

# IPU 16B SERIES

## 15W Desk Top Switching Power Supplies For Industrial Equipment

### Description:

The IPU16B series of AC/DC switching mode power supplies provide 15 Watts of continuous output power and is well-suited for a variety of applications. All supplies are UL 94V-1 min compliant. All model meet FCC Part-15 class B and CISPR-22 class B emission Limits and are designed to comply with UL/c-UL(UL 60950-1:2<sup>nd</sup>Edition), TUV/GS(EN 60950-1:2<sup>nd</sup>Edition) and new CE requirements. All units are 100% burned-in and tested.



### Features:

- Wide Operating Voltage 90 to 264 VAC, 47 to 63 Hz
- IEC-320-C8 Input Inlet
- Optional Output Connector (See appendix)
- Single Output
- Energy Star 2.0, Efficiency level V
- Class II
- Operating temperature -20~70°C
- 3 year warranty

### Safety Approvals:



### Electrical Characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vin	Safety Approvals Input Voltage Range		100		240	VAC
	Operate Voltage Range		90		264	VAC
f <sub>in</sub>	Input Frequency		47		63	Hz
P <sub>o</sub>	Output Power Range	V <sub>in</sub> =90 to 264VAC			15	W
V <sub>o</sub>	Output Voltage Range		See rating chart			V
I <sub>o</sub>	Output Current Range		See rating chart			A
I <sub>il</sub>	Input Current (Low Line)	I <sub>o</sub> =Full load, V <sub>in</sub> =115VAC			0.4	A
I <sub>ih</sub>	Input Current (High Line)	I <sub>o</sub> =Full load, V <sub>in</sub> =230VAC			0.26	A
I <sub>rl</sub>	Low Line Inrush Current	I <sub>o</sub> =Full load, 25°C, Cool start, V <sub>in</sub> =115VAC		12	15	A
I <sub>rh</sub>	High Line Inrush Current	I <sub>o</sub> =Full load, 25°C, Cool start, V <sub>in</sub> =230VAC		26	30	A
Eff	Efficiency	I <sub>o</sub> =Full Load, V <sub>in</sub> =230VAC	See rating chart			%
REG-i	Line Regulation	I <sub>o</sub> =Full Load		0.5	1	%
REG-o	Load Regulation	V <sub>in</sub> =230VAC		3	10	%
OVP	Over Voltage Protection		Nil			%
OCP	Over Current Protection	Nil.But,Output protected to short circuit conditions				%
T <sub>tr</sub>	Time of Transient Response	I <sub>o</sub> =Full Load to Half Load, V <sub>in</sub> =100VAC			4	ms
T <sub>hold</sub>	Hold-Up Time	I <sub>o</sub> =Full Load, V <sub>in</sub> =110VAC	8			ms
T <sub>s</sub>	Start Up Time	I <sub>o</sub> =Full Load, V <sub>in</sub> =100VAC	0.3	1	2	S
V <sub>p-p</sub>	Ripple & Noise (Peak to Peak)	Full Load, V <sub>in</sub> =90VAC		0.5	1	%
I <sub>lk</sub>	Safety Ground Leakage Current	I <sub>o</sub> =Full Load, V <sub>in</sub> =240VAC		0.5	0.75	mA
TC	Temperature Coefficient	All output	-0.04		0.04	%/°C
P <sub>no</sub>	No-Load Power Consumption	No load, V <sub>in</sub> =230VAC	See rating chart			W

\* Note: The Ripple & Noise which is under 3.3VCD at 2% max

### Environmental :

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
T <sub>oper</sub>	Operating Temperature		-20	40	70	°C
T <sub>stg</sub>	Storage Temperature		-40		85	°C
H <sub>o</sub>	Operating Humidity		0		95	%
H <sub>r</sub>	Storage Humidity		0		95	%
MTBF	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F		0.1M			Hrs
P <sub>d</sub>	Derate linearly from 100% load at 40°C to 50% load at 70°C					

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### Safety Specifications:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242			VDC
Ris	Isolation Resistance	Test Voltage=500VDC	50			MΩ
CISPR	EMI requirements for CISPR-22	Vin=220VAC	B			CLASS
FCC	EMI requirements for FCC PART-15	Vin=120VAC	B			CLASS

### Output Voltage And Current Rating Chart ( Single Output ) :

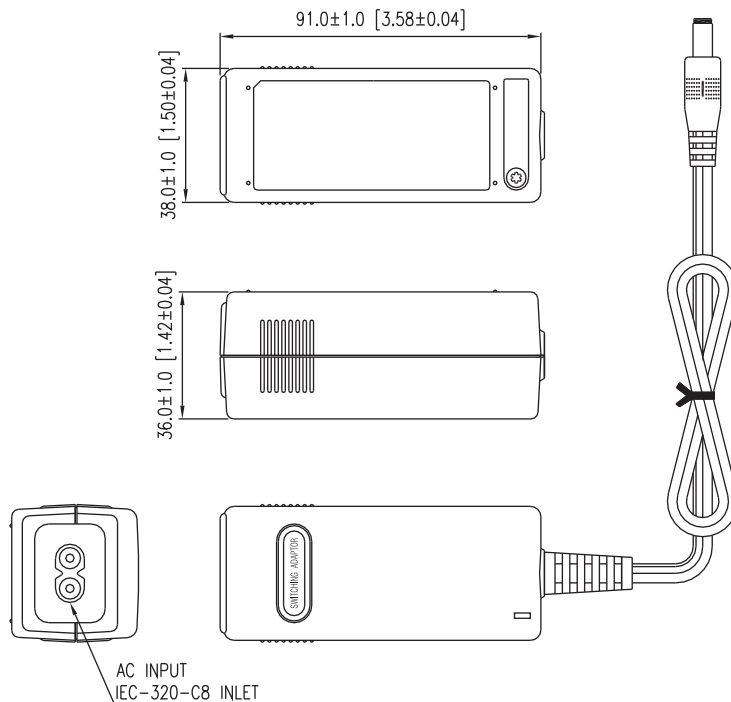
Model Number	Output Voltage	Output Current	Total Regulation	Efficiency (min.)	Maximum Output Power	Pno(max.)
* IPU16B-101	3 ~ 5 VDC	2.50 A max	7%	74.7%	12W	0.3W
* IPU16B-102	5 ~ 5.99 VDC	2.50 ~ 2.00 A	5%	74.7%	12W	
* IPU16B-103	6 ~ 8 VDC	2.00 ~ 1.50 A	5%	77.8%	12W	
* IPU16B-104	8 ~ 11 VDC	1.87 ~ 1.36 A	5%	79.2%	15W	
* IPU16B-105	11 ~ 13 VDC	1.36 ~ 1.15 A	5%	79.2%	15W	
* IPU16B-106	13 ~ 16 VDC	1.15 ~ 0.94 A	5%	79.2%	15W	
* IPU16B-107	16 ~ 21 VDC	0.94 ~ 0.72 A	5%	79.2%	15W	
* IPU16B-108	21 ~ 27 VDC	0.72 ~ 0.55 A	5%	79.2%	15W	
IPU16B-109	27 ~ 33 VDC	0.55 ~ 0.45 A	5%	79.2%	15W	
IPU16B-110	33 ~ 40 VDC	0.45 ~ 0.37 A	3%	79.2%	15W	
IPU16B-111	40 ~ 48 VDC	0.37 ~ 0.31 A	3%	79.2%	15W	

Mark " \* " means approved by PSE.

IPU16B-101 had been approved by CEC level IV.

IPU16B-102~111 had been approved by CEC level V.

### Mechanical Specifications :



Note:

1. Dimensions are shown in mm.
2. Weight: 165gs approx.
3. Optional output connector: See page Appendix.