

# **FEATURES**

- 100% Burn-in
- Class I Insulation
- IEC-320-C14 Input Inlet
- Active Power Factor Correction
- Optional Output Connectors Available
- Output Voltage Protection (Crowbar Design)
- CEC Level V and Energy Star 2.0 Compliant
- -20°C ~ 70°C Operating Temperature Range
- Wide Input Voltage Range: 90 to 260VAC, 47~63Hz
- Input Surge Current, Over Voltage, and Over Load Protection





# **DESCRIPTION**

The DTIPU80 series of AC/DC desktop switching mode power supplies provides 80 watts of continuous output power. This series consists of single output supplies with a universal input range of 90~260VAC and an IEC-320-C14 AC input connector. Some features include active power factor correction, -20°C~+70°C operating temperature range, and input surge current, over voltage, and over load protection. All supplies are CEC Level V, Energy Star 2.0, and UL 94V-1 compliant. This series meets FCC-Part-15 class B and CISPR-22 class B emission limits and are designed to comply with UL/c-UL (UL 60950-1), TUV/GS (EN 60950-1), and new CE requirements. All models are 100% burn-in tested.

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise-neted Wereserve the right to change specifications based on technological advances.    SPECIFICATION   TEST CONDITIONS   Min   Nom   Max   Unit	SPECIFICATIONS: DTIPU80 Series											
NPUT (V <sub>In</sub> )   Operating Voltage Range   90   260   VAC Input Frequency   10 = Full Load, Vin = 115VAC   47   63   Hz   Input Current (Low Line)   10 = Full Load, Vin = 230VAC   1.07   A   Input Current (High Line)   10 = Full Load, Vin = 230VAC   42   45   A   Inrush Current (Ligh Line)   10 = Full Load, 25°C, Cool Start, Vin = 115VAC   42   45   A   Inrush Current (High Line)   10 = Full Load, 25°C, Cool Start, Vin = 230VAC   88   92   A   Safety Ground Leakage Current   10 = Full Load, Vin = 240VAC   0.5   0.75   mA   Start-Up Time   10 = Full Load, Vin = 100VAC   0.3   1   2   s    OUTPUT (V <sub>s</sub> )												
Operating Voltage Range   90   260   VAC	SPECIFICATION	TEST CONDITIONS	Min	Nom	Max	Unit						
Input Current (Low Line)   Io = Full Load, Vin = 115VAC   1.07   A	INPUT (V <sub>in</sub> )											
Input Current (Low Line)   Io = Full Load, Vin = 115VAC   Io = Full Load, Vin = 230VAC   Io = Full Load, Z5°C, Cool Start, Vin = 115VAC   88   92   A   Inrush Current (High Line)   Io = Full Load, Z5°C, Cool Start, Vin = 230VAC   88   92   A   Inrush Current (High Line)   Io = Full Load, Vin = 240VAC   Io = Full Load, Vin = 100VAC   Io = Full Load, Vin = Io = Io = Full Load, Vin = Io = Io = Io = Full Load, Vin = Io = I	Operating Voltage Range		90		260	VAC						
Injust Current (High Line)   Io = Full Load, Vin = 230VAC   Inrush Current (Low Line)   Io = Full Load, 25°C, Cool Start, Vin = 115VAC   42   45   A   Inrush Current (High Line)   Io = Full Load, 25°C, Cool Start, Vin = 230VAC   88   92   A   Safety Ground Leakage Current   Io = Full Load, Vin = 240VAC   0.5   0.75   mA   Start-Up Time   Io = Full Load, Vin = 100VAC   0.3   1   2   s    OUTPUT (V₀)   Output Voltage Range   See Rating Chart   Load Regulation   Vin = 230VAC   3   7   %   Line Regulation   Io = Full Load   0.5   1   %   Output Power   Vin = 90 to 260VAC   0   80   W   Output Current Range   See Rating Chart   Ripple & Noise (peak to peak)   Full Load, Vin = 90VAC   5   1   %   Hold-Up Time   Io = Full Load, Vin = 100VAC   16   ms   PROTECTION   Over Voltage Protection   112   132   %   Over Current Protection   5   Full Load, Vin = 230VAC   110   150   %   ESENERAL   Efficiency   Primary to Secondary   Dielectric Withstanding Voltage For Primary to Ground   Primary to Ground   For Primary to Ground   Primary to Ground   Primary to Ground   For Primary to Ground   Primary t			47		63	Hz						
Inrush Current (Low Line)   Io = Full Load, 25°C, Cool Start, Vin = 115VAC   88   92   A		Io = Full Load, Vin = 115VAC			1.07	Α						
Inrush Current (High Line)   Io = Full Load, 25°C, Cool Start, Vin = 230VAC   Safety Ground Leakage Current   Io = Full Load, Vin = 240VAC   0.5 0.75 mA					0.5	Α						
Safety Ground Leakage Current   Io = Full Load, Vin = 240VAC   0.5   0.75   mA	Inrush Current (Low Line)			42	45	Α						
Start-Up Time	Inrush Current (High Line)	Io = Full Load, 25°C, Cool Start, Vin = 230VAC		88	92	Α						
OUTPUT (V <sub>s</sub> )         Output Voltage Range         See Rating Chart           Load Regulation         Vin = 230VAC         3 7 %           Line Regulation         Io = Full Load         0.5 1 %           Output Power         Vin = 90 to 260VAC         0 80 W           Output Current Range         See Rating Chart           Ripple & Noise (peak to peak)         Full Load, Vin = 90VAC         0.5 1 %           Transient Response Time         Io = Full Load to Half Load, Vin = 100VAC         4 ms           Hold-Up Time         Io = Full Load, Vin = 100VAC         16 ms           PROTECTION         112 ms         132 ms           Over Voltage Protection         112 ms         132 ms           Over Current Protection         10 = Full Load, Vin = 230VAC         87 ms           Efficiency         Io = Full Load, Vin = 230VAC         87 ms           Dielectric Withstanding Voltage For Primary to Secondary         Primary to Ground         2121 ms           Dielectric Withstanding Voltage For Primary to Ground	Safety Ground Leakage Current			0.5	0.75	mA						
Output Voltage Range	Start-Up Time	Io = Full Load, Vin = 100VAC	0.3	1	2	S						
Line Regulation   Vin = 230VAC   10 = Full Load   0.5   1   %	OUTPUT (V <sub>o</sub> )											
Line Regulation   Io = Full Load   Vin = 90 to 260VAC   O				See Rat	ing Chart							
Output Power         Vin = 90 to 260VAC         80         W           Output Current Range         See Rating Chart           Ripple & Noise (peak to peak)         Full Load, Vin = 90VAC         0.5         1         %           Transient Response Time         Io = Full Load to Half Load, Vin = 100VAC         4         ms           Hold-Up Time         Io = Full Load, Vin = 100VAC         16         ms           PROTECTION           Over Voltage Protection         112         132         %           Over Current Protection         110         150         %           GENERAL           Efficiency         Io = Full Load, Vin = 230VAC         87         %           Dielectric Withstanding Voltage For Primary to Secondary         Primary to Secondary         VDC           Dielectric Withstanding Voltage For Primary to Ground         Primary to Ground         2121         VDC           Isolation Resistance         Test Voltage = 500VDC         50         MΩ           Isolation Resistance         Test Voltage = 500VDC         0.95         0.97         1           ENVIRONMENTAL         Operating Temperature         Power Factor Correction         10 = Full Load, Vin = 90~260VAC         -20         +70         °C           Stor					7							
Output Current Range   Full Load, Vin = 90VAC   0.5   1   %	Line Regulation			0.5	1	%						
Ripple & Noise (peak to peak)   Full Load, Vin = 90VAC   0.5   1   %		Vin = 90 to 260VAC	0		80	W						
Transient Response Time   Io = Full Load to Half Load, Vin = 100VAC   16   ms												
Hold-Up Time	Ripple & Noise (peak to peak)	Full Load, Vin = 90VAC		0.5	1	%						
PROTECTION           Over Voltage Protection         112         132         %           Over Current Protection         110         150         %           GENERAL           Efficiency         Io = Full Load, Vin = 230VAC         87         %           Dielectric Withstanding Voltage For Primary to Secondary         Primary to Secondary         4242         VDC           Dielectric Withstanding Voltage For Primary to Ground         Primary to Ground         2121         VDC           Isolation Resistance         Test Voltage = 500VDC         50         MΩ           Power Factor Correction         Io = Full Load, Vin = 90~260VAC         0.95         0.97         1           ENVIRONMENTAL         Operating Temperature         Derates linearly from 100% Load at 40°C to 50% load at 70°C         -20         +70         °C           Storage Temperature         -40         +85         °C           Relative Humidity         5         95         %           Temperature Coefficient         All Outputs         -0.04         +0.04         +0.04         +0.04         */°C           MTBF         Operating Temperature at 25°C, Calculated per MIL-HDBK-217F         100,000 hours					4	ms						
Over Voltage Protection         112         132         %           Over Current Protection         110         150         %           GENERAL           Efficiency         Io = Full Load, Vin = 230VAC         87         %           Dielectric Withstanding Voltage For Primary to Secondary         Primary to Secondary         VDC           Dielectric Withstanding Voltage For Primary to Ground         Primary to Ground         2121         VDC           Isolation Resistance         Test Voltage = 500VDC         50         MΩ           Power Factor Correction         Io = Full Load, Vin = 90~260VAC         0.95         0.97         1           ENVIRONMENTAL         Operating Temperature         Derates linearly from 100% Load at 40°C to 50% load at 70°C         -20         +70         °C           Storage Temperature         All Outputs         5         95         %           Temperature Coefficient         All Outputs         -0.04         +0.04         +%°C           MTBF         Operating Temperature at 25°C, Calculated per MIL-HDBK-217F         100,000 hours		Io = Full Load, Vin = 100VAC	16			ms						
Over Current Protection         110         150         %           GENERAL           Efficiency         Io = Full Load, Vin = 230VAC         87         %           Dielectric Withstanding Voltage For Primary to Secondary         Primary to Secondary         4242         VDC           Dielectric Withstanding Voltage For Primary to Ground         Primary to Ground         2121         VDC           Isolation Resistance         Test Voltage = 500VDC         50         MΩ           Power Factor Correction         Io = Full Load, Vin = 90~260VAC         0.95         0.97         1           ENVIRONMENTAL         Operating Temperature         Derates linearly from 100% Load at 40°C to 50% load at 70°C         -20         +70         °C           Storage Temperature         -40         +85         °C           Relative Humidity         5         95         %           Temperature Coefficient         All Outputs         -0.04         +0.04         %/°C           MTBF         Operating Temperature at 25°C, Calculated per MIL-HDBK-217F         100,000 hours												
GENERALEfficiencyIo = Full Load, Vin = 230VAC87%Dielectric Withstanding Voltage For Primary to SecondaryPrimary to Secondary4242VDCDielectric Withstanding Voltage For Primary to GroundPrimary to Ground2121VDCIsolation ResistanceTest Voltage = 500VDC50MΩPower Factor CorrectionIo = Full Load, Vin = 90~260VAC0.950.971ENVIRONMENTALOperating TemperatureDerates linearly from 100% Load at 40°C to 50% load at 70°C-20+70°CStorage Temperature-40+85°CRelative Humidity595%Temperature CoefficientAll Outputs-0.04+0.04%/°CMTBFOperating Temperature at 25°C, Calculated per MIL-HDBK-217F100,000 hours	Over Voltage Protection		112		132							
EfficiencyIo = Full Load, Vin = 230VAC87%Dielectric Withstanding Voltage For Primary to SecondaryPrimary to Secondary4242VDCDielectric Withstanding Voltage For Primary to GroundPrimary to Ground2121VDCIsolation ResistanceTest Voltage = 500VDC50MΩPower Factor CorrectionIo = Full Load, Vin = 90~260VAC0.950.971ENVIRONMENTALOperating TemperatureDerates linearly from 100% Load at 40°C to 50% load at 70°C-20+70°CStorage Temperature-40+85°CRelative Humidity595%Temperature CoefficientAll Outputs-0.04+0.04%/°CMTBFOperating Temperature at 25°C, Calculated per MIL-HDBK-217F100,000 hours			110		150	%						
Dielectric Withstanding Voltage For Primary to SecondaryPrimary to Secondary4242VDCDielectric Withstanding Voltage For Primary to GroundPrimary to Ground2121VDCIsolation ResistanceTest Voltage = 500VDC50MΩPower Factor CorrectionIo = Full Load, Vin = 90~260VAC0.950.971ENVIRONMENTALOperating TemperatureDerates linearly from 100% Load at 40°C to 50% load at 70°C-20+70°CStorage Temperature-40+85°CRelative Humidity595%Temperature CoefficientAll Outputs-0.04+0.04%/°CMTBFOperating Temperature at 25°C, Calculated per MIL-HDBK-217F100,000 hours												
For Primary to Secondary   Dielectric Withstanding Voltage   Primary to Ground   2121   VDC   Secondary   VDC   Secondary   Primary to Ground   Secondary   Primary to Ground   2121   VDC   Secondary   VDC   Secondary   VDC   Secondary   VDC   Secondary   Secondary   VDC		Io = Full Load, Vin = 230VAC		87		%						
For Primary to Ground Script	For Primary to Secondary	Primary to Secondary	4242			VDC						
Power Factor Correction         Io = Full Load, Vin = 90~260VAC         0.95         0.97         1           ENVIRONMENTAL           Operating Temperature         Derates linearly from 100% Load at 40°C to 50% load at 70°C         -20         +70         °C           Storage Temperature         -40         +85         °C           Relative Humidity         5         95         %           Temperature Coefficient         All Outputs         -0.04         +0.04         %/°C           MTBF         Operating Temperature at 25°C, Calculated per MIL-HDBK-217F         100,000 hours	For Primary to Ground	Primary to Ground	2121			VDC						
ENVIRONMENTAL           Operating Temperature         Derates linearly from 100% Load at 40°C to 50% load at 70°C         -20         +70         °C           Storage Temperature         -40         +85         °C           Relative Humidity         5         95         %           Temperature Coefficient         All Outputs         -0.04         +0.04         %/°C           MTBF         Operating Temperature at 25°C, Calculated per MIL-HDBK-217F         100,000 hours	Isolation Resistance	Test Voltage = 500VDC	50			ΜΩ						
Operating Temperature     Derates linearly from 100% Load at 40°C to 50% load at 70°C     -20     +70     °C       Storage Temperature     -40     +85     °C       Relative Humidity     5     95     %       Temperature Coefficient     All Outputs     -0.04     +0.04     %/°C       MTBF     Operating Temperature at 25°C, Calculated per MIL-HDBK-217F     100,000 hours	Power Factor Correction	Io = Full Load, Vin = 90~260VAC	0.95	0.97	1							
Storage Temperature         -40         +85         °C           Relative Humidity         5         95         %           Temperature Coefficient         All Outputs         -0.04         +0.04         %/°C           MTBF         Operating Temperature at 25°C, Calculated per MIL-HDBK-217F         100,000 hours	_											
Relative Humidity 5 95 % Temperature Coefficient All Outputs -0.04 +0.04 %/°C MTBF Operating Temperature at 25°C, Calculated per MIL-HDBK-217F 100,000 hours	Operating Temperature	Derates linearly from 100% Load at 40°C to 50% load at 70°C	-20									
Temperature Coefficient All Outputs -0.04 +0.04 %/°C MTBF Operating Temperature at 25°C, Calculated per MIL-HDBK-217F 100,000 hours												
MTBF Operating Temperature at 25°C, Calculated per MIL-HDBK-217F 100,000 hours												
MTBF Operating Temperature at 25°C, Calculated per MIL-HDBK-217F 100,000 hours		All Outputs	-0.04			%/°C						
		Operating Temperature at 25°C, Calculated per MIL-HDBK-217F		100,000 hours								
	PHYSICAL											
Weight Approximately 600 ~ 700 grams	Weight		Approximately 600 ~ 700 grams									
Dimensions (L x W x H) 5.75 x 2.99 x 1.69 inches 146.0 x 76.0 x 43.0 mm	Dimensions (L x W x H)		5.75 x 2.99 x 1.69 inches 146.0 x 76.0 x 43.0 mm									
SAFETY												
EMI Requirements for CISPR-22 Vin = 220VAC B Class		Vin = 220VAC	В			Class						
EMI Requirements for FCC PART-15 Vin = 110VAC B Class		Vin = 110VAC	В			Class						

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MODEL SELECTION TABLE									
Model Number	Input Voltage Range	Preset Voltage	Output Voltage Range	Output Current	Total Regulation	Output Power			
*DTIPU80-105	90 ~ 260 VAC	13 VDC	11 ~ 13 VDC	7.27 ~ 6.15 A	5%	W08			
*DTIPU80-106	90 ~ 260 VAC	16 VDC	13 ~ 16 VDC	6.15 ~ 5.00 A	5%	80W			
*DTIPU80-107	90 ~ 260 VAC	21 VDC	16 ~ 21 VDC	5.00 ~ 3.80 A	5%	W08			
*DTIPU80-108	90 ~ 260 VAC	27 VDC	21 ~ 27 VDC	3.80 ~ 2.96 A	5%	80W			
*DTIPU80-109	90 ~ 260 VAC	33 VDC	27 ~ 33 VDC	2.96 ~ 2.42 A	5%	W08			
DTIPU80-110	90 ~ 260 VAC	40 VDC	33 ~ 40 VDC	2.42 ~ 2.00 A	5%	W08			
DTIPU80-111	90 ~ 260 VAC	48 VDC	40 ~ 48 VDC	2.00 ~ 1.66 A	5%	W08			

## **NOTES**

- 1. The output voltage is specified as a range (Ex: 40 ~ 48VDC); the preset voltage will be set as standard models if nothing different is requested. Please contact factory for ordering details.
- 2. The "\*" symbol means PSE approval.
- 3. Models with output voltages under 30VDC have been approved by TUV/PSE.
- 4. Optional output connectors are available. Please call factory for ordering details.
- 5. This product is Listed to applicable standards and requirements by UL. \*Due to advances in technology, specifications subject to change without notice.

### **MECHANICAL DRAWING**





# **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.

#### Contact Wall Industries for further information:

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