

# AC-DC Converter

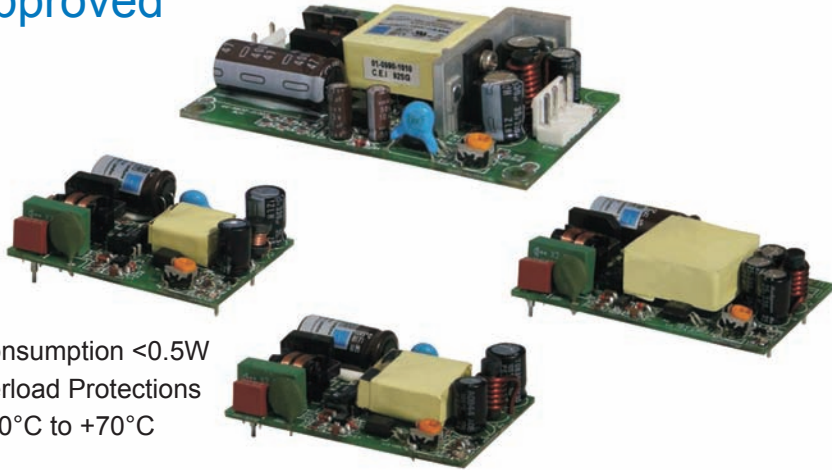
**POWER  
SOLVE**

## PMP05/PMP10/PMP15/PMP20 Series 5-20W Medically Approved Single Output

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### Features

- Universal AC Input
- Medical Safety Approved
- Isolation Class II
- Cooling by Free Air Convection
- Green Design, no-load power consumption <0.5W
- Short Circuit / Overvoltage / Overload Protections
- Operating Temperature range -20°C to +70°C
- 100% full load burn-in test



### Electrical Specification

Input Voltage	85-264VAC full range, 47-63Hz / 125-373VDC
AC Input Current (typ.)	0.13A at 115VAC / 0.08A at 230VAC (PMP05) 0.25A at 115VAC / 0.15A at 230VAC (PMP10) 0.35A at 115VAC / 0.2A at 230VAC (PMP15) 0.6A at 115VAC / 0.4A at 230VAC (PMP20)
Inrush Current	25A at 115VAC / 45A at 230VAC (PMP05 & PMP10) 30A at 115VAC / 50A at 230VAC (PMP15) 30A at 115VAC / 65A at 230VAC (PMP20)
Output Voltage	See Table
Output Current	See Table
Overload Protection	>110% of rated output power. Hiccup mode, recovers automatically when fault is removed
Overvoltage Protection	115-145% (115-150% PMP20) rated output voltage. Output latches off
Operating Temperature Range	-20°C to +70°C. Above 50°C, derate linearly to 50% load at 70°C
Operating Humidity	20-90% RH non-condensing
Storage Temperature Range	-40°C to +85°C
Storage Humidity	10-95% RH non-condensing
Temperature Coefficient	±0.03%/°C (0-50°C)
Vibration	10-500Hz, 2G 10 min/1 cycle, for 60 mins, along X,Y & Z axis
Safety Standards	UL60601-1, TUV EN60601-1 / IEC60601-1 approved
Green Energy	CEC Single Voltage External AC-DC & AC-AC power supplies eligibility criteria (version 1.1)
Withstand Voltage	I/P-O/P: 4KVAC
Isolation Resistance	I/P-O/P: 100MΩ / 500VDC
EMI Conduction & Radiation	EN55011: 2007+A2 : 2007 Class B
Harmonic Current	EN61000-3-2: 2006 Class A, EN61000-3-3 : 1995+A1 : 2005
EMS Immunity	EN61000-4-2, 3, 4, 5, 6, 8, 11, EN60601-1-2: 2001+1: 2006 Life Supporting Equipment
MTBF	217.4kHrs compliance to MIL-HDBK-217F (PMP05) 210.2kHrs compliance to MIL-HDBK-217F (PMP10) 206.3kHrs compliance to MIL-HDBK-217F (PMP15) 188.3kHrs compliance to MIL-HDBK-217F (PMP20)
Dimensions	57.9(L) x 45(W) x 19.1(H) mm (PMP05) 65(L) x 45(W) x 22(H) mm(PMP10) 70(L) x 48(W) x 22(H) mm (PMP15) 88.9(L) x 50.8(W) x 19.3(H) mm (PMP20)
Weight	0.033Kg (PMP05) 0.045Kg (PMP10) 0.062Kg (PMP15) 0.076Kg (PMP20)

#### Notes:

1. All parameters NOT specifically mentioned are measured at 230Vac input, rated load and 25°C ambient temperature
2. Ripple and noise are measured at 20MHz bandwidth by using a 12" twisted pair wire terminated with a 0.1µF ceramic & 47µF electrolytic capacitors across the output
3. Derating is required at low input voltages. Derate linearly to 90% load at 90Vac under 100Vac input
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

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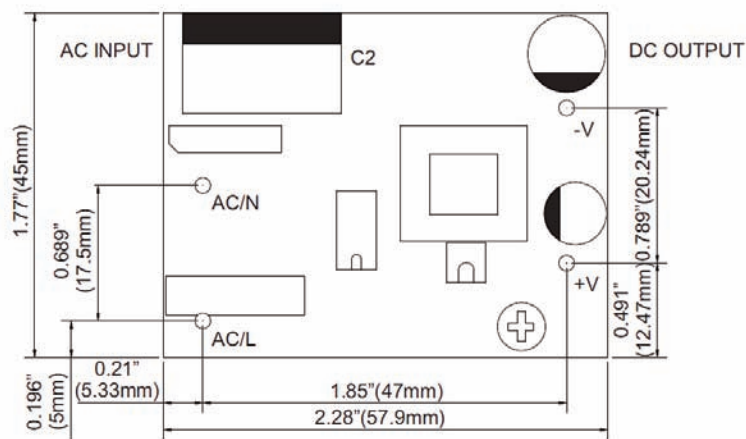
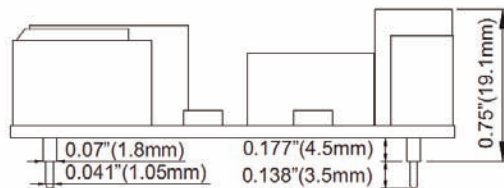
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## Output Voltage and Current Ratings

MODEL	OUTPUT VOLTAGE		MAX OUTPUT CURRENT	VOLTAGE TOLERANCE	RIPPLE & NOISE	LINE REG.	LOAD REG.	POWER Max.	EFF.
	Preset	Adj. Range							
PMP05-05	5V	±10%	1A	±2%	100mVpk-pk	±0.5%	±1%	5W	71%
PMP05-12	12V	±10%	0.42A	±1%	150mVpk-pk	±0.5%	±0.5%	5.04W	75%
PMP05-15	15V	±10%	0.33A	±1%	150mVpk-pk	±0.5%	±0.5%	4.95W	75%
PMP05-24	24V	±10%	0.21A	±1%	240mVpk-pk	±0.5%	±0.5%	5.04W	77%
PMP10-05	5V	±10%	2A	±2%	80mVpk-pk	±0.5%	±1%	10W	77%
PMP10-12	12V	±10%	0.83A	±1%	150mVpk-pk	±0.5%	±0.5%	9.96W	79%
PMP10-15	15V	±10%	0.66A	±1%	150mVpk-pk	±0.5%	±0.5%	9.9W	80%
PMP10-24	24V	±10%	0.42A	±1%	240mVpk-pk	±0.5%	±0.5%	10.08W	82%
PMP15-05	5V	±10%	3A	±2%	80mVpk-pk	±1%	±1%	15W	79%
PMP15-12	12V	±10%	1.25A	±1%	150mVpk-pk	±0.5%	±0.5%	15W	82%
PMP15-15	15V	±10%	1.0A	±1%	150mVpk-pk	±0.5%	±0.5%	15W	84%
PMP15-24	24V	±10%	0.63A	±1%	240mVpk-pk	±0.5%	±0.5%	15.12W	85%
PMP20-05	5V	±10%	4A	±2%	80mVpk-pk	±0.5%	±1%	20W	77%
PMP20-12	12V	±10%	1.66A	±1%	150mVpk-pk	±0.5%	±0.5%	19.92W	82%
PMP20-15	15V	±10%	1.33A	±1%	150mVpk-pk	±0.5%	±0.5%	19.95W	84%
PMP20-24	24V	±10%	0.84A	±1%	240mVpk-pk	±0.5%	±0.5%	20.16W	85%

## Mechanical Details

PMP05 Series: 57.9(L) x 45(W) x 19.1(H)mm



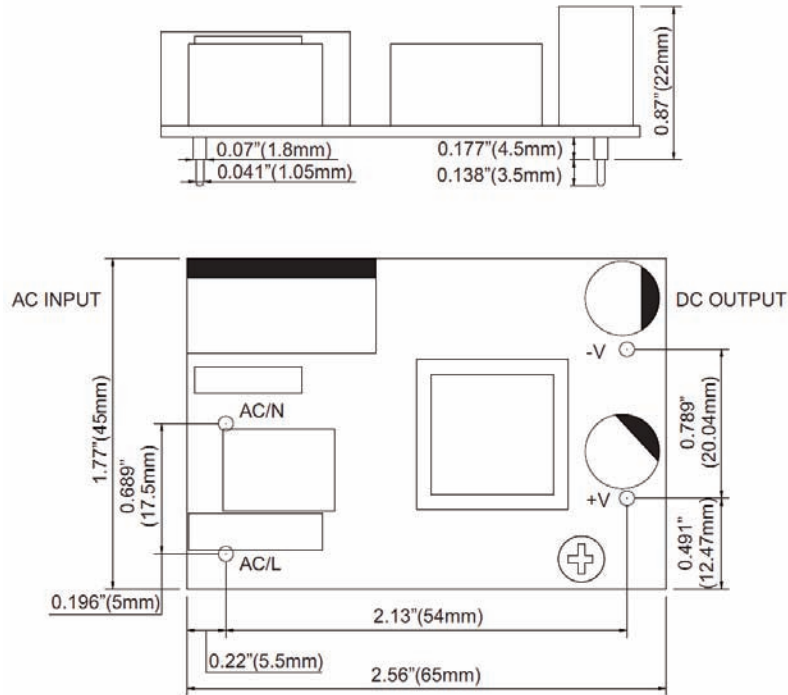
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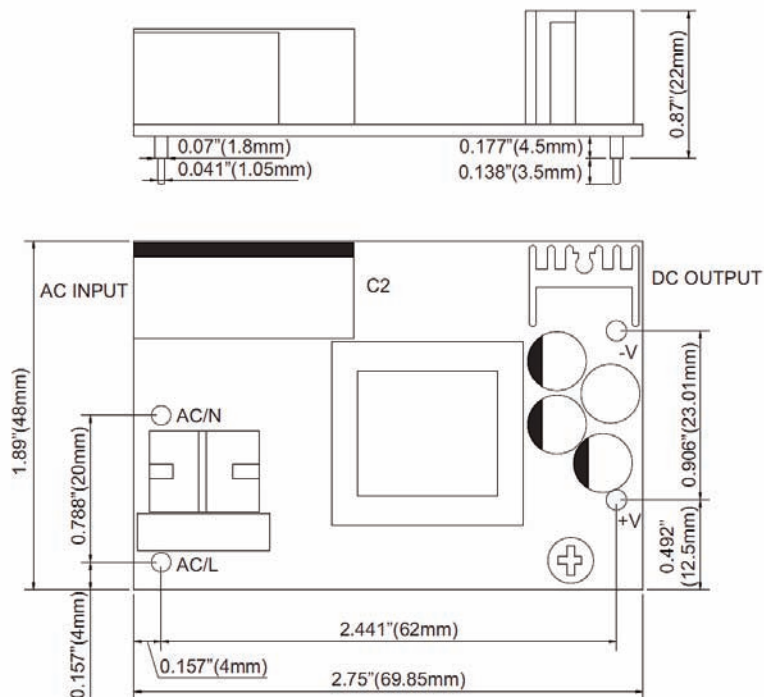
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## Mechanical Details (cont.)

PMP10 Series: 65(L) x 45(W) x 22(H)mm



PMP15 Series: 70(L) x 48(W) x 22(H)mm



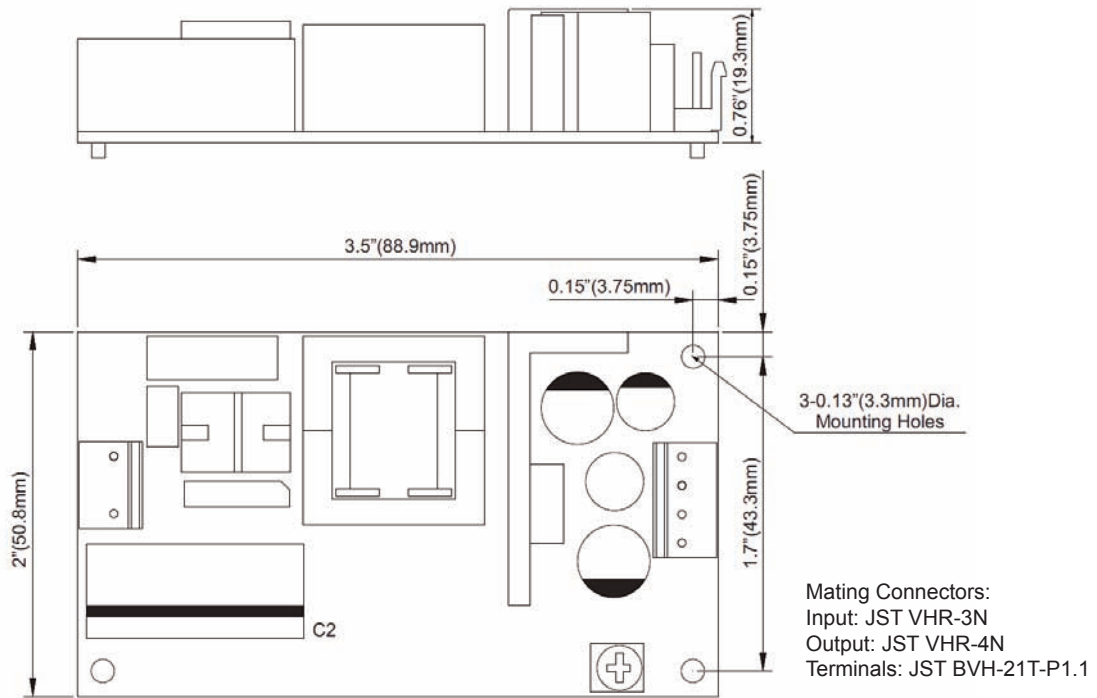
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## Mechanical Details (cont.)

PMP20 Series: 88.9(L) x 50.8(W) x 19.3(H)mm



## Derating Curve

