

## Features

- Input Voltage 90~264V AC
- Cooling by free air convection
- Efficiency up to 89%
- Protection: OLP, OVP, SCP
- 3 Years Warranty



## 56YEL50-x-RS AC-DC PSU Series

50W Enclosed AC/DC Power Supply (PSU)



The 56YEL50-x-RS Series is a reliable and efficient 50W Enclosed AC/DC Power Supply. Designed for use in applications such as telecoms, computing and multimedia systems. This series is supplied with a Screw Terminal Block input connection and supports input voltages of 90~264V AC 47~63Hz.

## Models

| Model         | Voltage (V)<br>DC | Rated<br>Current | Rated<br>Power | %<br>Efficiency | Voltage<br>range | Ripple and<br>Noise mVp- |
|---------------|-------------------|------------------|----------------|-----------------|------------------|--------------------------|
| 56YEL50-05-RS | 5                 | 10               | 50             | 83              | 4.5~5.5          | 80                       |
| 56YEL50-12-RS | 12                | 4.2              | 50.4           | 83.5            | 11.0~13.8        | 120                      |
| 56YEL50-15-RS | 15                | 3.4              | 51             | 84              | 13.5~18          | 120                      |
| 56YEL50-24-RS | 24                | 2.2              | 52.8           | 86.5            | 21.6~28.8        | 150                      |
| 56YEL50-36-RS | 36                | 1.45             | 52.2           | 88              | 32.4~39.6        | 200                      |
| 56YEL50-48-RS | 48                | 1.1              | 52.8           | 89              | 43.2~52.8        | 200                      |

| Input Specifications |                                     |              |                                     |
|----------------------|-------------------------------------|--------------|-------------------------------------|
| Input Voltage        | 90-264VAC/127 -370VDC               |              |                                     |
| Frequency Range      | 47-63Hz                             |              |                                     |
| AC Current           | 1.2A/115VAC                         | 0.65A/230VAC |                                     |
| Inrush Current       | Cold Start 60A/500us at 230VAC 50Hz |              | Cold Start 30A/500us at 115VAC 50Hz |
| Leakage Current      | <1.5mA/240VAC                       |              |                                     |

| Output Specifications    |                                     |        |                                     |
|--------------------------|-------------------------------------|--------|-------------------------------------|
|                          |                                     |        |                                     |
| Voltage Tolerance        | ±2.0%                               | 5v     |                                     |
|                          | ±1.0%                               | Others |                                     |
| Line Regulation          | ±0.5%                               |        |                                     |
| Load Regulation          | ±2.0%                               | 5v     |                                     |
|                          | ±1.0%                               | Others |                                     |
| Set up Rise Time Hold up | 1.0s,30ms,30ms/230VAC(at full load) |        | 2.0s,30ms,12ms/115VAC(at full load) |

| Protection    |                                                                                                       |
|---------------|-------------------------------------------------------------------------------------------------------|
| Over Load     | 110%-160% Rated Output Power<br>Hiccup mode, recovers automatically after fault condition is removed. |
| Over Voltage  | 115~140%Rated Output Voltage<br>Shut down o/p voltage, re-power on to recover.                        |
| Short Circuit | Hiccup mode, recovers automatically after fault condition is removed                                  |

| Environmental Characteristics |                                                                                                               |
|-------------------------------|---------------------------------------------------------------------------------------------------------------|
| Working Temp                  | -30~+70°C (Refer to "Derating Curve")                                                                         |
| Working Humidity              | 20~95% RH non-condensing                                                                                      |
| Storage Temp., Humidity       | -40~+85°C, 10~95% RH non-condensing                                                                           |
| Temp. Coefficient             | ±0.03%/°C (0~50°C)                                                                                            |
| Vibration                     | Component: 10 ~ 500Hz, 5G 10min./1cycle, 60min. each along X, Y, Z axes                                       |
| Over Voltage Category         | OVC II / According to BS EN/EN61558, BS EN/EN50178,BS EN/EN60664-1,BS EN/EN62477-1;altitude up to 2000 meters |
| MTBF                          | 312.4Khrs min. MIL-HDBK-217F(25°C)                                                                            |
| Safety Protection             | Class I                                                                                                       |

| Safety & EMC         |                                                                                                  |
|----------------------|--------------------------------------------------------------------------------------------------|
| Safety Standards     | UL62368-1, EN62368-1                                                                             |
| Withstand Voltage    | I/P-O/P:3KVAC/1min I/P-FG:2KVAC/1min O/P-FG:0.5KVAC/1min                                         |
| Isolation Resistance | I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH                                                        |
| EMC Emission         | Compliance to BS EN/EN55032 (CISPR32) Class B,BS EN/EN55035 BS EN/EN61000-3-2, BS EN/EN61000-3-3 |
| EMC Immunity         | Compliance to BS EN/EN61000-4-11 Criteria B, BS EN/EN61000-4-2,3,4,5,6,8 Criteria A              |

#### Notes:

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
2. Ripple & noise are measured from peak to peak with band width limit of 20MHz (0.1uf and 47uf /50V parallel capacitor under DC output full load, AC nominal input 25 °C ambient temperature).
3. Derating may be needed under low input voltages. Please check the derating curve for more details.
4. The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. For guidance on how to perform these EMC tests, please refer to "EMI testing of component power supplies."
5. The ambient temperature derating of 5°C/1000m is needed for operating altitude greater than 2000m(6500ft).

#### Dimensions & Weight

|        |                 |
|--------|-----------------|
| Size   | 99 x 82 x 30 mm |
| Weight | 207g/pcs        |

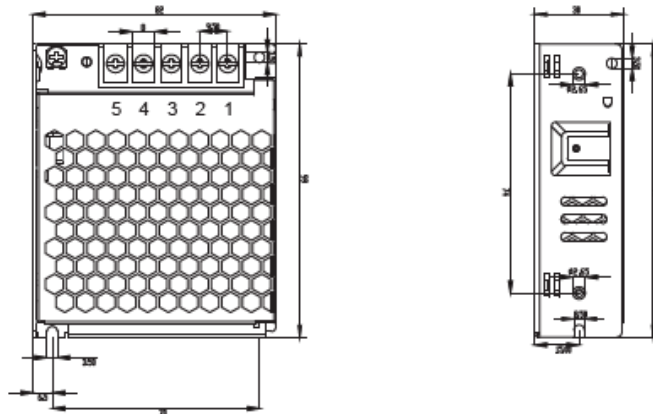
#### Packaging

|                          |                     |
|--------------------------|---------------------|
| Carton Size              | 38 x 34.5 x 20.5 cm |
| Master Carton Quantities | 60pcs/Carton        |

#### Dimensions and Recommended Layout

##### Drawing & Label

(Unit: mm , tolerance:  $\pm 1$ mm)

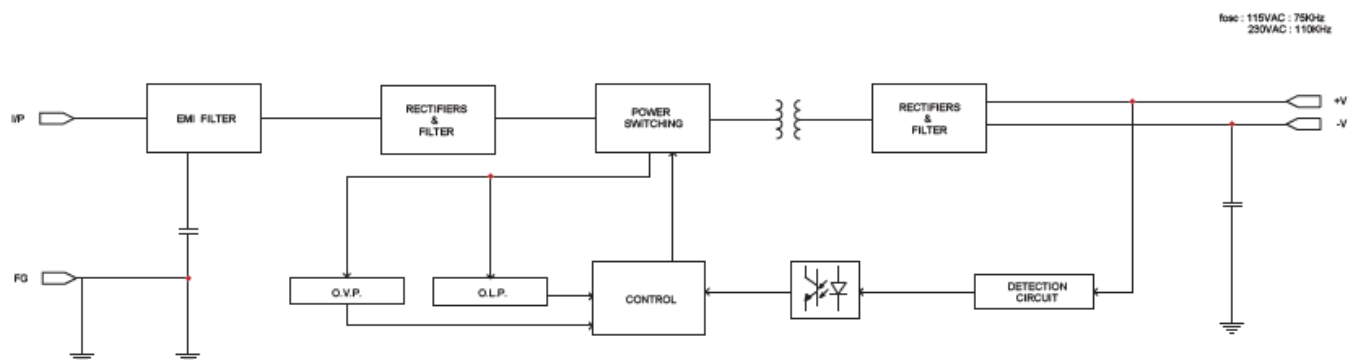


Terminal Pin No. Assignment

| Pin No. | Assignment   |
|---------|--------------|
| 1       | AC/L         |
| 2       | AC/N         |
| 3       | FG           |
| 4       | DC OUTPUT -V |
| 5       | DC OUTPUT +V |

#### Block Diagram

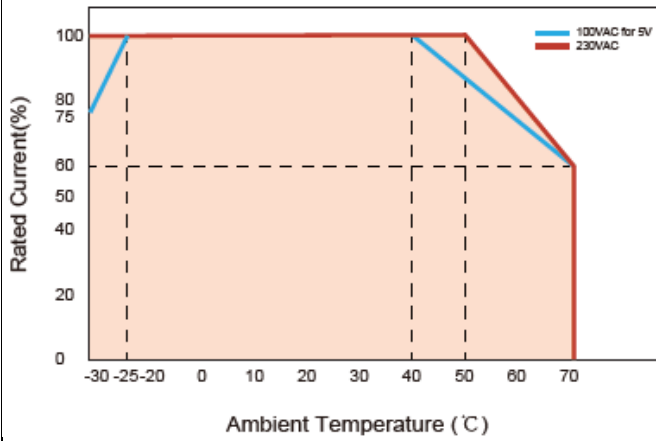
##### Block Diagram



Derating Curve

Engineering Data

Derating Curve



Static Characteristics

