

SPECIFICATION

High Quality Switching Wallmount Adapter

Universal AC Input
12W 12.0VDC 1.0A Output



P/N: W120010KO-US

*** Specification Approval ***

This specification (total 5 pages including cover page) in its entirety is approved by:

Company Name

Print Name

Signature

Date

Specification subject to change without prior notice.



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1. Scope

The document details the electrical, mechanical and environmental specifications of a single output adapter providing 12V 1000mA continuous output power. The adapter shall meet RoHS requirements.

1.1. Description

SMPS Adaptor(Wall mount)

2. Input Characteristics

2.1. Input Voltage & Frequency

The range of input voltage is from 90Vac to 264Vac single phase.

| | Minimum | Nominal | Maximum |
|-----------------|---------|---------------|---------|
| Input Voltage | 90Vac | 100Vac~240Vac | 264Vac |
| Input Frequency | 47Hz | 60Hz/50Hz | 63Hz |

2.2. Input AC Current

0.35Amax. @ 100-240Vac input & Full load

2.3. Inrush Current (cold start)

15Amax. @ 264Vac input

2.4. Averaged Efficiency

77.8% min. @ 115VAC & 230VAC 25% full load, 50% full load, 75% full load, 100% full load

2.5. Energy Consumption

100-240V, $\leq 0.30W$

3. Output Characteristics

3.1. Static Output Characteristics

| Output Rate | Rated Load | | Output Range | R+N |
|-------------|------------|-----------|--------------|----------|
| | Min. Load | Max. Load | | |
| +12V | 0.0A | 1A | 11.4V~12.6V | 120mVp-p |

Ripple & Noise: Measurement is done by 20MHZ bandwidth oscilloscope and the output Paralleled a 0.1 μF ceramic capacitor and a 10 μF electrolysis capacitor. (test under the Condition of rated input and rated output)

3.2. Line/Load Regulation

| Output Rate | Load Condition | | Line Regulation | Load Regulation |
|-------------|----------------|-----------|-----------------|-----------------|
| | Min. Load | Max. Load | | |
| +12V | 0.0A | 1A | $\pm 2\%$ | $\pm 5\%$ |

3.3. Turn - on Delay Time

2S max. @ 100 Vac to 240 Vac input & Full load

3.4. Hold-up Time

8mS min. @ Full load & 115Vac/60Hz input turn off at worst case

3.5. Rise Time

20mS max. @ Full load

3.6. Fall Time

20mS max. @ Full load

3.7. Output Overshoot/Undershoot

10% max. When the power on or off

3.8. Output Load Transient Response

Output voltage within 11.4-12.6V for load.step from 20% to 80%, R/S: 0.5A/μS,
Frequency: 100Hz duration and 8Ms at 80%

4. Protection Requirements

4.1. Over Current Protection

The output shall hiccup when the over currents applied to the output rail, and shall be self-recovery when the fault condition is removed

4.2. Short Circuit Protection

The input power shall decrease when the output rail short, the power supply shall no damage, and shall be self-recovery when the the fault condition is removed

5. Environment Requirements

5.1. Operating Temperature, and Relative Humidity

0°C to +40°C
20%RH to 90%RH

5.2. Storage Temperature, and Relative Humidity

-10°C to +80°C
0%RH to 95%RH non-condensing @ Sea level shall be low 10,000 feet

5.3. Vibration

10 to 300Hz sweep at a constant acceleration of 1.0G (Breath: 3.5mm) for 1Hour for each of the perpendicular axes X, Y, Z

5.4. Drop in

Height: 1m; the product should be fell off on the hardwood with the thickness of 20mm, and the hardwood should be put on the base of the cement or on the ground without fleibility.

6. Reliability Requirements

6.1. Burn-in

The power supply shall be burn-in for 2 Hours under normal input and 80% rated load at 40°C ±5°C

7. EMI/EMS Standards

7.1. EMI Standards

EN 55022:1998,+A1:2000+A2:2003,Class Bass B
 EN 55024:1998+A1:2001+A2:2003
 CISPR 22:2003,Class B
 AS/NZS CISPR 22:2004,Class B
 FCC Part 15

7.2. EMS Standards

| | |
|---------------|--|
| EN 61000-3-2 | Harmonic current emissions |
| EN 61000-3-3 | Voltage fluctuations & flicker |
| EN 61000-4-2 | Electrostatic Discharge(ESD):8Kv air discharge,4kV contact discharge |
| EN 61000-4-3 | Radio-Frequency Electromagnetic Field Susceptibility Test-RS |
| EN 61000-4-4 | Electrical Fast Transient/Burst-EFT |
| EN 61000-4-5 | Surge Immunity Test:AC Power Line:line to line 1kV,line to earth 2kV |
| EN 61000-4-6 | Conducted Radio Frequency Disturbances Test-CS |
| EN 61000-4-8 | Power Frequency Magnetic Field Test |
| EN 61000-4-11 | Voltage Dips |

8. Safety Standards

8.1. Dielectric Strength(Hi-pot)

Primary to Secondary:3000Vac/10mA Max/60second(3second for production)

8.2. Leakage Current

0.25mA max.at 264Vac/50Hz

8.3. Insulation Resistance

50M Ω min. at primary to secondary add 500Vdc test voltage

8.4 Regulatory Standards

| Type | Country | Standard |
|----------|---------|----------|
| UL/cUL | USA | UL60950 |
| CE | Eu | EN60950 |
| CEC/MEPS | USA/AUS | V |

9. Mech. Drawing

