



Wall Industries, Inc.

Rev A

DTSPU40 Series

40 Watt

Single Output

AC/DC Desktop Power Supply

## FEATURES

- Splash Proof
- 2 Year Warranty
- Class I Insulation
- IEC-320-C14 Input Inlet
- Optional Output Connector
- CEC and Energy Star Compliant
- Approved as Limited Power Source (LPS)
- Wide Input Voltage 90 to 264VAC, 47~63Hz
- Output Voltage Protection (Crowbar Design)
- Output Voltages Available from 5VDC thru 50VDC



## SPECIFICATIONS: DTSPU40 Series

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                | Nom | Max   | Unit   |
|----------------------------------------------------------|-------------------------------------------------------------|--------------------|-----|-------|--------|
| INPUT (V <sub>in</sub> )                                 |                                                             |                    |     |       |        |
| Operating Voltage Range                                  |                                                             | 90                 |     | 264   | VAC    |
| Input Frequency                                          |                                                             | 47                 |     | 63    | Hz     |
| Input Current (Low Line)                                 | Io = Full Load, Vin = 115VAC                                |                    |     | 1     | A      |
| Input Current (High Line)                                | Io = Full Load, Vin = 230VAC                                |                    |     | 0.5   | A      |
| Inrush Current (Low Line)                                | Io = Full Load, 25°C, Cool Start, Vin = 115VAC              |                    | 12  | 15    | A      |
| Inrush Current (High Line)                               | Io = Full Load, 25°C, Cool Start, Vin = 230VAC              |                    | 26  | 30    | 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                |     | 0.5   | s      |
| OUTPUT (V <sub>o</sub> )                                 |                                                             |                    |     |       |        |
| Output Voltage Range                                     |                                                             | See Rating Chart   |     |       | VDC    |
| Load Regulation                                          | Vin = 230VAC                                                |                    | 3   | 7     | %      |
| Line Regulation                                          | Io = Full Load                                              |                    | 0.5 | 1     | %      |
| Output Power                                             | Vin = 90 to 264VAC                                          | 0                  |     | 40    | W      |
| Output Current Range                                     |                                                             | See Rating Chart   |     |       | A      |
| Ripple & Noise (peak to peak)                            | Full Load, Vin = 90VAC                                      |                    | 0.5 | 1     | %      |
| Transient Response                                       | Io = Full Load to Half Load, Vin = 100VAC                   |                    |     | 4     | ms     |
| Hold-Up Time                                             | Io = Full Load, Vin = 110VAC                                | 16                 |     |       | ms     |
| PROTECTION                                               |                                                             |                    |     |       |        |
| Over Voltage Protection                                  |                                                             | 112                |     | 132   | %      |
| Over Current Protection                                  |                                                             | 110                |     | 150   | %      |
| GENERAL                                                  |                                                             |                    |     |       |        |
| Efficiency                                               | Io = Full Load, Vin = 230VAC                                | 78                 | 83  | 90    | %      |
| 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 Consumption (No Load)                              | No load, Vin = 240VAC                                       |                    | 0.3 | 0.5   | W      |
| ENVIRONMENTAL                                            |                                                             |                    |     |       |        |
| Operating Temperature                                    | Derate linearly from 100% Load at 40°C to 50% load at 70°C  | 0                  |     | +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  |
| PHYSICAL                                                 |                                                             |                    |     |       |        |
| Weight                                                   |                                                             | Approximately 275  |     |       | grams  |
| Dimensions                                               |                                                             | 4.65 x 2.05 x 1.36 |     |       | inches |
| Warranty                                                 |                                                             | 2                  |     |       | years  |
| SAFETY                                                   |                                                             |                    |     |       |        |
| EMI Requirements for CISPR-22                            | Vin = 220VAC                                                | B                  |     |       | Class  |
| EMI Requirements for FCC PART-15                         | Vin = 110VAC                                                | B                  |     |       | Class  |



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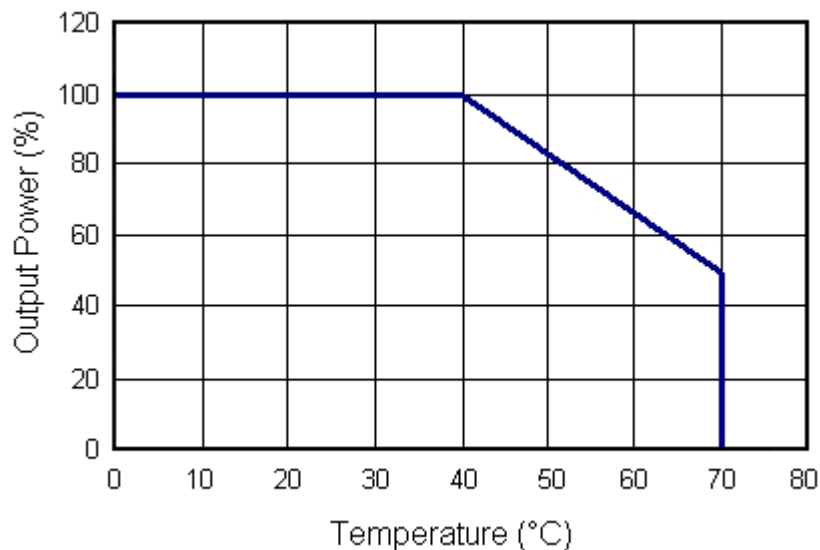
## OUTPUT VOLTAGE / CURRENT RATING CHART

| Model Number | Preset Voltage | Output Voltage Range | Output Current | Total Regulation | Maximum Output Power |
|--------------|----------------|----------------------|----------------|------------------|----------------------|
| DTSPU40-102  | 5 VDC          | 5 ~ 6 VDC            | 5.00 ~ 4.16 A  | 5%               | 25W                  |
| DTSPU40-103  | 6 VDC          | 6 ~ 8 VDC            | 4.00 ~ 3.75 A  | 5%               | 30W                  |
| DTSPU40-104  | 8 VDC          | 8 ~ 11 VDC           | 4.37 ~ 3.18 A  | 4%               | 35W                  |
| DTSPU40-105  | 11 VDC         | 11 ~ 13 VDC          | 3.63 ~ 3.07 A  | 3%               | 40W                  |
| DTSPU40-106  | 13 VDC         | 13 ~ 16 VDC          | 3.07 ~ 2.50 A  | 3%               | 40W                  |
| DTSPU40-107  | 16 VDC         | 16 ~ 21 VDC          | 2.50 ~ 1.90 A  | 3%               | 40W                  |
| DTSPU40-108  | 21 VDC         | 21 ~ 27 VDC          | 1.90 ~ 1.48 A  | 2%               | 40W                  |
| DTSPU40-109  | 27 VDC         | 27 ~ 33 VDC          | 1.48 ~ 1.21 A  | 2%               | 40W                  |
| DTSPU40-110  | 33 VDC         | 33 ~ 40 VDC          | 1.21 ~ 1.00 A  | 2%               | 40W                  |
| DTSPU40-111  | 40 VDC         | 40 ~ 50 VDC          | 1.00 ~ 0.80 A  | 2%               | 40W                  |

## NOTES

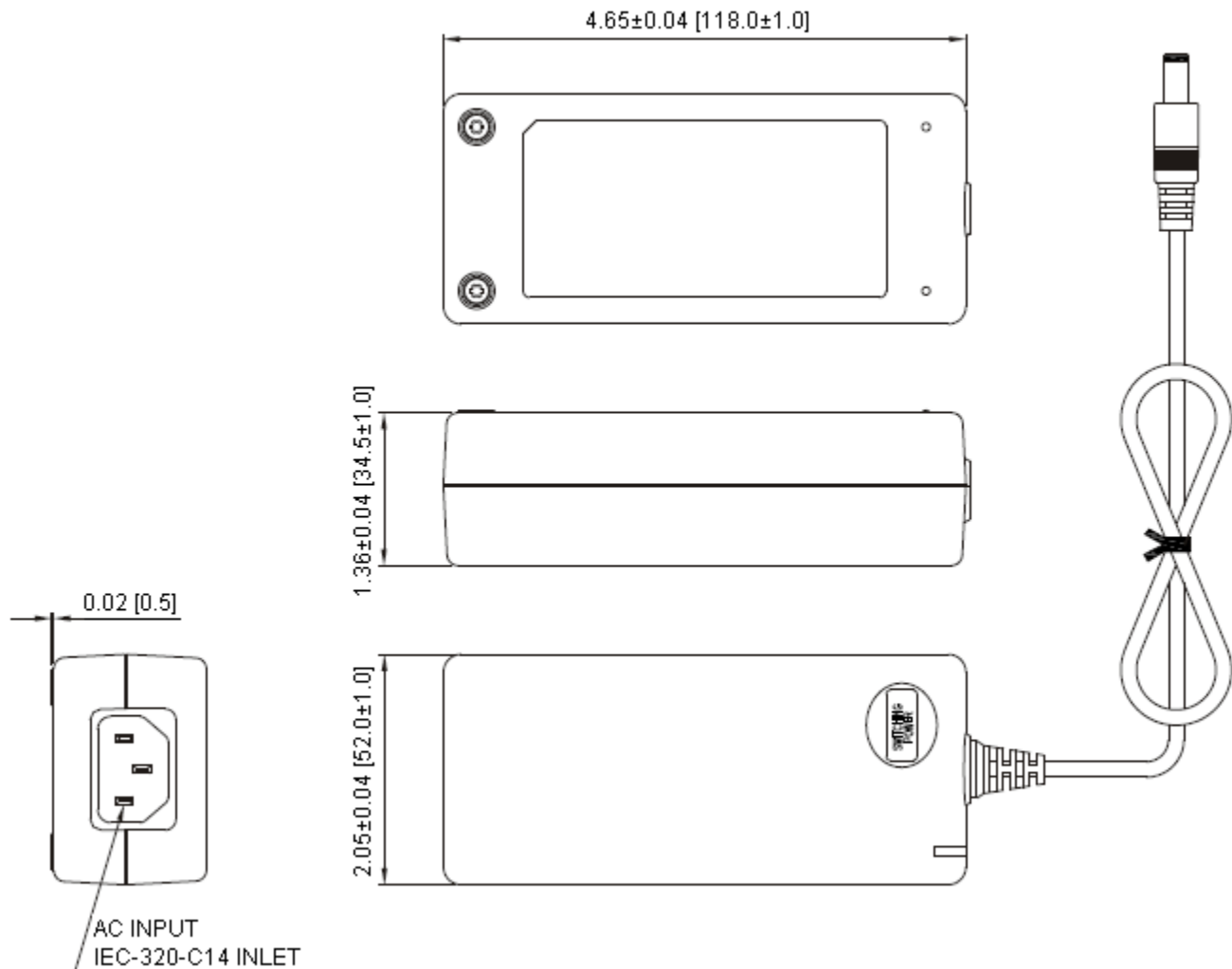
1. The output voltage is specified as a range (Ex: 40 ~ 50VDC); the preset voltage will be set as standard models if nothing different is requested. Please contact factory for ordering details.
2. Models DTSPU40-102 ~ DTSPU40-105 need to use "AWG#16, 4FT long" to meet CEC requirements and models DTSPU40-106 ~ DTSPU40-111 need to use "AWG#18, 4FT long" to meet CEC requirements.
3. The regulation will change by modifying the output cable.
4. Optional output connectors are available (see "DC Output Plug Selector List" link located at the bottom of the "Desktop" category page). Please call factory for ordering details.

## DERATING CURVE



**MECHANICAL DRAWING**

Unit: inches [mm]



**NOTES**

1. Dimensions are shown in inches [mm]
2. Weight: Approximately 275 grams.
3. Optional output connectors available:  
("DC Output Plug Selector List")