





## 1. OUTLINE

### 1.1. Purpose

The power supply specification is the description of customized power supplies, it is a cornerstone of normalizing the company customized power supply. The main function is:

- For suppliers to make the product design, the basis of production and inspection;
- The basis of inspection and returns of goods for Quality Department;
- The basis for suppliers to make technical certification of products' quality;
- The basis of choosing material for R&D department;

The purpose of the technical specification is to understand company's material requirements about quality and reliability, the product would be accepted only if the goods are compliant to the requirements of 100% quality and reliability. The company is able to cancel the qualification of unqualified suppliers, and revise the related contents of the specification, on the occasion, suppliers would receive the note of changing in advance and appropriate time would be given to make relative alteration.

Notes: The supplier mentioned above includes internal manufacturing department and external manufacturer.

### 1.2. Scope of Application

This specification defines the requirements of designing and developing of AC/DC switching mode power supply.

## 2. FUNCTION DESCRIPTION

The power supply is normal output of the **48VDC 2000mA**, with **desktop with C6 inlet** input..

The power supply has an input over current, under voltage protection, output overvoltage, over current, short circuit protection.

The power supply is designed in accordance with safety requirements, in line with **AS/NZS 62368** safety standards, the requirements obtained the relevant certification.

## 3. TECHNICAL SPECIFICATION

### 3.1. Electrical Features

3.1.1	Input Nominal Voltage	100V to 240V AC
3.1.2	Input Voltage Range	90V to 264V AC
3.1.3	Input Voltage Frequency	50/60 Hz
3.1.4	Input Voltage Frequency Range	47/63 Hz
3.1.5	Input Current	1.5A Max @ 90VAC & Full Load
3.1.6	Inrush current	120A Max @ 240Vac at ambient temperature of 25°C
3.1.7	Output Nominal Voltage	48.0 ±5% VDC
3.1.8	Output Nominal Current	0~2.0A
3.1.9	Output Nominal Power	96.0W



3.1.10	Line Regulation	±1%
3.1.11	Load Regulation	±5%
3.1.12	Maximum Output Vp-p ripple and noise	≤250mVpp Ripple +Noise @ 20MHz bandwidth with 10uF/50V capacitor and 104/50V ceramic capacitor at 25°C environment.
3.1.13	Turn-on Delay Time	≤ 3S max @ 100VAC input & full load
3.1.14	Hold Up Time	>5ms @Full load &115Vac/60Hz input turn off at worst case >10ms @Full load &230Vac/50Hz input turn off at worst case
3.1.15	Rise Tim	<30ms @ full load
3.1.16	Fall Time	<20ms @ full load
3.1.17	Output overshoot/undershoot	10% max. When the power on or off.
3.1.18	Protection against short-circuit	Power supply will support the short-circuit of its output without suffering damage. Power adapter will recover its normal functioning once the short-circuit has disappeared.
3.1.19	Protection against overload current.	Power Supply output will be protected against overload current between 3.0A and 4.0A. Power Supply will recover its normal functioning once the overload removed.
3.1.20	Protection against over voltage	The power supply shall protection when the output over voltage, the power supply shall no damage
3.1.21	Output Load Transient Response	Output voltage is within 43.2V-52.8V for the load step is from 25% to 75%, R/S: 0.5A/uS
3.1.22	Dielectric withstand (Hi-Pot)	Primary to Secondary: 3000Vac / 10mAMax / 60second (3second for production)
3.1.23	Isolation resistance	>100Mohm / 500V DC
3.1.24	Leakage current	<0.25mA @ 264Vac/50Hz input
3.1.25	Efficiency with Load	>88.0% @ 115~230VAC& 4 points average.
3.1.26	Efficiency without load	≤0.21W @ 115~230VAC

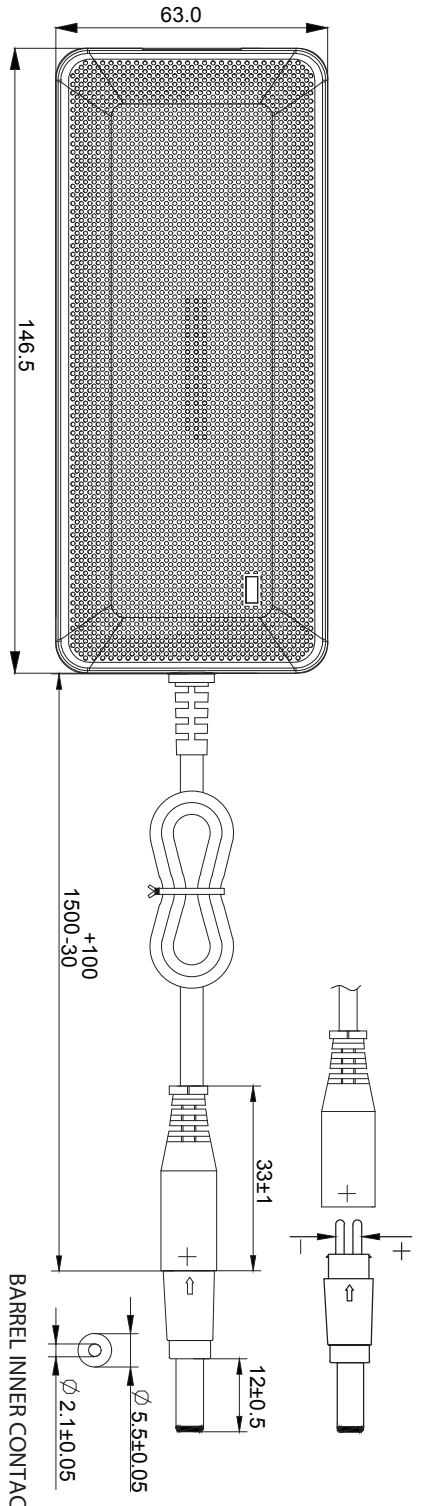
### 3.2. Regulatory & Reliability

3.2.1	Safety Standard compliance	AS/NZS 62368
3.2.2	EMI standard compliance	EN 55024, EN 55032, CISPR 32
3.2.3	EMS standard compliance	EN61000-3-2 / EN61000-3-3, EN61000-4-2 Air +/- 8KV, Contact +/-4KV / EN61000-4-3, EN61000-4-5 1KV Differential, 2KV Common / EN61000-4-8, EN61000-4-11
3.2.4	MTBF	>30,000hours @ 25C full load and nominal input.

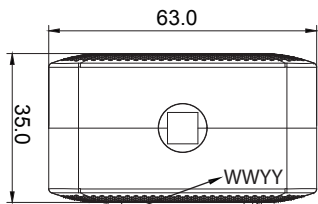
### 3.3. Environmental Features

3.3.1	Functioning temperature range	0 to +30°C
3.3.2	Storage temperature range	-40 to +70°C 24H
3.3.3	Relative humidity under functioning conditions	20 to 80% H.R.
3.3.4	Relative humidity under storage conditions	10 to 95% H.R.

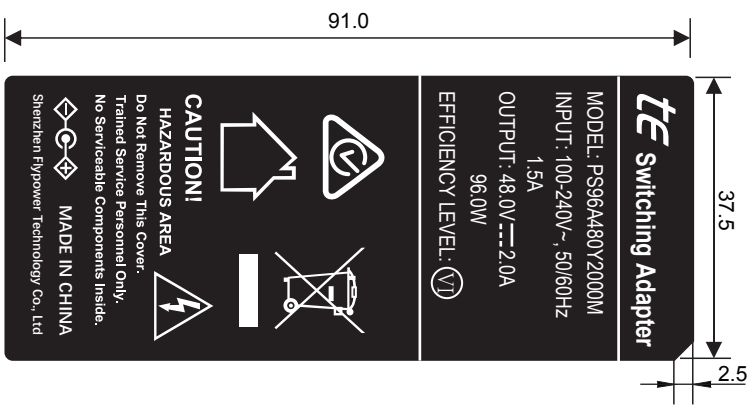
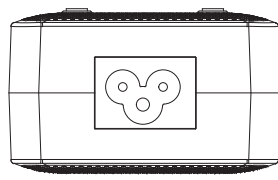
## 4. MECHANICAL DRAWING



REVISED	DRAWN	APPROVED
① UPDATED PRODUCT LABEL	JACKY	FREDERICK
② ADDED CLIENT P/N	09/11/21	09/11/21



WW: WEEK YY: YEAR



- NOTES:
- 1.DC OUTPUT CABLE: 2464 20AWG X 2C 1.50 METERS,LEAD FREE,ROUND WIRE
  2. HOUSING COLOUR: BLACK
  - 3.INPUT: 100~240VAC 50/60HZ
  4. OUTPUT: 48V2.0A BARREL INNER PLUG, DEFAULT C+ POLARITY
  - 5.ROHS & REACH COMPLIANT

DRAWING NO: TE30-0352 R1

PART NO: 48VDC2000/1

①

DESCRIPTION: SWITCHING ADAPTER 48VDC 2000mA 2.1X5.5X12.0MM C+REVERSIBLE

SIZE	A4	DATE	13/08/19	CHECKED	SUNNY	13/08/19	ORDER REF:	SHEET 1 OF 2	TOLERANCES UNLESS OTHERWISE STATED
UNIT	MM	DRAWN	STEVEN	APPROVED	FREDERICK	13/08/19	CUSTOMER: TENSUW		X = +/-1 .X = +/-0.5 .XX = +/-0.2
SCALE	NTS	MANU:	PS96A480Y2000M	DATE:					



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