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

Economy Version

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: 2nd Edition) and TUV/GS (EN 60950-1:2nd 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: 2nd edition), TUV/GS (EN 60950-1: 2nd 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(1)	Input Voltage Range	Output Voltage	Output Current	Ripple & Noise(6)	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%	15W	81.4%
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%	15W	81.4%
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.

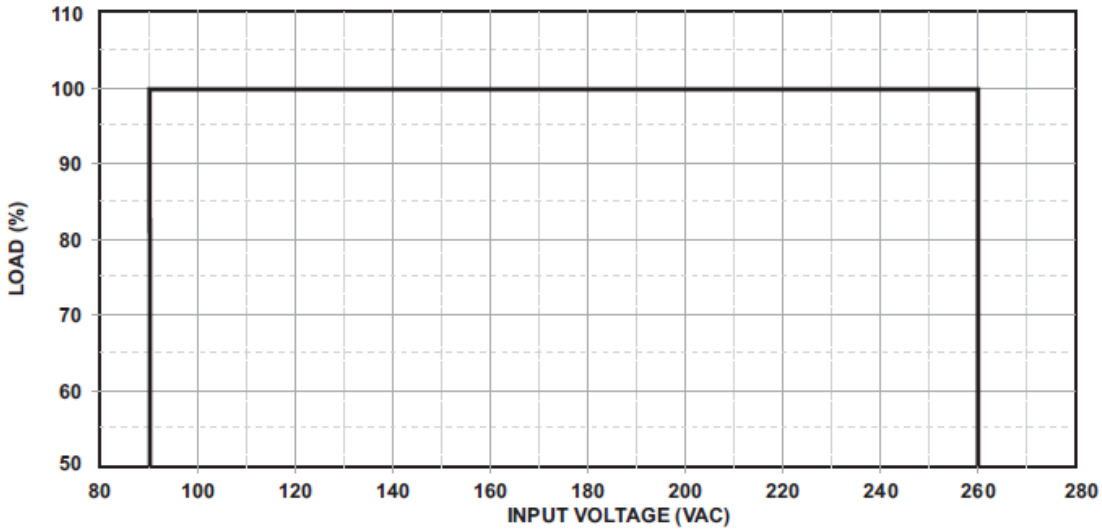
SPECIFICATION		TEST CONDITIONS		Min	Typ	Max	Unit
INPUT SPECIFICATIONS							
Input Voltage Range		Safety Approvals Input Voltage Range		100		240	VAC
		Operate Voltage Range		90		264	
Input Frequency				47		63	Hz
Input Current	Low Line	Io=Full Load, Vin=100VAC				0.5	A
	High Line	Io=Full Load, Vin=240VAC				0.3	
Inrush Current	Low Line	Io=Full Load, 25ºC, Cool Start, Vin=115VAC		40		50	A
	High Line	Io=Full Load, 25ºC, Cool Start, Vin=230VAC		81		87	
OUTPUT SPECIFICATIONS							
Output Voltage				See Table			
Line Regulation[4]		Io=Full Load, Vin=100~120VAC		0.5		1	%
Load Regulation[5]		Vin=230VAC, 10~90% Load Change at Condition		4		5	%
Output Power				See Table			
Output Current				See Table			
Ripple & Noise (20MHz BW)[6]		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[7]		Io=Full Load, Vin=100VAC		8			mS
Temperature Coefficient		Full Load, Vin=100~240VAC				±0.04	%/ºC
No Load Power Consumption		No Load, Vin=230VAC				0.1	W
PROTECTION							
Short Circuit Protection				Automatic Recovery			
Over Current Protection				Nil, but output protected to short circuit conditions			
ENVIRONMENTAL SPECIFICATIONS							
Operating Temperature		Derate linearly from 100% load at 40ºC to 50% load at 70ºC)		0		70	ºC
Storage Temperature		10~95% RH		-40		85	ºC
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
Surge Voltage		Line-Neutral				1	kV
		Line-PE & Neutral-PE				2	
Derating		Derate linearly from 100% load at 40ºC to 50% load at 70ºC					
MTBF		Operating Temperature at 25ºC, Calculated per MIL-HDBK-217F		100,000			Hours
GENERAL SPECIFICATIONS							
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	
PHYSICAL SPECIFICATIONS							
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)			
SAFETY							
Safety Approvals		UL/c-UL (UL 60950-1:2nd Edition) TUV/GS (EN 60950-1:2nd Edition)					
Protection Classes		DTEPU20A, DTEPU20C		Class I			
		DTEPU20B		Double Insulated, Class II			

NOTES

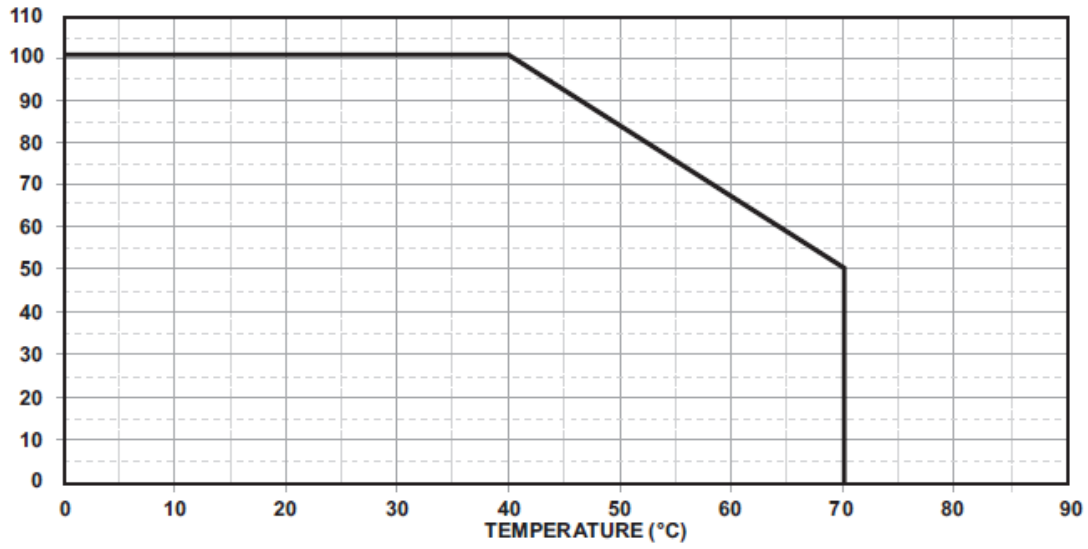
(1) DTEPU20B-102~107 are required to use AWG#18/4FT output cable.
DTEPU20B-108~111 are required to use AWG#20/4FT output cable.
The electrical characteristics will be changed by modified output cable.
(2) Output can provide up to peak load when the power supply starts up. Staying in more than rated load 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 ±10% of input voltage from nominal line at rated load.
(5) Load regulation is defined by changing ±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.

DERATING CURVES

Input Voltage Derating Curve

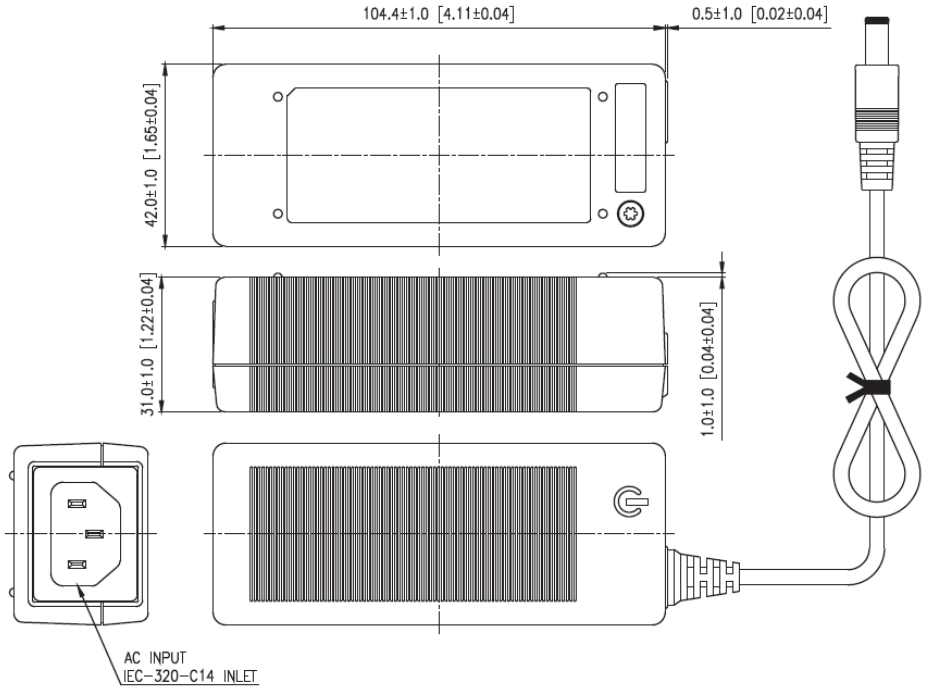


Temperature Derating Curve



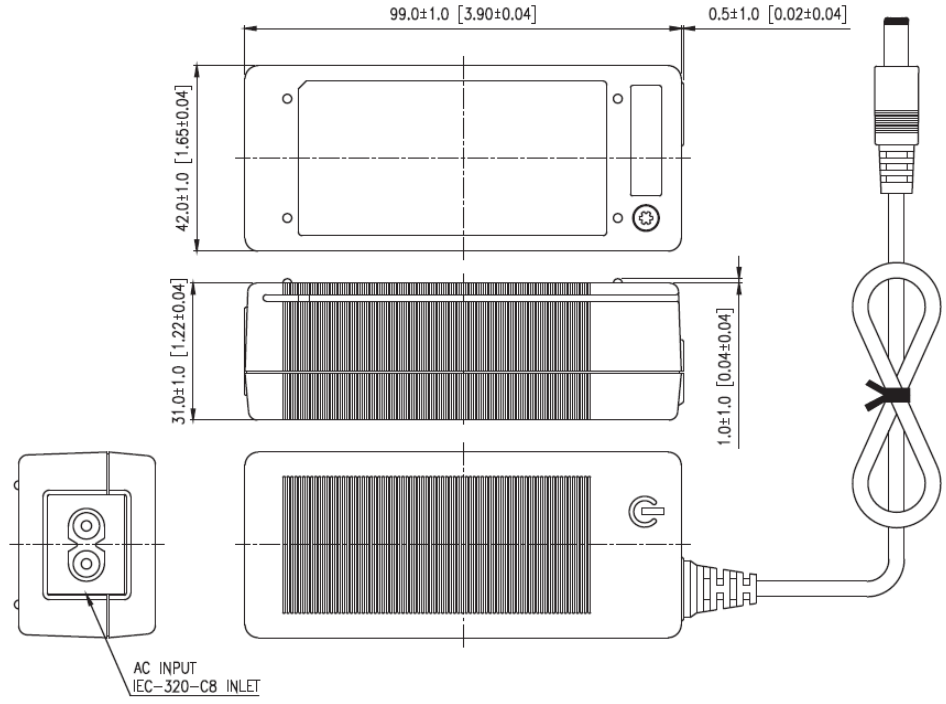
MECHANICAL DRAWINGS

Type A



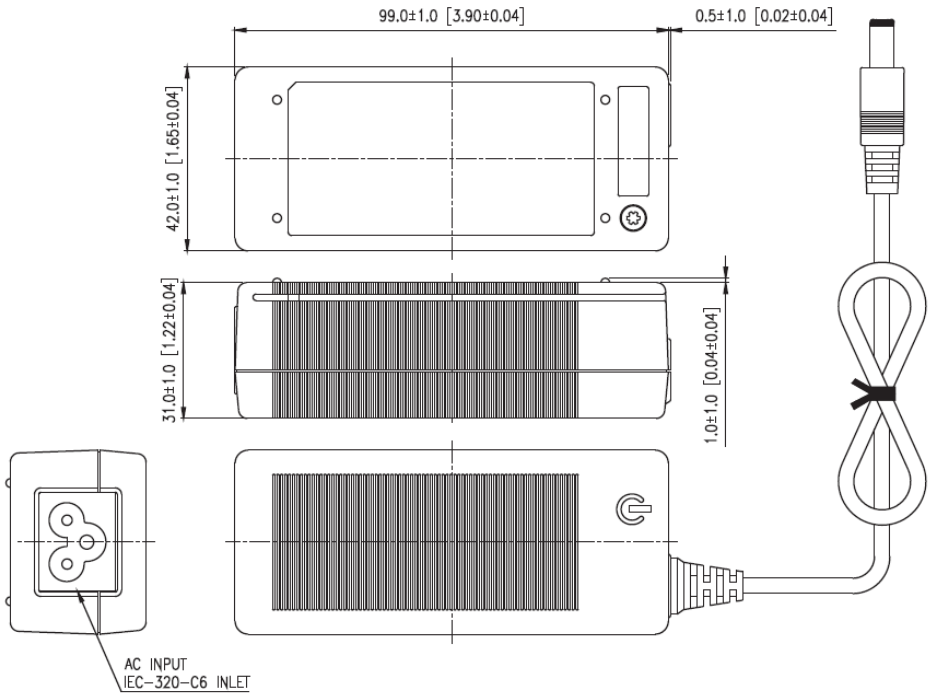
Note:
1. Dimensions are shown in mm.
2. Weight: 170gs approx.
3. Optional output connector: See page Appendix.

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 ISO9001-2008 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.

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