

## 300W Medical/ITE Class I and II AC-DC External Power Supplies

<https://product.tdk.com/en/power/dtm>  
[www.emea.lambda.tdk.com/dtm](http://www.emea.lambda.tdk.com/dtm)



The DTM300-D Class I and Class II (no ground connection) 300W external power supplies are certified to IEC/ES/CSA/EN60601-1, IEC60601-1-11 (Class II), IEC/UL/CSA/EN62368-1 and are compliant to IEC60601-1-2 (Ed4). With an average efficiency of greater than 88% and an off-load power consumption of less than 0.5W, this series also complies with DoE Level VI standards for efficiency and off-load power. With options for Class I or Class II inputs, the DTM300-D series is suitable for a variety of power hungry medical, industrial, and test and measurement applications.

| Features                                                  | Benefits                               |
|-----------------------------------------------------------|----------------------------------------|
| • Wide Range AC Input (Class I or Class II Input Options) | • Global Operation                     |
| • Meets DoE Level VI Efficiency                           | • Meets US Energy Saving Legislation   |
| • 60601-1 Medical Certifications /2xMoPP                  | • Suitable for B & BF Rated Equipment  |
| • 62368-1 ITE Certifications                              | • Suitable for Industrial Applications |
| • < 0.5W Off-load Power Draw                              | • Consumes Less Energy                 |

| Model Selector |                    |                 |               |                            |                          |
|----------------|--------------------|-----------------|---------------|----------------------------|--------------------------|
| Model          | Output Voltage (V) | Max Current (A) | Max Power (W) | Overvoltage Protection (V) | Ripple & Noise (mVpk-pk) |
| DTM300PW120D1  | 12                 | 25              | 300           | 12.9 - 16.0                | 240                      |
| DTM300PW150D1  | 15                 | 20              | 300           | 16.0 - 20.0                | 300                      |
| DTM300PW190D1  | 19                 | 15.79           | 300           | 20.20 - 25.46              | 300                      |
| DTM300PW240D1  | 24                 | 12.50           | 300           | 25.50 - 32.16              | 300                      |
| DTM300PW280D1  | 28                 | 10.71           | 300           | 29.6 - 33.2                | 300                      |
| DTM300PW480D1  | 48                 | 6.25            | 300           | 50.0 - 57.2                | 300                      |
| DTM300PW540D1  | 54                 | 5.56            | 300           | 56.0 - 60.2                | 300                      |
| DTM300PW120D2  | 12                 | 25              | 300           | 12.9 - 16.0                | 240                      |
| DTM300PW150D2  | 15                 | 20              | 300           | 16.0 - 20.0                | 300                      |
| DTM300PW190D2  | 19                 | 15.79           | 300           | 20.20 - 25.46              | 300                      |
| DTM300PW240D2  | 24                 | 12.5            | 300           | 25.50 - 32.16              | 300                      |
| DTM300PW280D2  | 28                 | 10.71           | 300           | 29.6 - 33.2                | 300                      |
| DTM300PW480D2  | 48                 | 6.25            | 300           | 50.0 - 57.2                | 300                      |
| DTM300PW540D2  | 54                 | 5.56            | 300           | 56.0 - 60.2                | 300                      |

| DTM300PW               | 240 | D2                             |
|------------------------|-----|--------------------------------|
| 120 12V Output Voltage |     | D1 Class I Input (IEC320-C14)  |
| 150 15V Output Voltage |     | D2 Class II Input (IEC320-C18) |
| 190 19V Output Voltage |     |                                |
| 240 24V Output Voltage |     |                                |
| 280 28V Output Voltage |     |                                |
| 480 48V Output Voltage |     |                                |
| 540 54V Output Voltage |     |                                |

| Specification                           |        |                                                                                                                                |
|-----------------------------------------|--------|--------------------------------------------------------------------------------------------------------------------------------|
| Model                                   |        | DTM300-D                                                                                                                       |
| <b>Input</b>                            |        |                                                                                                                                |
| Input Voltage range                     | Vac    | 90 - 264                                                                                                                       |
| Input Frequency                         | Hz     | 47 - 63                                                                                                                        |
| Input Current (115/230Vac)              | A      | 3.0 / 1.5                                                                                                                      |
| Inrush Current at 230Vac (Cold Start)   | A      | <70 (25°C ambient)                                                                                                             |
| Touch Current                           | uA     | <100                                                                                                                           |
| No Load Power Consumption               | mW     | <500                                                                                                                           |
| Hold Up Time (typ) at 115Vac Input      | ms     | 10                                                                                                                             |
| Average Efficiency (1)                  | %      | >88                                                                                                                            |
| Conducted & Radiated EMI                | -      | EN55032-B, EN55011-B, FCC Part 15 Class B, FCC Part 18 Class B                                                                 |
| Immunity                                | -      | IEC60601-1-2 Ed4:2014                                                                                                          |
| Safety Agency Certifications            | -      | IEC/ES/UL/CSA/EN60601-1, IEC/UL/CSA/EN62368-1, 60950-1, IEC60601-1-11 (Class II Models), CE Mark (LVD, EMC and RoHS)           |
| <b>Output</b>                           |        |                                                                                                                                |
| Voltage Accuracy                        | %      | Included in Total Regulation Specification                                                                                     |
| Output Voltage Adjustment               | -      | None                                                                                                                           |
| Switching Frequency (Full Load)         | kHz    | 83 - 96                                                                                                                        |
| Total Regulation                        | %      | ±5                                                                                                                             |
| Ripple & Noise (2)                      | -      | See Model Selector Table                                                                                                       |
| Temperature Coefficient                 | %/°C   | ±0.05                                                                                                                          |
| Minimum Load                            | -      | No minimum load required                                                                                                       |
| Overcurrent Protection                  | %      | 105 - 150 (Auto-Recovery)                                                                                                      |
| Overvoltage Protection                  | -      | See Model Selector Table (Auto-Recovery)                                                                                       |
| Short Circuit Protection                | -      | Continuous - Hiccup Mode (Auto-Recovery)                                                                                       |
| Indicators                              | -      | LED indicates DC output is on                                                                                                  |
| Parallel Operation                      | -      | Not possible                                                                                                                   |
| <b>Environmental</b>                    |        |                                                                                                                                |
| Operating Temperature (3)               | °C     | -30 to 60 derate linearly to 50% load from 40 to 60                                                                            |
| Storage Temperature                     | °C     | -30 to 85                                                                                                                      |
| Humidity (non condensing)               | %RH    | 0 - 95                                                                                                                         |
| Cooling                                 | -      | Convection                                                                                                                     |
| Altitude                                | m      | 5,000                                                                                                                          |
| Withstand Voltage (For 1 minute)        | Vac    | Class I: Input to Output 4,000 (2xMoPP), Input and Output to Ground 1,500 (1xMoPP)<br>Class II: Input to Output 4,000 (2xMoPP) |
| Isolation Resistance                    | MΩ     | 20                                                                                                                             |
| IP Rating                               | -      | IP42                                                                                                                           |
| <b>Other</b>                            |        |                                                                                                                                |
| Weight (Typ)                            | g      | 1,570                                                                                                                          |
| Size (LxWxH)                            | mm     | 222 x 112 x 45                                                                                                                 |
| Size (LxWxH)                            | Inches | 8.75 x 4.40 x 1.77                                                                                                             |
| AC Input Connector                      | -      | Class I: IEC 320-C14 (3 prong); Class II: IEC320-C18 (2 prong)                                                                 |
| DC Output Connector                     | -      | 10 Pin Mini Fit P4.20 (See Outline Drawing)                                                                                    |
| Output Mating Connector                 | -      | Molex Mini Fit 39-28-1103 or equivalent                                                                                        |
| Cable Length & Thickness                |        | 800mm; UL 2464 #16 AWG                                                                                                         |
| MTBF (Bellcore TR-332), 100% load, 25°C | hrs    | 200,000                                                                                                                        |
| Warranty                                | yrs    | 3                                                                                                                              |

## Notes

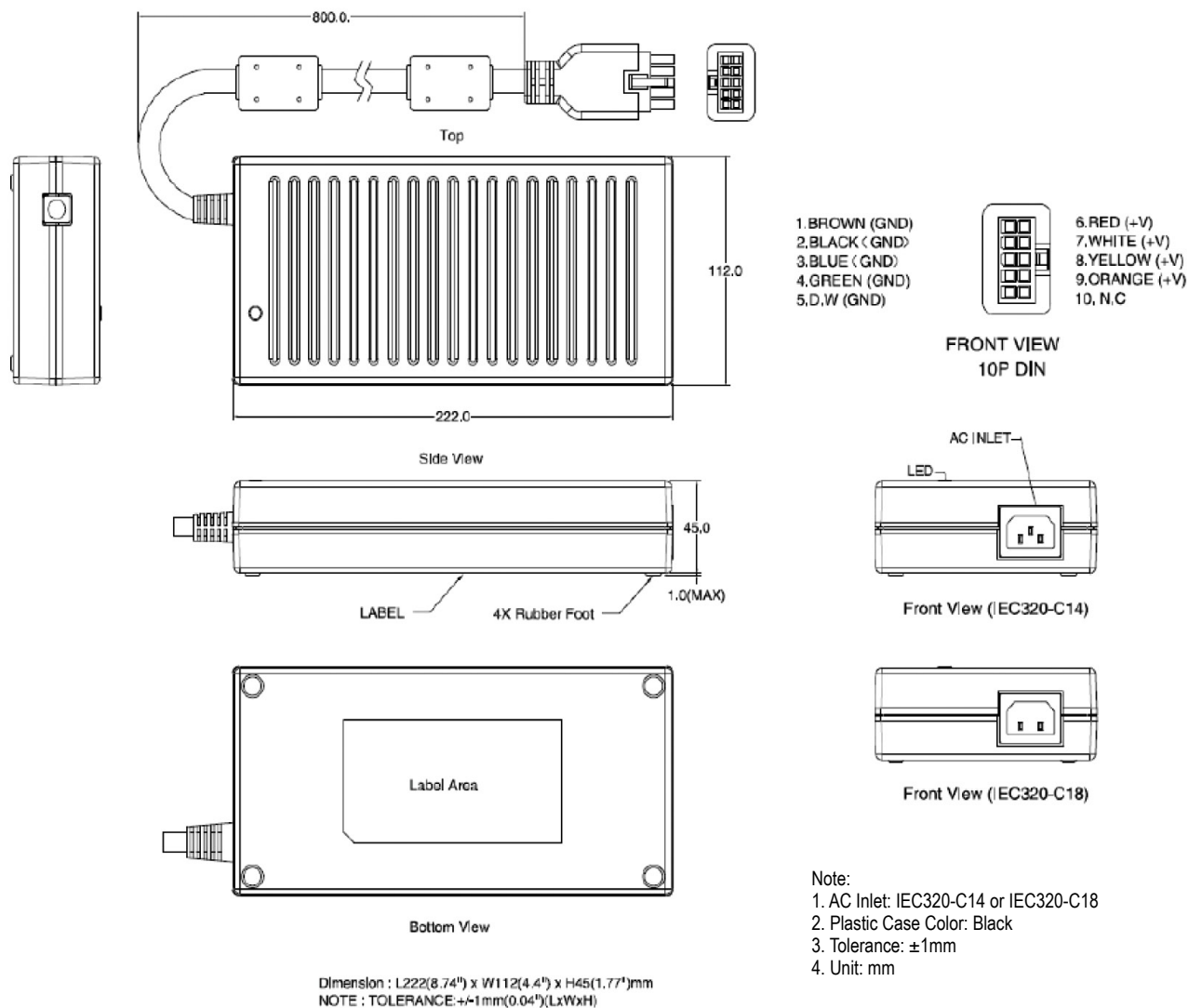
See website for detailed specifications, test methods and installation manual

(1) Measured at 25%, 50%, 75% and 100% load conditions

(2) Ripple and noise is measured at 20MHz BW. Add 0.1uF ceramic capacitor and 47uF Electrolytic capacitor in parallel across the output

(3) Derate linearly to 70% load from 0 to -30°C

## Outline Drawing





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