Digital Power®
Flexible Power Solutions

(877) 634-0982
www.digipwr.com

DPMZC20 Series
20 Watt

Product Specification
AC - DC Medical Power Module

Key Product Features

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC
- Regulated Output and Low Ripple and Noise
- Isolation Class II
- Low Standby <0.1W
- Small Size
- CE, CB, UL, cUL Approvals

E308218

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Product Specification		
Model	**DPMZC20-12S**	**DPMZC20-24S**
Input		
Max Output Wattage	20W	
Voltage	90-264VAC or 120-370 VDC, "N" TO DC "+" ; "L" to DC "-"	
Frequency	47-440 Hz	
Current (Full Load)	440mA max. (115VAC) / 287mA max. (230 VAC)	
Inrush current (<2ms, cold start)	20A max. (115 VAC) / 40A max. (230VAC)	
Leakage current	<0.1mA max. / 264VAC (Touch Current)	

NOTES:
1- This product is not designed for use in critical life support systems, equipment used in hazardous environment, nuclear control systems or other such application which necessitate specific safety and regulatory standards other the ones listed in this datasheet.
2- Ripple & Noise are measuared at 20MHz of bandwith with 0.1uF & 47uF parallel capacitor.
3- Safety approvals cover frequency 47-63 Hz.
4- The "natural convection" is about 20LFM but is not equal to still air (0 LFM).
5- It's recommended to add Varistor 14S471K at L / N input side in parallel.

Output	DPMZC20-12S	DPMZC20-24S
Voltage (V.D.C)	12V	24V
Voltage Accuracy	±2%	
Current max	1667mA	833mA
Maximum Capacitive Load (at 230VAC)	1500uF	470uF
Line Regulation (LL-HL) (typ.)	±0.5%	
Load Regulation (5-100%) (typ.)	±1%	
Ripple & Noise (Full Load)	150mVp-p	240mVp-p
Efficiency (at 230VAC)	83%	82%
Hold-up Time (typ.)	6ms (115VAC) /46ms (230VAC)	

Protection

Over Power Protection	Hiccup technique, auto-recovery
Over Voltage Protection	Zener diode clamp
Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)

Isolation

Input-Output (V.AC)	4000V

Environment

Operating Temperature	-40°C...+80°C (Case Temperature max. +95°C)
Storage Temperature	-40°C...+90°C
Temperature Coefficient	±0.05%/°C
Altitude During Operation	5000m
Humidity	Up to 95% RH
MTBF	>350,000h @ 25°C (MIL-HDBK-217F)
Atmospheric Pressure	70kPa to 106kPa

Safety Approval

cUL/ UL Standard	UL 60950-1, CAN/CSA C22.2 No. 60950-1-07 ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10), CAN/CSA-C22.2 No. 60601-1(2008), 2 x MOPP
CB Standard	IEC 60950-1:2005 (2nd Edition) + Am 1:2009 + Am 2:2013 IEC 60601-1:2005 (3rd Edition) + CORR. 1 (2006) + CORR.2(2007) + AM1(2012) or IEC 60601-1 (2012 reprint), 2 x MOPP

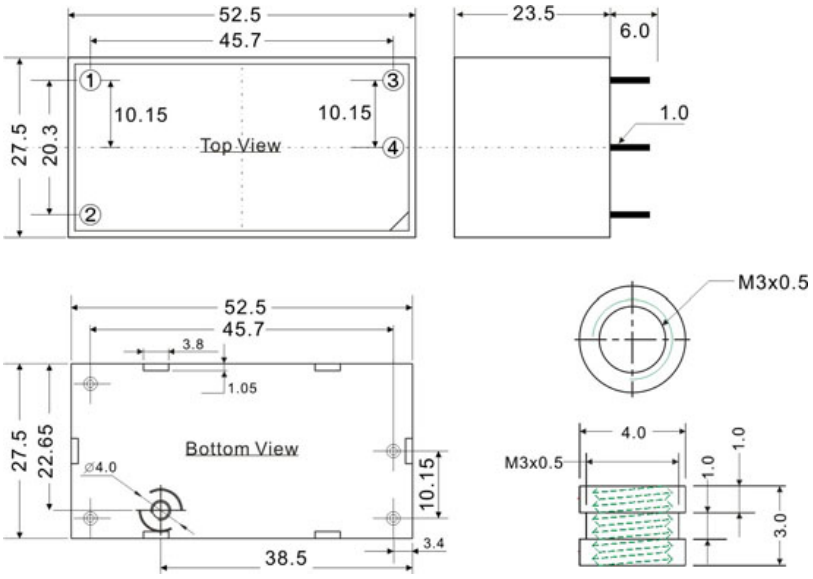
EMC

EMI (Conducted & Radiated Emission)	EN 55011 class B (Radiation Class A for DPMZC20 A2 Series)
ESD	EN61000-4-2 air ±8kV, Contact ±4kV
Radiated Immunity	EN61000-4-3 10V/m
Fast Transient	EN61000-4-4 ±2kV
Surge	EN61000-4-5 ±1kV
Conducted Immunity	EN61000-4-6 10 Vrms
PFMF	EN61000-4-8 30A/m
Dips	EN61000-4-11 30% 10ms
Interruption	EN61000-4-11 >95% 5000ms

Mechanical Specifications

Dimensions	2.07 x 1.08 x 0.93 in (52.5 x 27.5 x 23.5 mm) Tolerance ±0.5mm
Case Material	Plastic resin (flammability to UL 94V-0)
Weight	52g
Cooling Method	Free air convection

Mechanical Outline



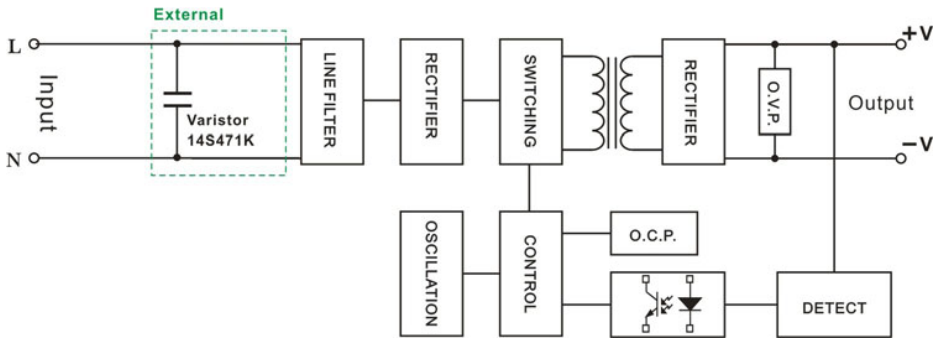
Outline Pin Assignet

PIN#	Signal Name
1	AC IN (L)
2	AC IN (N)
3	+DC OUT
4	-DC OUT

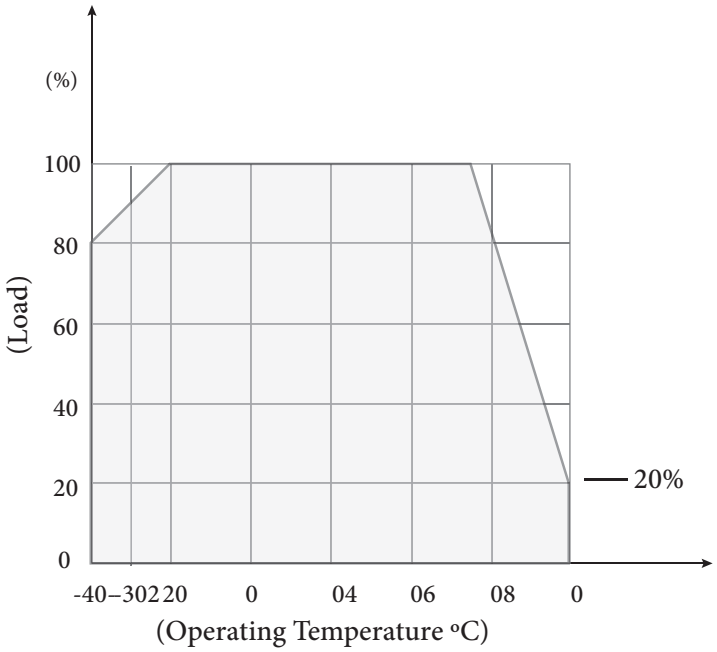
Maximum Torque: 12 {1.21} (kgf.cm{N.m})

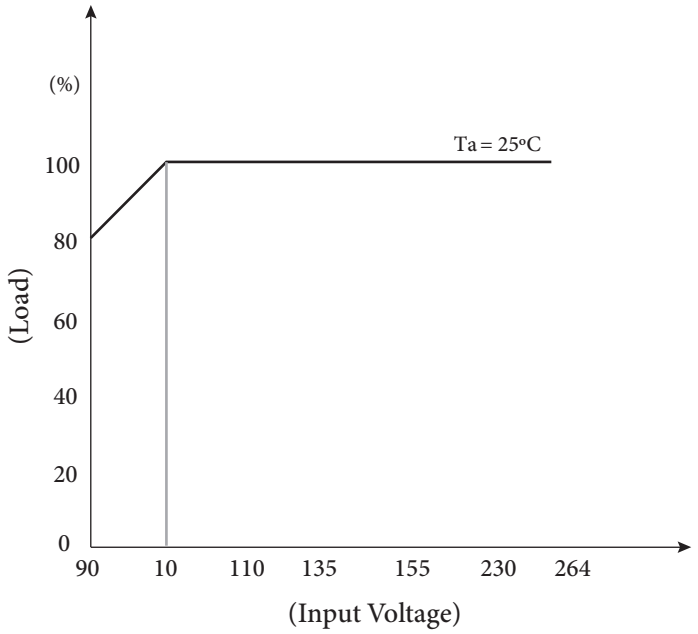
Block Diagram

Single Output



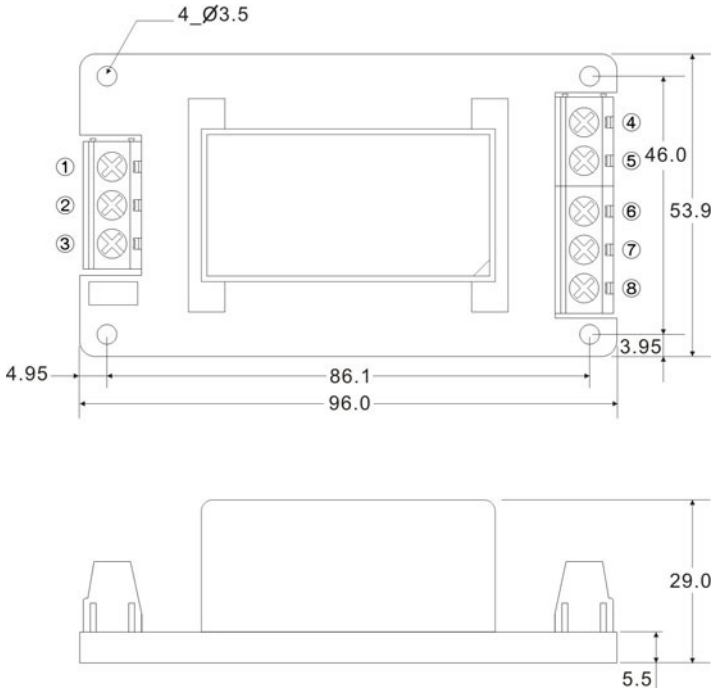
Derating Curve





Screw terminal

DPMZC20-A2



Outline Pin Assignet	
PIN#	Signal Name
1	NO CONNECT
2	AC IN (L)
3	AC IN (N)
4	NO CONNECT
5	+DC OUT
6	-DC OUT
7	NO CONNECT
8	NO CONNECT

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Digital Power Corporation designs and manufactures flexible power supply solutions for the most demanding applications in the defense, healthcare, telecom, and industrial markets. With headquarters in Fremont, California, Digital Power is publically traded on the NYSE (symbol: DPW). The company was founded in 1969 incorporated in California.