KTEC

SPECIFICATION FOR APPROVAL

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KSM-300A-2401250B3

SWITCH MODE POWER SUPPLY

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KSM-300A-2401250B3 Manufacturer Part No.: KS260037

Customer Name_____ _____

Customer Part NO. _____

Project Modify List

Item	Content	Rev.	Date	Prepared By	Checked By
1	First REV.	A	2026-02-06	Liao xiaoyan	Baison xiao

Manufacturer

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APPROVED BY	CHECKED BY	TESTED BY

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1. INPUT REQUIREMENTS

1.1 Highlight & Features

- Reliability level of 50K hours MTBF @ 25°C (rated input voltage and using the Telcordia SR-332 issue 3 method).
- Safety approvals to IEC60601-1& IEC 62368-1.
- Meet efficiency level VI.
- Low touch current (<0.1mA Normal & 0.3mA single fault).
- 2 × MOPP isolation.
- Cooling: natural convection.

1.2 General Description

This specification defines the performance characteristics for a class I adapter, single-phase 300.0 watts.

1.3 Chemical Substance Control Laws

PAHS 6P NP REACH ROHS NOP PROP65

1.4 Input Conditions

The supply shall operate over the voltage ranges as follows:

Rated input voltage	100-240Vac
Operating range	90-264Vac
Rated input frequency	50/60Hz +/- 3Hz
Rated input current	4.0A maximum
Power consumption(no-loading)	0.5W maximum
Input Configuration	3 Conductor
Power Factor (typ.)	0.95 @ 115 Vac / 60 Hz, full load 0.90 @ 230 Vac / 50 Hz, full load

1.5 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 start.

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2. OUTPUT REQUIREMENTS

2.1	Nominal DC output voltage	+24.0V
2.2	Minimum load current	0.01A
2.3	Rating load current	12.5A
2.4	Peak load current	/
2.5	Rating output power	300.0W
2.6	Line regulation	±1%
2.7	Load regulation	±5%
2.8	Ripple and noise	240mVp-p maximum Add 0.1uF/50V ceramic capacitor and 10uF/50V aluminum electrolytic capacitor across the output terminal. Measured with 20MHz Bandwidth Oscilloscope.
2.10	Average efficiency	91.00% (Typ.) 115V/60Hz and 230V/50Hz, output current from 100%, 75%, 50%, 25%.
2.11	Turn on delay time	1500ms at 115V nominal input AC voltage and full load.
2.12	Rise time	The supply shall have a start-up rise time of less than 50ms to rise to within regulation limits for all DC outputs.
2.13	Hold up time	15ms minimum at nominal input 115Vac minimum voltage and full load.
2.14	Output over-shoot	Less than 10% of nominal voltage value.
2.15	LED indication function	/
2.16	Protection function	
	Over-voltage protection	The output voltage shall be clamped by internal protection, latch mode.
	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 power supply will be protection when output current at 160% maximum rated current.

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3. MECHANICAL

3.1 Enclosure and Layout

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

3.2 Input and Output Configuration

Input pin	3Pin(C14 inlet)
Output connector	DC plug type: molex 39-01-2060 2*03P
Polarity	/
Cable	1.2M VW-1 80℃ 300V 2464 20AWG 6C Black

4. REGULATORY COMPLIANCE

4.1 EMC Specifications

The external power supply must meet all specification in this section. it is required that the external power supply work closely with the customer's equipment in order to get the best EMC solution.

4.1.1 Radiated and Conducted Emission

FCC part 15: Class B for radiated and conducted emissions.

EN55032, Class B for radiated and conducted emissions.

FCC part 18, IEC60601-1-2

4.2 Immunity

4.2.1 Electrostatic Discharge Immunity

IEC60601-1-2, EN55035, EN 61000-4-2

Air Discharge: ±15kv

Contact Discharge: ±8kv

Performance Criteria A

Electrostatic-discharge test by contact or air should be conducted with Static-discharge tester (energy storage capacitance of 150pF and discharge resistance of 330Ω) 15kv air discharge, 8kv contact discharge.

4.2.2 Radiated Field Immunity

IEC60601-1-2, EN55035, EN 61000-4-3

Frequency Range: 80MHz -2.7GHz

Field Strength: 3V/m with 80% amplitude modulation of 1kHz Performance Criteria A

Radio-frequency electromagnetic field susceptibility test, RS 80MHz -2.7GHz, 3V/m, 80%AM(1KHz).

4.2.3 Fast Transient Immunity

IEC60601-1-2, EN55035, EN 61000-4-4

Power line: 2kv

Performance Criteria B

4.2.4 Surge Immunity

IEC60601-1-2, EN55035, EN 61000-4-5

Line to line: ±1kv

Line to earth: ±2kv

+ 90°/ -270°

Lighting surge voltage of differential and common modes shall be applies across AC input lines and across input and frame ground.

4.3 Safety Requirements and Certification

4.3.1 Regulatory Standard

The power supply shall comply with the following international regulatory standards:

for short	Country or Region	Certified Status	Standard
UL	USA	/	ANSI/AAMI ES 60601-1 IT: UL62368-1
CUL	Canada	/	CSA C22.2 No. 60601-1
CE	Europe	/	EN60601 IT: UL62368-1

4.3.2 Additional Safety Requirements

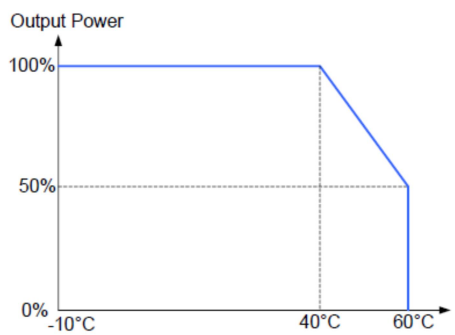
◎ Dielectric Withstand Voltage, Primary (input AC short)-to-Secondary (output DC short): 2000Vac, 10mA, 1minute.

◎ Insulation Resistance, Input to output: 100MΩ (MIN.) at 500 VDC.

◎ Reinforced insulation system, Primary-to-Ground and Primary-to-Secondary.

◎ The leakage current shall not exceed 0.1mA.

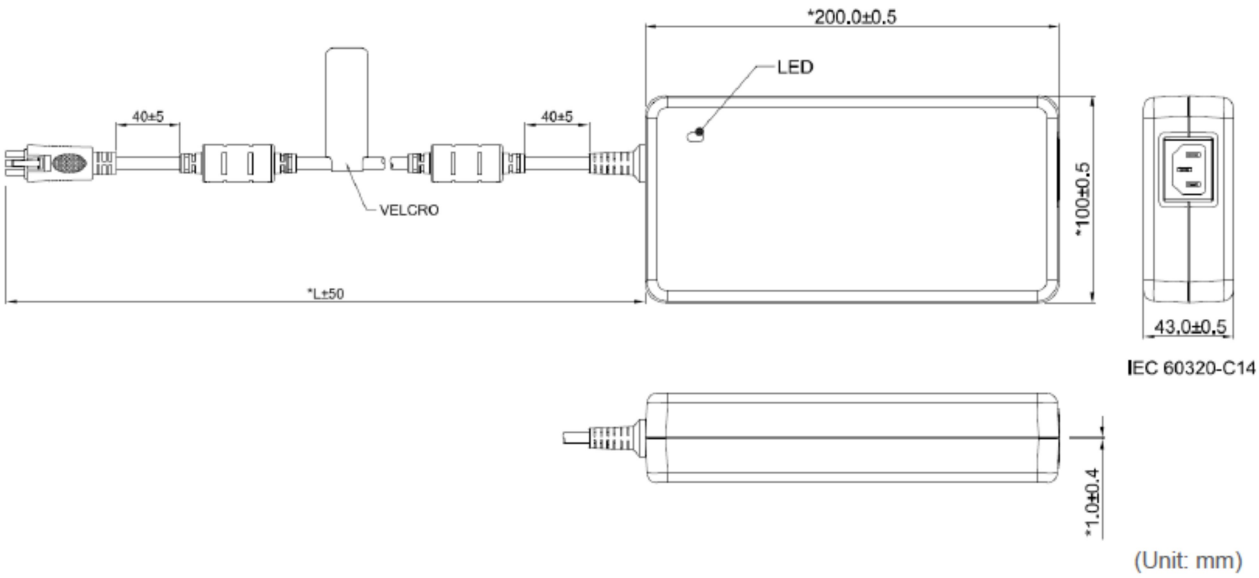
5. ENVIRONMENTAL REQUIREMENTS

Temperature	Operating	-10°C +60°C
	Non-Operating	-20°C +70°C
Power De-rating	>40°C de-rate power by 2.5% / °C 	
Humidity	Operating	10%~95% (Non Condensing)
	Non-Operating	10%~95% (Non Condensing)
Altitude	Sea level to 5000m	

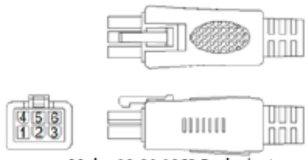
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6. APPEARANCE DRAWING: (UNIT: MM)



DC Output Plug:

Molex 39-01-2060 (4.2mm)	CC Code	Votage	Cable Type	Cable Lengh	Pin Assignment	
 Molex 39-01-2060 Equivalent	HAA	24V	UL2464 20AWG x 6C	1.2m	1	+V
					2	+V
					3	+V
					4	-V
					5	-V
					6	-V

The dimensions shown in the above image are for reference only!

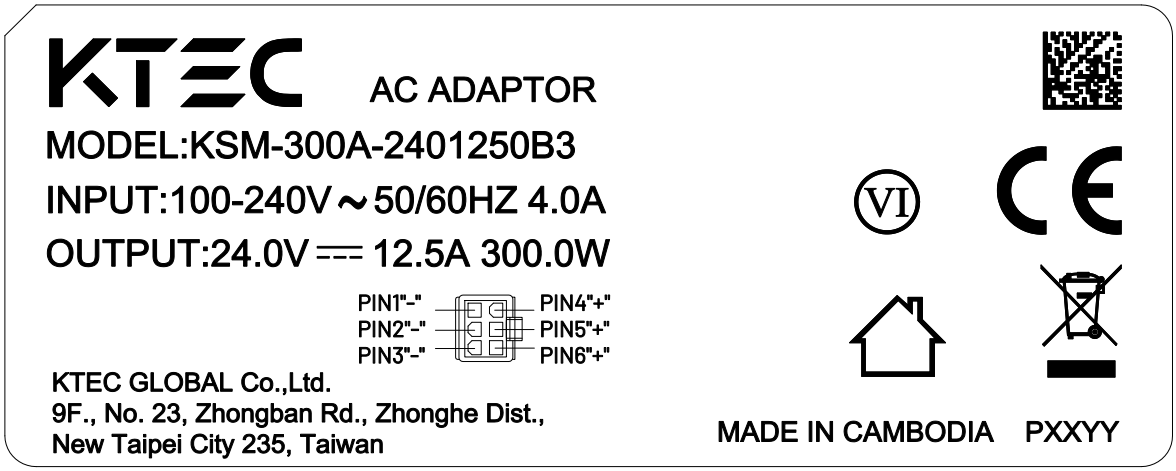
NOTE:

1. Case cover & chassis material: PC BLACK (NO KTEC)
2. AC PIN MATERIAL: BRASS (NI PLATED)
3. PAHS 6P NP REACH ROHS NOP PROP65
4. Satin Finish

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7. NAME PLATE



FYI

Note: Laser

PXXYY (P=PAHS, 6P, NP XX=Week, YY=Year), use the actual production date.

SN (Data Matrix Code size: 5*5mm):

First code G (Ktec)＋Production part number (Product code)＋Ten yards of flow code SSSSSSSSS (decimal) Total 19 codes

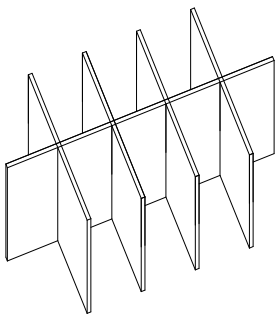
Example:GKS2600370000000001, GKS2600370000000002...GKS26003799999999.

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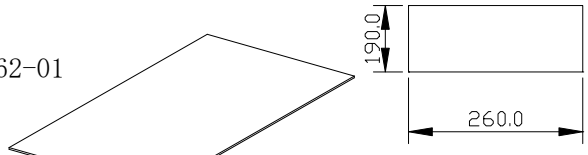
8. PACKING (UNIT: MM)

REVISION						Mold NO.	Cavity NO.	P/N	Material	Colour	Specification
ISSUE	MARK	DESCRIPTION	DATE	REV	SIGNATURE						
1		First Release	2025.03.18	1.0	肖明			-	-	-	

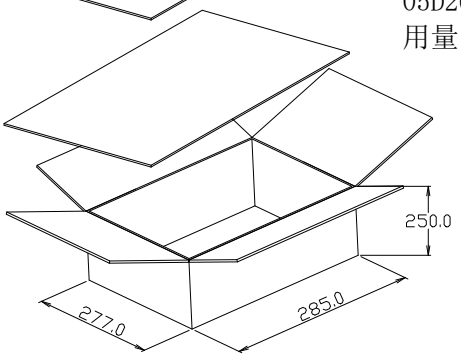


11Q135022-01
用量：1

11T270262-01
用量：2



05D260190-01
用量：1



11P282725-01
用量：1

每箱装10PCS

SELECT DIM / TOL	A	B	C *	M-A	M-B	M-C	USR
0 ~ 6	0.05	0.05	0.10	0.03	0.05	0.10	
6 ~ 30	0.10	0.15	0.20	0.05	0.10	0.15	
30 ~ 120	0.15	0.20	0.30	0.10	0.15	0.20	
120 ~ 300	0.20	0.30	0.40	0.15	0.20	0.25	
300 ~ 450	0.25	0.40	0.50	0.20	0.25	0.30	
450 ~ 600	0.30	0.50	0.60	0.25	0.30	0.35	

DRAFT TOLERANCE ±0.2° CRITICAL DIM. MARK

DESIGNED BY	CHECKED BY	MANAGER	SAFETY INSPECTION	APPROVED BY
肖明				贺洪明

MODEL NO.	PART NAME	DWG. NO	DWG. DATE	FILE NO
-	-	-	2025.03.18	-

KTEC	SIZE	SCALE	UNIT	REV.
	A4	Free	MM	1.0

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