SPECIFICATION

CUSTOMER: _____

PART NUMBER: _____

MODEL NO: ZTP2405B

PRODUCT: Uninterruptible Power Supply

OUTPUT: 24V/5A、24V/1A

PLEASE RETURN TO US COPY OF "SPECIFICATION FOR APPROVAL" WITH YOUR APPROVED SIGNATURES.

	"√"	CUSTOMER' S SIGNATURE	NOTE
CHECK OUT			
REJECTED			
CUSTOMER REFERENCE			

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E. C. LIST

Rev.	Description of Change		Changed Date	ECN No.
	Before	After		
V0.0	Original Release			

Table Of Content

1.SCOPE

The document describes the detailed specifications of one 120w constant voltage uninterruptible power supply. The electrical performance, mechanical and environmental requirements. The power supply shall meet the RoHS requirement.

2.Input Characteristics

2.1. Input Voltage & Frequency

The range of input voltage is from 190 to 264Vac single phase.

	Minimum	Nominal	Maximum
Input Voltage	190Vac	220Vac	264Vac
Input Frequency	47Hz	60Hz/50Hz	63Hz

2.2. Input AC Current

2Amax. @ input 190-264Vac & Full load.

2.3. Inrush Current (cold start)

40Amax. @ input 240Vac.

2.4. Power Factor

0.6Min. @ input 220AC & Full load.

2.5. Efficiency (Normal)

86% min. @ input 220Vac& Full load.

3. Output Characteristics

3.1. Static Output Characteristics <Vo & R+N>

Output Voltage	Load		Load adjustment rate	Output voltage Range	R+N	Remark
27.6VDC	Min. Load	Max. Load				
	0.0A	5A	+/-2%	24-28VDC	200mVp-p	

Ripple & Noise: Measurement is done by 20MHz bandwidth oscilloscope and the output paralleled a 0.1uF ceramic capacitor and a 10uF electrolysis capacitor. (test under the condition of rated input and rated output)

3.2. Turn - on Delay Time

3.0S max. @ input 220 Vac & Full load.

3.3. Hold-up Time

60mS min. @ Full load &220Vac/50Hz input turn off at worst case.

3.4. Rise Time

50mS max. @ FULL load.

3.5. Fall Time

50mS max. @ FULL load.

3.6. Output voltage Overshoot

10% max. When the power on or off.

4.Charge and discharge

4.1. Charge current

When the battery voltage is lower than the output voltage, the battery will be charged and maximum charging current is 1A.

4.2. Discharge current

When the AC input suddenly cut off, it will convert to battery power, the maximum supply current is 5A.

5. Protection Requirements

5.1. Short Circuit Protection

The products will hiccup in protection when the output short circuit, and shall be self-recovery when the short circuit condition is removed。

5.2. Over Current Protection

The products will hiccup in protection when the output over 110%-150% full load, and shall be self-recovery when the over current is remove.

5.3 Battery low voltage protection

The product will cut off when battery voltage descend to21+/-0.4V by battery powered alone.

5.4 Battery reverse connect protection

The battery will not charge and discharge when the battery cable reverse.

5.5 Battery discharge over current protection

When battery supply power alone, the discharge current exceeds to 5-7A, it will cut off.

6. Environment Requirements

6.1 Operating Temperature and Relative Humidity

Operating Temperature:-25℃ to +40℃.

Operating Relative Humidity：10%RH to 90%RH.

6.2. Storage Temperature and Relative Humidity

Storage Temperature：-40℃ to +80℃.

Storage and Relative Humidity：5% to 60%RH.

6.3. Vibration

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

6.4.Waterproof grade

None

7. Reliability Requirements

7.1. Burn-in

The power supply shall be in burn-in test at least 4 Hours with full load condition in 40℃ environment.

7.2. MTBF Qualification

The MTBF shall be at least 30,000hours at 25℃ in full load and nominal input condition。

8. EMI/EMS Standards

8.1. EMI Standards

EN 55022:2010

8.2. EMS Standards

EN 61000-3-2	Harmonic current emissions ,class c.
EN 61000-3-3	Voltage fluctuations & flicker
EN 61000-4-2	Electrostatic Discharge(ESD)
EN 61000-4-3	Radio-Frequency Continuous radiated disturbance
EN 61000-4-5	Surge Immunity Test

EN 61000-4-6	Radio-Frequency Continuous conducted disturbance
EN 61000-4-8	Power Frequency Magnetic Field Test
EN61000-4-11	Voltage Dips

9.Safety Standards

9.1 Dielectric Strength(Hi-pot)

Primary to Secondary: 3000Vac 5mAMax / 60second(3 second for production)

Primary to Earth: 1500Vac 5mAMax / 60second(0 second for production)

Secondary to Earth: 1500Vac 5mAMax / 60second(0 second for production)

9.2 Grounded Resistance

< 0.1Ω,25A,1Minute

9.3 Leakage Current

0.75mAmax. at input 240Vac/50Hz.

9.4 Insulation Resistance

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

9.5 Regulatory Standards

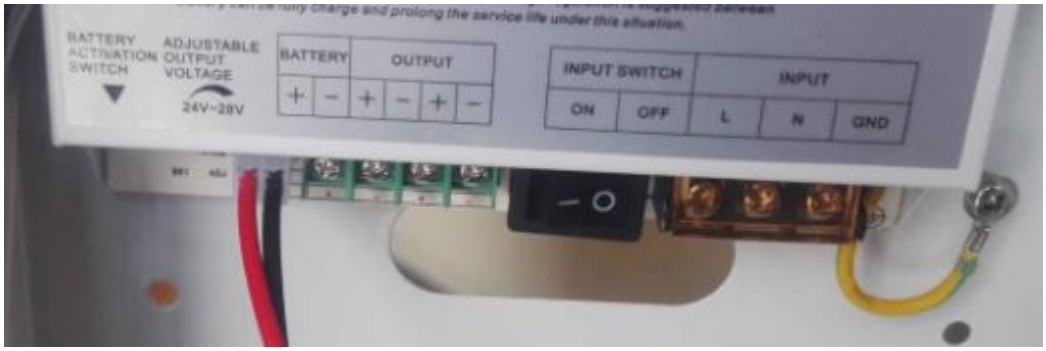
Type	Country	Standard	State
CE	Europe		Pass
IEC	International		Pass

10. Mach. Outline Drawing

L=31cm W=34cm H=8cm

NO (Color)	LED1（Red）	LED2（Yellow）	LED3（Green）	LED4（Red）
Instruction	Low battery alarm	Battery charge	DC output	AC input
Illustration	In battery discharge, red light is on when voltage is lower than 22± 0.4V.	With AC input and no connection to battery, yellow light on. When connecting to battery and charging, yellow light blinks. When AC cuts off and battery discharges, yellow light on.	With DC output, green light on. Without DC output, green light off.	With AC input, red light on. Without AC input, red light off.

11.Input ,output &battery connect and Function button



11.1 Input

AC input connect L,N and GND.

11.2 Output

DC output connect output+ and output-.

11.3 Battery

Battery connect battery+ and battery-.

11.4 AC input switch

AC input is connected when switch in position ON and AC input is cut off in position OFF.

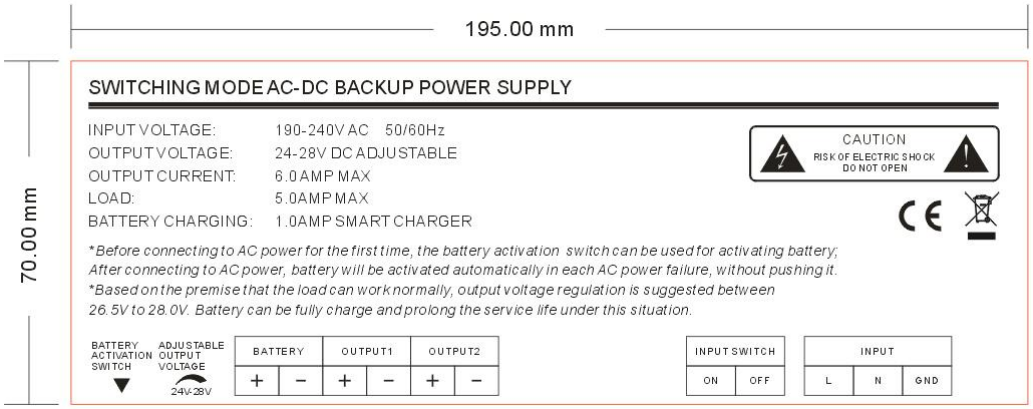
11.5 Output adjustable potentiometer

Output voltage is adjustable by potentiometer, output voltage range between DC24-28V.

11.6 Battery trigger switch

When connecting to battery without AC input, please press the white switch to trigger the battery discharge.

12.I/O Marking Drawing



13.PACKAGE DRAWING