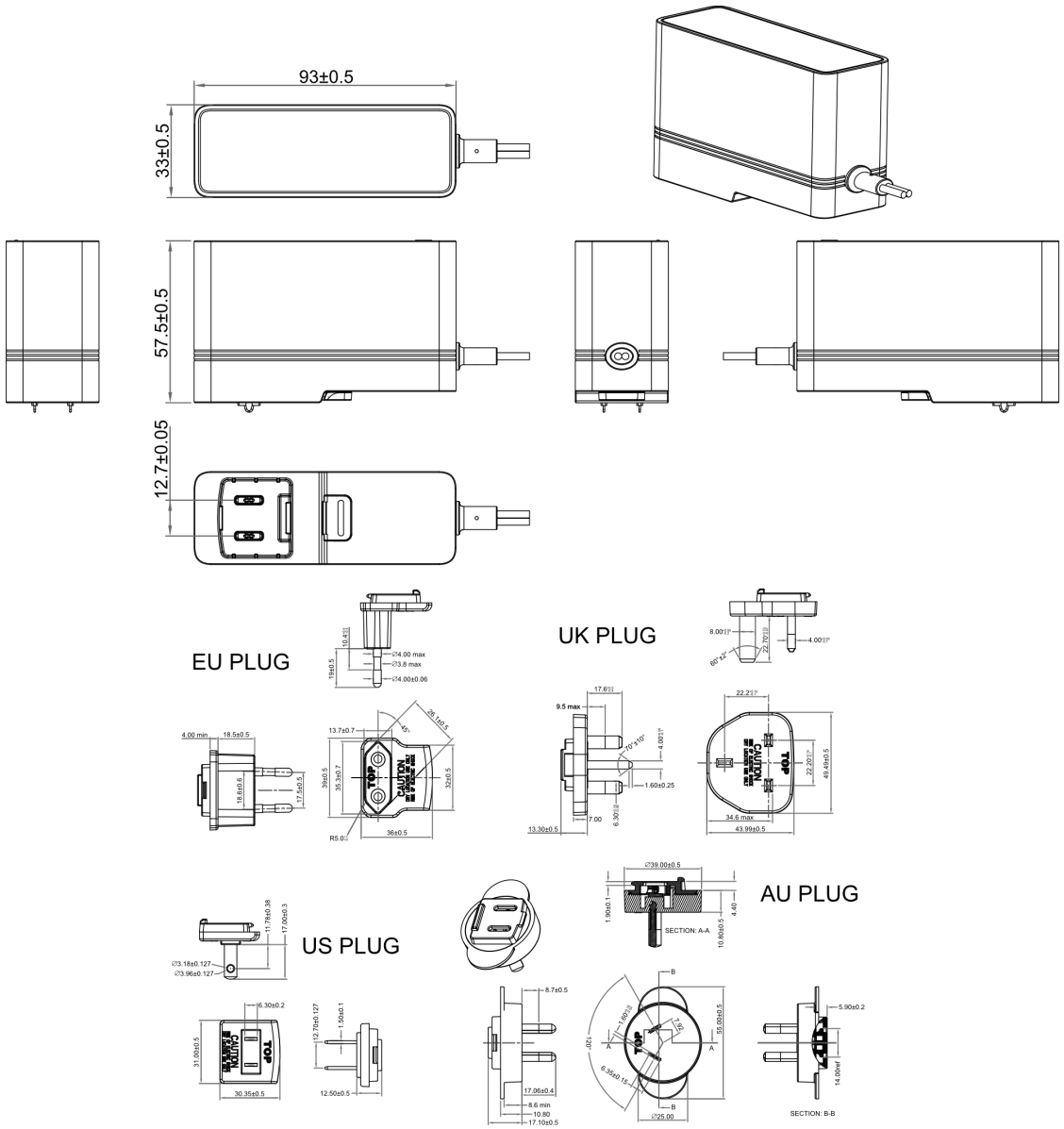
Regulatory Compliance	
EMC Specifications	• FCC Part 15: Class B for radiated and conducted emissions. • EN55032, Class B for radiated and conducted emissions.
Immunity	• Electrostatic Discharge Immunity ◦ Standards: EN 55035, EN 61000-4-2 ◦ Measurement Conditions: ▪ Air Discharge: ±8kV ▪ Contact Discharge: ±4kV ▪ Performance Criteria B ◦ Measurement Methods: Electrostatic-discharge test by contact or air should be conducted with Static-discharge tester, energy storage capacitance of 150pF, and discharge resistance of 330Ω 8kV air discharge, 4kV contact discharge. • Radiated Field Immunity ◦ Standards: EN 55035, EN 61000-4-3 ◦ Measurement Parameters: ▪ Frequency Range: 80-1000MHz, still need test singly 1800MHz, 2600MHz, 3500MHz, 5000MHz ▪ Field Strength: 3 V/m with 80% amplitude modulation of 1kHz ▪ Performance Criteria A ◦ Measurement Methods: Radio-frequency electromagnetic field susceptibility test, RS 80-1000MHz, 3V/m, 80%AM(1kHz). • Fast Transient Immunity ◦ Standards: EN 55035, EN 61000-4-4 ◦ Measurement Levels: ▪ Power line: 1kV ▪ Signal line: 0.5kV ▪ Performance Criteria B • Surge Immunity ◦ Standards: EN 55035, EN 61000-4-5 ◦ Measurement Levels: ▪ Line to line: ±1kV ▪ Line to Earth: ±2kV ▪ Phase Angle: +90° / -270° ◦ Measurement Methods: Lightning Surge Voltage shall be applied in differential and common mode to AC input lines and cross primary AC input and secondary GND.
Certification	• UL: UL 62368-1 • CUL: CSA C22.2 NO.62368-1 • CE: EN62368-1 • UKCA: BS EN62368-1 • RCM: AS/NZS62368.1
Safety Requirements	• Dielectric Withstand Voltage, Primary(input AC short)-to-Secondary(output DC short): 3000Vac, 10m A, 1 minute. • Insulation Resistance, Input to output: 50MΩ(MIN.) at 500VDC. • Reinforced insulation system, Primary-to-Ground and Primary-to-Secondary. • The leakage current shall not exceed 0.25mA.

Environmental Requirements	
Operating Temperature	0°C ~ 40°C
Storage Temperature	-20°C ~ 70°C
Operating Humidity	10% ~ 90% (Non Condensing)
Storage Humidity	10% ~ 90% (Non Condensing)

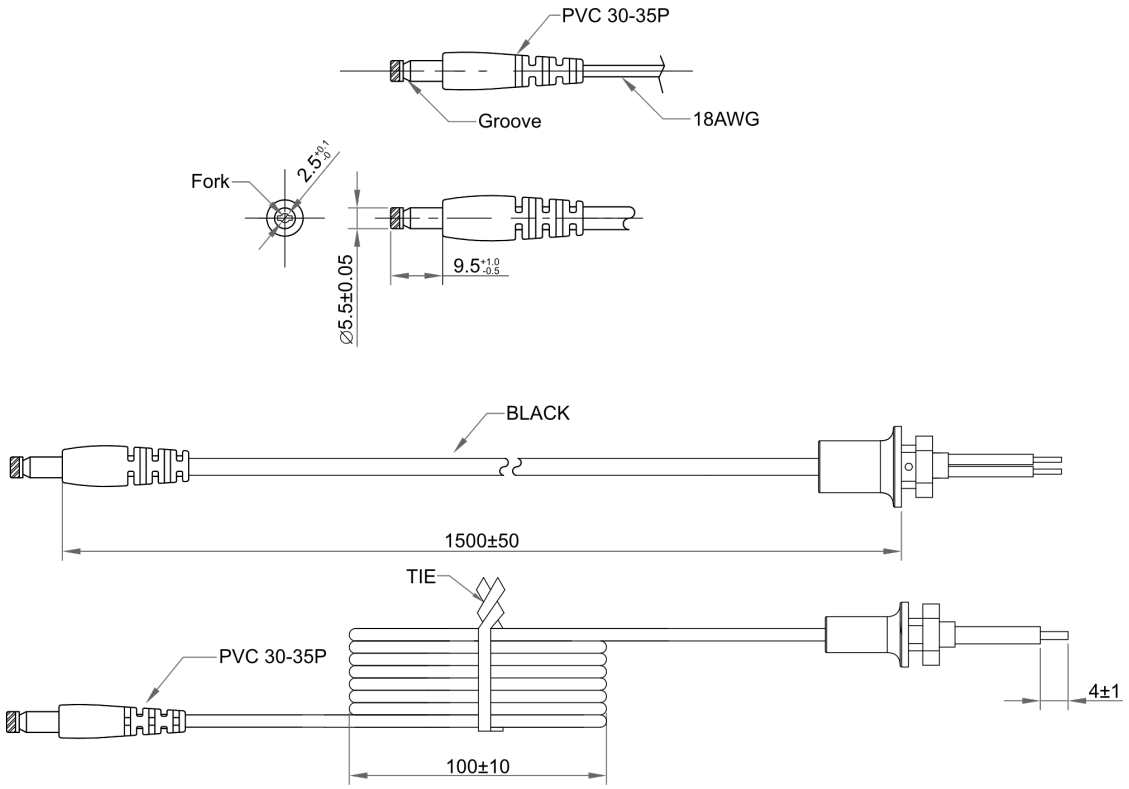
Dimensions

Unit: mm

- Main Body and AC Plug

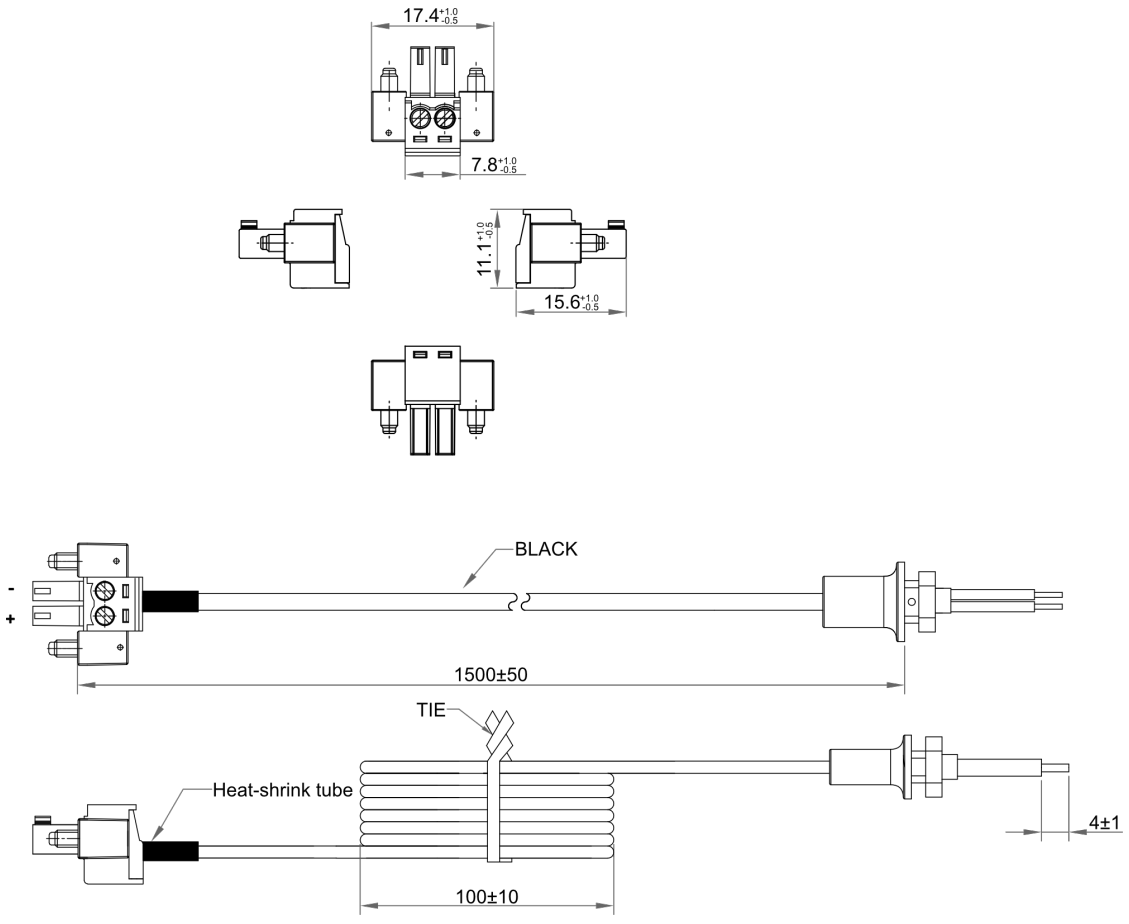


- Cable and DC Plug

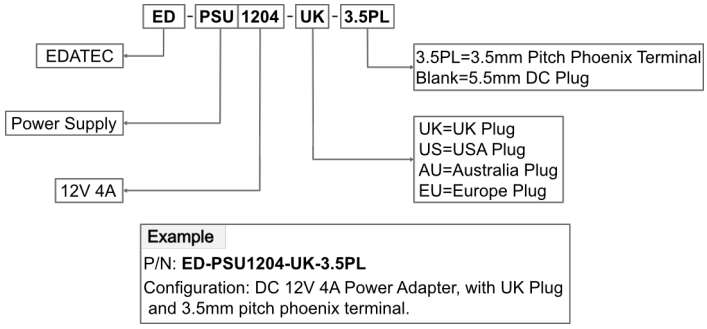


The Polarity:

- Cable and Phoenix Terminal Plug



Ordering Code



Example

P/N: **ED-PSU1204-UK-3.5PL**

Configuration: DC 12V 4A Power Adapter, with UK Plug and 3.5mm pitch phoenix terminal.

Packing List

- 1 x ED-PSU1204 Power Adapter