

## Single Output General Purpose Power Supplies

### Features

- ◆ Very low cost
- ◆ 25W to 150W
- ◆ Small size
- ◆ 115VAC or 230VAC input
- ◆ Withstands 300VAC surges (5s)
- ◆ Three year warranty



### Key Market Segments & Applications



| Specifications                      |     | LS25   | LS35            | LS50            | LS75            | LS100           | LS150           |                      |
|-------------------------------------|-----|--|-----------------|-----------------|-----------------|-----------------|-----------------|----------------------|
| AC Input Voltage (300VAC for 5s)    | VAC | 88 - 264VAC (See note (2) for LS100)   |                 |                 |                 |                 |                 | 88-132/176-264VAC(1) |
| Input Frequency                     | Hz  | 47 - 63Hz  |                 |                 |                 |                 |                 |                      |
| DC Input Voltage                    | VDC | 125 - 373VDC   |                 |                 |                 |                 |                 | 248 - 273VDC         |
| Inrush Current (230VAC, cold start) | A   | 30   | 40              | 40              | 40              | 60              | 40              |                      |
| Power Factor                        | -   | Meets EN61000-3-2, -3  |                 |                 |                 |                 |                 |                      |
| Input Current (115/230VAC)          | A   | 0.7 / 0.4  | 0.8 / 0.55      | 1.3 / 0.8       | 1.6 / 1.0       | 2.2 / 1.2       | 3.5 / 2         |                      |
| Temperature Coefficient             | -   | <0.02%/°C  |                 |                 |                 |                 |                 |                      |
| Overcurrent Protection              | -   | > 110%   |                 |                 |                 |                 |                 |                      |
| Overvoltage Protection              | V   | 3.3V: 3.8-4.45V, 5V: 5.75-6.75V, 12V: 13.8-16.2V, 15V: 17.25-20.25V, 24V: 27.6-32.4V, 36V: 41.4-48.6V, 48V: 55.2-64.8V |                 |                 |                 |                 |                 |                      |
| Hold Up Time (115 / 230V input)     | ms  | 14 / 80  | 12 / 80         | 14 / 60         | 14 / 60         | 25 / 150        | 20 / 28         |                      |
| Leakage Current (230VAC 60Hz)       | mA  | <1mA   |                 |                 |                 |                 |                 |                      |
| Remote Sense                        | -   | No   |                 |                 |                 |                 |                 |                      |
| LED Indicator                       | -   | Green LED = On   |                 |                 |                 |                 |                 |                      |
| Operating Temperature               | °C  | -25 to +70°C. Derate linearly to 50% load from +50 to +70°C (2)  |                 |                 |                 |                 |                 |                      |
| Storage Temperature                 | °C  | -40 to +85°C   |                 |                 |                 |                 |                 |                      |
| Operating Humidity                  | -   | 20 - 90% RH (non condensing)   |                 |                 |                 |                 |                 |                      |
| Storage Humidity                    | -   | 10 - 95% RH (non condensing)   |                 |                 |                 |                 |                 |                      |
| Cooling                             | -   | Convection   |                 |                 |                 |                 |                 |                      |
| Withstand Voltage                   | -   | Input to Ground 1.5kVAC, Input to Output 3kVAC, Output to Ground 500VAC for 1 min.                                     |                 |                 |                 |                 |                 |                      |
| Isolation Resistance                | -   | >100M at 25C & 70%RH, Output to Ground 500VDC  |                 |                 |                 |                 |                 |                      |
| Vibration (non operating)           | -   | 10 - 55Hz: 19.6m/s <sup>2</sup> constant sweep 1 min X, Y, Z for 1 hour  |                 |                 |                 |                 |                 |                      |
| Shock                               | -   | < 196.1 m/s <sup>2</sup> (20G)   |                 |                 |                 |                 |                 |                      |
| Immunity                            | -   | IEC61000-4-2, -3, -4, -5, -6, -8, -11  |                 |                 |                 |                 |                 |                      |
| Safety Agency Approvals             | -   | UL60950-1, EN60950-1, IEC60950-1, CE Mark  |                 |                 |                 |                 |                 |                      |
| Conducted & Radiated EMI            | -   | EN55011/EN55022-B, FCC-B   |                 |                 |                 |                 |                 |                      |
| MTBF (MIL-HDBK-217F)                | hrs | 906,997  | 706,464         | 712,890         | 648,786         | 545,375         | 505,393         |                      |
| Weight (Typ)                        | g   | 170  | 270             | 350             | 410             | 600             | 700             |                      |
| Size (LxWxH)                        | in  | 3.1 x 2.0 x 1.1  | 3.9 x 3.2 x 1.4 | 3.9 x 3.8 x 1.4 | 5.1 x 3.8 x 1.5 | 6.3 x 3.8 x 1.5 | 7.8 x 3.9 x 1.5 |                      |
| Warranty                            | yrs | Three Years  |                 |                 |                 |                 |                 |                      |

#### Notes:

- (1) Switch selectable for 115 or 230VAC
- (2)
 

|                              |  |
|------------------------------|--|
| LS25-3                       | Derate linearly to 60% load from +40 to +70°C.   |
| LS50, LS75-3 & -5            | Derate linearly to 70% load from +50 to +70°C.   |
| LS25-5 to 48, LS75-12 to 48  | Derate linearly to 60% load from +50 to +70°C.   |
| LS100-3 & -5                 | Derate linearly to 60% load from +45 to +70°C. Derate linearly to 80% load from 115V to 88VAC input. |
| LS100-12, -15, -24, -36, -48 | Derate linearly to 60% load from +50 to +70°C. Derate linearly to 80% load from 115V to 88VAC input. |
| LS150-3 & -5,                | Derate linearly to 50% load from +40 to +70°C.   |
| LS150-12, -15, -24, -36, -48 | Derate linearly to 70% load from +50 to +70°C.   |

| Output Ratings |         |                  |                 |               |               |                   |                    |
|----------------|---------|------------------|-----------------|---------------|---------------|-------------------|--------------------|
| Model          | Voltage | Adjust Range (V) | Max Current (A) | Load Reg (mV) | Line Reg (mV) | Ripple Noise (mV) | Efficiency (typ) % |
| LS25-3.3       | 3.3V    | 2.85 - 3.6       | 6.0             | 40            | 20            | 80                | 75                 |
| LS25-5         | 5V      | 4.5 - 5.5        | 5.0             | 40            | 20            | 80                | 79                 |
| LS25-12        | 12V     | 10.8 - 13.2      | 2.1             | 96            | 48            | 120               | 83                 |
| LS25-15        | 15V     | 13.5 - 16.5      | 1.7             | 120           | 60            | 120               | 83                 |
| LS25-24        | 24V     | 22 - 27.6        | 1.1             | 192           | 96            | 120               | 84                 |
| LS25-36        | 36V     | 32 - 40          | 0.75            | 288           | 144           | 150               | 84                 |
| LS25-48        | 48V     | 42 - 54          | 0.57            | 384           | 192           | 200               | 85                 |
| LS35-3.3       | 3.3V    | 2.85 - 3.6       | 7.0             | 40            | 20            | 80                | 75                 |
| LS35-5         | 5V      | 4.5 - 5.5        | 7.0             | 40            | 20            | 80                | 78                 |
| LS35-12        | 12V     | 10.8 - 13.2      | 3.0             | 96            | 48            | 120               | 82                 |
| LS35-15        | 15V     | 13.5 - 16.5      | 2.4             | 120           | 60            | 120               | 83                 |
| LS35-24        | 24V     | 22 - 27.6        | 1.5             | 192           | 96            | 120               | 84                 |
| LS35-36        | 36V     | 32 - 40          | 1.0             | 288           | 144           | 150               | 84                 |
| LS35-48        | 48V     | 42 - 54          | 0.8             | 384           | 192           | 200               | 84                 |
| LS50-3.3       | 3.3V    | 3.0 - 3.6        | 10.0            | 40            | 20            | 80                | 75                 |
| LS50-5         | 5V      | 4.75 - 5.5       | 10.0            | 40            | 20            | 80                | 80                 |
| LS50-12        | 12V     | 10.8 - 13.2      | 4.2             | 96            | 48            | 120               | 84                 |
| LS50-15        | 15V     | 13.5 - 16.5      | 3.4             | 120           | 60            | 120               | 85                 |
| LS50-24        | 24V     | 22 - 27.2        | 2.2             | 192           | 96            | 120               | 86                 |
| LS50-36        | 36V     | 32 - 40          | 1.4             | 288           | 144           | 150               | 86                 |
| LS50-48        | 48V     | 42 - 54          | 1.1             | 384           | 192           | 200               | 86                 |
| LS75-3.3       | 3.3V    | 3.0 - 3.6        | 15.0            | 40            | 20            | 80                | 75                 |
| LS75-5         | 5V      | 4.75 - 5.5       | 12.0            | 40            | 20            | 80                | 79                 |
| LS75-12        | 12V     | 10.8 - 13.2      | 6.0             | 96            | 48            | 120               | 84                 |
| LS75-15        | 15V     | 13.5 - 16.5      | 5.0             | 120           | 60            | 120               | 85                 |
| LS75-24        | 24V     | 22 - 27.2        | 3.2             | 192           | 96            | 120               | 86                 |
| LS75-36        | 36V     | 32 - 40          | 2.1             | 288           | 144           | 150               | 86                 |
| LS75-48        | 48V     | 42 - 54          | 1.6             | 384           | 192           | 200               | 87                 |
| LS100-3.3      | 3.3V    | 3.0 - 3.6        | 20.0            | 40            | 20            | 80                | 75                 |
| LS100-5        | 5V      | 4.75 - 5.5       | 16.0            | 40            | 25            | 80                | 79                 |
| LS100-12       | 12V     | 10.8 - 13.2      | 8.5             | 96            | 48            | 120               | 82                 |
| LS100-15       | 15V     | 13.5 - 16.5      | 7.0             | 120           | 60            | 120               | 84                 |
| LS100-24       | 24V     | 22 - 27.2        | 4.5             | 192           | 96            | 120               | 86                 |
| LS100-36       | 36V     | 32 - 40          | 3.0             | 288           | 144           | 150               | 86                 |
| LS100-48       | 48V     | 42 - 54          | 2.3             | 384           | 192           | 200               | 86                 |
| LS150-3.3      | 3.3V    | 3.0 - 3.6        | 30.0            | 40            | 20            | 80                | 75                 |
| LS150-5        | 5V      | 4.75 - 5.5       | 26.0            | 40            | 20            | 80                | 79                 |
| LS150-12       | 12V     | 10.8 - 13.2      | 12.5            | 96            | 48            | 120               | 83                 |
| LS150-15       | 15V     | 13.5 - 16.5      | 10.0            | 120           | 60            | 120               | 85                 |
| LS150-24       | 24V     | 22 - 27.2        | 6.5             | 192           | 96            | 120               | 86                 |
| LS150-36       | 36V     | 32 - 40          | 4.3             | 288           | 144           | 150               | 87                 |
| LS150-48       | 48V     | 42 - 54          | 3.3             | 384           | 192           | 200               | 87                 |

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

