

## AEU65-050

### Description:

The AEU65-050 is a single output power supply. This power supply is designed for a wide variety applications where high reliability is desired, including applications for the industrial and telecommunications markets. Excellent performance specifications are provided, together with compliance to European EMC (EN55022, Class B and EN61000-3-2), and Low Voltage directive (TUV EN60950).

### Specifications (@25C)

#### Input Characteristics:

|                        |                                      |
|------------------------|--------------------------------------|
| Input Voltage:         | 90-264VAC, 127-373VDC                |
| Input Frequency Range: | 47-63Hz                              |
| Input Current:         | 1.6A @ 115VAC, 0.8A @ 230VAC typ.    |
| Max Inrush Current:    | 30A@115VAC, 60A@230VAC at cold start |
| Leakage Current:       | <2.4mA/240Vac                        |

#### Output Characteristics:

|                               |                                                                                    |
|-------------------------------|------------------------------------------------------------------------------------|
| Output Voltage:               | 5.0VDC $\pm$ 2.0%Vdc                                                               |
| Output Current (Convection):  | 0-10A                                                                              |
| Output Power(Convection):     | 50W                                                                                |
| Adjustable Output Range:      | 4.75 – 5.25V. Output voltage can be adjusted at VR51                               |
| Ripple & Noise <sup>1</sup> : | 60mVp-p                                                                            |
| Load Regulation:              | $\pm$ 1.0%                                                                         |
| Line Regulation:              | $\pm$ 0.5%                                                                         |
| Efficiency:                   | 84.0%                                                                              |
| Start-up Time:                | 1000ms/230VAC, 2000ms/115VAC, full load                                            |
| Rise-up Time:                 | 30ms/230VAC, 30ms/115VAC, full load                                                |
| Hold-up Time:                 | 24ms/230VAC, 12ms/115VAC, full load                                                |
| Over Current Protection:      | 110 – 160%. Hiccup mode. Resets automatically once the fault condition is removed. |
| Over Voltage Protection:      | 5.75 – 6.75VDC.                                                                    |

#### General Specifications:

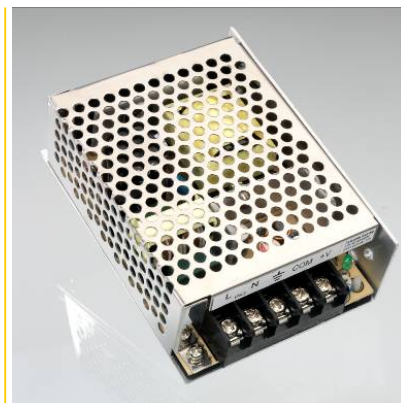
|                       |                                               |
|-----------------------|-----------------------------------------------|
| Dimension (LxWxH):    | 99(3.9) x 75(3.0) x 35.0(1.38) mm (in)        |
| Weight:               | 200g                                          |
| Cooling:              | Natural Convection                            |
| Isolation Resistance: | I/P—O/P, I/P—FG, O/P—FG: 500VDC/100M Ohms     |
| Dielectric Strength:  | I/P—O/P:3KVAC; I/P—FG:1.5KVAC; O/P—FG:0.5KVAC |
| Warranty:             | 3 years                                       |
| MTBF:                 | 250K hrs. min. MIL-HDBK-217F (25°C)           |

#### Environmental Specifications:

|                        |                                                                 |
|------------------------|-----------------------------------------------------------------|
| Operating Temperature: | -20° to 50°C at full load (Refer to output load derating curve) |
| Operating Humidity:    | 20 to 90% RH, non-condensing                                    |
| Storage Temperature:   | -40 to 85°C                                                     |
| Storage Humidity:      | 10 to 95% RH, non-condensing                                    |
| Temperature Drift:     | <0.03%/°C (0-50°C)                                              |
| Vibration:             | 10-500Hz, 2G 10min/cycle, period of 60min, each X, Y & Z axis   |

#### EMC & Safety Specifications<sup>2</sup>:

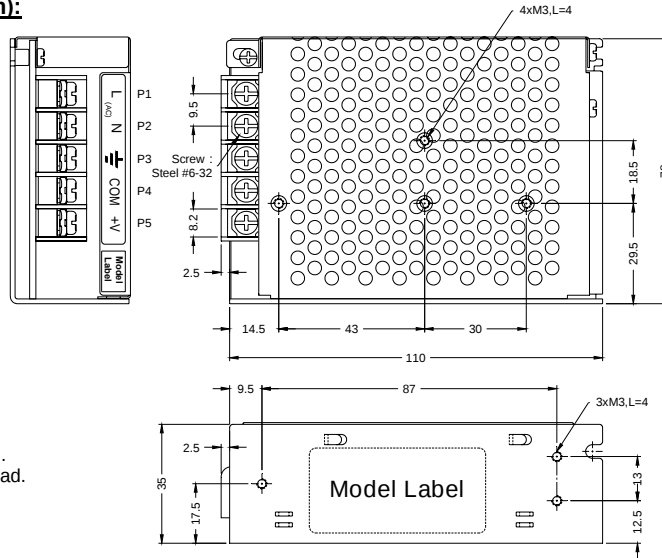
|                   |                                                                                         |
|-------------------|-----------------------------------------------------------------------------------------|
| EMI Emissions:    | Compliance to EN55022,CISPR22 Class B (Conducted & Radiated)                            |
| Harmonic Current: | Compliance to EN61000-3-2, 3                                                            |
| EMS Immunity:     | Compliance to EN61000-4-2, 3-6, 8 & 11; EN55024 heavy, light industry level, criteria A |
| Safety Approval:  | UL 60950-1, TUV EN60950-1 (insulation class -1)                                         |



<sup>1</sup> Ripple and noise are measured at 20MHz of bandwidth by using a 12" twisted-pair wire termination with a 0.1uF & 47uF parallel capacitors.

<sup>2</sup> 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.

### Outline Dimensions (mm):



### NOTE :

1. All I/O connection shall Follow specified Model Label.
2. Temp  $\pm 50^{\circ}\text{C}$  (max) at full load.

### Connections:

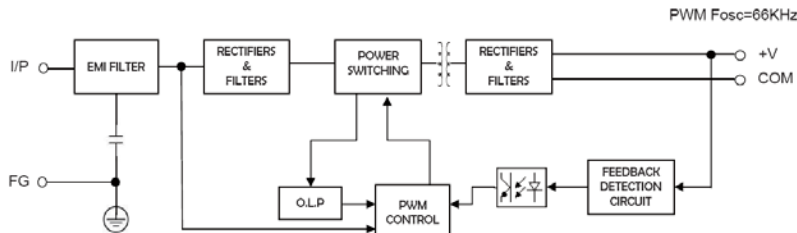
#### AC Input Connector

| Assignment |      |
|------------|------|
| P1         | AC/L |
| P2         | AC/N |
| P3         | FG   |

#### DC Output Connector

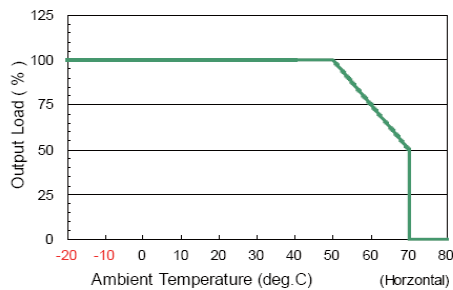
| Assignment |     |
|------------|-----|
| P4         | COM |
| P5         | V+  |

### Block Diagram:

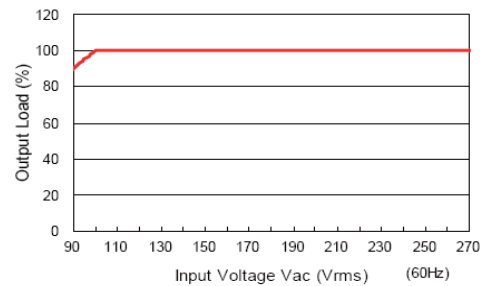


### Derating Curve:

#### ■ Output Derating VS Ambient Temperature : (HORIZONTAL MOUNTING)



#### ■ Output Derating VS Input Voltage :



**RoHS Compliance:** As of manufacturing date February 2005, all standard products meet the requirements of 2011/65/EU, known as the RoHS initiative.

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