

MEAN WELL MPS-30 Series 30W Single Output for Medical **Type Instruction Manual**

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Features

- Universal AC input / Full range
- Low leakage current <200pA
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Medical safety approved (2 x MOPP between primary to secondary)
- Fixed switching frequency at 100KHz
- Low cost
- · High reliability
- 3 years warranty







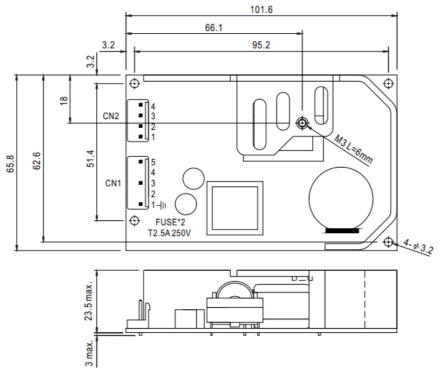
SPECIFICATION

MODEL	MPS-30-5	MPS-30.12	MPS-30-15	MPS-30-24	MPS-30-27	MPS-30-48
DC VOLTAGE	5V	12V	15V	24V	27V	48V
RATED CURREN T	SA	2.5A	2A	1.2A	1.1A	0.6A
CURRENT RANGE	0 – 5A	0 – 2.5A	0 – 2A	0 – 12A	0-1.1A	0 – 0.6A
RATED POWER	25W	30W	30W	28.8W	29.7W	282W
RIPPLE & NOISE (ma) Note.2	80mVp-p	120mVp-p	150mVp-p	240mVp-p	240mVp-p	240mVp-p
VOLTAGE TOLER ANCE Note.3	i 3.0%	r 3.0%	13.%	13.%	13.%	12.%
LINE REGULATI ON	11.%	11.%	11.%	11.%	11.%	11.%
LOAD REGULATI ON	12.%	-1.%	11.%	1.1.0%	11.%	11.%
SETUP, RISE TI ME	500ms. 30ms/230VAC SOOms. 30ms/115VAC at ful load					
HOLD UP TIME (Typ.)	70ms/230VAC 12ms/115VAC at full load					
VOLTAGE RANG E	88 – 264VAC aub switch 120 – 370VDC					
FREQUENCY RA NGE	47 – 63Hz					
EFFICIENCY (Typ .)	72% 75% 178% 177% 78% 178%					
AC CURRENT (Ty p.)	0.8A1115VAC 0.5A/230VAC					
INRUSH CURRE NT (Typ.)	COLD START 30N230VAC					
LEAKAGE CURR ENT	Earth leakage current < 20001264VAC					
OVERLOAD	Above 105% rated output power					
	Protection type: Hiccup mode. recovers automatically after the fault condition is removed					
	DC VOLTAGE RATED CURRENT CURRENT RANGE RATED POWER RIPPLE & NOISE (ma) Note.2 VOLTAGE TOLER ANCE Note.3 LINE REGULATI ON LOAD REGULATI ON SETUP, RISE TI ME HOLD UP TIME (Typ.) VOLTAGE RANG E FREQUENCY RA NGE EFFICIENCY (Typ .) AC CURRENT (Ty p.) INRUSH CURRE NT (Typ.) LEAKAGE CURR ENT	DC VOLTAGE 5V RATED CURRENT SA CURRENT 25W RIPPLE & NOISE (ma) Note.2 80mVp-p VOLTAGE TOLER ANCE Note.3 11.% LINE REGULATI ON 12.% SETUP, RISE TI ME 500ms. 30m HOLD UP TIME (Typ.) 70ms/230VA VOLTAGE RANG 88 – 264VAC FREQUENCY RA NGE 72% I 75% 11. AC CURRENT (Typ.) 72% I 75% 11. AC CURRENT (Typ.) 0.8A1115VA INRUSH CURRE NT (Typ.) COLD STARENT (Typ.) Earth leakage over 105%	DC VOLTAGE 5V 12V RATED CURRENT T SA 2.5A CURRENT RANGE 0 - 5A 0 - 2.5A RATED POWER 25W 30W RIPPLE & NOISE (ma) Note.2 80mVp-p 120mVp-p VOLTAGE TOLER ANCE Note.3 13.0% r 3.0% LINE REGULATI ON 11.% 11.% LOAD REGULATI ON 12.% -1.% SETUP, RISE TI ME 500ms. 30ms/230VAC SO HOLD UP TIME (Typ.) 70ms/230VAC 12ms/115V VOLTAGE RANG E 88 - 264VAC aub switch 1 FREQUENCY RANGE 47 - 63Hz EFFICIENCY (Typ.) 72% I 75% I 78% I 77% I 7 AC CURRENT (Typ.) 0.8A1115VAC 0.5A/230VAC INRUSH CURRE NT (Typ.) COLD START 30N230VAC LEAKAGE CURR ENT (Typ.) Earth leakage current < 20	DC VOLTAGE 5V 12V 15V RATED CURREN T ANGE SA 2.5A 2A CURRENT RANGE 0 - 5A 0 - 2.5A 0 - 2A RATED POWER 25W 30W 30W RIPPLE & NOISE (ma) Note.2 80mVp-p 120mVp-p 150mVp-p VOLTAGE TOLER ANCE Note.3 i 3.0% r 3.0% 13.% LINE REGULATI ON 11.% 11.% 11.% LOAD REGULATI ON 12.% -1.% 11.% HOLD UP TIME (Typ.) 500ms. 30ms/230VAC SOOms. 30ms/11. 30ms/11. HOLD UP TIME (Typ.) 70ms/230VAC 12ms/115VAC at full load 30ms/11. VOLTAGE RANG E RAN	DC VOLTAGE 5V 12V 15V 24V RATED CURREN T ANGE SA 2.5A 2A 1.2A CURRENT RANGE 0 - 5A 0 - 2.5A 0 - 2A 0 - 12A RATED POWER 25W 30W 30W 28.8W RIPPLE & NOISE (ma) Note.2 80mVp-p 120mVp-p 150mVp-p 240mVp-p VOLTAGE TOLER ANCE Note.3 i 3.0% r 3.0% 13.% 13.% LINE REGULATI ON 11.% 11.% 11.% 11.% 11.% LOAD REGULATI ON 12.% -1.% 11.% 1.1.0% 1.1.0% SETUP, RISE TI ME 500ms. 30ms/230VAC SOOms. 30ms/115VAC at full load 500ms. 30ms/230VAC 12ms/115VAC at full load 1.0% 1.0% VOLTAGE RANG E 88 - 264VAC aub switch 120 - 370VDC 88 - 264VAC aub switch 120 - 370VDC FREQUENCY RANGE 47 - 63Hz EFFICIENCY (Typ.) 72% I 75% 178% 177% I 78% 178% 178% 178% 178% 179% 179% 179% 1.0 AC CURRENT (Typ.) 0.8A1115VAC 0.5A/230VAC 1.0 1.0 1.0 1.0 1.0 1.0 1.0<	DC VOLTAGE 5V 12V 15V 24V 27V RATED CURRENT T SA 2.5A 2A 1.2A 1.1A CURRENT RANGE 0 - 5A 0 - 2.5A 0 - 2A 0 - 12A 0-1.1A RATED POWER 25W 30W 30W 28.8W 29.7W RIPPLE & NOISE (ma) Note .2 VOLTAGE TOLER ANCE Note.3 13.0% 13.0% 13.% 13.% 13.% 13.% 13.% 11.% 11.% 11.% 11.% 11.% 11.% 11.% 11.% 11.% 11.% 11.% 11.% 11.% 11.% SETUP, RISE TI ME HOLD UP TIME (Typ.) VOLTAGE RANGE 88 - 264VAC aub switch 120 - 370VDC FREQUENCY RANGE FREQUENCY RANGE AC CURRENT (Typ.) AC CURRENT (Typ.) NRUSH CURRE NT (Typ.) COLD START 30N230VAC OVERLOAD Protection type: Hiccup mode. recovers automatically after the fault of the content of the fault of the content of the fault of the content of

PROT ECTIO N	OVEDVOLTAGE	5.5 -6.75V 1 132 – 18.2V 1 16.5 -2025V 1 26.4 -32.4V 1 29.7 – 36.45V 1 52.8 – 6 4.8V		
	OVERVOLTAGE	Protect= type : Hiccup mode. recovers automatically after the fault condition is re moved		
	OVER TEMPERA TURE	Shut down of voltage. re-power on to recover		
EIMR ONNE NT	WORKING TEMP	-10 - •60 C (Refer to 'berating Curve')		
	WORKING HUMI DITY	20- 90% RH non-condensing		
	STORAGE TEMP. . HUMIDITY	-20- •85 C.10 – 95% RH		
	TEMP. COEFFICI ENT	±0.03%1C (0 – 50t)		
	VIBRATION	10- 500Hz. 2G 10mindlcycle. period for 60min. each along X. Y.Z axes		
SA TY &FE E MC (N ote 4)	SAFETY STAND ARDS	ANSI/MMI E560601-1. TUV EN60601-1.1E080601-1 approved		
	ISOLATION LEVE	Primary-Secondary: 2xMOPP. Primary-Earth:1 xMOPP		
	WITHSTAND VO LTAGE	VP-0/P:IKVAC IIP-FG2KVAC OiP-FG:SHORT		
	ISOLATION RESI STANCE	1/P-011s, I/P-FG:100M Ohms / 500VDC / 25C/ 70% RH		
	EMC EMISSION	Compliance to EN55011 (CISPR11) Class B. EN61000-3.23		
	EMC IMMUNITY	Compliance to EN61000-4-22.4.5.6.8.11.EN55024.EN60601.1-2. medical level. c riteria A		
	MTBF	547Khrs min. ML-HDBK-217F(2512)		
OTHE RS	DIMENSION	101.6'65.8'23.5mm (12WIH)		
	PACKING	0.16Kg: 90pcs/15.8Kg11.06CUFT		
NOTE	nt temperature. 2 Ripple & noise ar 1u18 47uf parallel of 3. Tolerance: include 4. The power supple E tests are been exthickness. The foal how to perform the lle on herps:/www. 5. When the input of nal product manufacture.	des set up tolerance, line regulation, and load regJabon. It is considered a component that will be instated into the final equipment. At the EK recuted by mounting the unit on a 36Orrrn*360mm metal plate with Imm of equipment must be re-confirmed that it sat meets EMC directives. For guidance on se EMC tests, please refer to 'EMI testing of component power supplies: (as eyelet: .menwell.com Voltage s Ic6s than 40VAC, the SPS may exhibit degradation of performance. The first turers must re-confirm xis deviation that does not affect basic safety or essential product Lialolly Osclaimer For detailed information, please refer to herps://www.menwell.com		

Mechanical Specification

Unit:mm



AC Input Connector (CN1): Molex 41791-5 or equivalent

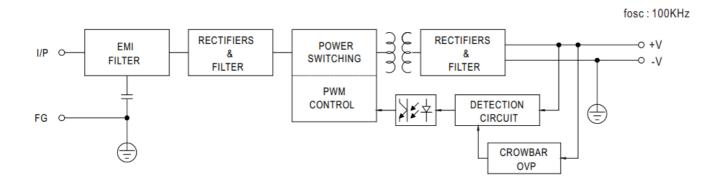
Pin No.	Assignment	Mating Housing	Terminal
1	FG ≟		
2,4	No Pin	Molex 2139	Molex 2478 or equivalent
3	AC/N	or equivalent	
5	AC/L		

± : Grounding Required CN1:Pin 1 is safety ground

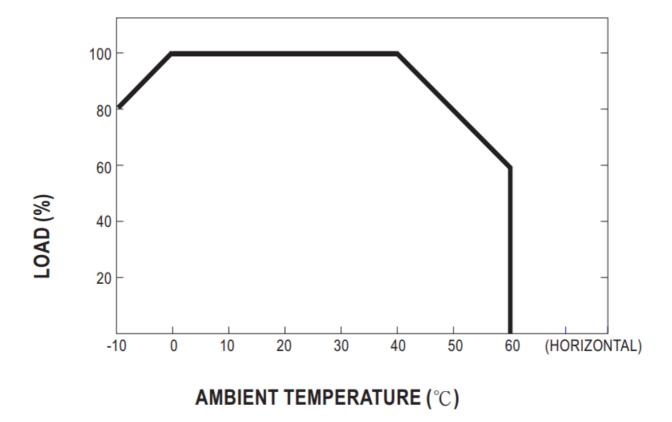
DC Output Connector (CN2): Molex 41791-4 or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1,2	-V	Molex 2139	Molex 2478
3,4	+V	or equivalent	or equivalent

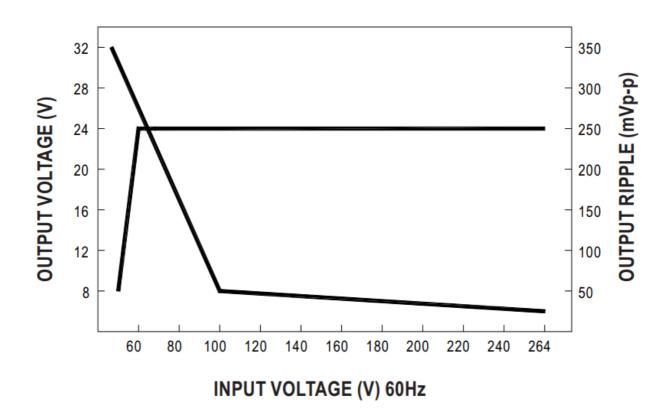
Block Diagram



Derating Curve



Static Characteristics





https://www.meanwell.com/Upload/PDF/Medical_EN.pdf

Documents / Resources



MEAN WELL MPS-30 Series 30W Single Output for Medical Type [pdf] Instruction Manual MPS-30 Series 30W Single Output for Medical Type, MPS-30 Series, 30W Single Output for Medical Type, Medical Type

References

- MEAN WELL Switching Power Supply Manufacturer
- Product Liability Disclaimer-MEAN WELL Switching Power Supply Manufacturer

Manuals+,