

1 GENERAL

1.1 Description

- This specification defines the performance characteristics for a class II adapter, single-phase 10.0 watts. Single output level power supply.
- Simple design philosophy.
- Reliability level of 50K hours MTBF @ 25° C (rated input voltage, and using the BELLCORE SR-332 method).
- DC output voltage must be Safe Extra Low Voltage (SELV) & Limited Power as defined by IEC62368-1.
- The maximum room ambient temperature (T_{mra}), as mentioned in clause B.1.6 and B.2.6 of IEC62368-1, for the external power supply is 40 °C.
- Cooling: natural convection.

2 INPUT REQUIREMENTS

2.1 Input Conditions

The supply shall operate over the voltage ranges as follows:

Rated input voltage	100-120Vac
Operating range	90-132Vac
Rated input frequency	50/60Hz +/- 3Hz
Rated input current	0.4A max.
Power consumption (no-loading)	0.1W max.
Primary current protection	An adequate internal fuse on the AC input line is provide.
Configuration	<u>2</u> Conductor

2.2 AC Inrush Current

No damage shall be occurred and the input fuse shall not be blown up nominal input voltage full load 25°C cold starts.

3 OUTPUT REQUIREMENTS

3.1	Nominal DC output voltage	+5.0V
3.2	Minimum load current	0.01A
3.3	Rating load current	2.0A
3.4	Peak load current	/
3.5	Rating output power	10.0W
3.6	Line regulation	The line regulation is less than <u>±5%</u> while measuring at rated load and +/-10% of input voltage changing.
3.7	Load regulation	The load regulation for <u>+5.0V</u> is less than <u>±5%</u> , at measured output load from 10% to 100% rated load .

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3.8	Peak load regulation	The peak load regulation for <u>+5.0V</u> is less than <u> / </u> , at measured output load from 30% to 100% rated load.
3.9	Ripple and noise	<u>150 mVp-p</u> Add 0.1uF/50V ceramic capacitor and 10uF/50V aluminum electrolytic capacitor across the output terminal. Measured with 20MHz Bandwidth Oscilloscope.
3.10	Switching efficiency	<u>78.7%</u> minimum 115V/60Hz, output current from 100%, 75%, 50%, 25%.
3.11	Turn on delay time	<u>3000 mS max</u> at nominal input AC voltage and full load
3.12	Rise time	The supply shall have a start-up rise time of less than <u>20mS</u> to rise to within regulation limits for all DC outputs.
3.13	Hold up time	<u>8 mS</u> minimum at nominal input 100Vac minimum voltage and full load.
3.14	Output over-shoot	Less than <u>10%</u> of nominal voltage value
3.15	LED indication function	<u> / </u>
3.16	Protection function	
	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.

4 MECHANICAL

4.1 Enclosure and Layout

Plastic case: UL94V-0
 Weight : / g (Max.)
 Dimensions: 27.0x27.0x25.0mm
 Color : Black

4.2 Input and Output Configuration

Input pin: International Pin
 Output connector : DC plug type: Type-C
 Polarity: /

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5 REGULATORY COMPLIANCE

5.1 Safety Requirements and Certification

5.1.1 Regulatory Standard

The power supply shall comply the following international regulatory standards

Approval	Country	Standard
UL	USA	UL 62368-1
CUL	Canada	CSA C22.2 NO.62368-1

5.1.2 Additional Safety Requirements

- ⊙ Dielectric Withstand Voltage, Primary(input AC short)-to-Secondary(output DC short): 3000Vac, 5m A, 1 minute.
- ⊙ Insulation Resistance, Input to output: 10MΩ(MIN.) at 500VDC.
- ⊙ Reinforced insulation system, Primary-to-Ground and Primary-to-Secondary.
- ⊙ The leakage current shall not exceed 0.25mA.

6 ENVIRONMENTAL REQUIREMENTS

6.1 Temperature

- ⊙ Operating: 0 °C +40 °C
- ⊙ Non-Operating: -25 °C +70 °C

6.2 Humidity

- ⊙ Operating: 10%~90% (Non Condensing)
- ⊙ Non-Operating: 10%~90% (Non Condensing)

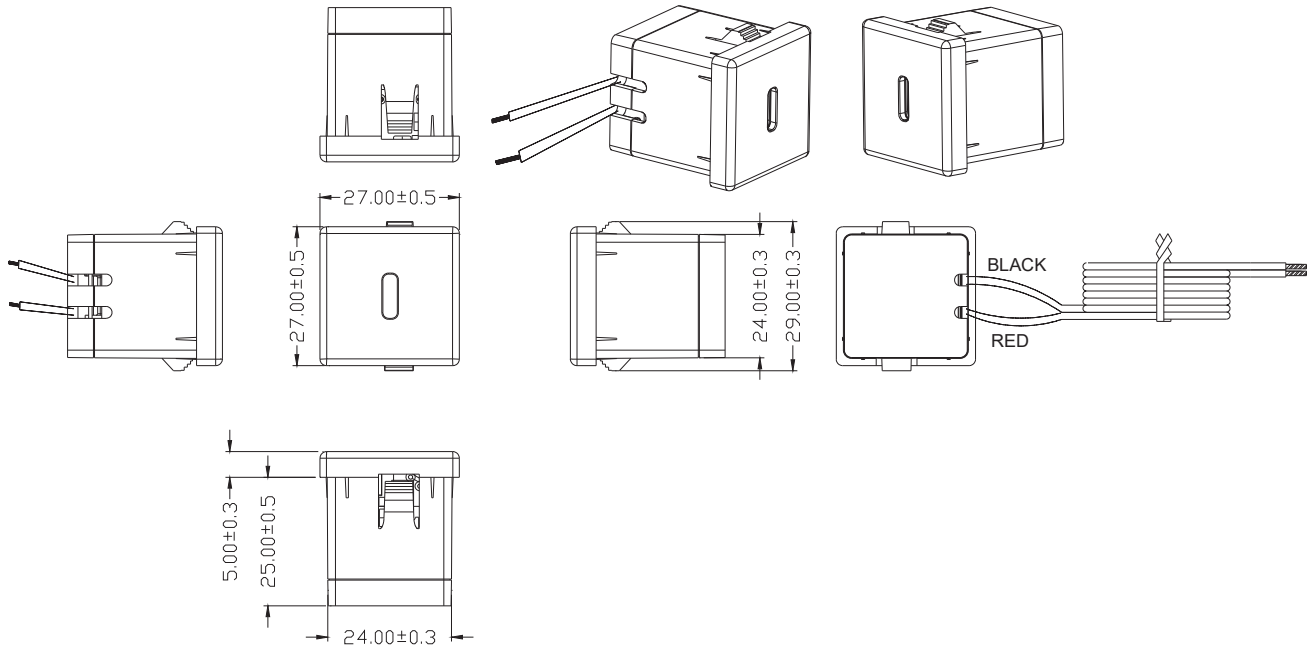
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7 APPEARANCE DRAWING: (Unit: mm)



- NOTE: 1. Case cover & chassis material:
 PC: BLACK
 2. AC PIN MATERIAL: BRASS (NI PLATED)
 3. Panel Thickness: 0.8~1.8mm

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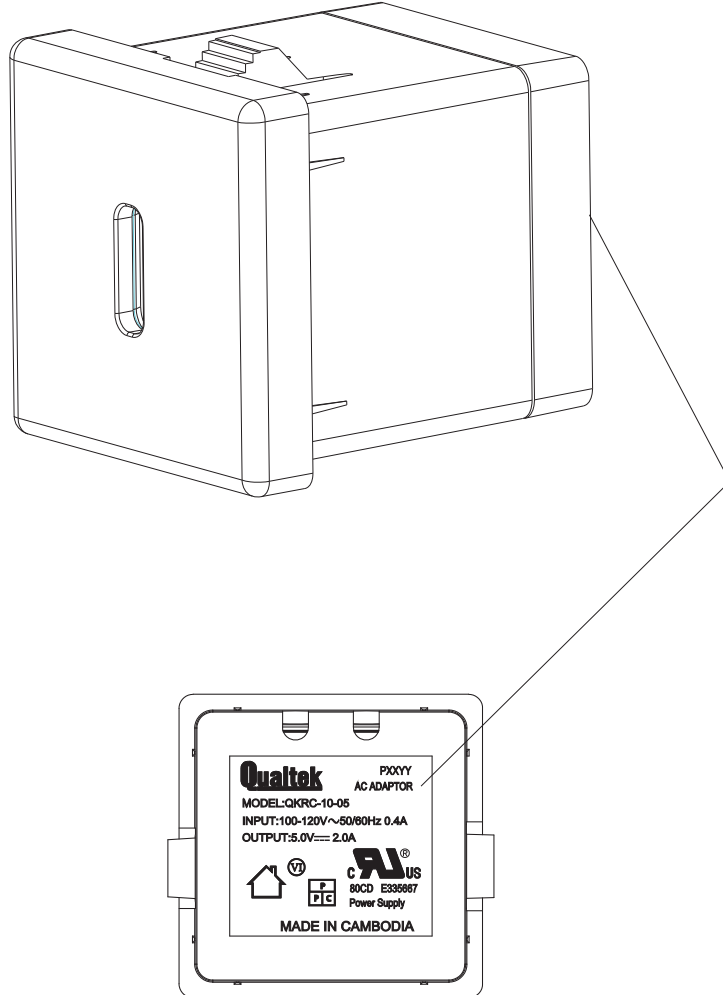


10W 5V Snap-in USB Type C Power Supply Receptacle

Qualtek P/N:

QKRC-10-05

8 NAME PLATE:



Note: 1. Laser

Date code(PXXXX: P=PAHS+REACH+ROHS, XX=Week, YY=Year)

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