

Wall Industries, Inc.

DTMPU31 SERIES

90~264VAC Input Voltage Range
Class I, Up to 30 Watts
Single, Dual, and Triple Outputs
3rd Edition Medical Approvals
Medical AC/DC Desktop Power Supplies



EN 60601-1
IEC 60601-1



Agree to apply for the PSE if order on hand

FEATURES

- Class I
- RoHS Compliant
- UL 94V-1 Compliant
- Energy Star 2.0, Efficiency Level V
- IEC-320-C14 AC Inlet Connector
- 100% Burn-in Tested
- Single, Dual, and Triple Outputs
- Up to 30 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 3rd Edition) and EN 60601-1:2006 (TUV/T-mark 3rd Edition) Safety Approvals
- Input to Output: 2MOPP
- Optional Output Connectors Available

DESCRIPTION

The DTMPU31 series of class I medical AC/DC desktop power supplies provides up to 30 Watts of continuous output power in a 4.65" x 2.56" x 1.52" 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 UL 94V-1 and RoHS compliant and meet FCC Part-18 class B and CISPR-11 EN55011 class B emission limits. The DTMPU31 series also meets new CE requirements and has ANSI/AAMI ES 60601-1:2005 (UL/cUL 3rd Edition) and EN 60601-1:2006 (TUV/T-mark 3rd Edition) safety approvals.

SPECIFICATIONS: DTMPU31 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
INPUT SPECIFICATIONS					
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		0.9		A
	Io = Full Load, Vin = 240VAC		0.34		
Inrush Current	Io = Full Load, 25°C, Cold Start, Vin = 115VAC			14	A
	Io = Full Load, 25°C, Cold Start, Vin = 230VAC			28	
No Load Power Consumption	No load, Vin = 230VAC	Single Output Models		0.3	W
		Dual & Triple Output Models		3	
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Line Regulation	Io = Full Load			1	%
Load Regulation	Vin = 230VAC	2		10	%
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	12			ms
Start-Up Time	Io = Full Load, Vin = 100VAC	0.3		2	s
Temperature Coefficient		-0.04		+0.04	%/°C
PROTECTION					
Over Voltage Protection		112		132	%
Over Current Protection		110		150	%
GENERAL SPECIFICATIONS					
Efficiency	Io = Full Load, Vin = 230VAC	67.6		85	%
Dielectric Withstanding Voltage	Primary to Secondary	6802			VDC
	Primary to PE	2121			
Isolation Resistance	Test Voltage = 500VDC	50			MΩ
Safety Ground Leakage Current	Vin = 240VAC/60Hz			0.1	mA
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	Derating linearly from 100% Load at 50°C to 50% load at 70°C	0	40	70	°C
Storage Temperature		-40		85	°C
Operating Humidity		0		95	%
Storage Humidity		0		95	%
Operating Altitude		Up to 3000m			
MTBF	Operating Temp. at 25°C; calculated per MIL-HDBK-217F	100,000 hours			
PHYSICAL SPECIFICATIONS					
Weight		approx. 14.1~16.2oz (400~460g)			
Dimensions (L x W x H)		4.65 x 2.56 x 1.52 inches (118.0 x 65.0 x 38.5 mm)			
AC Inlet Connector		IEC-320-C14			
SAFETY & COMPLIANCE					
Safety Approvals	ANSI/AAMI ES 60601-1: 2005 (UL/cUL 3 rd ed.), EN 60601-1:2006 (TUV/T-mark 3 rd ed.), CE				
EMI Requirements	FCC Part-18 Class B and CISPR-11 EN55011 Class B				
Compliance	RoHS, UL 94V-1, CEC/Energy Star 2.0, Efficiency Level V				

MODEL SELECTION TABLE

SINGLE OUTPUT MODELS

Model Number	Input Voltage Range	Output Voltage ⁽¹⁾	Max. Output Current	Total Regulation	Max. Output Power
DTMPU31-101	90~264 VAC	3 ~ 5 VDC	6.66 ~ 4.00A	7%	20W
DTMPU31-102	90~264 VAC	5 ~ 6 VDC	5.00 ~ 4.16A	5%	25W
DTMPU31-103	90~264 VAC	6 ~ 8 VDC	4.16 ~ 3.12A	5%	25W
DTMPU31-104	90~264 VAC	8 ~ 11 VDC	3.75 ~ 2.72A	4%	30W
DTMPU31-105	90~264 VAC	11 ~ 13 VDC	2.72 ~ 2.30A	3%	30W
DTMPU31-106	90~264 VAC	13 ~ 16 VDC	2.30 ~ 1.87A	3%	30W
DTMPU31-107	90~264 VAC	16 ~ 21 VDC	1.87 ~ 1.42A	3%	30W
DTMPU31-108	90~264 VAC	21 ~ 27 VDC	1.42 ~ 1.11A	2%	30W
DTMPU31-109	90~264 VAC	27 ~ 33 VDC	1.11 ~ 0.90A	2%	30W
DTMPU31-110	90~264 VAC	33 ~ 40 VDC	0.90 ~ 0.75A	2%	30W

DUAL OUTPUT MODELS

Model Number	Input Voltage Range	Output Voltage	Output Current		Max. Regulation	Max. Output Power
			Min	Max.		
DTMPU31-200	90~264 VAC	+3.3 VDC	0.30A	3.0A	7%	25W
		+12 VDC	0.13A	1.3A	5%	
DTMPU31-201	90~264 VAC	+5 VDC	0.30A	3.0A	5%	30W
		+12 VDC	0.13A	1.3A	5%	
DTMPU31-202	90~264 VAC	+5 VDC	0.30A	3.0A	5%	30W
		+15 VDC	0.10A	1.0A	5%	
DTMPU31-203	90~264 VAC	+5 VDC	0.30A	3.0A	5%	30W
		+24 VDC	0.07A	0.7A	5%	
DTMPU31-204	90~264 VAC	+3.3 VDC	0.30A	3.0A	7%	17.9W
		+5 VDC	0.16A	1.6A	5%	
DTMPU31-209	90~264 VAC	+12 VDC	0.20A	2.0A	5%	30W
		-12 VDC	0.05A	0.5A	10%	
DTMPU31-210	90~264 VAC	+15 VDC	0.15A	1.5A	5%	30W
		-15 VDC	0.05A	0.5A	10%	
DTMPU31-215	90~264 VAC	+5 VDC	0.30A	3.0A	5%	30W
		-24 VDC	0.10A	1.0A	10%	

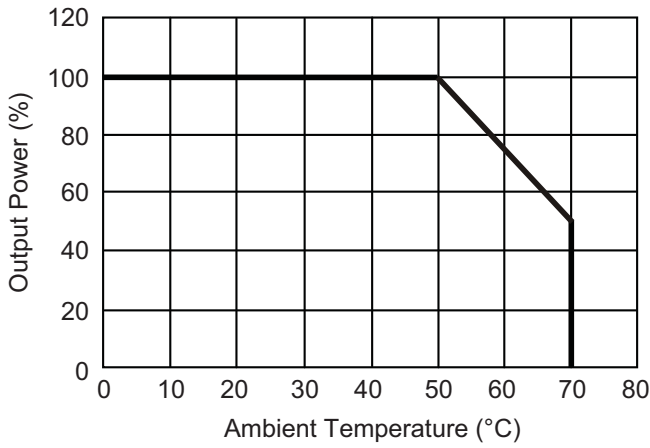
TRIPLE OUTPUT MODELS

Model Number	Input Voltage Range	Output Voltage	Output Current		Max. Regulation	Max. Output Power
			Min	Max.		
DTMPU31-301	90~264 VAC	+5 VDC	0.25A	2.5A	5%	25W
		+12 VDC	0.11A	1.1A	5%	
		-5 VDC	0.05A	0.5A	10%	
DTMPU31-302	90~264 VAC	+5 VDC	0.25A	2.5A	5%	30W
		+12 VDC	0.10A	1.0A	5%	
		-12 VDC	0.05A	0.5A	10%	
DTMPU31-303	90~264 VAC	+5 VDC	0.25A	2.5A	5%	30W
		+15 VDC	0.10A	1.0A	5%	
		-15 VDC	0.05A	0.5A	10%	
DTMPU31-304	90~264 VAC	+5 VDC	0.30A	3.0A	5%	30W
		+24 VDC	0.10A	1.0A	5%	
		-24 VDC	0.05A	0.5A	10%	
DTMPU31-305	90~264 VAC	+5 VDC	0.30A	3.0A	5%	30W
		+24 VDC	0.10A	1.0A	5%	
		-12 VDC	0.05A	0.5A	10%	
DTMPU31-306	90~264 VAC	+3.3 VDC	0.30A	3.0A	5%	25W
		+12 VDC	0.11A	1.1A	5%	
		-5 VDC	0.05A	0.5A	10%	

NOTES

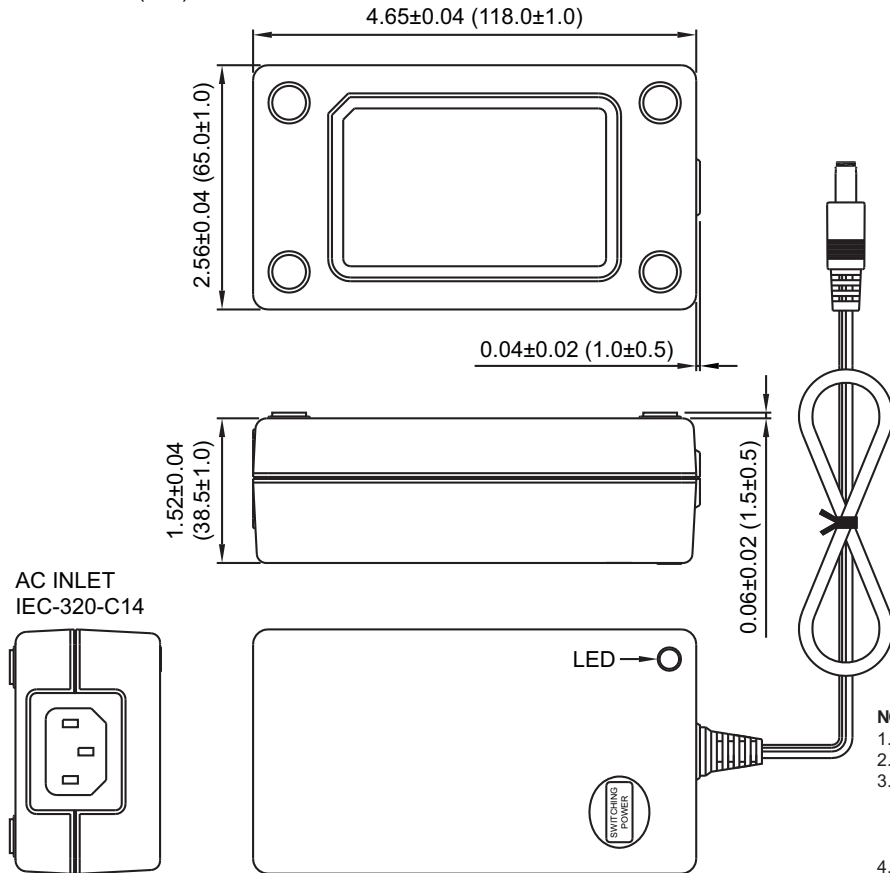
- For single output models the output voltage is specified as a range (ex: 33~40VDC); the customer must specify what they would like the output voltage set at.
- Models DTMPU31-101~104 need to use AWG#16/4FT output cable in order to meet the total regulation specified.
Models DTMPU31-105~108 need to use AWG#18/6FT output cable in order to meet the total regulation specified.
Models DTMPU31-109~110 need to use AWG#20/6FT output cable in order to meet the total regulation specified.
The regulation and efficiency will change if a different output cable is used.
- Optional output connectors available. Please call factory for ordering details.

DERATING CURVE



MECHANICAL DRAWING

Unit: inches (mm)



NOTES

1. Weight: 14.1~16.2oz (400~460g)
2. AC Inlet: IEC-320-C14
3. Models DTMPU31-101~104 need to use AWG#16/4FT output cable.
 Models DTMPU31-105~108 need to use AWG#18/6FT output cable.
 Models DTMPU31-109~110 need to use AWG#20/6FT output cable.
 The regulation and efficiency will change if a different output cable is used.
4. Optional output connectors available.

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 ISO9001-2008 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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