POLLOCK INDUSTRIES

Technical Data Sheet

100 Watt, 12 Volt, Medical Safety Certified Single Output Power Supply with PFC

UNIT CODE	DESCRIPTION
MED-PS 100-12V	**100 Watt, 12 Volt, Single Output Medical (**MOOP level) **Power Supply with Active PFC Function**

SPECIFICATIONS		
AC Input	**DC Output**	**Approvals**
Universal AC input 85 ~ 264V	+12VDC @ 0 ~ 8.5A	

Features at a Glance:

Medical safety certified, MOOP level

Built-in active PFC function, PF>0.95

Withstands 300VAC surge for 5 seconds

Low leakage current <300μA/264VAC

No load power consumption < 0.5W
Standby 5V @ 0.3A

1U low profile case: 38mm

Protection: Short circuit, Overload,
Over voltage and Over temperature (option)

Built-in constant current limiting circuit and
Remote sense function (ON/OFF control)

Working temperature range -40ºC ~ +60ºC
105ºC long-life electrolytic capacitors

Cooling by natural (free air) convection

Certificates: UL / CUL / CB / CE
Safety standards: ANSI/AAMI ES60601-1,
IEC60601-1 approved
EMC standards: Class B level
(see following pages for complete EMC details)

MTBF: 295.7K hrs min. *MIL-HDBK-217F (25ºC)*

Case: 901

Weight: 0.83 lbs (0.38 Kgs)
Dimensions: 6.25 x 3.81x 1.49inches (LxWxH)
159 x 97 x 38mm (LxWxH)
5 year warranty

The MED-PS 100 series are highly reliable power supplies deigned to meet the rigerous requirements for medical applications and are an excellent choice for non-patient contact instruments and equipmet. MED-PS 100-12 is a 100 Watt AC/DC, efficient (87.5%), enclosed, 1U medical type power supply, with active PFC, that complies with international medical safety regulations (MOOP level).

Standard functions include built-in remote ON/OFF control, protections for short circuit, overload (constant current mode), over voltage, and over temperature. Additionally, with low leakage current (≦300μA), extremely low no-load power consumption (<0.5W), 1U low profile (38mm). This series Global certificates of compliance meeting UL/ CUL/ CB/ CE medical safety requirements ensure users' safety. EMI emmisions: Class B Level, compliant.

Suitable applications include medical and diagnostic equipment requiring low leakage current such as lab and analysis equipment, monitoring equipment, MRI & X-ray machines, CT Scanners, chemical or biological detection equipment, as well as any system requiring low, no-load, power consumption.

Release & Application Notes

Pricing:	1 ~ 9	$ 139.50
	10+	117.00
	25+	99.70

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POLLOCK INDUSTRIES

100W Single Output Medical Type

MPS-100 Series

■ Features :

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 90%
- Withstand 300VAC surge input for 5 seconds
- Protections: Short circuit / Overload / Over voltage
- Protections: Over temperature (optional)
- Cooling by free air convection
- 1U low profile 38mm
- Medical safety approved (MOOP level)
- Built-in remote ON-OFF control
- No load power consumption<0.5W
- All using 105℃ long life electrolytic capacitors
- 5 years warranty

SPECIFICATION

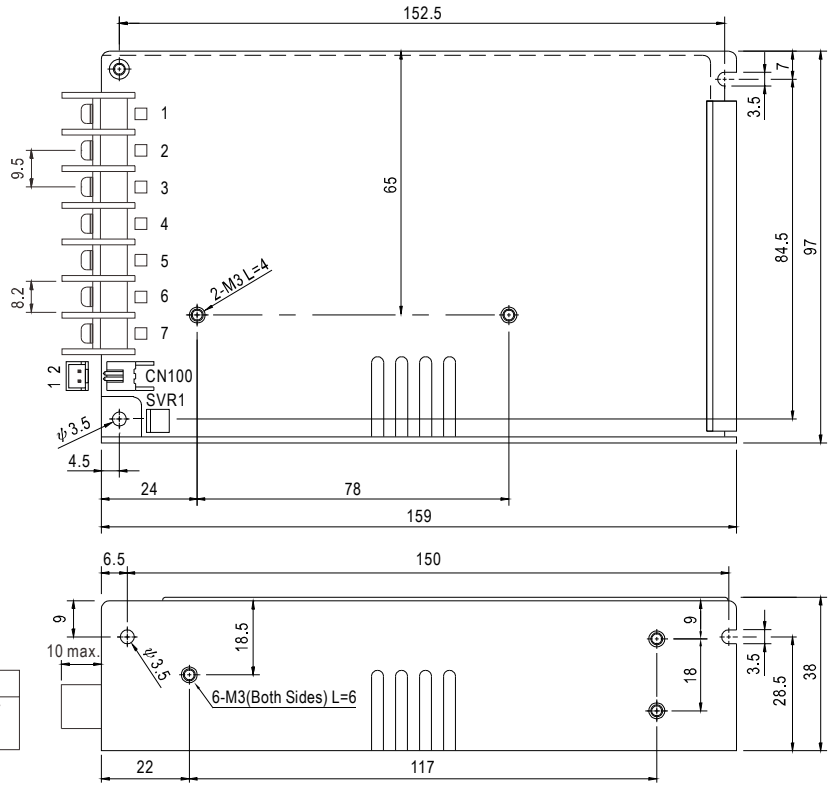
MODEL		MSP-100-3.3	MSP-100-5	MSP-100-7.5	MSP-100-12	MSP-100-15	MSP-100-24	MSP-100-36	MSP-100-48
OUTPUT	DC VOLTAGE	3.3V	5V	7.5V	12V	15V	24V	36V	48V
	RATED CURRENT	20A	17A	13.5A	8.5A	7A	4.5A	2.9A	2.2A
	CURRENT RANGE	0 ~ 20A	0 ~ 17A	0 ~ 13.5A	0 ~ 8.5A	0 ~ 7A	0 ~ 4.5A	0 ~ 2.9A	0 ~ 2.2A
	RATED POWER	66W	85W	101.3W	102W	105W	108W	104.4W	105.6W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	80mVp-p	100mVp-p	120mVp-p	150mVp-p	150mVp-p	200mVp-p	240mVp-p
	VOLTAGE ADJ. RANGE	3.1 ~ 3.8V	4.75 ~ 5.8V	7.1 ~ 9V	11.4 ~ 13.8V	14.25 ~ 18V	22.8 ~ 28.8V	34.2 ~ 39.6V	45.6 ~ 55.2V
	VOLTAGE TOLERANCE Note.3	+2.5,-3.5%	+2.5,-3.5%	±2.5%	±1.5%	±1.5%	±1.5%	±1.5%	±1.5%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.3%	±0.3%	±0.2%	±0.2%	±0.2%
	LOAD REGULATION	±2.0%	±2.0%	±1.5%	±0.8%	±0.8%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME	2500ms, 100ms/230VAC 2500ms, 100ms/115VAC at full load							
	HOLD UP TIME (Typ.)	50ms/230VAC 20ms/115VAC at full load							
INPUT	VOLTAGE RANGE Note.5	85 ~ 264VAC 120 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz							
	POWER FACTOR (Typ.)	PF>0.95/230VAC PF>0.98/115VAC at full load							
	EFFICIENCY (Typ.)	78%	83%	84%	87.5%	88%	88.5%	89%	90%
	AC CURRENT (Typ.)	1.2A/115VAC 0.6A/230VAC							
	INRUSH CURRENT (Typ.)	35A/115VAC 65A/230VAC							
	LEAKAGE CURRENT Note.6	Earth leakage current < 300μA/264VAC , Touch leakage current < 100μA/264VAC							
PROTECTION	OVERLOAD	105 ~ 135% rated output power							
		Protection type : Constant current limiting for Vo=50 ~ 100% of rated voltage, recovers automatically after fault condition is removed							
	OVER VOLTAGE	3.96 ~ 4.62V	6 ~ 7V	9.4 ~ 10.9V	14.4 ~ 16.8V	18.8 ~ 21.8V	30 ~ 34.8V	41.4 ~ 48.6V	57.6 ~ 67.2V
		Protection type : Shut down o/p voltage, re-power on to recover							
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down							
FUNCTION	REMOTE CONTROL	RC+/RC- : 0 ~ 0.8V= power on ; 4 ~ 10V = power off							
ENVIRONMENT	WORKING TEMP.	-40 ~ +60℃ (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 90% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.04%/℃ (0 ~ 50℃)							
	VIBRATION	10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes							
SAFETY & EMC (Note 4)	SAFETY STANDARDS	ANSI/AAMI ES60601-1, IEC60601-1 approved							
	ISOLATION LEVEL	Primary-Secondary: 2×MOOP, Primary-Earth: 1×MOOP, Secondary-Earth: 1×MOOP							
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC							
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH							
	EMC EMISSION	Compliance to EN55011 (CISPR11) Class B, EN61000-3-2,-3							
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN60601-1-2							
OTHERS	MTBF	295.7K hrs min. MIL-HDBK-217F (25℃)							
	DIMENSION	159*97*38mm (L*W*H)							
	PACKING	0.38Kg; 24pcs/10.1Kg/0.76CUFT							

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies." (as available on http://www.meanwell.com)
5. Derating may be needed under low input voltages. Please check the derating curve for more details.
6. Touch current was measured from primary input to DC output.
7. When the input voltage is less than 40VAC, the SPS may exhibit degradation of performance. The final product manufacturers must re-confirm this deviation that does not affect basic safety or essential performance.

■ Mechanical Specification

Case No.901I Unit:mm



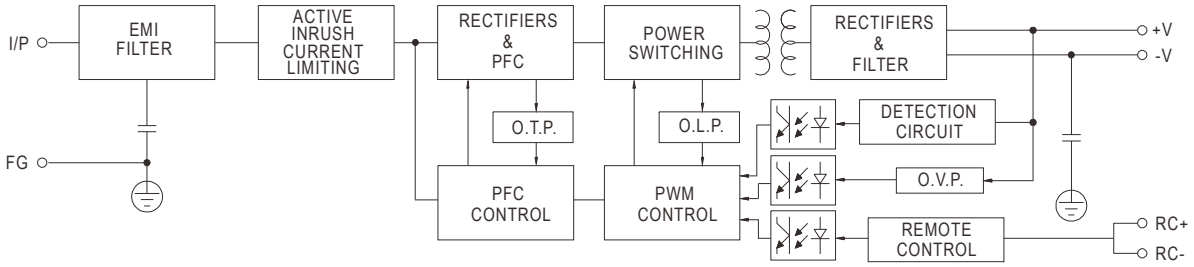
Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	AC/L	4,5	DC OUTPUT -V
2	AC/N	6,7	DC OUTPUT +V
3	FG ⏚		

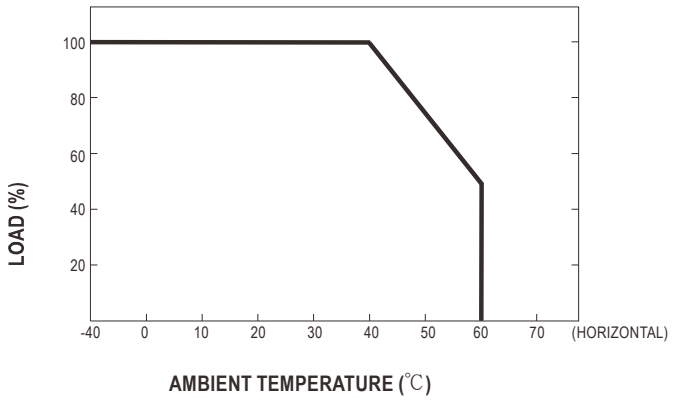
Remote ON/OFF (CN100) : JST B-XH or equivalent

Pin No.	Assignment	Mating Housing	Terminal
1	RC-	JST XHP or equivalent	JST SXH-001T or equivalent
2	RC+		

■ Block Diagram

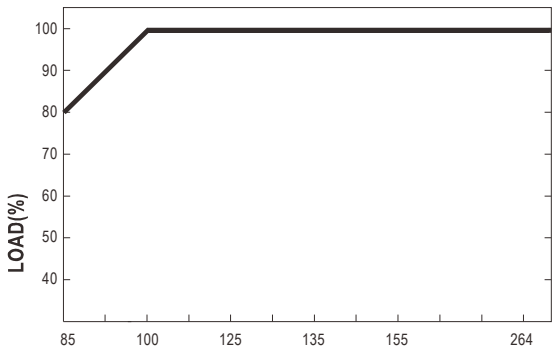


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Output Derating VS Input Voltage



INPUT VOLTAGE (V) 60Hz

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