

Type A: IEC-320-C14



Size: 4.11in x 1.65in x 1.22in

Type B: IEC-320-C8



Size: 3.90in x 1.65in x 1.22in

Type C: IEC-320-C6



Size: 3.90in x 1.65in x 1.22in



**OPTIONS**

- Output Connectors
- Output Voltage
- AC Inlet

**FEATURES**

- Class I for A & C Types; Class II for B Type
- RoHS and UL 94V-1 Compliant
- Energy Star 2.0, Efficiency Level VI Compliant
- Single Output Voltages Available from 5~50VDC
- Wide Input Voltage Range: 90~264VAC
- 100% Burn-In Tested
- 1 Year Warranty
- Up to 20 Watts Output Power
- Efficiency up to 87%
- UL/cUL (UL60950-1: 2<sup>nd</sup> Edition) and TUV/GS (EN 60950-1:2<sup>nd</sup> Edition), FCC, CE, and CB Safety Approvals
- IEC-320-C14, IEC-320-C8, and IEC-320-C6 AC Inlets Available
- Optional Output Connectors Available

**APPLICATIONS**

- POS System
- AV Equipment
- Industrial PC
- Note PC
- Charger
- LED Lighting

**DESCRIPTION**

The DTEPU20 series of AC/DC desktop power supplies provides up to 20 watts of continuous output power. This series consists of single output models with output voltages ranging from 5~50VDC and a wide operating input voltage range of 90~264VAC. All units are UL 94V-1, RoHS, and CEC/Energy Star level VI compliant and meet FCC Part-15 class B and CISPR-22 class B emission limits. The DTEPU20 series also meets new CE requirements and has UL/cUL (UL 60950-1: 2<sup>nd</sup> edition), TUV/GS (EN 60950-1: 2<sup>nd</sup> edition), FCC, CB, and CE safety approvals. The DTEPU20 series has three types of AC inlets available: IEC-320-C14 (Type A), IEC-320-C8 (Type B), and IEC-320-C6 (Type C). All units have been 100% burn-in tested.

**MODEL SELECTION TABLE**

Model Number <sup>(1)</sup>	Input Voltage Range	Output Voltage	Output Current	Ripple & Noise <sup>(6)</sup>	Total Regulation	Output Power	Efficiency
DTEPU20A-102	90~264VAC	5~5.99VDC	2.50~3.00A	100mVp-p	±5%	15W	81.4%
DTEPU20A-103		6.5~8VDC	1.87~2.30A		±5%	15W	81.4%
DTEPU20A-104		8~11VDC	1.81~2.50A		±5%	20W	85.5%
DTEPU20A-105		11~13VDC	1.53~1.81A		±5%	20W	85.5%
DTEPU20A-106		13~16VDC	1.25~1.53A		±5%	20W	85.5%
DTEPU20A-107		16~21VDC	0.95~1.25A		±4%	20W	85.5%
DTEPU20A-108		21~27VDC	0.74~0.95A		±4%	20W	86%
DTEPU20A-109		27~33VDC	0.60~0.74A		±4%	20W	86%
DTEPU20A-110		33~40VDC	0.50~0.60A		±4%	20W	87%
DTEPU20A-111		40~50VDC	0.40~0.50A		±4%	20W	87%
DTEPU20B-102		90~264VAC	5~5.99VDC		2.50~3.00A	100mVp-p	±5%
DTEPU20B-103	6.5~8VDC		1.87~2.30A	±5%	15W		81.4%
DTEPU20B-104	8~11VDC		1.81~2.50A	±5%	20W		85.5%
DTEPU20B-105	11~13VDC		1.53~1.81A	±5%	20W		85.5%
DTEPU20B-106	13~16VDC		1.25~1.53A	±5%	20W		85.5%
DTEPU20B-107	16~21VDC		0.95~1.25A	±4%	20W		85.5%
DTEPU20B-108	21~27VDC		0.74~0.95A	±4%	20W		86%
DTEPU20B-109	27~33VDC		0.60~0.74A	±4%	20W		86%
DTEPU20B-110	33~40VDC		0.50~0.60A	±4%	20W		87%
DTEPU20B-111	40~50VDC		0.40~0.50A	±4%	20W		87%
DTEPU20C-102	90~264VAC		5~5.99VDC	2.50~3.00A	100mVp-p		±5%
DTEPU20C-103		6.5~8VDC	1.87~2.30A	±5%		15W	81.4%
DTEPU20C-104		8~11VDC	1.81~2.50A	±5%		20W	85.5%
DTEPU20C-105		11~13VDC	1.53~1.81A	±5%		20W	85.5%
DTEPU20C-106		13~16VDC	1.25~1.53A	±5%		20W	85.5%
DTEPU20C-107		16~21VDC	0.95~1.25A	±4%		20W	85.5%
DTEPU20C-108		21~27VDC	0.74~0.95A	±4%		20W	86%
DTEPU20C-109		27~33VDC	0.60~0.74A	±4%		20W	86%
DTEPU20C-110		33~40VDC	0.50~0.60A	±4%		20W	87%
DTEPU20C-111		40~50VDC	0.40~0.50A	±4%		20W	87%

**SPECIFICATIONS**

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	Typ	Max	Unit
<b>INPUT SPECIFICATIONS</b>					
Input Voltage Range	Safety Approvals Input Voltage Range	100		240	VAC
	Operate Voltage Range	90		264	
Input Frequency		47		63	Hz
Input Current	Low Line io=Full Load, Vin=100VAC			0.5	A
	High Line io=Full Load, Vin=240VAC			0.3	
Inrush Current	Low Line io=Full Load, 25°C, Cool Start, Vin=115VAC	40		50	A
	High Line io=Full Load, 25°C, Cool Start, Vin=230VAC	81		87	
<b>OUTPUT SPECIFICATIONS</b>					
Output Voltage		See Table			
Line Regulation <sup>(4)</sup>	io=Full Load, Vin=100~120VAC	0.5		1	%
Load Regulation <sup>(5)</sup>	Vin=230VAC, 10~90% Load Change at Condition	4		5	%
Output Power		See Table			
Output Current		See Table			
Ripple & Noise (20MHz BW) <sup>(6)</sup>	Rated Load and Nominal Line		100		mVp-p
Transient Response Recovery Time	Full Load, Vin=100VAC			4	mS
Start-Up Time	io=Full Load, Vin=100~240VAC			3	S
Hold-Up Time <sup>(7)</sup>	io=Full Load, Vin=100VAC	8			mS
Temperature Coefficient	Full Load, Vin=100~240VAC			±0.04	%/°C
No Load Power Consumption	No Load, Vin=230VAC			0.1	W
<b>PROTECTION</b>					
Short Circuit Protection		Automatic Recovery			
Over Current Protection		Nil, but output protected to short circuit conditions			
<b>ENVIRONMENTAL SPECIFICATIONS</b>					
Operating Temperature	Derate linearly from 100% load at 40°C to 50% load at 70°C)	0		70	°C
Storage Temperature	10~95% RH	-40		85	°C
Operating Humidity	Non-Condensing	0		95	%
Storage Humidity		0		95	%
Cooling		Free Air Convection			
Flammability		UL94V-1			
Electrostatic Discharge	Air Discharge, IEC61000-4-2			8	kV
	Contact Discharge, IEC61000-4-2			6	
Operating Altitude				3000	M
Vibration	10~500Hz, 10min. 1cycle, 60min. each along X, Y, Z axes			5	G
	Line-Neutral			1	kV
Surge Voltage	Line-PE & Neutral-PE			2	
Derating	Derate linearly from 100% load at 40°C to 50% load at 70°C				
MTBF	Operating Temperature at 25°C, Calculated per MIL-HDBK-217F	100,000			Hours
<b>GENERAL SPECIFICATIONS</b>					
Efficiency	io=Full Load, Vin=230VAC	See Table			
Dielectric Withstanding Voltage	DTEPU20A, DTEPU20C	Primary to PE	2550		VDC
	All Outputs	Primary to Secondary	4242		
Isolation Resistance	Test Voltage=500VDC		50		MΩ
Leakage Current	Vin=240VAC/60Hz	DTEPU20A, DTEPU20C		0.75	mA
		DTEPU20B		0.25	
<b>PHYSICAL SPECIFICATIONS</b>					
Weight		Approx. 6oz (170g)			
Dimensions (L x W x H)	DTEPU20A	4.11in x 1.65in x 1.22in (104.4mm x 42mm x 31mm)			
	DTEPU20B, DTEPU20C	3.90in x 1.65in x 1.22in (99mm x 42mm x 31mm)			
<b>SAFETY</b>					
Safety Approvals		UL/c-UL (UL 60950-1:2 <sup>nd</sup> Edition) <sup>(8)</sup> TUV/GS (EN 60950-1:2 <sup>nd</sup> Edition)			
Protection Classes	DTEPU20A, DTEPU20C	Class I			
	DTEPU20B	Double Insulated, Class II			

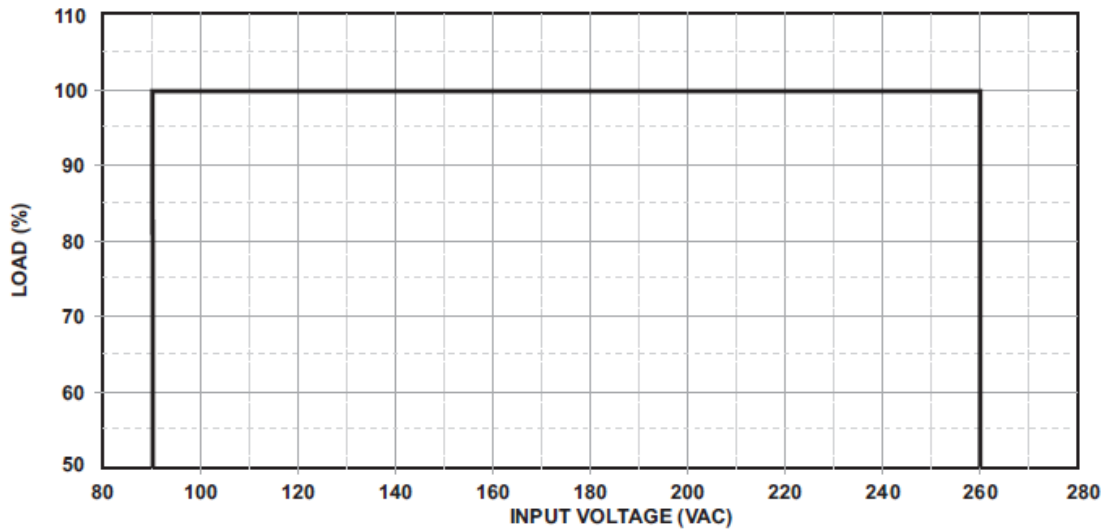
**NOTES**

- (1) DTEPU20B-102~107 are required to use AWG#18/4FT output cable.  
DTEPU20B-108~111 are required to use AWG#20/4FT output cable.  
The electrical characteristics will be changed by modified output cable.
- (2) Output can provide up to peak load when the power supply starts up. Staying in more than rated load continually is not allowed.
- (3) Each output is checked to be within voltage accuracy in 60% rated load condition.
- (4) Line regulation is defined by changing  $\pm 10\%$  of input voltage from nominal line at rated load.
- (5) Load regulation is defined by changing  $\pm 40\%$  of measured output load from 60% rated load.
- (6) Ripple & Noise is measured by using 20MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor at rated load and nominal line.
- (7) Hold up time is measured from the end of the last charging pulse to the time which the main output drops down to low limit of main output at rated load and nominal line.
- (8) This product is Listed to applicable standards and requirements by UL.

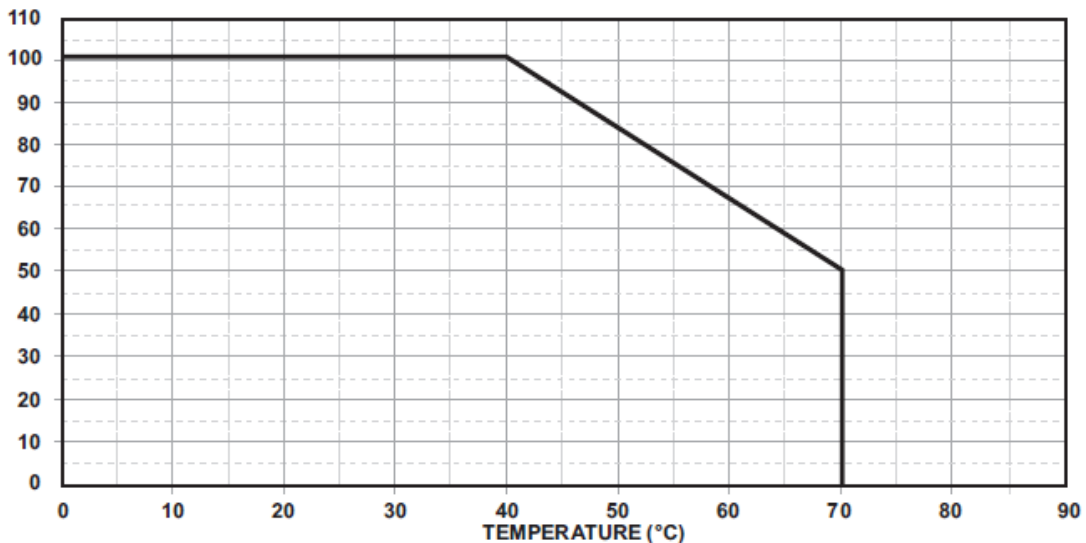
*\*Due to advances in technology, specifications subject to change without notice.*

**DERATING CURVES**

**Input Voltage Derating Curve**

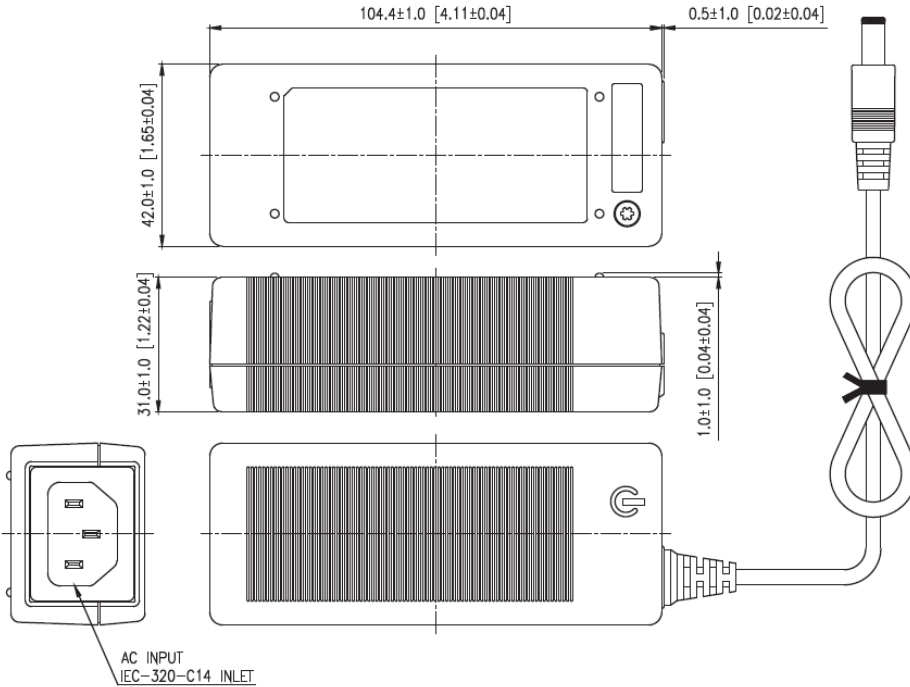


**Temperature Derating Curve**



MECHANICAL DRAWINGS

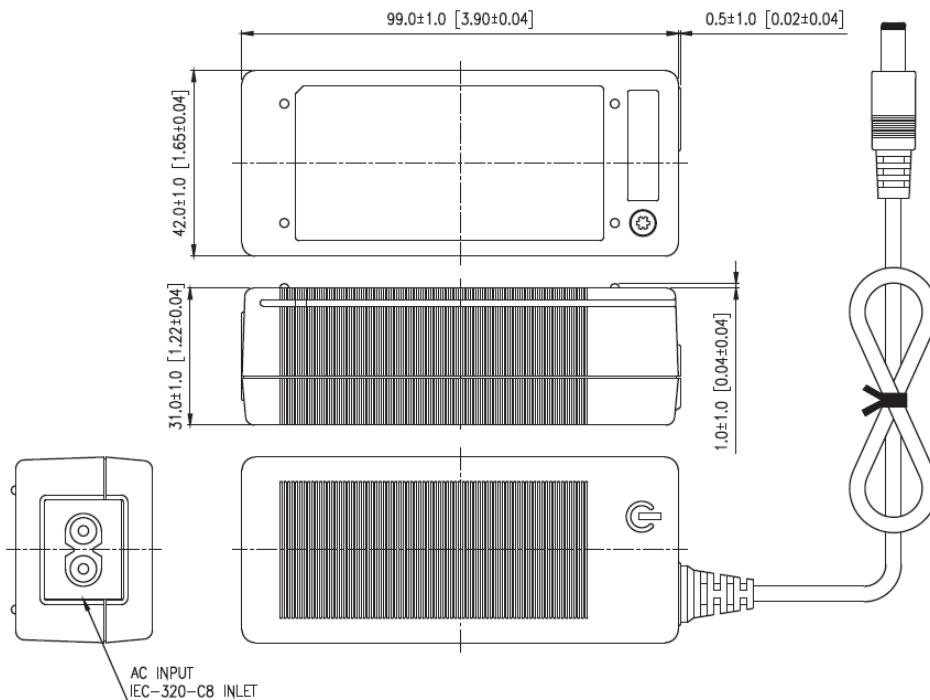
Type A



Note:

1. Dimensions are shown in mm.
2. Weight: 170gs approx.
3. Optional output connector:  
See page Appendix.

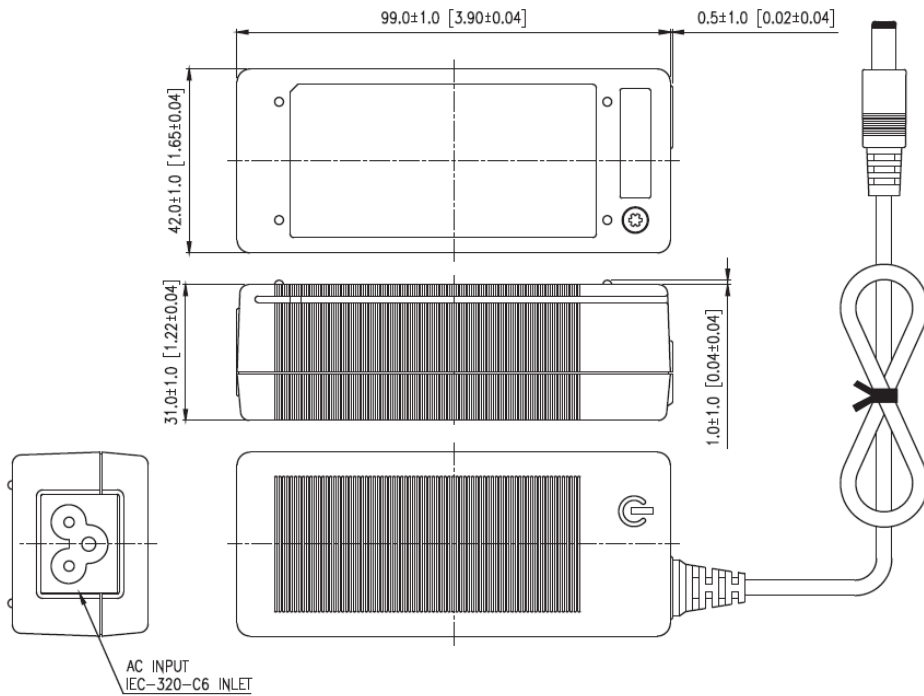
Type B



Note:

1. Dimensions are shown in mm.
2. Weight: 170gs approx.
3. Optional output connector:  
See page Appendix.

Type C



Note:

1. Dimensions are shown in mm.
2. Weight: 170gs approx.
3. Optional output connector: See page Appendix.

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.

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