

## 4 to 15W AC-DC Board Mount Power Supplies

### Features

- ◆ Low profile
- ◆ Smaller footprint
- ◆ PC board Mountable
- ◆ Low Cost
- ◆ UL Class II Approved
- ◆ Wide input range
- ◆ No external components needed



### Key Market Segments & Applications



| Specifications                  |       | KPS-5                                                                         | KPS-10            | KPS-15             |
|---------------------------------|-------|-------------------------------------------------------------------------------|-------------------|--------------------|
| Input Voltage range             | -     | 85 - 264VAC (47 - 440Hz) or 110 - 370VDC*                                     |                   |                    |
| Inrush Current                  | A     | 30A at 240VAC, cold start at 25°C                                             |                   |                    |
| Input Current (115/230VAC)      | A     | 0.13 / 0.07                                                                   | 0.27 / 0.13       | 0.4 / 0.2          |
| Leakage Current                 | mA    | 0.25mA maximum                                                                |                   |                    |
| Temperature Coefficient         | -     | ±0.05%/°C                                                                     |                   |                    |
| Voltage Accuracy                | -     | ±1%                                                                           |                   |                    |
| Minimum Load                    | A     | None                                                                          |                   |                    |
| Load Regulation                 | -     | ±1% (10% to 100% load)                                                        |                   |                    |
| Line Regulation                 | -     | ±0.5% (100-240VAC line change)                                                |                   |                    |
| Ripple & Noise (1)              | mV    | 1% or 50mV whichever is greater                                               |                   |                    |
| Short Circuit Protection        | -     | Continuous - hiccup mode                                                      |                   |                    |
| Overvoltage Protection          | V     | 130-150%, Zener clamp                                                         |                   |                    |
| Efficiency (typical)            | %     | 72%                                                                           | 75%               | 75%                |
| Hold Up Time (Typ@115VAC input) | ms    | 8ms at full load                                                              |                   |                    |
| LED Indicator                   | -     | Green LED = OK                                                                |                   |                    |
| Operating Temperature (2)       | °C    | Convection cooling: 0 to +70°C, derating linearly to 25% load from 40 to 70°C |                   |                    |
| Storage Temperature             | °C    | -20 to +85°C                                                                  |                   |                    |
| Humidity (non condensing)       | -     | 10 - 95% RH                                                                   |                   |                    |
| Cooling                         | -     | Convection or forced air                                                      |                   |                    |
| Withstand Voltage               | -     | Input to Output 3kVAC                                                         |                   |                    |
| Vibration (non operating)       | -     | 23.52m/s <sup>2</sup> (10 - 55Hz: constant sweep 1 min X, Y, Z for 1 hour)    |                   |                    |
| Shock                           | -     | < 196.1 m/s <sup>2</sup> (20G)                                                |                   |                    |
| Safety Agency Approvals         | -     | UL60950-1, CSA60950-1, EN60950-1, Class II, CE Mark                           |                   |                    |
| Conducted & Radiated EMI        | -     | EN55022-B, FCC Class B                                                        |                   |                    |
| Immunity                        | -     | EN61000-4 -2, -3, -4, -5, -6                                                  |                   |                    |
| Weight (Typ)                    | g(oz) | 29g (1oz)                                                                     | 60g (2oz)         | 80g (2.8oz)        |
| Size (WxLxH; H above pcb)       | in.   | 1.28 x 2.17 x 0.83                                                            | 1.55 x 2.40 x 0.9 | 1.77 x 2.75 x 0.79 |
| Warranty                        | yr    | One Year                                                                      |                   |                    |

Notes:

\*Safety certified for AC input only

(1) Measured with 0.1uF ceramic & 10uF electrolytic at 20MHz BW

(2) 20CFM forced air ratings:

KPSA5: 0 - 70°C full load

KPSA10: 0 - 70°C full load (3.3V & 5V models derate linearly to 80% load from 50 to 70°C)

KPSA15: 0 - 70°C derate linearly to 80% load from 50 to 70°C

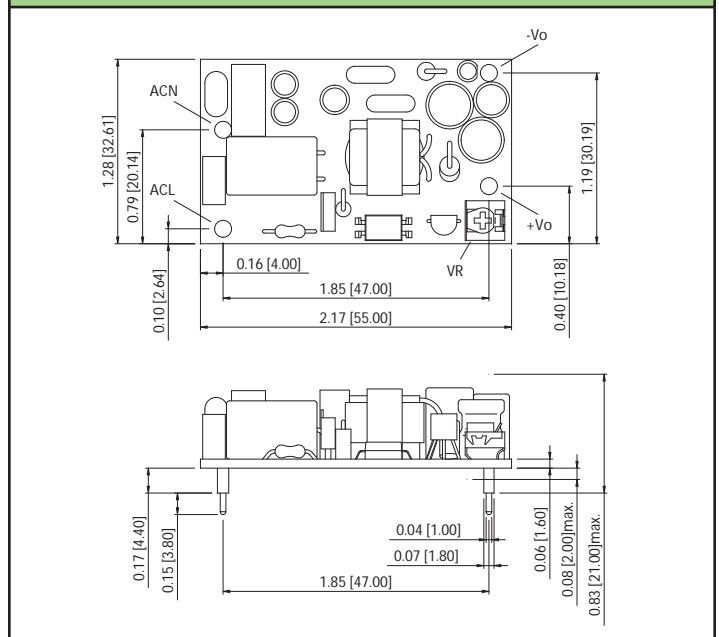
## Model Selector (other voltages available)

| Model      | Output Voltage (V) | Maximum Output (A) | Peak Load (A)(3) | Output Pwr (W) |
|------------|--------------------|--------------------|------------------|----------------|
| KPSA5-3R3  | 3.3                | 1.25               | -                | 4.1            |
| KPSA5-5    | 5                  | 1.0                | -                | 5.0            |
| KPSA5-12   | 12                 | 0.42               | -                | 5.0            |
| KPSA5-15   | 15                 | 0.33               | -                | 5.0            |
| KPSA5-24   | 24                 | 0.23               | -                | 5.5            |
| KPSA10-3R3 | 3.3                | 2.5                | 3.8              | 8.3            |
| KPSA10-5   | 5                  | 2.0                | 2.8              | 10.0           |
| KPSA10-12  | 12                 | 0.84               | 1.2              | 10.1           |
| KPSA10-15  | 15                 | 0.67               | 1.0              | 10.1           |
| KPSA10-24  | 24                 | 0.42               | 0.65             | 10.1           |
| KPSA15-3R3 | 3.3                | 3.0                | 4.5              | 9.9            |
| KPSA15-5   | 5                  | 3.0                | 4.5              | 15.0           |
| KPSA15-12  | 12                 | 1.25               | 1.8              | 15.0           |
| KPSA15-15  | 15                 | 1.0                | 1.5              | 15.0           |
| KPSA15-24  | 24                 | 0.63               | 0.95             | 15.1           |

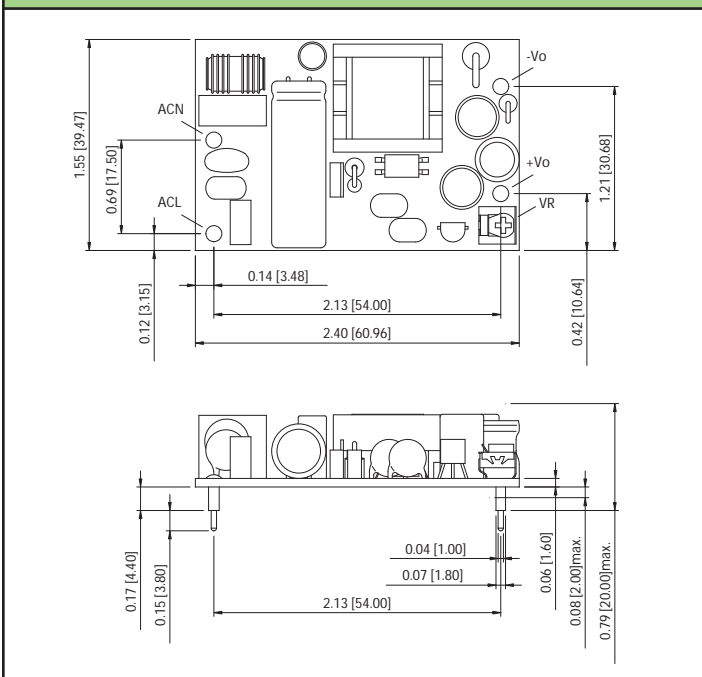
### Notes

(3) Average not to exceed max power, <30s, 10% duty cycle

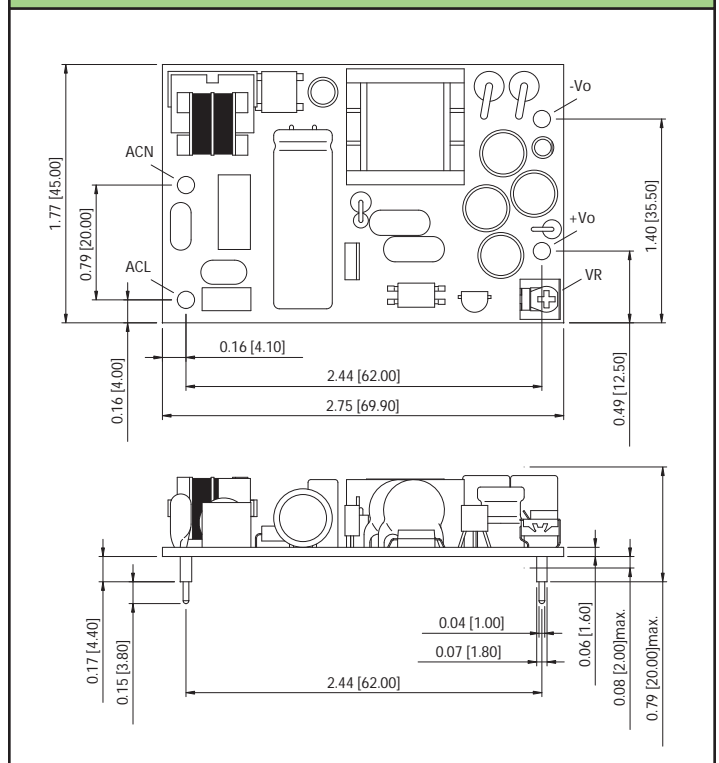
## KPSA5 Outline Drawing



## KPSA10 Outline Drawing



## KPSA15 Outline Drawing



## Other Industrial Products

|      |                             |
|------|-----------------------------|
| ZPSA | 20W to 60W                  |
| KM   | 15 to 40W pcb mount medical |
| ZWS  | 5 to 240W, single output    |

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

