

# TPIPU31 SERIES

## 30W Desk Top Switching Power Supplies For Industrial Equipment

### Description:

The 31 series of AC/DC switching mode power supplies provide 30 Watts of continuous output power. All supplies are UL 94V-1 min compliant, include IEC-320-C14 input for worldwide applications. All models 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), TUV/GS (EN 60950-1) and new CE requirements. All units are 100% burned in and tested.



### Features:

- Wide Input Voltage 90 to 264 VAC, 47 to 63 Hz
- IEC-320-C14 Input Inlet
- Single Output
- Output Voltage Available From 5 VDC Thru 50 VDC
- Optional Output Connector (See appendix)
- Splash proof
- Class I
- 2 year warranty

### Safety Approvals:



### Electrical Characteristics:

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vin	Input Voltage	Operating Voltage	90		264	VAC
fin	Input Frequency		47		63	Hz
Po	Output Power Range	Vin=90 to 264VAC	0		30	W
Vo	Output Voltage Range		See rating chart			V
Io	Output Current Range		See rating chart			A
Iil	Input Current (Low Line)	Io=Full load, Vin=115VAC			0.8	A
Iih	Input Current (High Line)	Io=Full load, Vin=230VAC			0.5	A
Irl	Low Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=115VAC		12	15	A
Irh	High Line Inrush Current	Io=Full load, 25°C, Cool start, Vin=230VAC		26	30	A
Eff	Efficiency	Io=Full Load, Vin=230VAC	73	81	90	%
REG-i	Line Regulation	Io=Full Load		0.5	1	%
REG-o	Load Regulation	Vin=230VAC		3	7	%
OCP	Over Current Protection		110		150	%
Ttr	Time of Transient Response	Io=Full Load to Half Load, Vin=100VAC			4	mS
Thold	Hold-Up Time	Io=Full Load, Vin=110VAC	12			mS
Ts	Start Up Time	Io=Full Load, Vin=100VAC	0.3	1	2	S
Vrn	Ripple & Noise (Peak to Peak)	Full Load, Vin=90VAC		0.5	1	%
Ilk	Safety Ground Leakage Current	Io=Full Load, Vin=240VAC		0.5	0.75	mA
TC	Temperature Coefficient	All output	-0.04		0.04	%/°C
Pno	No-Load Power Consumption	No load, Vin=240VAC	0	0.3	0.5	W

### Environmental :

Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Toper	Operating Temperature		-20		70	°C
Tstg	Storage Temperature		-40		85	°C
Hr	Relative Humidity		5		95	%
MTBF	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F		0.1M			Hrs
Pd	Derate linearly from 100% load at 40°C to 50% load at 70°C					

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### Safety Specifications:

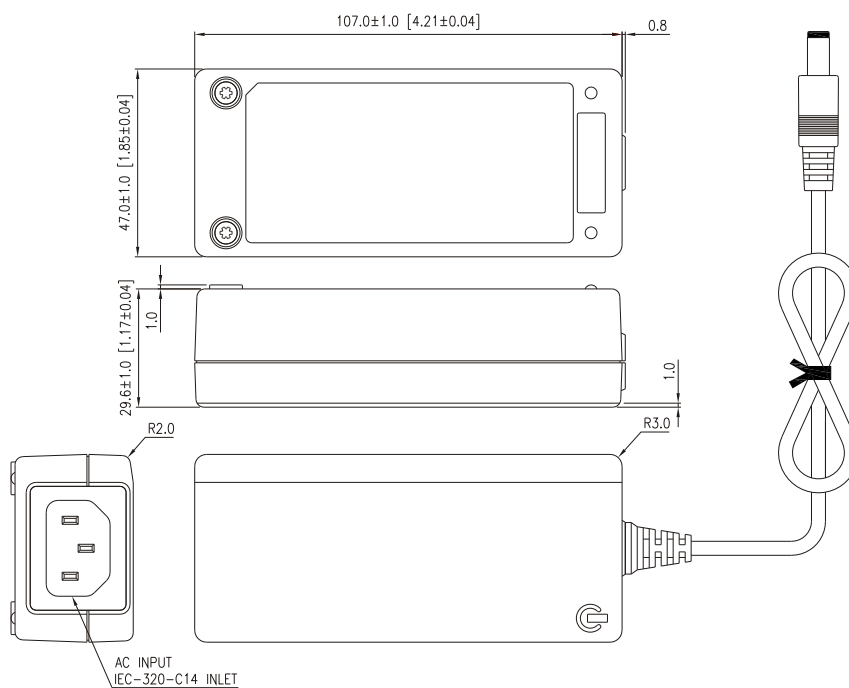
Sym.	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Vps	Dielectric Withstanding Voltage for Primary to secondary	Primary to secondary	4242			VDC
Vpg	Dielectric Withstanding Voltage for Primary to Ground	Primary to ground	2121			VDC
Ris	Isolation Resistance	Test Voltage=500VDC	50			M Ω
CISPR	EMI requirements for CISPR-22	Vin=220VAC	B			CLASS
FCC	EMI requirements for FCC PART-15	Vin=110VAC	B			CLASS

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

Model Number	Output Voltage	Output Current	Total Regulation <sup>Ⓢ</sup>	Maximum Output Power
TPIPU31-102	5 ~ 6 VDC	5.00 ~ 4.16 A	5%	25W
TPIPU31-103	6 ~ 8 VDC	4.16 ~ 3.12 A	5%	25W
TPIPU31-104	8 ~ 11 VDC	3.75 ~ 2.72 A	5%	30W
TPIPU31-105	11 ~ 13 VDC	2.72 ~ 2.30 A	5%	30W
TPIPU31-106	13 ~ 16 VDC	2.30 ~ 1.87 A	5%	30W
TPIPU31-107	16 ~ 21 VDC	1.87 ~ 1.42 A	5%	30W
TPIPU31-108	21 ~ 27 VDC	1.42 ~ 1.11 A	3%	30W
TPIPU31-109	27 ~ 33 VDC	1.11 ~ 0.90 A	3%	30W
TPIPU31-110	33 ~ 40 VDC	0.90 ~ 0.75 A	3%	30W
TPIPU31-111	40 ~ 50 VDC	0.75 ~ 0.60 A	3%	30W

- Ⓢ The total regulation on model 101~105 is required to use AWG#16 / 4FT output cable.  
 The total regulation on model 106~108 is required to use AWG#18 / 4FT output cable.  
 The total regulation on model 109~111 is required to use AWG#18 / 6FT output cable  
 The regulation will be changed by modified output cable

### Mechanical Specifications :



### Note:

1. Dimensions are shown in mm.
2. Weight: 265~280gs approx.
3. Optional output connector: See page Appendix.