

## 15-40W Medical AC-DC PCB-Mount Power Supplies

### Features

- ◆ Small size and lightweight
- ◆ PC Board Mountable
- ◆ Wide Range Input
- ◆ Medical Safety Certifications (4kVAC Input - Output)
- ◆ Class II (No ground needed)
- ◆ High efficiency



### Key Market Segments & Applications



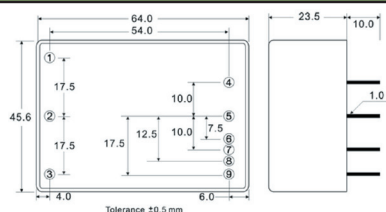
| Specifications                                   |     |                                                                                            |
|--------------------------------------------------|-----|--------------------------------------------------------------------------------------------|
| Model                                            |     | KMS15    KMD15    KMT15    KMS40    KMD40    KMT40                                         |
| Input Voltage Range                              | -   | 90-264VAC 47-440Hz or 100-375VDC                                                           |
| Inrush Current Limiting                          | A   | 10 / 20A, cold start, 25°C ambient (115 / 230VAC)                                          |
| Input Current (115 / 230VAC)                     | mA  | 220 / 118mA                      860 / 460mA                                               |
| Recommended External Fuse                        | -   | 2A slow blow type                      3.15A slow blow type                                |
| Temperature Coefficient                          | -   | ±0.01%/°C                                                                                  |
| Ripple and Noise (pk-pk)                         | mV  | 50mV or 1%, whichever is greater                                                           |
| Overcurrent Protection                           | -   | > 105%, hiccup mode, automatic recovery                                                    |
| Overvoltage Protection                           | %   | Yes, Zener diode clamp                                                                     |
| Hold-up Time (typical)                           | ms  | 20ms                      18ms                                                             |
| Enclosure Leakage (240VAC 63Hz)<br>(264VAC 63Hz) | mA  | 0.055 max                      0.08 max<br>0.06 max                      0.085 max         |
| Operating Temperature                            | °C  | -25°C to 70°C, derate linearly to 50%(1) load from 50°C to 70°C. Max case temperature 95°C |
| Storage Temperature                              | °C  | -40°C to 100°C                                                                             |
| Humidity                                         | %RH | 20% to 95% RH (non-condensing)                                                             |
| Cooling                                          | -   | Convection, over temperature protected ~100°C case temperature                             |
| Withstand Voltage                                | VAC | Input to output: 4kVAC (Reinforced) (2 x MOPPS 3rd Edition)                                |
| Immunity                                         | -   | EN60601-1-2                                                                                |
| Safety Agency Certification                      | -   | UL60601-1, IEC60601-1, CE Mark, EN60950-1                                                  |
| Conducted EMI                                    | -   | EN55011, EN55022 Class B                      EN55011, EN55022 Class A                     |
| Switching Frequency                              | kHz | 132kHz                                                                                     |
| Weight                                           | g   | 120                      280                                                               |
| Size (LxWxH)                                     | in  | 2.52 x 1.79 x 0.92"                      3.5 x 2.5 x 1.06"                                 |
| Mounting & Case                                  | -   | PC board mountable. Plastic resin fiberglass case (UL 94V-0)                               |
| MTBF                                             | hrs | 200,000 to 400,000 hours, model dependent                                                  |
| Warranty                                         | yrs | 2 years                                                                                    |

(1) KM15 derates linearly to 40% load

## Output Ratings

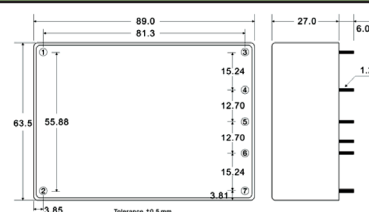
| Power Supply Specifications |    |                |                 |                 |       |                     |                 |                     |                  |            |
|-----------------------------|----|----------------|-----------------|-----------------|-------|---------------------|-----------------|---------------------|------------------|------------|
|                             |    | Output Voltage | Minimum Current | Maximum Current | Power | Output Set Accuracy | Line Regulation | Load Regulation (1) | Cross Regulation | Efficiency |
| Model                       |    | (V)            | (A)             | (A)             | (W)   | (%)                 | (%)             | (%)                 |                  | (%)        |
| Single Output               |    |                |                 |                 |       |                     |                 |                     |                  |            |
| KMS15-3P3                   | V1 | 3.3V           | 0A              | 3.00A           | 9.9W  | ±2%                 | 0.5%            | 1%                  | -                | 74%        |
| KMS40-3P3                   | V1 | 3.3V           | 80mA            | 8.00A           | 26.4W | ±2%                 | 0.5%            | 1%                  | -                | 75%        |
| KMS15-5                     | V1 | 5V             | 0A              | 3.00A           | 15W   | ±2%                 | 0.5%            | 1%                  | -                | 78%        |
| KMS40-5                     | V1 | 5V             | 80mA            | 8.00A           | 40W   | ±2%                 | 0.5%            | 1%                  | -                | 79%        |
| KMS15-9                     | V1 | 9V             | 0A              | 1.67A           | 15W   | ±2%                 | 0.5%            | 1%                  | -                | 79%        |
| KMS40-9                     | V1 | 9V             | 44mA            | 4.44A           | 40W   | ±2%                 | 0.5%            | 1%                  | -                | 82%        |
| KMS15-12                    | V1 | 12V            | 0A              | 1.25A           | 15W   | ±2%                 | 0.5%            | 1%                  | -                | 81%        |
| KMS40-12                    | V1 | 12V            | 33mA            | 3.33A           | 40W   | ±2%                 | 0.5%            | 1%                  | -                | 83%        |
| KMS15-15                    | V1 | 15V            | 0A              | 1.00A           | 15W   | ±2%                 | 0.5%            | 1%                  | -                | 81%        |
| KMS40-15                    | V1 | 15V            | 26.7mA          | 2.67A           | 40W   | ±2%                 | 0.5%            | 1%                  | -                | 83%        |
| KMS15-24                    | V1 | 24V            | 0A              | 0.62A           | 15W   | ±2%                 | 0.5%            | 1%                  | -                | 83%        |
| KMS40-24                    | V1 | 24V            | 16.7mA          | 1.67A           | 40W   | ±2%                 | 0.5%            | 1%                  | -                | 83%        |
| Dual Output                 |    |                |                 |                 |       |                     |                 |                     |                  |            |
| KMD15-55                    | V1 | +5V            | 150mA           | 1.5A            | 15W   | ±2%                 | 0.5%            | 1%                  | 5%               | 78%        |
|                             | V2 | -5V            | 150mA           | 1.5A            |       | ±2%                 | 0.5%            | 1%                  | 5%               |            |
| KMD40-55                    | V1 | +5V            | 400mA           | 4A              | 40W   | ±2%                 | 0.5%            | 1%                  | 5%               | 79%        |
|                             | V2 | -5V            | 400mA           | 4A              |       | ±2%                 | 0.5%            | 1%                  | 5%               |            |
| KMD40-512                   | V1 | 5V(2)          | 1250mA          | 5A              | 40W   | ±3%                 | 0.5%            | 2%                  | 1%               | 80%        |
|                             | V2 | 12V(2)         | 312mA           | 1.25A           |       | ±5%                 | 5.0%            | 6%                  | 7%               |            |
| KMD40-524                   | V1 | 5V(2)          | 1250mA          | 5A              | 40W   | ±3%                 | 0.5%            | 2%                  | 1%               | 80%        |
|                             | V2 | 24V(2)         | 156mA           | 0.625A          |       | ±5%                 | 5.0%            | 6%                  | 7%               |            |
| KMD15-1212                  | V1 | +12V           | 62.5mA          | 0.625A          | 15W   | ±2%                 | 0.5%            | 1%                  | 3%               | 80%        |
|                             | V2 | -12V           | 62.5mA          | 0.625A          |       | ±2%                 | 0.5%            | 1%                  | 3%               |            |
| KMD40-1212                  | V1 | +12V           | 166mA           | 1.66A           | 40W   | ±2%                 | 0.5%            | 1%                  | 5%               | 83%        |
|                             | V2 | -12V           | 166mA           | 1.66A           |       | ±2%                 | 0.5%            | 1%                  | 5%               |            |
| KMD15-1515                  | V1 | +15V           | 50mA            | 0.5A            | 15W   | ±2%                 | 0.5%            | 1%                  | 3%               | 81%        |
|                             | V2 | -15V           | 50mA            | 0.5A            |       | ±2%                 | 0.5%            | 1%                  | 3%               |            |
| KMD40-1515                  | V1 | +15V           | 133mA           | 1.33A           | 40W   | ±2%                 | 0.5%            | 1%                  | 5%               | 81%        |
|                             | V2 | -15V           | 133mA           | 1.33A           |       | ±2%                 | 0.5%            | 1%                  | 5%               |            |
| Triple Output               |    |                |                 |                 |       |                     |                 |                     |                  |            |
| KMT15-51212                 | V1 | 5V(3)          | 500mA           | 2A              | 15W   | ±2%                 | 0.5%            | 1%                  | 1%               | 78%        |
|                             | V2 | +12V           | 50mA            | 0.2A            |       | ±3%                 | 2.0%            | 5%                  | 5%               |            |
|                             | V3 | -12V           | 50mA            | 0.2A            |       | ±3%                 | 2.0%            | 5%                  | 5%               |            |
| KMT40-51212                 | V1 | 5V(3)          | 1250mA          | 5A              | 40W   | ±3%                 | 0.5%            | 3%                  | 3%               | 80%        |
|                             | V2 | +12V           | 150mA           | 0.6A            |       | ±5%                 | 5.0%            | 7%                  | 7%               |            |
|                             | V3 | -12V           | 150mA           | 0.6A            |       | ±5%                 | 5.0%            | 7%                  | 7%               |            |
| KMT15-51515                 | V1 | 5V(3)          | 500mA           | 2A              | 15W   | ±2%                 | 0.5%            | 1%                  | 1%               | 78%        |
|                             | V2 | +15V           | 37.5mA          | 0.15A           |       | ±3%                 | 2.0%            | 5%                  | 5%               |            |
|                             | V3 | -15V           | 37.5mA          | 0.15A           |       | ±3%                 | 2.0%            | 5%                  | 5%               |            |
| KMT40-51515                 | V1 | 5V(3)          | 1250mA          | 5A              | 40W   | ±3%                 | 0.5%            | 3%                  | 3%               | 80%        |
|                             | V2 | +15V           | 125mA           | 0.5A            |       | ±5%                 | 5.0%            | 7%                  | 7%               |            |
|                             | V3 | -15V           | 125mA           | 0.5A            |       | ±5%                 | 5.0%            | 7%                  | 7%               |            |

## KM15 Outline Drawings



- (1) Symmetrical loading, from minimum to maximum load
- (2) Output V1 is isolated from output V2
- (3) Output V1 is isolated from outputs V2 & V3

## KM40 Outline Drawings



For Additional Information, please visit  
[us.tdk-lambda.com/lp/products/km-series.htm](http://us.tdk-lambda.com/lp/products/km-series.htm)

