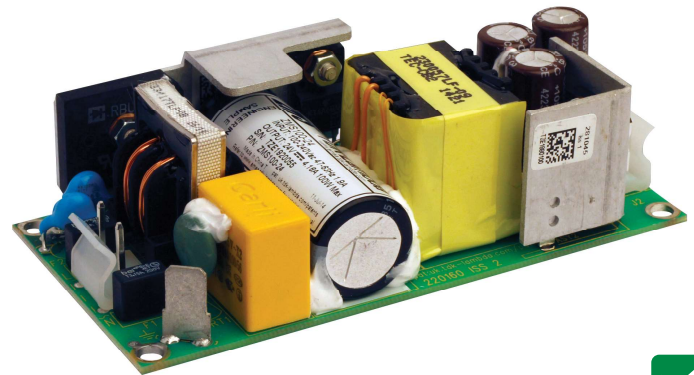


## 100W, 2 x 4" AC-DC Power Supplies

### Features

- ◆ 80W Convection, 100W with Forced Air
- ◆ Long e-cap lifetime
- ◆ Compact 2 x 4 inch footprint
- ◆ Medical approval with 2 x MoPP isolation
- ◆ Suitable for Class I and Class II installations
- ◆ Ceramic start-up cap



### Key Market Segments & Applications



### Specifications <sup>(1)</sup>

| Model                                         |     | ZMS100                                                                                                                                                                                                                                                                                |
|-----------------------------------------------|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| AC Input Voltage range (2) (4)                | -   | 85 - 264VAC (47-63Hz) 120 - 350VDC                                                                                                                                                                                                                                                    |
| Input Fusing                                  | -   | Line and neutral                                                                                                                                                                                                                                                                      |
| Input Current (Typ) (230V/115VAC)             | A   | 1.0 / 2.0                                                                                                                                                                                                                                                                             |
| Inrush Current - cold start                   | A   | <40 (max at 264Vac input)                                                                                                                                                                                                                                                             |
| Harmonic Compliance                           | -   | Compliant to EN/IEC61000-3-2 class A Temperature Coefficient - <0.02% / °C                                                                                                                                                                                                            |
| Typical Hold Up Time at 80W load, 115/230VAC  | ms  | 22 / 108                                                                                                                                                                                                                                                                              |
| Typical Hold Up Time at 100W load, 115/230VAC | ms  | 16 / 84 (see graphs for more detail)                                                                                                                                                                                                                                                  |
| Leakage Current                               | µA  | <100µA at 100V 60Hz input, <250µA at 230V 50Hz                                                                                                                                                                                                                                        |
| Touch Current (enclosure leakage)             | µA  | <100 µA                                                                                                                                                                                                                                                                               |
| Cooling                                       | -   | 80W with convection cooling, 100W max. with forced air cooling (see airflow rate graphs)                                                                                                                                                                                              |
| Efficiency                                    | -   | Up to 90% (see efficiency curves)                                                                                                                                                                                                                                                     |
| Operating Temperature                         | °C  | -20°C to +70°C, derate linearly to 50% load from 50°C to 70°C                                                                                                                                                                                                                         |
| Storage Temperature                           | °C  | -40°C to +85°C                                                                                                                                                                                                                                                                        |
| Operational Altitude                          | -   | 5000m                                                                                                                                                                                                                                                                                 |
| Overcurrent Protection                        | -   | hiccup (auto recovery)                                                                                                                                                                                                                                                                |
| Overvoltage Protection                        | -   | Latching (unit shutdown, recycle mains to restart)                                                                                                                                                                                                                                    |
| No Load Input Power at 230VAC                 | W   | <0.5                                                                                                                                                                                                                                                                                  |
| Average Active Efficiency                     | %   | >87                                                                                                                                                                                                                                                                                   |
| Humidity (non condensing)                     | RH  | Operating and storage : 5 - 95% (non-condensing)                                                                                                                                                                                                                                      |
| Withstand Voltage                             | -   | Input to output 4kVac 2x MoPP, 1.5kVac input to ground 1x MoPP, 1.5kVac output to ground 1 x MoPP                                                                                                                                                                                     |
| Isolation Resistance                          | -   | >100MΩ at 25°C & 70%RH                                                                                                                                                                                                                                                                |
| Isolation Class (3)                           | -   | Construction suitable for Class II installations                                                                                                                                                                                                                                      |
| Vibration                                     | -   | 10 to 500Hz at 2G, EN60068-2-6 19,6m/s <sup>2</sup> Constant, X, Y, Z 1 hour each.                                                                                                                                                                                                    |
| Shock                                         | -   | 30G EN60068-2-27, -47, MIL-STD-810E                                                                                                                                                                                                                                                   |
| Approvals                                     | -   | IEC/EN/UL/CSA 62368-1, 60950-1 and 60601-1, ANSI/AAMI ES 60601-1, CE Mark.<br>Designed to meet IEC/EN/UL/CSA 61010-1:2010.<br>ZMS100-12, 15 and 24 are type tested to EN 60335-1                                                                                                      |
| Conducted & Radiated EMI                      | -   | EN55011 / EN55022 level B conducted, level A radiated                                                                                                                                                                                                                                 |
| Immunity (5)                                  | -   | EN 61000-4-2 (Level 3 criteria A) -3 (Level 3 criteria A) -4 (Level 3 criteria A),<br>-5 (Level 3 criteria A), -6 (Level 3 criteria A), -8 (Level 3 criteria A), -11(class 3), -12(level 3)<br>Meets the requirements of EN60601-1-2:2007 (as applicable to a component power supply) |
| Weight (Typ)                                  | g   | 150                                                                                                                                                                                                                                                                                   |
| Size (W x L x H)                              | mm  | 50.8 x 101.6 x 31.9 (2" x 4" x 1.25")                                                                                                                                                                                                                                                 |
| Warranty                                      | yrs | 3                                                                                                                                                                                                                                                                                     |
| Connectivity                                  | -   | Molex as standard with separate ground faston<br>Input Molex 10-63-4027, output Molex 09-65-2048                                                                                                                                                                                      |

- Note: 1. Specification parameters apply at 25°C ambient temperature unless stated otherwise.  
2. For 12V & 15V unit derate from 100% at 100V to 90% at 90V and to 80% at 85V, for 24V, 36V, & 48V unit derate from 100% at 90V to 90% at 85V. (convection and forced air ratings) .  
3. ZMS100 uses Y1 capacitors to earth.  
4. Consult Sales Office for use under DC Input conditions  
5. Criteria B for dips and interruptions, contact technical support for full details.

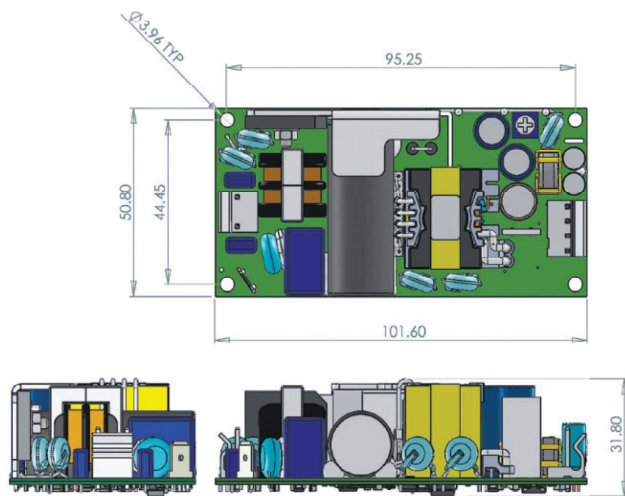
## Model Selector

| Model     | Nominal Output Voltage (V) | Output Adjust Range (V) | Maximum Current Convection (A) | Maximum Current Forced Air (A) | Maximum Output Power Convection (W) | Maximum Output power Forced Air (W) | Ripple (6) and noise (mv pk-pk) | Load Reg from 0 - full load (mv) | Line Reg from 85-264Vac (mv) |
|-----------|----------------------------|-------------------------|--------------------------------|--------------------------------|-------------------------------------|-------------------------------------|---------------------------------|----------------------------------|------------------------------|
| ZMS100-12 | 12                         | 11.4 to 13.2            | 6.7                            | 8.4                            | 80.4                                | 100.8                               | 120                             | 120                              | 60                           |
| ZMS100-15 | 15                         | 14.25 to 16.5           | 5.4                            | 6.7                            | 81.0                                | 100.5                               | 150                             | 150                              | 75                           |
| ZMS100-24 | 24                         | 22.8 to 26.4            | 3.4                            | 4.2                            | 81.6                                | 100.8                               | 240                             | 240                              | 120                          |
| ZMS100-36 | 36                         | 34.2 to 39.6            | 2.25                           | 2.8                            | 81.0                                | 100.8                               | 360                             | 360                              | 180                          |
| ZMS100-48 | 48                         | 45.6 to 52.8            | 1.67                           | 2.1                            | 80.2                                | 100.8                               | 480                             | 480                              | 240                          |

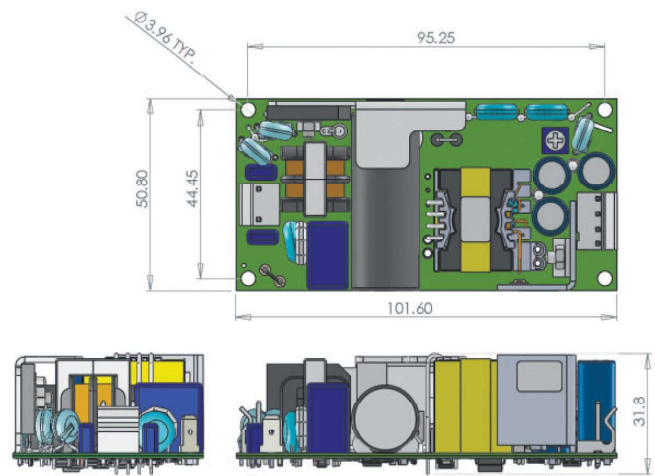
Note: 6. At 115VAC input 25°C

## Outline Drawing

ZMS100 12 - 15V Series



ZMS100 24 - 48V Series



## ZMS100 Series Pinout

| J1              | J2             | J3             |
|-----------------|----------------|----------------|
| PIN Connection  | PIN Connection | PIN Connection |
| 1 Live          | 1 +VE          | 1 Earth        |
| 2 Not Connected | 2 +VE          |                |
| 3 Neutral       | 3 0V           |                |
|                 | 4 0V           |                |

## ZMS100 Series Mating Parts

| Connector | Housing               | Crimp Pin  | Manufacturer |
|-----------|-----------------------|------------|--------------|
| J1        | 09-50-1031            | 08-70-1030 | Molex        |
| J2        | 09-50-1041            | 08-70-1030 | Molex        |
| J3        | 22-18AWG - 2-52047-2  | -          | Tyco         |
| (Faston)  | 16-14AWG - 3-520408-2 |            |              |

## Other TDK-Lambda AC-DC Products

|           |                                   |
|-----------|-----------------------------------|
| ZPSA20-60 | 20 to 60W single output           |
| NV175     | 175W, 3x5", 1-5 outputs           |
| ZWS       | 5 to 240W, single output          |
| KPSA      | 5 to 15W, pcb mount               |
| ZPD, ZPT  | 40W, 2x4" dual and triple outputs |

For Additional Information, please visit  
<https://product.tdk.com/en/power/>



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