

## 150-160W Medical and ICT Class I and II External AC-DC Power Supplies

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



The DTM160 Class I and DTM160-C8 Class II (no ground connection) 150-160W external power supplies are certified to IEC/UL/CSA/EN60601-1, IEC60601-1-11 (DTM160-C8 model) and are compliant to IEC60601-1-2 (Ed4) and IEC/BS/EN62368-1. With an average efficiency of up to 93% and an off-load power consumption of less than 0.15W, this series also complies with DoE Level VI standards. The DTM160 series is suitable for a variety of medical, clinical, healthcare, industrial, test and measurement applications.

| Features                                                  | Benefits                                                |
|-----------------------------------------------------------|---------------------------------------------------------|
| • Wide Range AC Input (Class I or Class II Input Options) | • Supports Medical and Industrial Applications Globally |
| • Locking Output Connector                                | • Avoids Accidental Disconnection                       |
| • DoE Level VI Efficiency                                 | • Meets US Energy Saving Legislation                    |
| • 60601-1 Medical Certifications (2xMOPP)                 | • Suitable for B & BF Rated Equipment                   |
| • 62368-1 Compliant for ICT and Industrial Applications   | • Suitable for Industrial Applications                  |
| • < 0.15W Off-load Power Draw                             | • Consumes Less Energy, ErP Compliant                   |

| Model Selector |                    |                     |                   |                            |                           |                          |                            |
|----------------|--------------------|---------------------|-------------------|----------------------------|---------------------------|--------------------------|----------------------------|
| Model          | Output Voltage (V) | Maximum Current (A) | Maximum Power (W) | Overvoltage Protection (V) | Ripple & Noise (mV pk-pk) | Efficiency at 230Vac (%) | Max. Load Capacitance (μF) |
| DTM160CN120    | 12                 | 12.5                | 150               | 13.2                       | 120                       | 91                       | 12,250                     |
| DTM160CN240    | 24                 | 6.66                | 160               | 28.6                       | 200                       | 92                       | 6,600                      |
| DTM160CN360    | 36                 | 4.44                | 160               | 41.8                       | 200                       | 92                       | 4,330                      |
| DTM160CN480    | 48                 | 3.33                | 160               | 55.6                       | 200                       | 93                       | 3,240                      |
| DTM160CN120C8  | 12                 | 12.5                | 150               | 13.2                       | 120                       | 91                       | 12,250                     |
| DTM160CN240C8  | 24                 | 6.66                | 160               | 28.6                       | 200                       | 92                       | 6,600                      |
| DTM160CN360C8  | 36                 | 4.44                | 160               | 41.8                       | 200                       | 92                       | 4,330                      |
| DTM160CN480C8  | 48                 | 3.33                | 160               | 55.6                       | 200                       | 93                       | 3,240                      |

| DTM160CN | XXX                                                                                                          | YY                                                                    | -XXX                                                                                                         |
|----------|--------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| Series   | 120 = 12V Output Voltage<br>240 = 24V Output Voltage<br>360 = 36V Output Voltage<br>480 = 48V Output Voltage | Blank = Class I (IEC320/C14) inlet<br>C8 = Class II (IEC320/C8) inlet | Modified standard designator for alternative connectors, cables and other non-safety file impacting changes* |

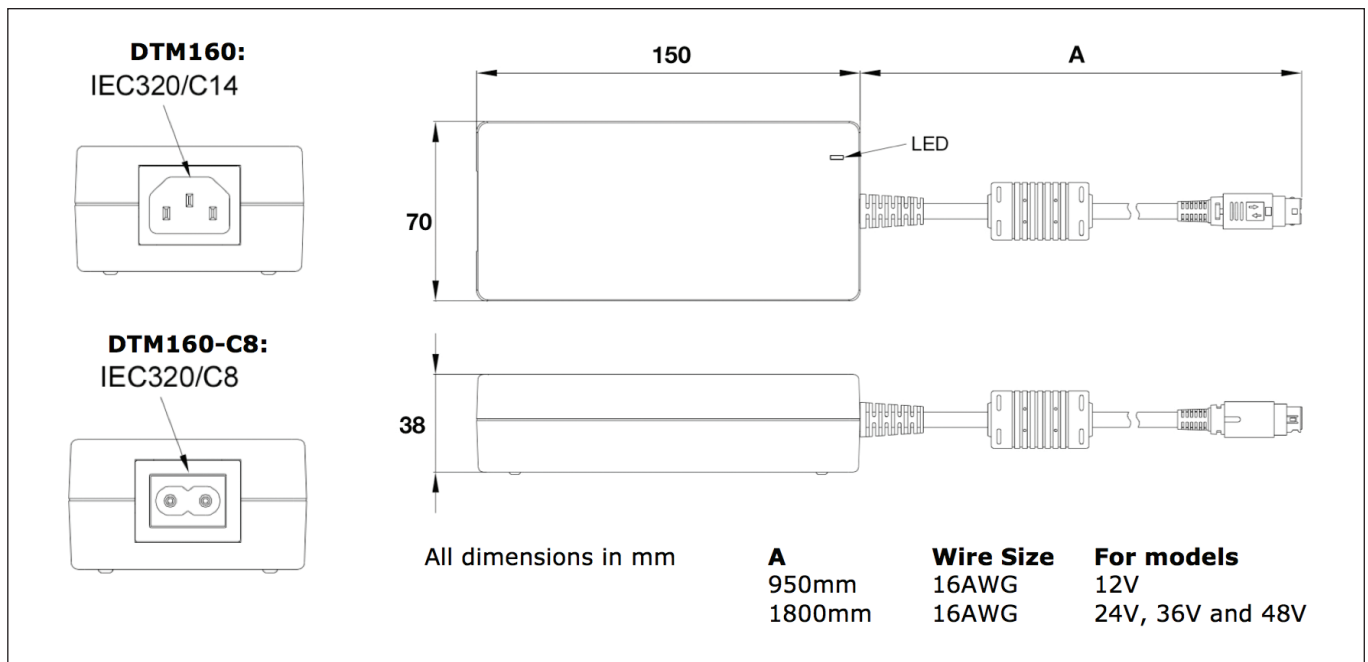
\* Contact Sales, MOQs may apply

| Related Products |                             |                                    |
|------------------|-----------------------------|------------------------------------|
| Type             | Part Number                 | Description                        |
| Power supply     | <a href="#">DTM and WMM</a> | 30 to 300W external power supplies |

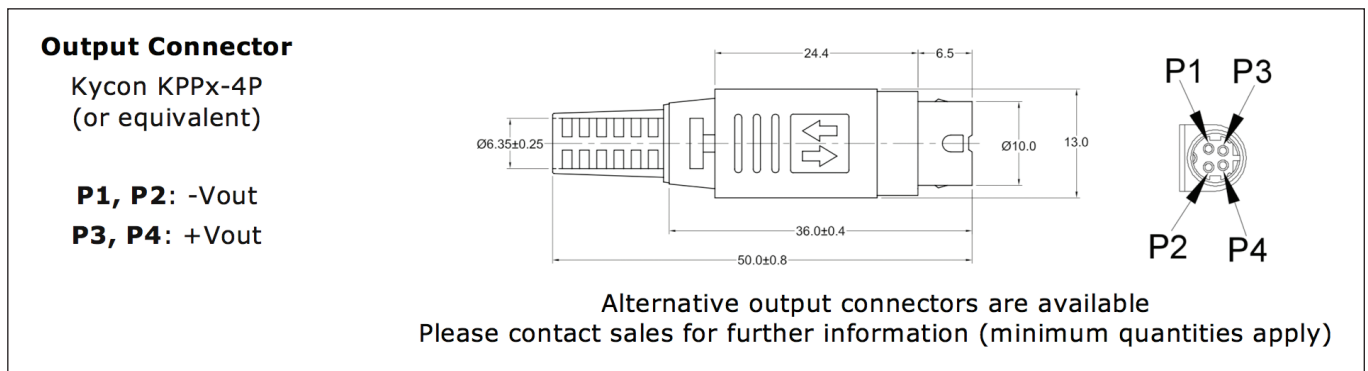
| Specifications                            |        |                                                                                                                                          |
|-------------------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------|
| Model                                     |        |                                                                                                                                          |
| Input                                     |        |                                                                                                                                          |
| AC Input Voltage Range (Operating)        | Vac    | 80 - 264 - Derate output power linearly to 80% load from 80Vac to 90Vac input                                                            |
| Nominal Input Voltage Range               | Vac    | 100 - 240 (Note: Safety certified for 90-264Vac only)                                                                                    |
| Input Frequency                           | Hz     | 47 - 63                                                                                                                                  |
| Input Current (100/230Vac)                | A      | 2.0 / 0.95                                                                                                                               |
| Power Factor (100/230Vac)                 | -      | 0.9 / 0.9                                                                                                                                |
| Harmonic Compliance                       | -      | Meets EN61000-3-2 Class A                                                                                                                |
| Inrush Current at 240Vac (Cold Start)     | A      | <120 (25°C ambient)                                                                                                                      |
| Earth Leakage Current                     | uA     | <300 (DTM160)                                                                                                                            |
| Touch Current                             | uA     | <90 (DTM160, DTM160-C8)                                                                                                                  |
| No Load Power Consumption                 | mW     | <150                                                                                                                                     |
| Hold Up Time (typ. at 115/230Vac)         | ms     | 25 / 25                                                                                                                                  |
| Line Regulation                           | %      | 1                                                                                                                                        |
| Efficiency                                | %      | See Model Selector Table                                                                                                                 |
| Low Input Voltage Protection              | Vac    | 60 - 70                                                                                                                                  |
| Conducted & Radiated EMI                  | -      | IEC/EN61000-6-1, IEC/EN61000-6-2, EN55011 (Class B), EN55032 (Class B), FCC 47 Part 18, IEC60601-1-2; IEC/EN 61000-3-2, IEC/EN 61000-3-3 |
| Immunity                                  | -      | IEC/EN61000-6-3, IEC/EN61000-6-4, IEC60601-1-2                                                                                           |
| Insulation Class                          | -      | DTM160: Class I, DTM160-C8: Class II                                                                                                     |
| Safety Certifications and Markings        | -      | IEC/UL/CSA/EN60601-1, IEC60601-1-11 (Class II models)<br>Compliant to IEC/BS/EN62368-1, CE Mark and UKCA Mark                            |
| Output                                    |        |                                                                                                                                          |
| Voltage Accuracy                          | %      | ± 2 (at 115/230Vac, 60% load and 25°C ambient)                                                                                           |
| Output Voltage Adjustment                 | -      | None                                                                                                                                     |
| Switching Frequency (Full Load)           | kHz    | 115                                                                                                                                      |
| Ripple & Noise (2)                        | -      | See Model Selector Table                                                                                                                 |
| Minimum Load                              | -      | No minimum load required                                                                                                                 |
| Overcurrent Protection                    | %      | 110 - 130 (Auto-Recovery)                                                                                                                |
| Overvoltage Protection                    | -      | See Model Selector Table (Latching-type)                                                                                                 |
| Short Circuit Protection                  | -      | Continuous - Hiccup Mode (Auto-Recovery)                                                                                                 |
| Indicators                                | -      | LED indicates DC output is on                                                                                                            |
| Parallel Operation                        | -      | Not possible                                                                                                                             |
| Environmental                             |        |                                                                                                                                          |
| Operating Temperature                     | °C     | -20 to +70, derate linearly to 50% load from +40 to +70                                                                                  |
| Storage Temperature                       | °C     | -40 to +85                                                                                                                               |
| Humidity (non condensing)                 | %RH    | 93 (max.)                                                                                                                                |
| Overvoltage Category                      | -      | II                                                                                                                                       |
| Pollution Degree                          | -      | 2                                                                                                                                        |
| Cooling                                   | -      | Convection                                                                                                                               |
| Altitude                                  | m      | 5,000                                                                                                                                    |
| Withstand Voltage (For 1 minute)          | Vac    | DTM160: Input to Output 4,400 (2x MOPP), Input and Output to Ground 1,700 (1x MOPP)<br>DTM160-C8: Input to Output 4,400 (2x MOPP)        |
| Isolation Resistance                      | MΩ     | 20                                                                                                                                       |
| IP Rating                                 | -      | IP22                                                                                                                                     |
| Other                                     |        |                                                                                                                                          |
| Weight (Typ)                              | g      | 575                                                                                                                                      |
| Size (LxWxH)                              | mm     | 150 x 70 x 38                                                                                                                            |
| Size (LxWxH)                              | Inches | 5.91 x 2.76 x 1.50                                                                                                                       |
| AC Input Connector                        | -      | Class I: IEC 320-C14, Class II: IEC 320-C8. AC line cord not included.                                                                   |
| DC Output Connector                       | -      | Kycon KPPx-4P or equivalent Pins 1 & 2: -Vout, Pins 3 & 4: +Vout. Locking type.                                                          |
| Cable Length & Thickness                  | -      | See Outline Drawing                                                                                                                      |
| MTBF (MIL HDBK 217F at full load, GB25°C) | Hours  | 370,000                                                                                                                                  |
| Warranty                                  | Years  | 3                                                                                                                                        |

Notes  
 (1) Ripple and noise is measured at 20MHz bandwidth. Add 100nF ceramic capacitor and 10uF electrolytic capacitor in parallel across the output

## Mechanical Specification



## Output Connector



**TDK-Lambda France SAS**

Tel: +33 1 60 12 71 65  
 ttf.fr-powersolutions@tdk.com  
 www.emea.lambda.tdk.com/fr

**TDK-Lambda Americas**

Tel: +1 800-LAMBDA-4 or 1-800-526-2324  
 tla.powersolutions@tdk.com  
 www.us.lambda.tdk.com

**Italy Sales Office**

Tel: +39 02 61 29 38 63  
 ttf.it-powersolutions@tdk.com  
 www.emea.lambda.tdk.com/it

**TDK Electronics do Brasil Ltda**

Tel: +55 11 3289-9599  
 sales.br@tdk-electronics.tdk.com  
 www.tdk-electronics.tdk.com/en

**Netherlands**

ttf.nl-powersolutions@tdk.com  
 www.emea.lambda.tdk.com/nl

**TDK-Lambda Corporation**

Tel: +81-3-6778-1113  
 www.jp.lambda.tdk.com

**TDK-Lambda Europe GmbH**

Tel: +49 7841 666 0  
 tlg.powersolutions@tdk.com  
 www.emea.lambda.tdk.com/de

**TDK-Lambda (China) Electronics Co. Ltd.**

Tel: +86 21 6485-0777  
 tlc.powersolutions@tdk.com  
 www.lambda.tdk.com.cn

**Austria Sales Office**

Tel: +43 2256 655 84  
 tlg.at-powersolutions@tdk.com  
 www.emea.lambda.tdk.com/at

**TDK-Lambda Singapore Pte Ltd.**

Tel: +65 6251 7211  
 tfs.marketing@tdk.com  
 www.sg.lambda.tdk.com

**Switzerland Sales Office**

Tel: +41 44 850 53 53  
 tlg.ch-powersolutions@tdk.com  
 www.emea.lambda.tdk.com/ch

**TDK India Private Limited, Power Supply Division**

Tel: +91 80 4039-0660  
 mathew.philip@tdk.com  
 www.sg.lambda.tdk.com

**TDK-Lambda Europe GmbH**

Tel: Tel. +45 3222 8086  
 tlg.dk-powersolutions@tdk.com  
 www.emea.lambda.tdk.com/dk

**TDK-Lambda UK Ltd.**

Tel: +44 (0) 12 71 85 66 66  
 tlu.powersolutions@tdk.com  
 www.emea.lambda.tdk.com/uk

**TDK-Lambda Ltd.**

Tel: +9 723 902 4333  
 tli.powersolutions@tdk.com  
 www.emea.lambda.tdk.com/il-en

