



**FEATURES**

- Output Voltages Ranging from 11~48VDC
- Wide Operating Input Voltage of 90~260VAC
- IEC-320-C14 Input Inlet
- Single Output
- Over Voltage, Over Load, and Short Circuit Protection
- Active Power Factor Correction
- Efficiency Level VI Compliant
- RoHS Compliant
- Class I
- High Efficiency of 88~89%

**APPLICATIONS**

- Printer
- Industrial PC
- Power Tools
- DC Moto
- AV Equipment
- LED Lighting

**DESCRIPTION**

The DTSPU100 series of AC DC desktop power supplies provides 100 watts of continuous output power. This series consists of single output models with an output voltage ranging from 11-48VDC and an input voltage range of 90~260VAC. All models are protected against over voltage, over load, and short circuit conditions, and have UL/c-UL (UL 60950-1: 2<sup>nd</sup> Edition) and TUV/GS (EN 60950-1:2<sup>nd</sup> Edition) safety approvals. This series is Class I and has Energy Efficiency Level VI and RoHS compliance. All units are 100% burn-in tested.

**MODEL SELECTION TABLE**

Model Number	Input Voltage Range	Output Voltage <sup>(1)</sup>	Output Current		Ripple & Noise <sup>(2)</sup>	No Load Power Consumption	Output Power	Total Regulation	Efficiency <sup>(3)</sup>
			Min Load	Max Load					
DTSPU100-105	90~260VAC	11~13VDC	9.09A	7.96A	100mVp-p	0.21W	100W	±5%	88%
DTSPU100-106		13~16VDC	7.69A	6.25A			100W	±4%	88%
DTSPU100-107		16~21VDC	6.25A	4.76A			100W	±4%	88%
DTSPU100-108		21~27VDC	4.76A	3.70A			100W	±4%	89%
DTSPU100-109		27~33VDC	3.70A	3.03A			100W	±3%	89%
DTSPU100-110		33~40VDC	3.03A	2.50A			100W	±3%	89%
DTSPU100-111		40~48VDC	2.50A	2.08A			100W	±3%	89%

**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 Approval Input Voltage Range	100		240	VAC
	Input Operate Voltage Range	90		260	
Input Frequency		47		63	Hz
Power Factor Correction	Io=Full Load, Vin=240VAC	0.95		1	
Input Current	Low Line Full Load, Vin=100VAC			1.2	A
	High Line Full Load, Vin=240VAC			0.5	
Inrush Current	Low Line Full Load, 25°C, Cool Start, Vin=100VAC			50	A
	High Line Full Load, 25°C, Cool Start, Vin=240VAC			100	
<b>OUTPUT SPECIFICATIONS</b>					
Output Voltage				See Table	
Line Regulation <sup>(4)</sup>	Full Load, Vin=100~120VAC			1	%
Load Regulation <sup>(5)</sup>	Vin=230VAC, 10~90% Load Change at Condition	3		5	%
Output Power				See Table	
Output Current				See Table	
Ripple & Noise (20MHz bandwidth) <sup>(2)</sup>				See Table	
Transient Response Time	Full Load, Vin=110VAC			4	mS
Start-Up Time <sup>(6)</sup>	Full Load, Vin=100~240VAC			2	S
Hold-Up Time <sup>(7)</sup>	Full Load, Vin=100VAC		16		mS
Temperature Coefficient	Full Load, Vin=100~240VAC			±0.04	%/°C
<b>PROTECTION</b>					
Short Circuit Protection				Automatic Recovery	
Over Load Protection	Recovers automatically after fault condition is removed	110		150	%
Over Voltage Protection		112		132	%
<b>ENVIRONMENTAL SPECIFICATIONS</b>					
Operating Case 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	% RH
Storage Humidity		0		95	% RH
Surge Voltage	All Conditions			2	kV
Electro Static Discharge	Air Discharge, IEC61000-4-2			8	kV
	Contact Discharge, IEC61000-4-2			6	kV
Vibration	10~500Hz, 10min./1 cycle, 60 min. each along X, Y, Z axes			5	G
Cooling				Free Air Convection	
Operating Altitude	All Conditions			3000	m
MTBF	Operating Temperature at 25°C, calculated per MIL-HDBK-217F	100,000			H
<b>GENERAL SPECIFICATIONS</b>					
Efficiency	Full Load, Vin=230VAC			See Table	
Dielectric Withstanding Voltage	Primary to Secondary			4242	VDC
	Primary to PE			2652	
Safety Ground Leakage Current	Vin=240VAC, 60Hz			0.75	mA
<b>PHYSICAL SPECIFICATIONS</b>					
Weight				Approx. 1.08~1.48lbs (490~670g)	
Dimensions (L x W x H)				5.75in x 2.99in x 1.69in (146mm x 76mm x 43mm)	
<b>SAFETY &amp; EMC CHARACTERISTICS</b>					
Safety Approvals <sup>(8)</sup>		UL/c-UL (UL 60950-1: 2 <sup>nd</sup> Edition) <sup>(9)</sup> TUV/GS (EN 60950-1: 2 <sup>nd</sup> Edition)			
Protection Class					Class I
Flammability Rating					UL94V-1
EMC Emission		Compliance to EN55022 (CISPR22), EN61000-3-2, 3			
					Class B

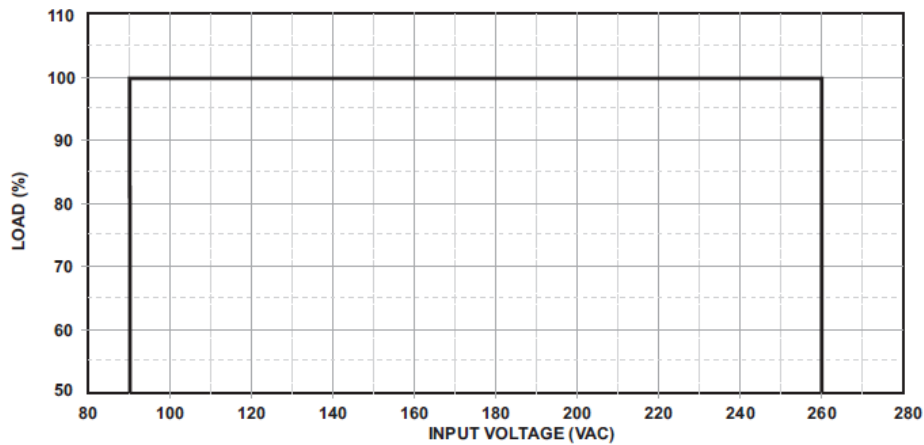
**NOTES**

- (1) Setting Voltage Range is the factory setting and cannot be adjusted.
- (2) 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.
- (3) Efficiency is measured at rated load and nominal line.
- (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) Output can provide up to peak load when the power supply starts up. Continuous staying in more than rated load is not allowed.
- (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) The DTSPU100-108 is available on KC mark (Korea Certification)
- (9) This product is Listed to applicable standards and requirements by UL.

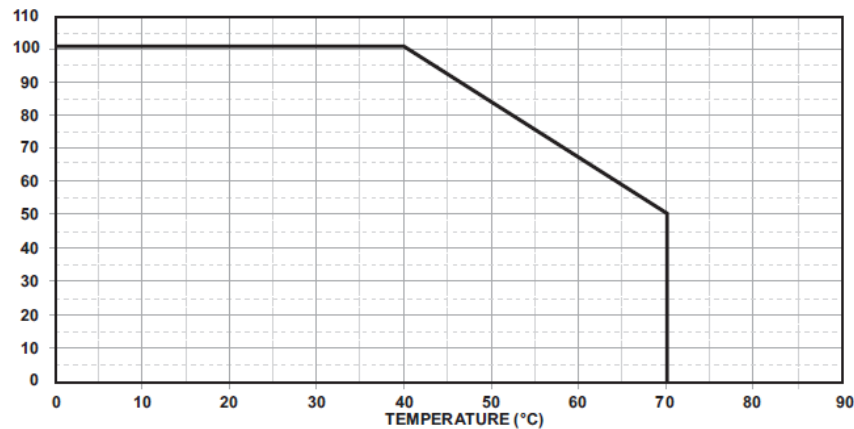
*\*Due to advances in technology, specifications subject to change without notice.*

**DERATING CURVES**

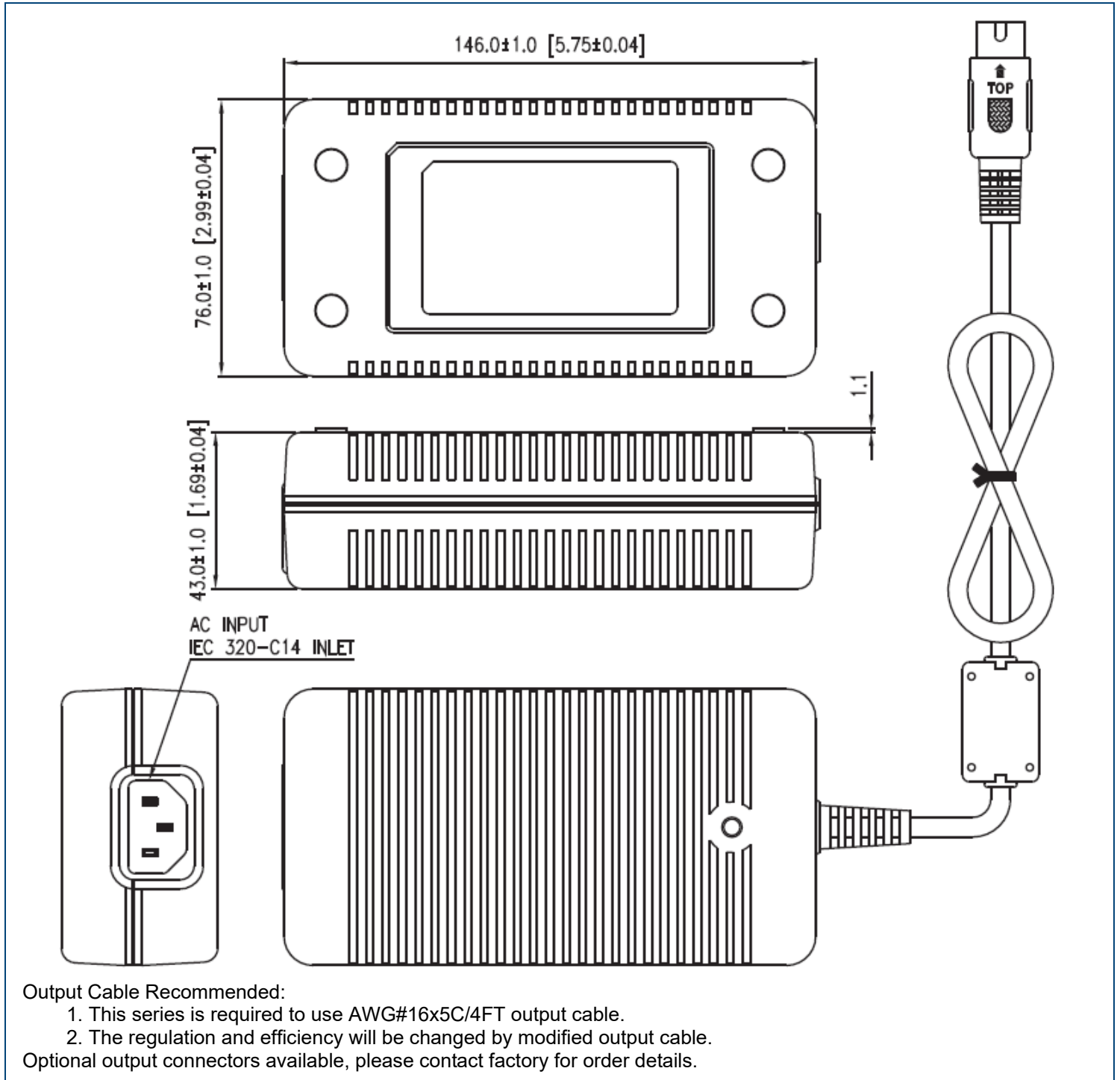
Input Voltage Derating Curve



Temperature Derating Curve



MECHANICAL DRAWINGS



Output Cable Recommended:

1. This series is required to use AWG#16x5C/4FT output cable.
2. The regulation and efficiency will be changed by modified output cable.

Optional output connectors available, please contact factory for order details.

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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.

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