Size: 5.75in x 2.99in x 1.69in (146mm x 76mm x 43mm)

FEATURES

- Wide Operating Voltage 90 to 264VAC
- 47 to 63Hz Input Frequency
- Optional Output Connectors Available
- Single, Dual, and Triple Outputs
- High Efficiency Up to 84.2%
- IEC-320-C14 Input Inlet
- Over Voltage, Over Load, and Short Circuit Protection
- Class I
- UL 60950-1:2nd Edition, IEC 60950-1:2005/A2:2013, EN60950-1:2005/A2:2013 Safety Approvals
- Dual and Triple Models Meet Level VI Efficiency

APPLICATIONS

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

DESCRIPTION

The DTSPU45 series of AC DC desktop power supplies offers up to 50 watts of output power in a 5.75in x 2.99in x 1.69in package. This series consists of single, dual, and triple output models with wide operating voltage of 90 to 264VAC. Each model in this series is protected against over voltage, over load, and input surge current conditions and has UL 60950-1:2nd Edition, IEC 60950-1:2005/A2:2013, EN60950-1:2005/A2:2013 safety approvals.

MODEL SELECTION TABLE

Single Output Models

Model Number	Input Voltage Range	Output Voltage	Output Current		Total Regulation	Ripple & Noise	Max. Output Power	Efficiency	No Load Power Consumption
			Min Load	Max Load					
DTSPU45-101	90~264VAC	3~5VDC	8.00A		±5%	50mVp-p	40W	75%	4W
DTSPU45-102		5~6VDC	6.66A	8.00A	±5%	50mVp-p	42W		
DTSPU45-103		6~8VDC	5.25A	7.00A	±5%	65mVp-p	42W		
DTSPU45-104		8~11VDC	4.00A	5.63A	±5%	80mVp-p	45W		
DTSPU45-105		11~13VDC	3.46A	4.00A	±5%	100mVp-p	45W		
DTSPU45-106		13~16VDC	2.81A	3.46A	±5%	100mVp-p	45W		
DTSPU45-107		16~21VDC	2.38A	3.12A	±5%	100mVp-p	50W		
DTSPU45-108		21~27VDC	1.85A	2.30A	±3%	100mVp-p	50W		
DTSPU45-109		27~33VDC	1.51A	1.85A	±3%	100mVp-p	50W		
DTSPU45-110		33~40VDC	1.25A	1.51A	±3%	100mVp-p	50W		
DTSPU45-111		40~50VDC	1.00A	1.25A	±3%	100mVp-p	50W		

MODEL SELECTION TABLE

Dual Output Models

Model Number	Input Voltage Range	Output Voltage	Output Current		Total Regulation	Ripple & Noise	Max. Output Power	Efficiency	No Load Power Consumption
			Min Load	Max Load					
DTSPU45-200	90~264VAC	+3.3VDC	0.5A	5A	±7%	50mVp-p	40W	83.8%	0.3W
		+12VDC	0.3A	2A	±5%	120mVp-p			
DTSPU45-201		+5VDC	0.5A	5A	±5%	50mVp-p	42W	84.2%	
		+12VDC	0.3A	2A	±5%	120mVp-p			
DTSPU45-202		+5VDC	0.8A	5A	±7%	50mVp-p	42W	84.2%	
		+15VDC	0.3A	1.5A	±5%	150mVp-p			
DTSPU45-203		+5VDC	0.5A	5A	±5%	50mVp-p	45W	84.2%	
		+24VDC	0.1A	1A	±5%	200mVp-p			
DTSPU45-204		+3.3VDC	0.5A	5A	±7%	50mVp-p	26.5W	80.7%	
		+5VDC	0.2A	2A	±5%	60mVp-p			
DTSPU45-209		+12VDC	0.3A	3A	±5%	120mVp-p	42W	84.2%	
		-12VDC	0.1A	1A	±5%	130mVp-p			
DTSPU45-210		+15VDC	0.2A	2A	±5%	150mVp-p	42W	84.2%	
		-15VDC	0.1A	1A	±5%	150mVp-p			
DTSPU45-215		+5VDC	0.5A	5A	±5%	50mVp-p	42W	84.2%	
		-24VDC	0.1A	1A	±5%	200mVp-p			
DTSPU45-216		+5.1VDC	0A	1A	±5%	50mVp-p	23.82W	79.9%	
		+7.2VDC	0.2A	2.6A	±5%	72mVp-p			

MODEL SELECTION TABLE

Triple Output Models

Model Number	Input Voltage Range	Output Voltage	Output Current		Total Regulation	Ripple & Noise	Max. Output Power	Efficiency	No Load Power Consumption
			Min Load	Max Load					
DTSPU45-300	90~264VAC	+3.3VDC	1.0A	5A	±7%	50mVp-p	42W	84.2%	0.3W
		+12VDC	0.3A	2A	±5%	120mVp-p			
		-12VDC	0.1A	0.8A	±5%	120mVp-p			
DTSPU45-301		+5VDC	0.5A	5A	±5%	50mVp-p	42W	84.2%	
		+12VDC	0.2A	2A	±5%	100mVp-p			
		-5VDC	0A	0.8A	±5%	50mVp-p			
DTSPU45-302		+5VDC	0.5A	5A	±5%	50mVp-p	42W	84.2%	
		+12VDC	0.2A	2A	±5%	120mVp-p			
		-12VDC	0A	0.8A	±5%	120mVp-p			
DTSPU45-303		+5V	0.5A	5A	±5%	50mVp-p	42W	84.2%	
		+15V	0.4A	2A	±6%	150mVp-p			
		-15V	0A	0.8A	±5%	150mVp-p			
DTSPU45-304		+5V	0.5A	5A	±5%	50mVp-p	42W	84.2%	
		+24V	0.2A	1A	±5%	200mVp-p			
		-24V	0A	0.5A	±5%	200mVp-p			
DTSPU45-305		+5V	0.5A	5A	±5%	50mVp-p	42W	84.2%	
		+24V	0.1A	1A	±5%	200mVp-p			
		-12V	0A	0.8A	±5%	120mVp-p			
DTSPU45-306		+3.3V	0.5A	5A	±7%	50mVp-p	42W	84.2%	
		+12V	0.4A	2A	±5%	120mVp-p			
		-5V	0A	0.8A	±5%	50mVp-p			

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 Approval Input Voltage Range		100		240	VAC
	Operate Voltage Range		90		264	
Input Frequency			47		63	Hz
Input Current	Low Line	Full Load, 100VAC			1.35	A
	High Line	Full Load, 240VAC			0.80	
Inrush Current	Low Line	Full Load, Cool Start @25ºC 100VAC			20	A
	High Line	Full Load, Cool Start @25ºC, 240VAC			40	
OUTPUT SPECIFICATIONS						
Output Voltage			See Table			
Line Regulation[3]	Full Load, Vin=100~120VAC		0.5		1	%
Load Regulation[4]	Vin=230VAC, 10~90% Load Change at Condition		3		7	%
Output Power			See Table			
Output Current			See Table			
Ripple & Noise[5]			See Table			
Transient Response Time	Full Load, Vin=110VAC				4	mS
Start-Up Time	Full Load, 100~240VAC				3	S
Hold-Up Time[6]	Single Output			16		mS
	Dual & Triple Output			12		
Temperature Coefficient	Full Load, Vin=100~240VAC		-0.04		+0.04	ºC
PROTECTION						
Short Circuit Protection			Automatic Recovery			
Over Load Protection			110		150	%
Over Voltage Protection			112		132	%
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	%
Vibration	10~500Hz, 10min./1cycle, 60min. each along X, Y, Z axes				5	G
Operating Altitude	All Conditions				5000	M
Cooling			Free Air Convection			
MTBF	Operating temperature at 25ºC, calculated per MIL-HDBK-217F		100,000			hours

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
GENERAL SPECIFICATIONS					
Efficiency	Full Load, Vin=230VAC	75		84.2	%
Safety Ground Leakage Current	240VAC/60Hz			0.75	mA
Dielectric Withstanding Voltage	Primary to Secondary			4242	VDC
	Primary to PE			2677	
Isolation Resistance	Test Voltage=500VDC	50			MΩ
No Load Power Consumption	No load, 230VAC	See Table			
Surge Voltage	Line-Neutral			1	kV
	Line-PE & Neutral-PE			2	
PHYSICAL SPECIFICATIONS					
Weight		18.87~19.75oz (535~560g)			
Dimensions (L x W x H)		5.75in x 2.99in x 1.69in (146mm x 76mm x 43mm)			
Flammability Rating		UL94V-1			
SAFETY & EMC CHARACTERISTICS					
Safety Approvals(7)	UL60950-1L:2nd Edition IEC 60950-1:2005/A2:2013 EN60950-1:2006/A2:2013				
EMC Emission					B Class
Protection Classes					Class I

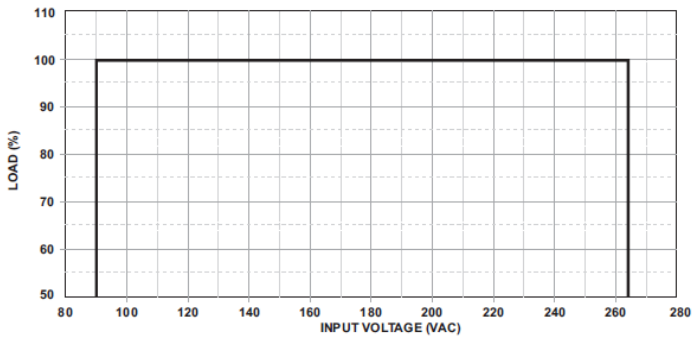
NOTES

(1) Output can provide up to peak load when the power supply starts up. Staying in more than rated load continually is not allowed.
(2) At factory, each output is checked to be within voltage accuracy in 60% rated load condition.
(3) Line regulation is defined by changing ±10% of input voltage from nominal line at rated load.
(4) Load regulation is defined by changing ±40% of measured output load from 60% rated load.
(5) Ripple and Noise measured by using 20MHz bandwidth limited oscilloscope and terminated each output with a 0.47uF capacitor at rated load and nominal line.
(6) 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.
(7) DTSPU45-101~111 are available on CCC mark

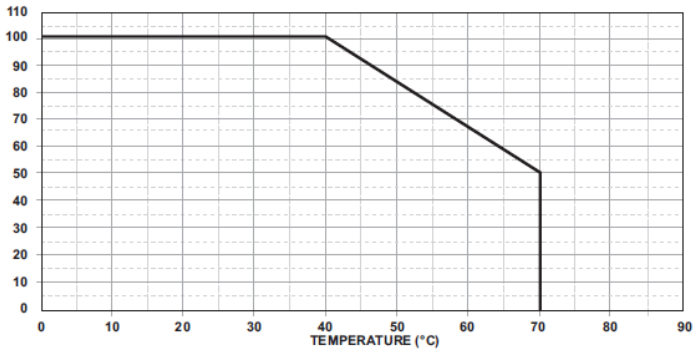
Due to advances in technology, specifications are subject to change without notice.

DERATING CURVES

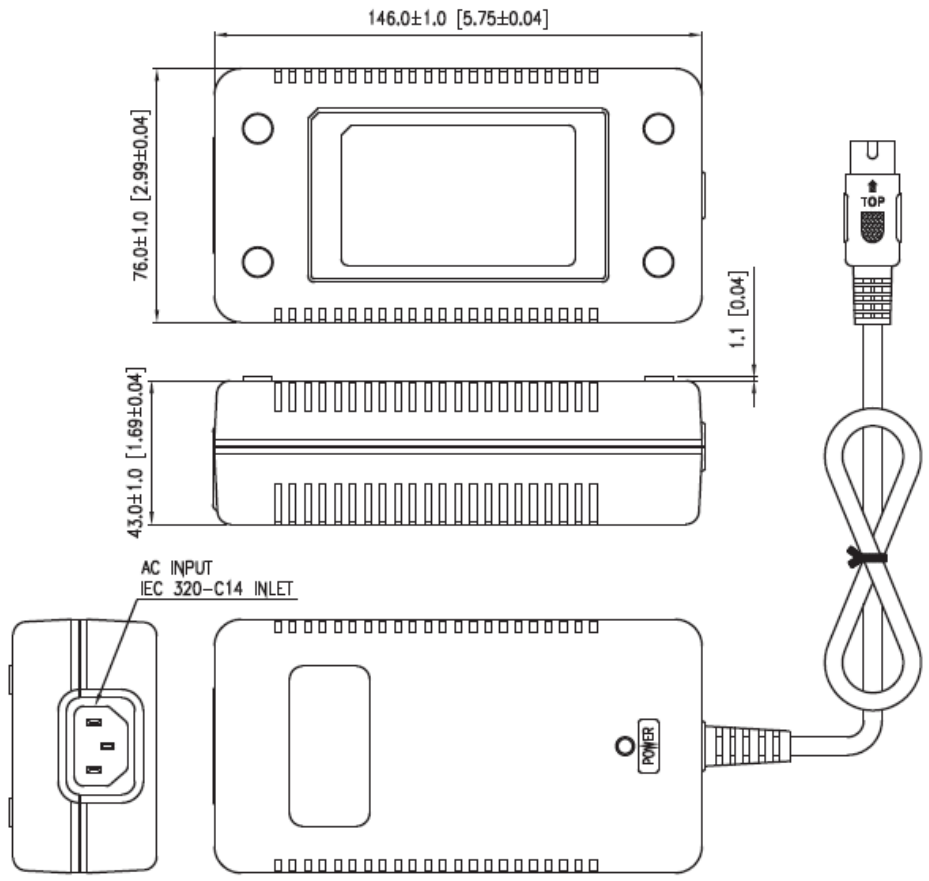
Input Voltage Derating Curve



Temperature Derating Curve



MECHANICAL DRAWINGS



Notes:
Dimensions in mm (in)
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.

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