

50 Watts

- Energy Efficiency Level VI
- European CoC Tier 2
- <0.15 W Standby Power
- Single Output 12 to 48 V
- 0 °C to 65 °C Operation
- Universal Input
- 3 Year Warranty



Dimensions:

AEJ50:

4.72 x 2.05 x 1.22" (120.0 x 52.0 x 31.0 mm)

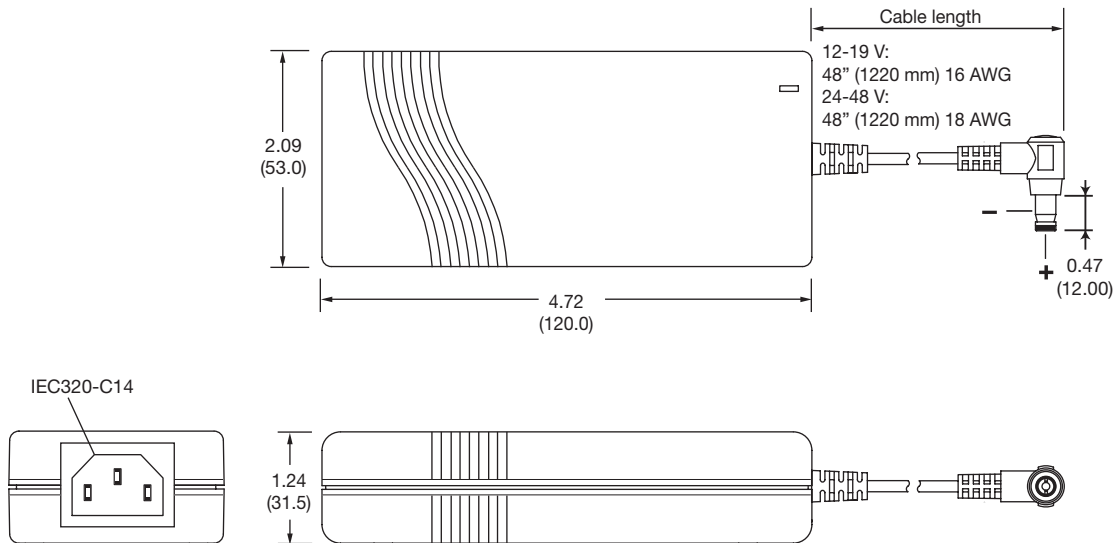
Models & Ratings

| Output Power | Output Voltage | Output Current | Total Regulation | Efficiency ⁽¹⁾ | Model Number |
|--------------|----------------|----------------|------------------|---------------------------|--------------|
| 50 W | 12.0V | 4.20 A | ±5% | 89% | AEJ50US12 |
| | 15.0V | 3.36 A | | 89% | AEJ50US15 |
| | 19.0V | 2.65 A | | 89% | AEJ50US19 |
| | 24.0V | 2.10 A | | 89% | AEJ50US24 |
| | 28.0V | 1.80 A | | 89% | AEJ50US28 |
| | 36.0V | 1.40 A | | 89% | AEJ50US36 |
| | 48.0V | 1.05 A | | 89% | AEJ50US48 |

Notes

1. Typical average of efficiencies measured at 25%, 50%, 75% and 100% load and 230 VAC input.

Mechanical Details



Notes

1. All dimensions shown in inches (mm).
2. Weight: 0.60 lbs (300 g) approx.
3. Tolerance is ±0.02 (±0.5) maximum, except output cable length which is ±2" (±50 mm)
4. Output connector is 5.5 mm dia. outer barrel, inner dia. is 2.5 mm with a center + and outer shell - polarity.

Input

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|-----------------------|-------------------------------------|---------|---------|-------|------------------------------|
| Input Voltage | 90 | | 264 | VAC | |
| Input Frequency | 47 | | 63 | Hz | |
| Input Current | | 1.20 | | A | Measured at 100VAC |
| Inrush Current | | | 50 | A | 230 VAC, cold start at 25 °C |
| Earth Leakage Current | | | 350 | µA | 264 VAC, 60 Hz |
| No Load Input Power | | | 0.15 | W | |
| Input Protection | T2.0A/250 VAC internal fuse in line | | | | |

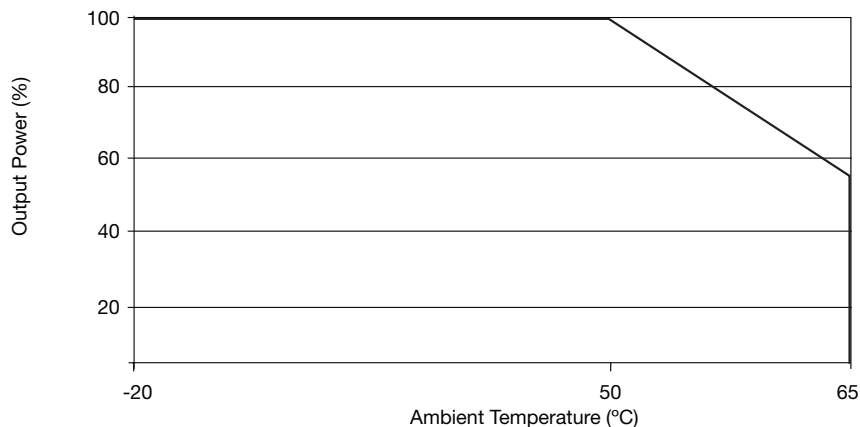
Output

| Characteristic | Min. | Typ. | Max. | Units | Notes & Conditions |
|--------------------------|---|------|------|---------|--|
| Output Voltage | 12 | | 48 | VDC | See Models and Ratings table |
| Initial Set Accuracy | | | ±2 | % | At 60% load |
| Minimum Load | | | | | No minimum load required |
| Start Up Delay | | | 3 | s | |
| Start Up Rise Time | | | 20 | ms | |
| Hold Up Time | | 8 | | ms | Full load and 115 VAC |
| Line Regulation | | | ±1 | % | |
| Total Regulation | | | ±4 | % | |
| Transient Response | | | 5 | % | Maximum deviation, recovering to less than 1% within 500 µs for 25% step load |
| Ripple and Noise | | | 1 | % pk-pk | Measured with 20 MHz Bandwidth and 10 µF electrolytic in parallel with 0.1 µF ceramic capacitor. |
| Overshoot | | | 10 | % | At turn on / turn off |
| Overload Protection | 115 | | 250 | % | |
| Overvoltage Protection | 112 | | 140 | % | |
| Short Circuit Protection | Trip and restart (hiccup), auto resetting | | | | |
| Temperature Coefficient | | 0.05 | | %/°C | |

Environmental

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|-----------------------|---|---------|---------|-------|---|
| Operating Temperature | -20 | | +65 | °C | Derate from 100% load at 50 °C to 58% load at 65 °C |
| Cooling | Natural convection | | | | |
| Operating Humidity | 5 | | 90 | %RH | Non-condensing |
| Storage Temperature | -40 | | +85 | °C | |
| Operating Altitude | | | 5000 | m | |
| Shock | IEC68-2-27, 30 g, 11 ms half sine, 3 times in each of 6 axes | | | | |
| Vibration | IEC68-2-6, 10-500 Hz, 2 g 10 mins/sweep, 60 mins for each of 3 axes | | | | |

Derating Curve

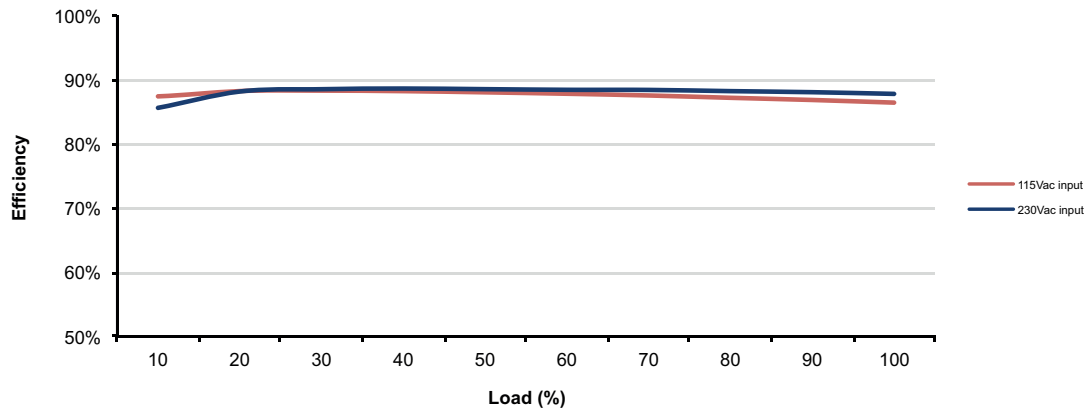


General

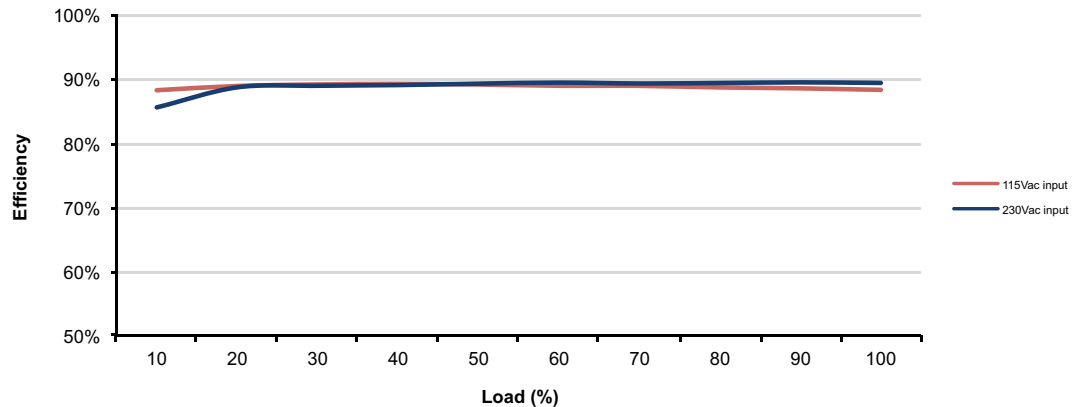
| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|---|---------|------------|---------|-------------------|--|
| Efficiency | | 89 | | % | See Models and Ratings table and curves. |
| Isolation: Input to Output Input to Ground Output to Ground | 3000 | | | VAC | |
| | 1500 | | | VAC | |
| | | | | | Negative output is connected to ground |
| Switching Frequency | | 65 | | kHz | |
| Power Density | | | 4.23 | W/in ³ | |
| Mean Time Between Failure | 285 | | | kHrs | MIL-HDBK-217F at 25 °C GB for 24 V version |
| Weight | | 0.60 (300) | | lb (g) | |

Efficiency Curves

AEJ50US12



AEJ50US24



EMC: Emissions

| Phenomenon | Standard | Test Level | Notes & Conditions |
|------------------|-------------|------------|----------------------|
| Emissions | EN55022 | Level B | Conducted & Radiated |
| Harmonic Current | EN61000-3-2 | Class A | |
| Voltage Flicker | EN61000-3-3 | | |

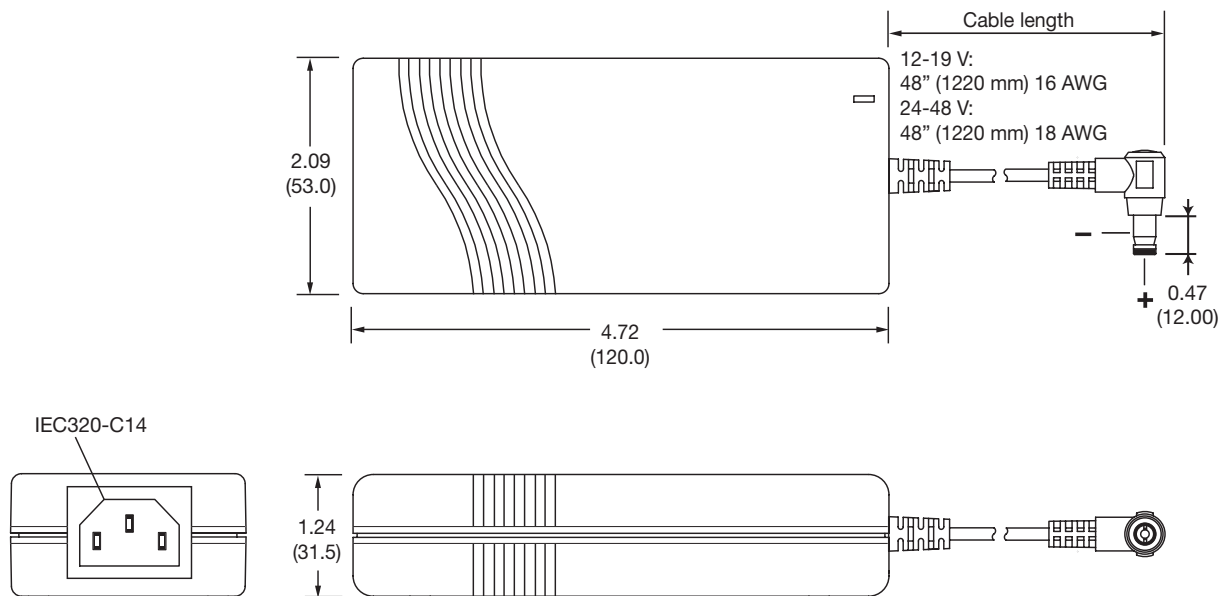
EMC: Immunity

| Phenomenon | Standard | Test Level | Criteria | Notes & Conditions |
|------------------------|--------------|--------------------------|----------|--------------------|
| ESD | EN61000-4-2 | ±8 kV Air, ±6 kV contact | A | |
| Radiated | EN61000-4-3 | 3 V/m | A | |
| EFT/Burst | EN61000-4-4 | 2 | A | |
| Surge | EN61000-4-5 | Installation Class 3 | A | |
| Conducted | EN61000-4-6 | 3 V | A | |
| Magnetic Fields | EN61000-4-8 | 3 A/m | A | |
| Dips and Interruptions | EN61000-4-11 | Dip: 30% 500 ms | A/B | High Line/Low Line |
| | | Dip: 60% 100 ms | A/B | High Line/Low Line |
| | | Int: 100% 5000 ms | B | |
| | | Int: 100% 10 ms | A | |

Safety Approvals

| Safety Agency | Safety Standard | Notes & Conditions |
|---------------|-----------------|--------------------|
| UL | UL60950-1 | |
| TUV | EN60950-1 | |
| CB | IEC60950-1 | |

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