

Industrial

IPU25A series

V2.0

The IPU25A series of AC/DC switching mode power supplies provide 25 Watts of continuous output power. All supplies are UL 94V-1 min compliant. All models meet FCC Part-15 class B and CISPR-32 class B emission Limits and are designed to comply with cTUVus and CE marking conformity assessment. All units are 100% burned in and tested.



RoHS2
2011/65/EU
(EU) 2015/863

25W External Power Supply for Industrial Purpose

FEATURES:

- * Wide Operating Voltage 80 to 275 VAC, 47 to 63 Hz
- * IEC-320-C14 Input Inlet
- * Optional Output Connector (See page appendix)
- * Single Output
- * Efficiency level VI
- * Operating temperature -20~70°C
- * 5 year warranty

APPLICATIONS:

- * Ethernet Hub
- * Portable Devices
- * Charger
- * Monitor
- * Set-top Box
- * AV Equipment

GENERAL SPECIFICATION:

- * **Short Circuit Protection:** Auto Recovery
- * **Cooling:** Free Air Convection
- * **Flammability Rating:** UL94V-1 min.
- * **Protection Classes:** Class I
- * **Safety:** IEC 62368-1 Edition 2.0, UL 62368-1, CAN/CSA-C22.2 NO.62368-1-14, EN 62368-1:2014, J 62368-1

APPROVALS:



Electrical Characteristics:

Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
V _{ins}	Safety Approval Input Voltage Range	Safety Approval & Specification in Label	100		240	VAC
V _{in}	Input Operate Voltage Range	Detail to see Fig.1	80		275	VAC
F _i	Input Frequency	Sine wave	47		63	Hz
P _o	Output Power Range	See Rating Chart			25	W
I _{il}	Low Line Input Current	Full Load, V _{in} =100VAC		0.55		A
I _{ih}	High Line Input Current	Full Load, V _{in} =240VAC		0.22		A
I _{rl}	Low Line Input Inrush Current	Full Load, 25°C, Cool start, V _{in} =100VAC			30	A
I _{rh}	High Line Input Inrush Current	Full Load, 25°C, Cool start, V _{in} =240VAC			60	A
I _k	Safety Ground Leakage Current	V _{in} =264VAC, F _i =63Hz			0.75	mA
η	Efficiency	Full Load, V _{in} =230VAC, Detail to see Rating Chart	See Rating Chart			
ΔV _{oi}	Line Regulation	Full Load, V _{in} =100~120VAC	0.5		1	%
ΔV _{oL}	Load Regulation	V _{in} =230VAC, 10~90% Load Change at Condition	1		5	%
OLP	Over Load Protection	Nil.But,Output protected to short circuit conditions				
t _{tr}	Time of Transient Response	I _o =Full Load to Half Load, V _{in} =110VAC			4	ms
t _{hu}	Hold-Up Time	Full Load, V _{in} =110VAC	See Rating Chart			
t _s	Start-up time	Full Load, V _{in} =100~240VAC			2	s
T _c	Temperature Coefficient	Full load, V _{in} =100~240VAC			±0.04	%/°C
HV	Dielectric Withstanding Voltage (P-S)	Primary to Secondary			4242	VDC
V _{pg}	Dielectric Withstanding Voltage (P-G)	Primary to PE			2121	VDC
EMI	EMC Emission	Compliance to EN55032 (CISPR32)			B	Class

Environmental:

Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
T _o	Operating Temperature	Detail to see Fig.2 (Derate linearly from 100% load at 40°C to 50% load at 70°C)	-20		70	°C
T _s	Storage Temperature	10 ~ 95% RH	-40		85	°C
H _o	Operating Humidity	non-condensing	0		95%	RH
H _s	Storage Humidity		0		95%	RH
ESDa	Electro Static Discharge	Air Discharge, IEC61000-4-2			8	kV
ESDc	Electro Static Discharge	Contact Discharge, IEC61000-4-2			4	kV
MTBF	Mean Time Between Failure	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F	300k			h
ELEV	Operating Altitude (Elevation)	All condition			2000	m
VBR	Vibration	10 ~ 500Hz, 10min./1cycle, 60min. each along X, Y, Z axes			5	G
V _{s1}	Surge Voltage	Line-Neutral			1	kV
V _{s2}	Surge Voltage	Line-PE & Neutral-PE			2	kV

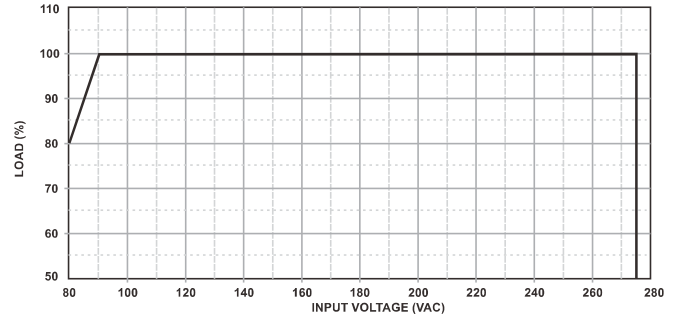
Industrial

IPU25A series V2.0

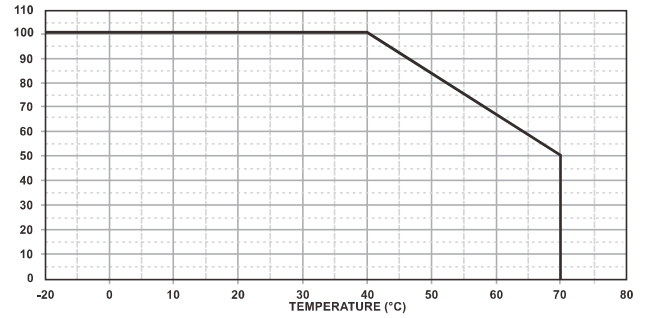
25W External Power Supply for Industrial Purpose

SPECIFICATION NOTE :

1. Output can provide up to peak load when the power supply starts up. Continuous staying in more than rated load is not allowed.
2. At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
3. Line regulation is defined by changing $\pm 10\%$ of input voltage from nominal line at rated load.
4. Load regulation is defined by changing $\pm 40\%$ of measured output load from 60% rated load.
5. The ripple is measured from peak to peak with a bandwidth-limit of 20MHz (Measured at the output connector with a 0.1 μ F ceramic capacitor and a 47 μ F electrolytic capacitor).
6. Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to low limit of main output at rated load and nominal line.
7. Efficiency is measured at rated load, and nominal line.

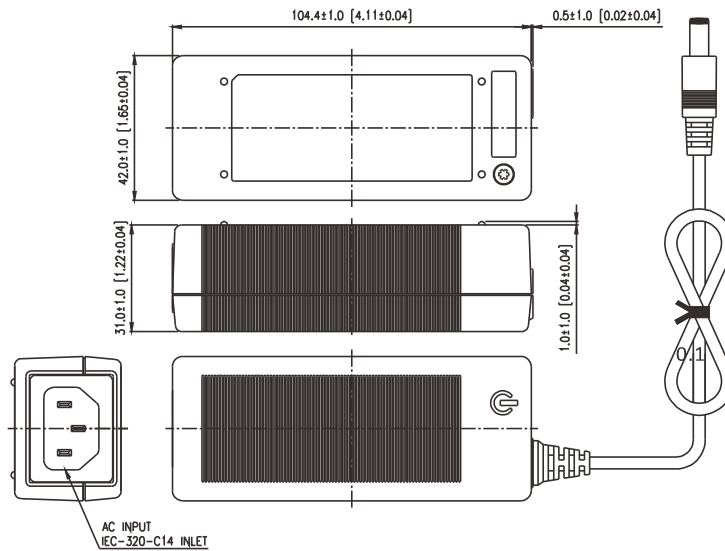


(FIG.1) INPUT VOLTAGE DERATING CURVE



(FIG.2) TEMPERATURE DERATING CURVE

MECHANICAL DIMENSIONS: (UNIT: mm [inch])



OUTPUT CABLE RECOMMEND :

1. Selected output connectors and wire, please refer to Appendix.
2. SPU25A-102~108 are required to use AWG#16/4FT output cable.
3. SPU25A-109~111 are required to use AWG#18/4FT output cable.
4. The regulation and efficiency will be changed by modified output cable.

PACKING :

1. Net weight: 170g approx.
2. Optional output connectors available contact sales for details.

Rating Chart:

MODEL NO.	Setting Voltage Range (Factory setting, can't be adjusted)		Output Current (Based on the output volt.)		Maximum Output Power (W)	Ripple & Noise (mVp-p)	Total Regulation (%)	Typ. Efficiency (%)	Typ. No Load Consumption (W)	Hold-Up Time (ms)	Protection Mode
	min	max	min	max							
	(VDC)	(VDC)	(A)	(A)							
*IPU25A-102	5.0	6.0	2.75	3.30	16.5	60	± 5	81.97	0.1	12	Hiccup
*IPU25A-103	6.0	8.0	2.50	3.33	20	80	± 5	85.47	0.1	12	Hiccup
*IPU25A-104	8.0	11.0	2.00	2.75	22	110	± 5	85.87	0.1	12	Hiccup
IPU25A-105	11.0	13.0	1.92	2.27	25	130	± 5	86.35	0.1	12	Hiccup
*IPU25A-106	13.0	16.0	1.56	1.92	25	150	± 5	86.35	0.1	12	Hiccup
*IPU25A-107	16.0	21.0	1.19	1.56	25	200	± 5	86.35	0.1	12	Hiccup
*IPU25A-108	21.0	27.0	0.92	1.19	25	200	± 4	86.35	0.1	12	Hiccup
*IPU25A-109	27.0	33.0	0.75	0.92	25	250	± 3	86.35	0.1	12	Hiccup
*IPU25A-110	33.0	40.0	0.62	0.75	25	250	± 3	86.35	0.1	12	Hiccup
IPU25A-111	40.0	48.0	0.52	0.62	25	300	± 3	86.35	0.1	12	Hiccup

[*]=MOQ is required. Please contact sales.

トキトレーディング株式会社 電話079-560-7333