



SPECIFICATION FOR APPROVAL

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KSM-42W-120350D5

AC/DC ADAPTOR

Project Modify List

[illegible]

Manufacturer

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Approved Signatures

TESTED BY

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AC/DC ADAPTOR

KSM-42W-120350D5 Manufacturer Part No.: KS251240



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1. INPUT REQUIREMENTS

1.1 Highlight & Features

- Simple design philosophy.
- Reliability level of 50K hours MTBF @ 25°C (rated input voltage and using the Telcordia SR-332 issue 3 method).
- DC output voltage must be Safe Extra Low Voltage (SELV) & Limited Power as defined by IEC60601.
- Cooling: natural convection

1.2 General Description

This specification defines the performance characteristics for a class II adapter, single-phase 42.0 watts. Single output level power supply.

1.3 Chemical Substance Control Laws

PAHS 6P NP NOP REACH ROHS 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	1.0A max.
Power consumption	0.1W maximum (no-loading)
Primary current protection	An adequate internal fuse on the AC input line is provided.
Input Configuration 2 Conductor	<u>2</u> Conductor

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	+12.0V
2.2	Minimum load current	0.0A
2.3	Rating load current	3.5A
2.4	Peak load current	/
2.5	Rating output power	42.0W
2.6	Line regulation	The line regulation is less than $\pm 5\%$ while measuring at rated load and $\pm 10\%$ of input voltage changing.
2.7	Load regulation	The load regulation for +12.0V is less than $\pm 5\%$, at measured output load from 10% to 100% rated load.
2.8	Ripple and noise	150 mVp-p Add 0.1uF/50V ceramic capacitor and 10uF/50V aluminum electrolytic capacitor across the output terminal. Measured with 20MHz Bandwidth Oscilloscope.
2.9	Average efficiency	87.66% minimum 115V/60Hz and 230V/50Hz, output current from 100%, 75%, 50%, 25%. The work of a half hour test CEC.
2.10	Turn on delay time	3000 ms max. at nominal input AC voltage and full load.
2.11	Rise time	The supply shall have a start-up rise time of less than 20ms to rise to within regulation limits for all DC outputs.
2.12	Hold up time	10 ms minimum at nominal input 100Vac minimum voltage and full load.
2.13	Output over-shoot	Less than 10% of nominal voltage value.
2.14	LED indication function	/
2.15	Protection function	
	Over-voltage protection	The output voltage shall be clamped by internal protection.
	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 power at 105%-160% all rated DC output

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3. MECHANICAL

3.1 Enclosure and Layout

Plastic case	UL94V-0
Weight	/ g (Max.)
Dimensions	80x46x31.2 mm
Color	Black

3.2 Input and Output Configuration

Input pin	International Pin
Output connector	DC plug type: 5.5*2.1*12mm (Fork)
Polarity	Center “+”
Cable	1.5M VW-1 80℃ 300V 1185 3.5Q 18AWG Black

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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 18: Class B for radiated and conducted emissions.

CISPR-II / EN55011: Class B for radiated and conducted emissions.

4.2 Immunity

4.2.1 Electrostatic Discharge Immunity

EN 61000-4-2

Air Discharge: $\pm 15\text{kV}$

Contact Discharge: $\pm 8\text{kV}$

Performance Criteria B

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

4.2.2 Radiated Field Immunity

EN 61000-4-3

Frequency Range: 80-5782MHz

Field Strength: 10 V/m with 80% amplitude modulation of 1kHz for 80-2700MHz

Field Strength: 9~28 V/m with 80% amplitude modulation of 1kHz for 385-5782MHz

Performance Criteria A

Radio-frequency electromagnetic field susceptibility test, RS 80-5782MHz, 9-28V/m, 80%AM(1KHz).

4.2.3 Fast Transient Immunity

EN 61000-4-4

Power line: 2kV

Performance Criteria B

4.2.4 Surge Immunity

EN 61000-4-5

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-1.2/50 μ s Open Circuit voltage

8/20 μ s Short Circuit current

Power line: 1kV

Line to earth: 2kV

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

4.2.5 Conducted Disturbances Immunity

EN 61000-4-6

Level 3: 10V (rms) for ISM band

Level 3: 10V (rms) for ISM band and radio band

Performance Criteria A

4.2.6 Power Frequency Magnetic Field Immunity

EN 61000-4-8

Field Strength: 30A/m

Orientations of Induction Coil: X, Y, Z

Performance Criteria A

4.2.7 Voltage dips and interruption

Meet EN61000-4-11

100% dip 1 periods, 30% dip 25 periods, 100% interruptions 250 periods.

4.2.8 Harmonic Standard

Meet EN61000-3-2

Performance Criteria A

4.2.9 Voltage fluctuations and Flicker

Meet EN61000-3-3

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4.3 Safety Requirements and Certification

4.3.1 Regulatory Standard

The power supply shall comply with the following international regulatory standards , and meet CLASS BF standards:

for short	Country or Region	Certified Status	Standard
UL	USA	/	UL 60601-1
TUV	Europe	/	TUV/VDE-EN60601

4.3.2 Additional Safety Requirements

- © Dielectric Withstand Voltage, Primary(input AC short)-to-Secondary(output DC short): 4000 Vac, 10mA, 1 minute.
- © Insulation Resistance, Input to output: 100M Ω (MIN.) at 500 VDC.
- © Reinforced insulation system, Primary-to-Ground and Primary-to-Secondary.
- © The leakage current shall not exceed 100 μ A.

5. ENVIRONMENTAL REQUIREMENTS

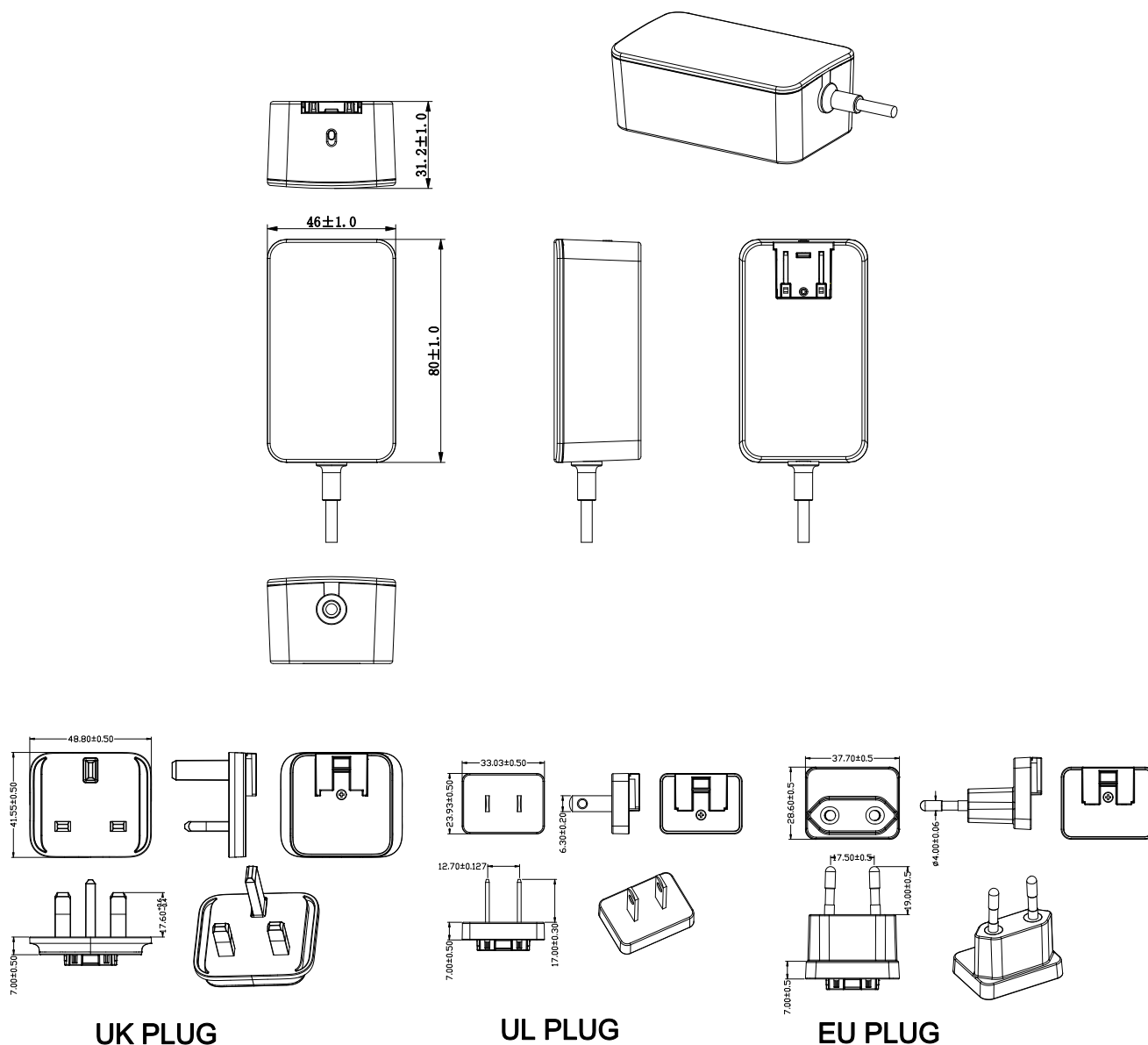
Temperature	Operating	0 °C +40 °C
	Non-Operating	-20 °C +80 °C
Humidity	Operating	10%~90% (Non Condensing)
	Non-Operating	10%~90% (Non Condensing)
Altitude	Sea level to 2000m	

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6. APPEARANCE DRAWING: (UNIT: MM)



NOTE:

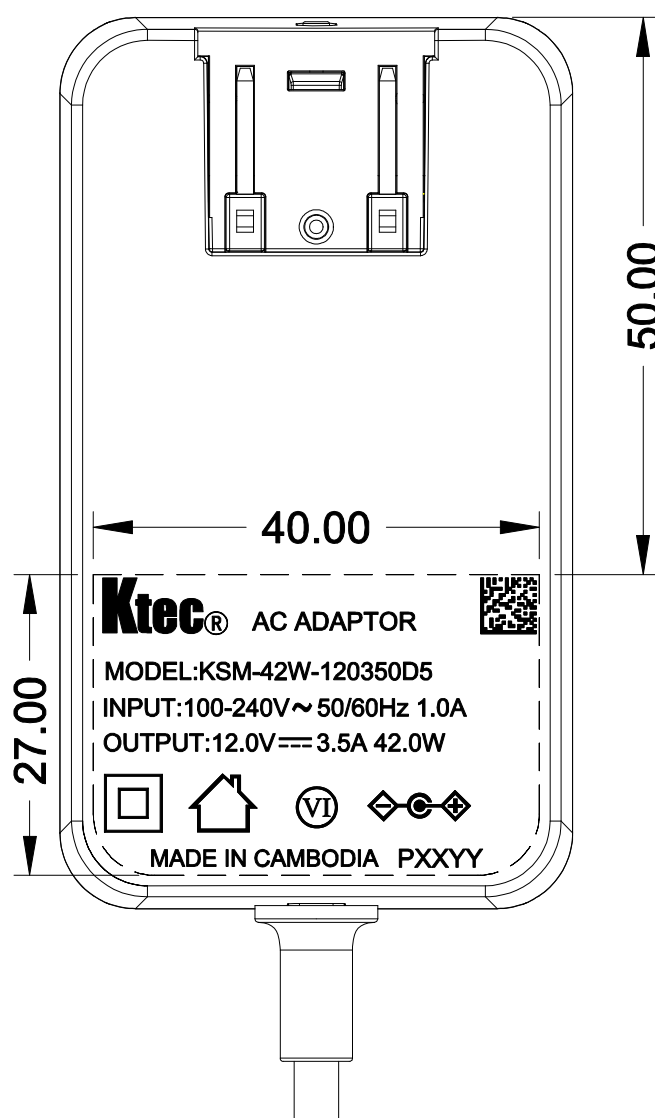
1. Case cover & chassis material PC BLACK (NO KTEC)
2. AC PIN MATERIAL: BRASS (NI PLATED)
3. PAHS 6P NP NOP REACH ROHS PROP65
4. Satin Finish
5. Top mold: MSS024019 Bottom mold: MSS024020

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7. NAME PLATE



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 SSSSSSSSSS (decimal) Total 19 codes

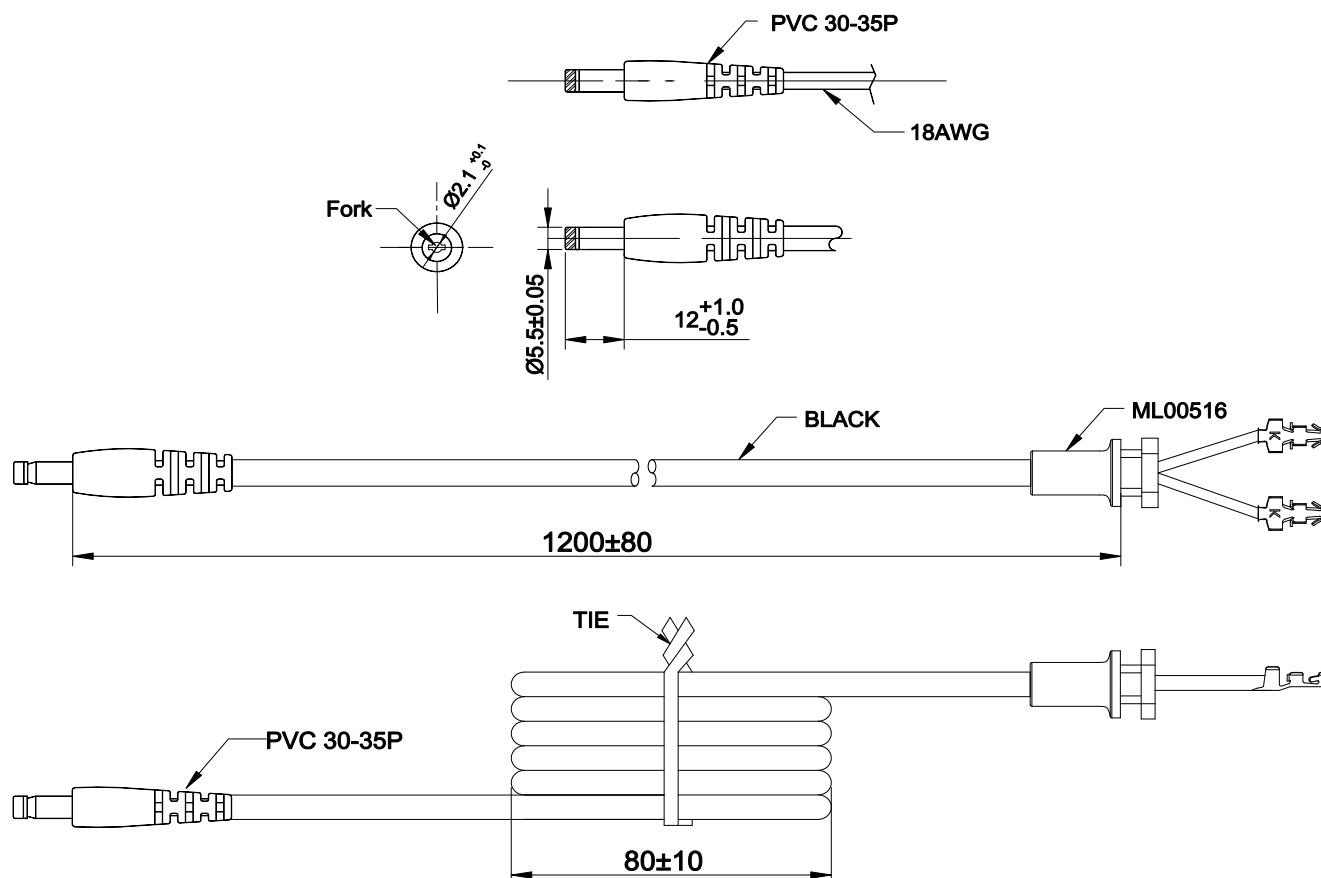
Example : GKS25042000000000001, GKS25042000000000002...GKS25042099999999999.

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8. DIMENSION OF OUTPUT PLUG & DC CORD (UNIT: MM)



NOTE: (unit:mm)

- 1).WIRE TYPE:L=1200mm 18AWG 3.5Ø 1185 BLACK
- 2).THE POLARITY: 
- 3).PAHS 6P NP NOP REACH PROP65
- 4).SR MOLD: ML00516

REVISION				5	6	7	8	9	10	11	12
ISSUE/MAKE	DESCRIPTION	DATE	REV SIGNATURE								
A											

05P041000-07
Body 72PCS

05P120100-02
plugs 216 PCS

11T500357-01
3 PCS

11Q805710-01
2 SET

11P513723-01
1 PCS

235.0

515.0

375.0

每箱装72PCS
本体和三个活动脚单独装PE袋
再一起放入旦条里

Select	Isr	A	B	C	M-A	M-B	M-C	USR	MODEL NO.	PART NO.	DWG DATE	MATERIAL	PART NAME
10-15	0.05	0.05	0.10	0.05	0.05	0.10					2013.09.12		PACKING-ASM
16-20	0.10	0.15	0.20	0.05	0.10	0.15							
21-25	0.15	0.20	0.30	0.10	0.15	0.20							
26-30	0.20	0.30	0.40	0.15	0.20	0.25							
31-35	0.25	0.40	0.50	0.20	0.25	0.30							
36-40	0.30	0.50	0.60	0.25	0.30	0.35							
41-45	0.35	0.55	0.65	0.30	0.35	0.40							
46-50	0.40	0.60	0.70	0.35	0.40	0.45							
51-55	0.45	0.65	0.75	0.40	0.45	0.50							
56-60	0.50	0.70	0.80	0.45	0.50	0.55							
61-65	0.55	0.75	0.85	0.50	0.55	0.60							
66-70	0.60	0.80	0.90	0.55	0.60	0.65							
71-75	0.65	0.85	0.95	0.60	0.65	0.70							
76-80	0.70	0.90	1.00	0.65	0.70	0.75							
81-85	0.75	0.95	1.05	0.70	0.75	0.80							
86-90	0.80	1.00	1.10	0.75	0.80	0.85							
91-95	0.85	1.05	1.15	0.80	0.85	0.90							
96-100	0.90	1.10	1.20	0.85	0.90	0.95							
101-105	0.95	1.15	1.25	0.90	0.95	1.00							
106-110	1.00	1.20	1.30	0.95	1.00	1.05							
111-115	1.05	1.25	1.35	1.00	1.05	1.10							
116-120	1.10	1.30	1.40	1.05	1.10	1.15							
121-125	1.15	1.35	1.45	1.10	1.15	1.20							
126-130	1.20	1.40	1.50	1.15	1.20	1.25							
131-135	1.25	1.45	1.55	1.20	1.25	1.30							
136-140	1.30	1.50	1.60	1.25	1.30	1.35							
141-145	1.35	1.55	1.65	1.30	1.35	1.40							
146-150	1.40	1.60	1.70	1.35	1.40	1.45							
151-155	1.45	1.65											