

# Wall Industries, Inc.

# **DT24 SERIES**

90 ~ 264VAC Input Voltage Range Single Outputs, Up to 24 Watts Class II, IEC-320-C8 AC Inlet AC/DC Desktop Power Supplies



IEC-320-C8 AC Inlet

#### **FEATURES**

- Up to 24 Watts
- Single Outputs
- Class II
- RoHS Compliant
- Output Voltages Available from 5VDC to 48VDC
- 100% Burn-In and Hi-Pot Tested
- Wide Input Voltage Range: 90~264VAC, 47~63Hz

- Over Voltage, Over Load, and Short Circuit Protection
- EMC Compliance
- UL60950-1, EN60950-1, IEC 60950-1 Safety Approvals
- Meets CEC, ERP, EISA, and Energy Star Level V Requirements
- Meets UL 1310 NEC Class 2 Requirement
- IEC-320-C8 AC Inlet

## **DESCRIPTION**

The DT24 series offers up to 24 watts of output power in a single output desktop power supply. This series has UL60950-1, EN60950-1, and IEC 60950-1 safety approvals. All units are short circuit, over voltage, and over load protected. All models have an IEC-320-C8 AC inlet and output voltages range from 5 to 48VDC. All units meet CEC, ERP, EISA, and Energy Star Level V requirements as well as UL 1310 NEC Class 2 requirements. These supplies are RoHS compliant and have been 100% burn-in and Hi-pot tested.



# **SPECIFICATIONS:** *DT24 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.

| Input Voltage Range  | We reserve the right to change specifications based on technological advances. |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
| Input Frequency  | INPUT SPECIFICATIONS   |  |  |  |  |  |  |
| Input Current (rms)  | Input Voltage Range  | 90 ~ 264VAC (Full Range)   |  |  |  |  |  |
| Input Current (rms)  | Input Frequency  | 47 ~ 63Hz  |  |  |  |  |  |
| Output Current Output Voltage See Table Output Voltage Voltage Regulation  +5% / -3% Output Power See Table Ripple & Noise (See Note 2)  ±1% Hold Up Time > 10ms typical at full load and 115VAC  PROTECTION Short Circuit Protection Over Voltage Protection Over Voltage Protection Auto-recovery ENVIRONMENTAL SPECIFICATIONS Operating Temperature -20°C to +40°C Storage Temperature -20°C to +85°C Humidity 20% to 90% MTBF > 150,000 hours at full load and 25°C ambient temperature  PHYSICAL SPECIFICATIONS Dimensions (L x W x H) 3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm) Net Weight AC Input (See Note 1) EC-320-C8  SAFETY & EMI Safety Standards UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1 EMI Standards CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | Input Current (rms)  |  |  |  |  |  |  |
| Output Current         See Table           Output Voltage         See Table           Voltage Regulation         +5% /-3%           Output Power         See Table           Ripple & Noise (See Note 2)         ±1%           Hold Up Time         > 10ms typical at full load and 115VAC           PROTECTION           Short Circuit Protection         Auto-recovery           Over Voltage Protection         Latch, AC recycle           Over Load Protection         Auto-recovery           ENVIRONMENTAL SPECIFICATIONS         See Table           Operating Temperature         -20°C to +40°C           Storage Temperature         -20°C to +85°C           Humidity         20% to 90%           MTBF         > 150,000 hours at full load and 25°C ambient temperature           PHYSICAL SPECIFICATIONS           Dimensions (L x W x H)         3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)           Net Weight         4.62oz (131g)           AC Input (See Note 1)         IEC-320-C8           SAFETY & EMI           Safety Standards         UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1           EMI Standards         UL 62PC Class B, FCC Part 15 Class B, EN55022 Class B, CE   | No Load Power Consumption  | < 300mW  |  |  |  |  |  |
| Output Voltage  See Table  Voltage Regulation  Output Power  See Table  Ripple & Noise (See Note 2)  Hold Up Time  > 10ms typical at full load and 115VAC  PROTECTION  Short Circuit Protection  Auto-recovery  Over Voltage Protection  Over Voltage Protection  Auto-recovery  ENVIRONMENTAL SPECIFICATIONS  Operating Temperature  -20°C to +40°C  Storage Temperature  -20°C to +85°C  Humidity  20% to 90%  MTBF  > 150,000 hours at full load and 25°C ambient temperature  PHYSICAL SPECIFICATIONS  Dimensions (L x W x H)  3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)  Net Weight  AC Input (See Note 1)  EC-320-C8  SAFETY & EMI  Safety Standards  UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1  EMI Standards  CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | OUTPUT SPECIFICATIONS  |  |  |  |  |  |  |
| Voltage Regulation +5% / -3%  Output Power See Table  Ripple & Noise (See Note 2) ±1%  Hold Up Time > 10ms typical at full load and 115VAC  PROTECTION  Short Circuit Protection Auto-recovery Over Voltage Protection Latch, AC recycle Over Load Protection Auto-recovery  ENVIRONMENTAL SPECIFICATIONS Operating Temperature -20°C to +40°C Storage Temperature -20°C to +85°C  Humidity 20% to 90%  MTBF > 150,000 hours at full load and 25°C ambient temperature  PHYSICAL SPECIFICATIONS  Dimensions (L x W x H) 3.07 x 1.38 inches (78.0 x 50.0 x 35.0 mm)  Net Weight 4.62oz (131g)  AC Input (See Note 1) IEC-320-C8  SAFETY & EMI  Safety Standards UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1  EMI Standards CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | Output Current   | See Table  |  |  |  |  |  |
| Output Power  Ripple & Noise (See Note 2)  ±1%  Hold Up Time  > 10ms typical at full load and 115VAC  PROTECTION  Short Circuit Protection  Auto-recovery  Over Voltage Protection  Latch, AC recycle  Over Load Protection  Auto-recovery  ENVIRONMENTAL SPECIFICATIONS  Operating Temperature  -20°C to +40°C  Storage Temperature  -20°C to +85°C  Humidity  20% to 90%  MTBF  > 150,000 hours at full load and 25°C ambient temperature  PHYSICAL SPECIFICATIONS  Dimensions (L x W x H)  3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)  Net Weight  AC Input (See Note 1)  IEC-320-C8  SAFETY & EMI  Safety Standards  UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1  EMI Standards  CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | Output Voltage   | See Table  |  |  |  |  |  |
| Ripple & Noise (See Note 2) ±1%  Hold Up Time > 10ms typical at full load and 115VAC  PROTECTION  Short Circuit Protection Auto-recovery  Over Voltage Protection Auto-recovery  ENVIRONMENTAL SPECIFICATIONS  Operating Temperature -20°C to +40°C  Storage Temperature -20°C to +85°C  Humidity 20% to 90%  MTBF > 150,000 hours at full load and 25°C ambient temperature  PHYSICAL SPECIFICATIONS  Dimensions (L x W x H) 3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)  Net Weight 4.62oz (131g)  AC Input (See Note 1) IEC-320-C8  SAFETY & EMI  Safety Standards UL 60950-13°, CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1  EMI Standards CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | Voltage Regulation   | +5% / -3%  |  |  |  |  |  |
| Hold Up Time > 10ms typical at full load and 115VAC  PROTECTION  Short Circuit Protection Auto-recovery Over Voltage Protection Latch, AC recycle Over Load Protection Auto-recovery  ENVIRONMENTAL SPECIFICATIONS Operating Temperature -20°C to +40°C Storage Temperature -20°C to +85°C Humidity 20% to 90% MTBF > 150,000 hours at full load and 25°C ambient temperature  PHYSICAL SPECIFICATIONS Dimensions (L x W x H) 3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm) Net Weight 4.62oz (131g) AC Input (See Note 1) IEC-320-C8  SAFETY & EMI Safety Standards UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1 EMI Standards CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE   | Output Power   | See Table  |  |  |  |  |  |
| PROTECTION  Short Circuit Protection  Auto-recovery  Over Voltage Protection  Latch, AC recycle  Over Load Protection  Auto-recovery  ENVIRONMENTAL SPECIFICATIONS  Operating Temperature  -20°C to +40°C  Storage Temperature  -20°C to +85°C  Humidity  20% to 90%  MTBF  >150,000 hours at full load and 25°C ambient temperature  PHYSICAL SPECIFICATIONS  Dimensions (L x W x H)  3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)  Net Weight  4.620z (131g)  AC Input (See Note 1)  IEC-320-C8  SAFETY & EMI  Safety Standards  UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1  EMI Standards  CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | Ripple & Noise (See Note 2)  | ±1%  |  |  |  |  |  |
| Short Circuit Protection  Over Voltage Protection  Latch, AC recycle Over Load Protection  Auto-recovery  ENVIRONMENTAL SPECIFICATIONS  Operating Temperature  -20°C to +40°C Storage Temperature  -20°C to +85°C  Humidity  20% to 90%  MTBF  >150,000 hours at full load and 25°C ambient temperature  PHYSICAL SPECIFICATIONS  Dimensions (L x W x H)  3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)  Net Weight  4.62oz (131g)  AC Input (See Note 1)  IEC-320-C8  SAFETY & EMI  Safety Standards  UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1  EMI Standards  CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE   | Hold Up Time   | > 10ms typical at full load and 115VAC   |  |  |  |  |  |
| Over Voltage Protection  Latch, AC recycle  Over Load Protection  Auto-recovery  ENVIRONMENTAL SPECIFICATIONS  Operating Temperature  -20°C to +40°C  Storage Temperature  -20°C to +85°C  Humidity  20% to 90%  MTBF  >150,000 hours at full load and 25°C ambient temperature  PHYSICAL SPECIFICATIONS  Dimensions (L x W x H)  3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)  Net Weight  4.62oz (131g)  AC Input (See Note 1)  IEC-320-C8  SAFETY & EMI  Safety Standards  UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1  EMI Standards  CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE   | PROTECTION   |  |  |  |  |  |  |
| Over Load Protection  Auto-recovery  ENVIRONMENTAL SPECIFICATIONS  Operating Temperature  -20°C to +40°C  Storage Temperature  -20°C to +85°C  Humidity  20% to 90%  MTBF  >150,000 hours at full load and 25°C ambient temperature  PHYSICAL SPECIFICATIONS  Dimensions (L x W x H)  3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)  Net Weight  4.62oz (131g)  AC Input (See Note 1)  IEC-320-C8  SAFETY & EMI  Safety Standards  UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1  EMI Standards  CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE   | Short Circuit Protection   | Auto-recovery  |  |  |  |  |  |
| ### Comparison of Comparison o | Over Voltage Protection  | Latch, AC recycle  |  |  |  |  |  |
| Operating Temperature         -20°C to +40°C           Storage Temperature         -20°C to +85°C           Humidity         20% to 90%           MTBF         > 150,000 hours at full load and 25°C ambient temperature           PHYSICAL SPECIFICATIONS           Dimensions (L x W x H)         3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)           Net Weight         4.62oz (131g)           AC Input (See Note 1)         IEC-320-C8           SAFETY & EMI           Safety Standards         UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1           EMI Standards         CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | Over Load Protection   | Auto-recovery  |  |  |  |  |  |
| Storage Temperature  | ENVIRONMENTAL SPECIFICATIONS   |  |  |  |  |  |  |
| Humidity   20% to 90%     MTBF   > 150,000 hours at full load and 25°C ambient temperature   | Operating Temperature  | -20°C to +40°C   |  |  |  |  |  |
| MTBF         > 150,000 hours at full load and 25°C ambient temperature           PHYSICAL SPECIFICATIONS           Dimensions (L x W x H)         3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)           Net Weight         4.62oz (131g)           AC Input (See Note 1)         IEC-320-C8           SAFETY & EMI           Safety Standards         UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1           EMI Standards         CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | Storage Temperature  | -20°C to +85°C   |  |  |  |  |  |
| PHYSICAL SPECIFICATIONS           Dimensions (L x W x H)         3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)           Net Weight         4.62oz (131g)           AC Input (See Note 1)         IEC-320-C8           SAFETY & EMI           Safety Standards         UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1           EMI Standards         CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE   | Humidity   | 20% to 90%   |  |  |  |  |  |
| Dimensions (L x W x H)       3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)         Net Weight       4.62oz (131g)         AC Input (See Note 1)       IEC-320-C8         SAFETY & EMI         Safety Standards       UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1         EMI Standards       CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE   | MTBF   | > 150,000 hours at full load and 25°C ambient temperature                        |  |  |  |  |  |
| Net Weight       4.62oz (131g)         AC Input (See Note 1)       IEC-320-C8         SAFETY & EMI         Safety Standards       UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1         EMI Standards       CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | PHYSICAL SPECIFICATIONS  |  |  |  |  |  |  |
| AC Input (See Note 1)  IEC-320-C8  SAFETY & EMI  Safety Standards  UL 60950-1 <sup>(3)</sup> , CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1  EMI Standards  CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | Dimensions (L x W x H)   | 3.07 x 1.97 x 1.38 inches (78.0 x 50.0 x 35.0 mm)                                |  |  |  |  |  |
| SAFETY & EMI           Safety Standards         UL 60950-1(3), CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1           EMI Standards         CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE  | Net Weight   | 4.62oz (131g)  |  |  |  |  |  |
| Safety Standards  UL 60950-1 <sup>(3)</sup> , CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1  EMI Standards  CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE   | AC Input (See Note 1)  | IEC-320-C8   |  |  |  |  |  |
| EMI Standards  CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE   | SAFETY & EMI   |  |  |  |  |  |  |
|  | Safety Standards   | UL 60950-1 <sup>(3)</sup> , CSA-C22.2 No.60950-1, NEMKO EN60950-1, CB IEC60950-1 |  |  |  |  |  |
| All models meet CEC, ERP, EISA, and Energy Star Level V requirements   | EMI Standards  | CISPR Class B, FCC Part 15 Class B, EN55022 Class B, CE                          |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| All models meet UL 1310 NEC Class 2 requirements   | All models meet UL 1310 NEC Class 2 requir                                     | ements   |  |  |  |  |  |



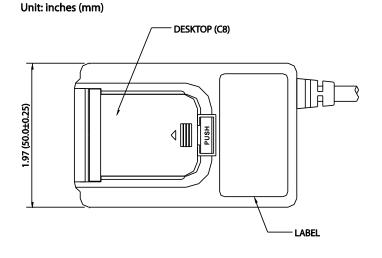
| MODEL SELECTION TABLE |                        |                |                |                    |                          |                     |  |  |
|-----------------------|------------------------|----------------|----------------|--------------------|--------------------------|---------------------|--|--|
| Model Number          | Input<br>Voltage Range | Output Voltage | Output Current | Ripple & Noise (2) | <b>Output Regulation</b> | <b>Output Power</b> |  |  |
| DT15A1Y05K0           | 90 ~ 264 VAC           | 5 VDC          | 3A             | 50mVp-p            | +5% / -3%                | 15W                 |  |  |
| DT24A1Y09K0           |                        | 9 VDC          | 2.67A          | 90mVp-p            | +5% / -3%                | 24W                 |  |  |
| DT24A1Y12K0           |                        | 12 VDC         | 2A             | 120mVp-p           | +5% / -3%                | 24W                 |  |  |
| DT24A1Y16K0           |                        | 16 VDC         | 1.5A           | 160mVp-p           | +5% / -3%                | 24W                 |  |  |
| DT24A1Y18K0           |                        | 18 VDC         | 1.34A          | 180mVp-p           | +5% / -3%                | 24W                 |  |  |
| DT24A1Y24K0           |                        | 24 VDC         | 1A             | 240mVp-p           | +5% / -3%                | 24W                 |  |  |
| DT24A1Y36K0           |                        | 36 VDC         | 0.67A          | 360mVp-p           | +5% / -3%                | 24W                 |  |  |
| DT24A1Y48K0           |                        | 48 VDC         | 0.5A           | 480mVp-p           | +5% / -3%                | 24W                 |  |  |

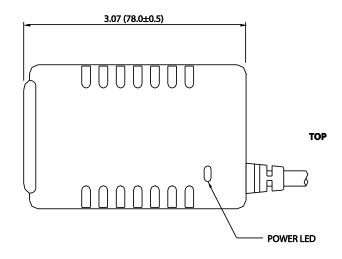
# **NOTES**

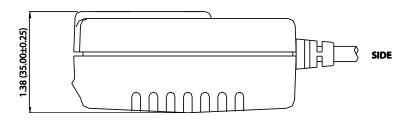
- 1. All models have an IEC-320-C8 AC inlet.
- 2. Ripple and Noise is measured at 20MHz bandwidth with a tantalum 10µF in parallel with a 0.1µF ceramic capacitor.
- 3. This product is Listed to applicable standards and requirements by UL.

# **MECHANICAL DRAWINGS**

Unit: inches (mm)



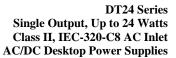




#### **Standard Output Cable**

- 1. AWM 1185 # 18 AWG / 1C + SHIELDING, UL 80°C 300V VW-1, 1550 mm
- 2. Depends on customer's requirements.

<sup>\*</sup>Due to advances in technology, specifications subject to change without notice





### **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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