EN-50 series

50W LED Constant voltage Switching Power Supply with PFC function

■ Features:

• European AC Input

• Protections: Short circuit / Over current / Over voltage / Over temperature

• Cooling by free air convection

• Built-in active PFC function

• Isolation class II

• Extremely short case size





| © ELECTRICAL SPECIFICATION | | | | | | |
|----------------------------------|-----|--|----------------------|--|--|--|
| MODEL | | EN-50-12 | EN-50-24 | | | |
| OUTPUT | | | | | | |
| Rated Voltage | | 12V | 24V | | | |
| Rated Current | | 4.2A | 2.08A | | | |
| Rated Power | | 50.4W | 49.92W | | | |
| Power Range | | 0 ÷ 50.4W | 0 ÷ 49.92W | | | |
| Line Reglation | | ± 1% | | | | |
| Load Reglation | | ± 2% | | | | |
| Voltage Tolerance | [2] | ± 5% | | | | |
| Ripple & Noise (max.) | [3] | 180mV _{P-P} | 240mV _{P-P} | | | |
| Setup, Rise, Holdup time | [4] | 500ms, 30ms, 15ms | | | | |
| INPUT | | | | | | |
| Voltage Range | | 180 ÷ 264VAC | | | | |
| Frequency Range | | 47 ÷ 63Hz | | | | |
| Power Factor (typ.) | | PF > 0.9 / 230VAC at full load | | | | |
| Efficiency (typ.) | | 85% | 85% | | | |
| AC current (typ.) | | 0.3A / 230VAC | | | | |
| Inrush current (max.) | | 60A / 230VAC(25°C) | | | | |
| No Load Power Consumption (max.) | | 0.5W | | | | |
| PROTECTIONS | | | | | | |
| Over Current | | Range: 110 ÷ 140% | | | | |
| over current | | Type: hiccup mode. Recovers automatically after fault condition is removed. | | | | |
| Short Circuit | | Type: hiccup mode. Recovers automatically after fault condition is removed. | | | | |
| Over voltage | | 15 ÷ 18VDC | 30 ÷ 36VDC | | | |
| | | Type: shut down output voltage. Re-power on to recovery. | | | | |
| Over temperature | | Range: 140°C ± 10°C (detect by main IC) | | | | |
| | | Type: shut down output voltage. Recovers automatically after fault condition is removed. | | | | |

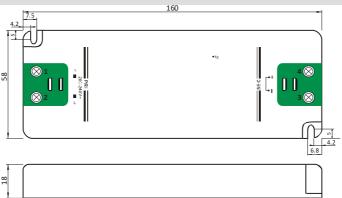
EN-50 series

50W LED Constant voltage Switching Power Supply with PFC function

| WORKING ENVIRONMENT | | | | | |
|----------------------------------|--|---------------------------|--|--|--|
| Working Temperature | -20°C ÷ 45°C | | | | |
| Working Humidity | 20 ÷ 95% RH non-condensing | | | | |
| Storage Temperature and Humidity | -40°C ÷ 80°C, 10 ÷ 95% RH non-condensing | | | | |
| Temperature Coefficient | ± 0.05% / °C (-10°C ÷ 45°C) | | | | |
| Vibration | 10 ÷ 500Hz, 2G, 10min / cycle, period 30min. each along X, Y, Z axes | | | | |
| SAFETY AND EMC REGULATIONS | | | | | |
| Safet Standards | Compliance to EN61347-1, EN61347-2-13 | | | | |
| Withstand Voltage | IN/OUT: 5.3kVDC/1min | | | | |
| Isolation Resistance | IN/OUT: 50MΩ/500VDC/25°C/70% | | | | |
| EMC Emission | Compliance to EN55015 | | | | |
| EMC Immunity | Compliance to EN61547; EN61000-4-2, -3, -4, -5, -6, -8, -11; EN55024 | | | | |
| Harmonic Current | Compliance to EN61000-3-3; EN61000-3-2 class C (≥ 100% load) | | | | |
| OTHERS | | | | | |
| Dimensions | 160 x 58 x 18mm (L x W x H) | | | | |
| Weight and Packing | 0.16kg; 50pcs./ctn; ctn dimensions: 30 x 20.5 x 16cm | | | | |
| EAN Code | 5 9 0 2 1 3 5 1 1 7 9 0 3 | 5 9 0 2 1 3 5 1 1 9 2 3 5 | | | |

- $1. \ All \ parameters \ NOT \ specially \ mentioned \ are \ measured \ at \ 230 VAC \ input, \ rated \ load \ and \ 25^{\circ}C \ of \ ambient \ temperature.$
- 2. Tolerance incudes set up tolerance, line regulation and load regulation.
- 3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a $0.1\mu F$ i $47\mu F$ parallel capacitor.
- 4. Setup and rise time is measured from 0 to 90% rated output voltage.
- 5. Power supply is considered as a component that will be operated in combination with final equipment. Since EMC performance will be affected by the complete installation, the final equipment must be re-qualify to comply with EMC Directives.

MECHANICAL SPECIFICATION



| PIN ASSIGNMENT | | | | | | | | |
|----------------|-------------|-----|----------------------------|--|--|--|--|--|
| No. | Assignment | No. | Assignment | | | | | |
| 1 | Input: AC/N | 3 | Output: U _{OUT} - | | | | | |
| 2 | Input: AC/L | 4 | Output: U _{OUT} + | | | | | |