

## Wall Industries, Inc.

### DTMPU51 SERIES

90~264VAC Input Voltage Range  
Class I, Up to 50 Watts  
Single, Dual, and Triple Outputs  
3<sup>rd</sup> Edition Medical Approvals  
Medical AC/DC Desktop Power Supplies



#### FEATURES

- Class I
- RoHS Compliant
- UL 94V-1 Compliant
- CEC/Energy Star Level V Compliant
- IEC-320-C14 AC Inlet Connector
- 100% Burn-in Tested
- Single, Dual, and Triple Outputs
- Up to 50 Watts Output Power
- Wide Input Voltage Range: 90~264VAC
- Over Voltage and Over Load Protection
- Meets FCC Part-18 Class B and CISPR-11 EN55011 Class B Emission Limits
- ANSI/AAMI ES 60601-1:2005 (UL/cUL 3<sup>rd</sup> Edition) and EN 60601-1:2006 (TUV/T-mark 3<sup>rd</sup> Edition) Safety Approvals
- Input to Output: 2MOPP
- Optional Output Connectors Available

#### DESCRIPTION

The DTMPU51 series of class I medical AC/DC desktop power supplies provides up to 50 Watts of continuous output power in a 5.75" x 2.99" x 1.69" package. This series consists of single, dual, and triple output models with a 90~264VAC input voltage range and an IEC-320-C14 AC inlet connector. These power supplies are protected against over voltage and over load conditions and have been 100% burn-in tested. All units are CEC/Energy Star Level V, UL 94V-1, and RoHS compliant. The DTMPU51 series also meets FCC Part-18 class B and CISPR-11 EN55011 class B emission limits and has ANSI/AAMI ES 60601-1:2005 (UL/cUL 3<sup>rd</sup> Edition) and EN 60601-1:2006 (TUV/T-mark 3<sup>rd</sup> Edition) medical approvals.

## SPECIFICATIONS: DTMPU51 SERIES

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.  
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Nom	Max	Unit
<b>INPUT SPECIFICATIONS</b>					
Operating Voltage Range	Operating Input Voltage Range	90		264	VAC
	Safety Approvals Input Voltage Range	100		240	
Input Frequency		47		63	Hz
Input Current	Io = Full Load, Vin = 100VAC	0.91		1.04	A
	Io = Full Load, Vin = 240VAC	0.43		0.53	
Inrush Current	Io = Full Load, 25°C, Cold Start, Vin = 115VAC			35	A
	Io = Full Load, 25°C, Cold Start, Vin = 230VAC			70	
No Load Power Consumption	No load, Vin = 230VAC	See Table			
<b>OUTPUT SPECIFICATIONS</b>					
Output Voltage		See Table			
Line Regulation	Io = Full Load	0.5		1	%
Load Regulation	Vin = 230VAC	3		7	%
Output Power	Vin = 90 to 264VAC	See Table			
Output Current		See Table			
Ripple & Noise (peak to peak)	Full load, Vin = 90VAC	Outputs under 3.3VDC		2	%
		Others		1	
Transient Response Time	Io = Full Load to Half Load, Vin = 100VAC			4	ms
Hold-Up Time	Io = Full Load, Vin = 110VAC	16			ms
Start-Up Time	Io = Full Load, Vin = 100VAC	0.3		2	s
Temperature Coefficient		-0.04		+0.04	%/°C
<b>PROTECTION</b>					
Over Voltage Protection		112		132	%
Over Current Protection		110		150	%
<b>GENERAL SPECIFICATIONS</b>					
Efficiency	Io = Full Load, Vin = 230VAC	75		88	%
Dielectric Withstanding Voltage	Primary to Secondary	6321			VDC
	Primary to PE	2121			
Isolation Resistance	Test Voltage = 500VDC	50			MΩ
Safety Ground Leakage Current	Vin = 240VAC/60Hz		0.25		mA
<b>ENVIRONMENTAL SPECIFICATIONS</b>					
Operating Temperature	Derating linearly from 100% Load at 50°C to 50% load at 70°C	0		70	°C
Storage Temperature		-40		85	°C
Operating Humidity		0		95	%
Storage Humidity		0		95	%
Operating Altitude				3000	m
MTBF	Operating Temp. at 25°C; calculated per MIL-HDBK-217F	100,000 hours			
<b>PHYSICAL SPECIFICATIONS</b>					
Weight		approx. 1.12~1.23 lbs (510~560g)			
Dimensions (L x W x H)		5.75 x 2.99 x 1.69 inches (146.0 x 76.0 x 43.0 mm)			
AC Inlet Connector		IEC-320-C14			
<b>SAFETY &amp; COMPLIANCE</b>					
Safety Approvals	ANSI/AAMI ES 60601-1: 2005 (UL/cUL 3 <sup>rd</sup> ed.) <sup>(3)</sup> , EN 60601-1:2006 (TUV/T-mark 3 <sup>rd</sup> ed.), CE				
EMI Requirements	FCC Part-18 Class B and CISPR-11 EN55011 Class B				
Compliance	RoHS, UL 94V-1, CEC/Energy Star Level V				

**MODEL SELECTION TABLE**
**SINGLE OUTPUT MODELS**

Model Number	Input Voltage	Output Voltage <sup>(1)</sup>	Maximum Output Current	Total Regulation	Maximum Output Power	No Load Power Consumption
DTMPU51-101	90~264 VAC	3 ~ 5 VDC	10.0 ~ 8.00A	5%	40W	2W
DTMPU51-102	90~264 VAC	5 ~ 6 VDC	8.00 ~ 6.66A	5%	40W	2W
DTMPU51-103	90~264 VAC	6 ~ 8 VDC	7.00 ~ 5.25A	5%	42W	3W
DTMPU51-104	90~264 VAC	8 ~ 11 VDC	5.63 ~ 4.00A	4%	45W	3W
DTMPU51-105	90~264 VAC	11 ~ 13 VDC	4.00 ~ 3.46A	3%	45W	3W
DTMPU51-106	90~264 VAC	13 ~ 16 VDC	3.46 ~ 2.81A	3%	45W	3W
DTMPU51-107	90~264 VAC	16 ~ 21 VDC	3.12 ~ 2.38A	3%	50W	3W
DTMPU51-108	90~264 VAC	21 ~ 27 VDC	2.30 ~ 1.85A	2%	50W	4W
DTMPU51-109	90~264 VAC	27 ~ 33 VDC	1.85 ~ 1.51A	2%	50W	4W
DTMPU51-110	90~264 VAC	33 ~ 40 VDC	1.51 ~ 1.25A	2%	50W	5W
DTMPU51-111	90~264 VAC	40 ~ 50 VDC	1.25 ~ 1.00A	2%	50W	6W

**DUAL OUTPUT MODELS**

Model Number	Input Voltage	Output Voltage	Output Current		Maximum Regulation	Maximum Output Power	No Load Power Consumption
			Min	Max.			
DTMPU51-200	90~264 VAC	+3.3 VDC	0.5A	5A	7%	40W	4W
		+12 VDC	0.2A	2A	5%		
DTMPU51-201	90~264 VAC	+5 VDC	0.5A	5A	5%	42W	4W
		+12 VDC	0.2A	2A	5%		
DTMPU51-202	90~264 VAC	+5 VDC	0.5A	5A	5%	42W	4W
		+15 VDC	0.15A	1.5A	6%		
DTMPU51-203	90~264 VAC	+5 VDC	0.5A	5A	5%	42W	4W
		+24 VDC	0.1A	1A	5%		
DTMPU51-204	90~264 VAC	+3.3 VDC	0.5A	5A	7%	26.5W	3W
		+5 VDC	0.2A	2A	5%		
DTMPU51-209	90~264 VAC	+12 VDC	0.3A	3A	5%	42W	4W
		-12 VDC	0A	1A	5%		
DTMPU51-210	90~264 VAC	+15 VDC	0.2A	2A	5%	42W	4W
		-15 VDC	0.1A	1A	5%		

**TRIPLE OUTPUT MODELS**

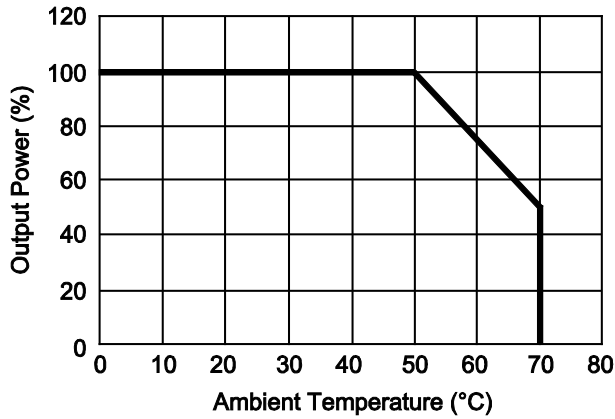
Model Number	Input Voltage	Output Voltage	Output Current		Maximum Regulation	Maximum Output Power	No Load Power Consumption
			Min	Max.			
DTMPU51-300	90~264 VAC	+3.3 VDC	0.5A	5A	7%	42W	5W
		+12 VDC	0.4A	2A	5%		
		-12 VDC	0.1A	0.8A	5%		
DTMPU51-301	90~264 VAC	+5 VDC	0.5A	5A	5%	42W	4W
		+12 VDC	0.2A	2A	5%		
		-5 VDC	0A	0.8A	5%		
DTMPU51-302	90~264 VAC	+5 VDC	0.5A	5A	5%	42W	4W
		+12 VDC	0.2A	2A	5%		
		-12 VDC	0.1A	0.8A	5%		
DTMPU51-303	90~264 VAC	+5 VDC	0.5A	5A	5%	42W	4W
		+15 VDC	0.4A	2A	6%		
		-15 VDC	0.1A	0.8A	5%		
DTMPU51-304	90~264 VAC	+5 VDC	0.5A	5A	5%	42W	6W
		+24 VDC	0.2A	1A	5%		
		-24 VDC	0A	0.5A	5%		
DTMPU51-305	90~264 VAC	+5 VDC	0.5A	5A	5%	42W	5W
		+24 VDC	0.1A	1A	5%		
		-12 VDC	0A	0.8A	5%		
DTMPU51-306	90~264 VAC	+3.3 VDC	0.5A	5A	7%	42W	5W
		+12 VDC	0.4A	2A	5%		
		-5 VDC	0.1A	0.8A	5%		

**NOTES**

- For single output models the output voltage is specified as a range (ex: 40~50VDC); the customer must specify what they would like the output voltage set at.
- Optional output connectors available. Please call factory for ordering details.
- This product is Listed to applicable standards and requirements by UL.

*\*Due to advances in technology, specifications subject to change without notice.*

**DERATING CURVE**

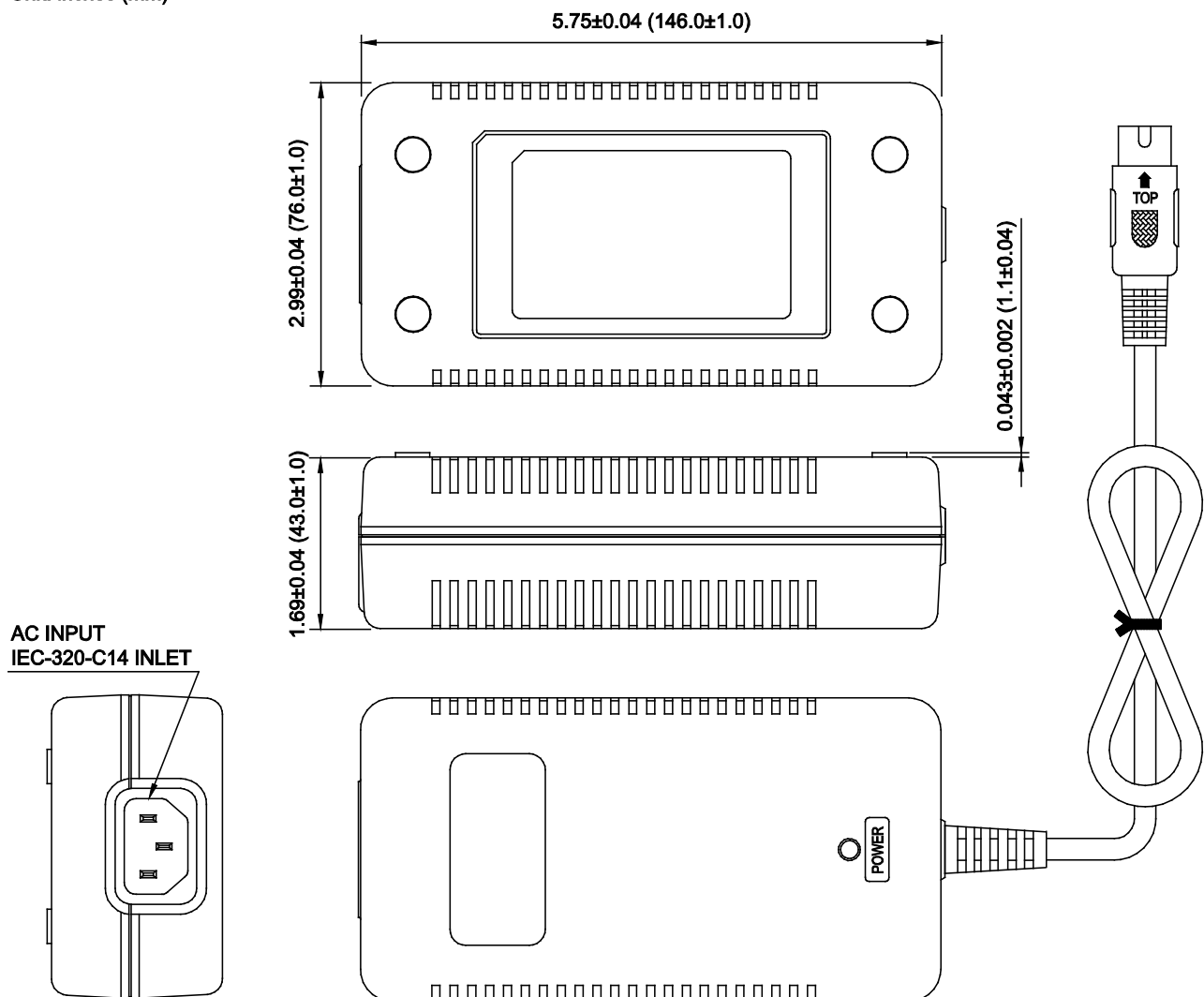


**NOTES**

1. Operating Temperature: 0 to +70°C
2. De-rating linearly from 100% load at 50°C to 50% load at 70°C

**MECHANICAL DRAWING**

Unit: inches (mm)





Wall Industries, Inc.

Rev. B

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## COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

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