

160W CONVECTION COOLED

The AEJ160 Series of ITE approved desktop adapters complies with the latest international efficiency requirements including Level VI and EU2019/1782.

As part of a range starting at 36W, the 160W AEJ160 with its wide selection of output voltages is suitable for many applications in the industrial and technology fields.



Features

- Energy efficiency level VI & EU2019/1782
- Active power factor correction
- Single outputs 12V to 56V
- <0.15W standby power
- -20°C to +65°C operating temperature
- Universal input
- 3 year warranty

Applications



Industrial Electronics



Instrumentation



Technology

Dimensions

5.91" x 2.76" x 1.5" (150.0 x 70.0 x 38.0 mm)

Models & Ratings

| Model Number | Output Voltage | Output Current | Total Regulation | Efficiency ⁽⁶⁾ |
|--------------|----------------|----------------|------------------|---------------------------|
| AEJ160PS12 | 12.0V | 12.5A | ±5% | 91% |
| AEJ160PS24 | 24.0V | 6.66A | | 92% |
| AEJ160PS28 | 28.0V | 5.70A | | 92% |
| AEJ160PS30 | 30.0V | 5.31A | | 92% |
| AEJ160PS36 | 36.0V | 4.44A | | 92% |
| AEJ160PS48 | 48.0V | 3.33A | | 93% |
| AEJ160PS56 | 56.0V | 2.85A | | 93% |

Notes:

1. All dimensions shown in inches (mm).
2. Weight: 1.27lbs (575g) approx.
3. Tolerance is ±0.02 (±0.5) maximum, except output cable length which is ±2" (±50mm)
4. Output connector is power mini DIN and mates with KYCON KPJX-4S or equivalent.
5. Optional output connector is barrel jack with 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity. Add suffix '-B' e.g., AEJ160PS24-B.
6. Typical at 230VAC and 75% load.

Input

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|-----------------------|---|---------|---------|-------|---------------------------------------|
| Input Voltage | 90 | | 264 | VAC | |
| Input Frequency | 47 | | 63 | Hz | |
| Power Factor | | 0.95 | | | 230VAC, 100% load EN61000-3-2 class A |
| Input Current | | 2.0 | | A | 100VAC |
| Inrush Current | | | 120 | A | 230VAC cold start, 25°C |
| Earth Leakage Current | | | 250 | μA | 264VAC, 60Hz |
| No load Input Power | | | 0.15 | W | |
| Input Protection | T3.15A/250V Internal fuse fitted in line and neutral. | | | | |

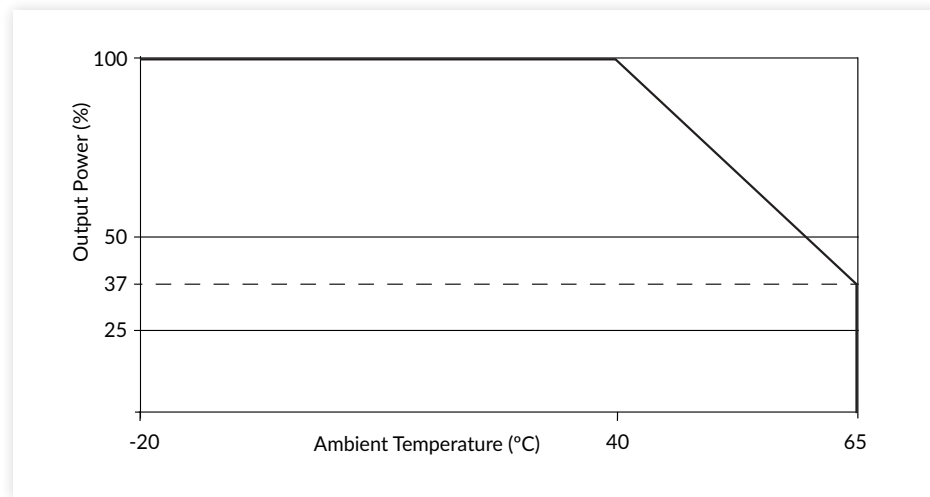
Output

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|--------------------------|---|---------|---------|-------|---|
| Output Voltage - V1 | 12 | | 56 | VDC | See Models and Ratings table |
| Initial Set Accuracy | | | ±2 | % | 60% load |
| Minimum Load | No minimum load required | | | | |
| Start Up Delay | | | 3 | s | |
| Start Up Rise Time | | | 30 | ms | |
| Hold Up Time | 15 | 25 | | ms | Full load and 115VAC |
| Line Regulation | | | ±1 | % | |
| Load Regulation | | | ±4 | % | |
| Transient Response | | | 5 | % | Maximum deviation, recovering to less than 1% within 500μs for 25% step load |
| Over/Undershoot | | | 5 | % | At turn on / turn off |
| Ripple & Noise | | | 1 | % | Measured with 20MHz Bandwidth and 10μF electrolytic in parallel with 0.1μF ceramic capacitor. |
| Overvoltage Protection | 106 | | 140 | % | Latching, recycle AC to recover |
| Overload Protection | 110 | | 150 | % | |
| Temperature Coefficient | | | 0.05 | %/°C | |
| Short Circuit Protection | Trip and restart (hiccup), auto resetting | | | | |

Environmental

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|-----------------------|---|---------|---------|-------|--|
| Operating Temperature | -20 | | +65 | °C | Derate linearly from 100% load at 40°C to 37% load at 65°C |
| Storage Temperature | -40 | | +85 | °C | |
| Cooling | Natural convection | | | | |
| Operating Altitude | | | 5000 | m | |
| Vibration | IEC68-2-6, 10-500Hz, 2g 10 mins/sweep, 60 mins for each of 3 axes | | | | |
| Shock | IEC68-2-27, 30g, 11ms half sine, 3 times in each of 6 axes | | | | |

Derating Curve



General

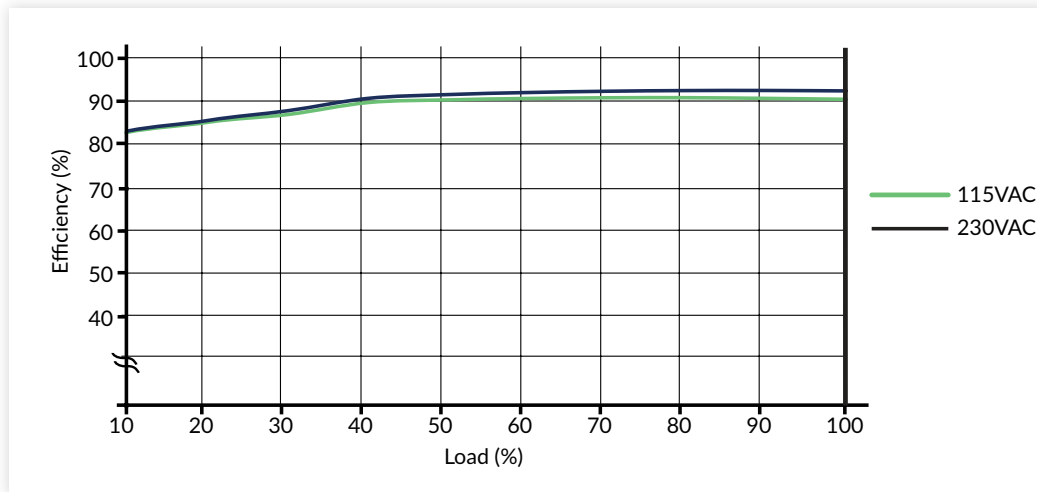
| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|----------------------------|--|------------|---------|-------------------|---|
| Efficiency | | 92 | | % | See Models and Ratings table |
| Isolation: Input to Output | 3000 | | | VAC | |
| Input to Ground | 1500 | | | VAC | |
| Output to Ground | Negative output is connected to ground | | | | |
| Switching Frequency | 75 | | 120 | kHz | For PFC |
| | 110 | | 135 | kHz | Main converter |
| Power Density | | | 6.5 | W/in ³ | |
| Mean Time Between Failure | | 300 | | khrs | 24V version, MIL-HDBK-217F, 25°C GB, 115VAC |
| Weight | | 1.27 (575) | | lb(g) | |

EMC: Emissions

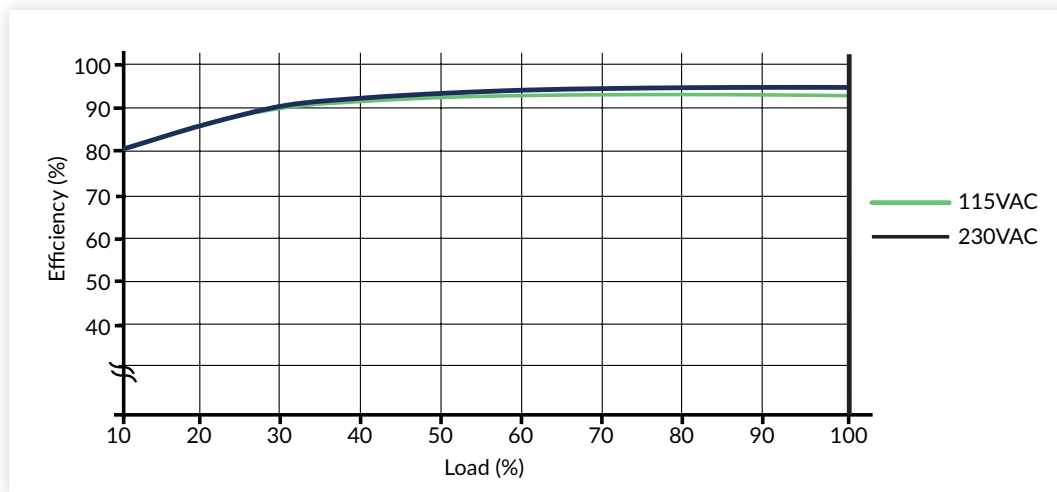
| Phenomenon | Standard | Test Level | Notes & Conditions |
|-------------------|-------------|------------|----------------------|
| Emissions | EN55032 | Level B | Conducted & Radiated |
| Harmonic Currents | EN61000-3-2 | Class A | |
| Voltage Flicker | EN61000-3-3 | | |

Efficiency Curves

AEJ160PS12



AEJ160PS24



EMC: Immunity

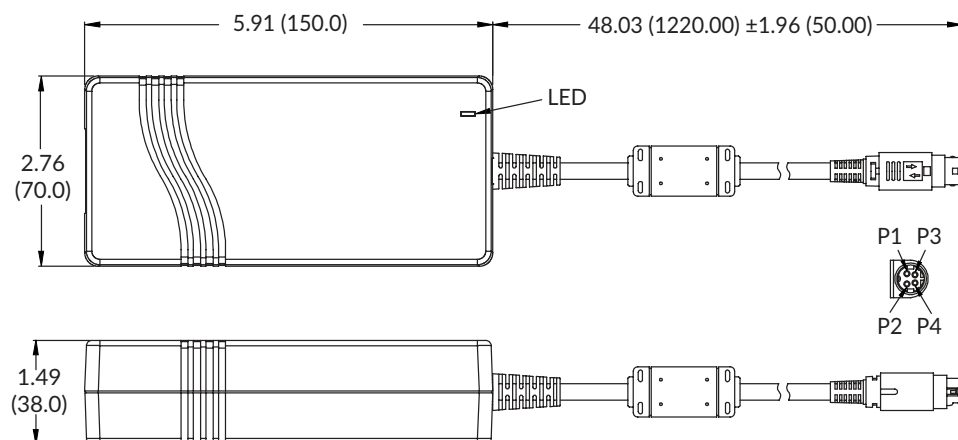
| Phenomenon | Standard | Test Level | Criteria | Notes & Conditions |
|------------------------|--------------|------------------------|----------|--------------------|
| ESD Immunity | EN61000-4-2 | ±8kV Air, ±4kV contact | A | |
| Radiated Immunity | EN61000-4-3 | 3V/m | A | |
| EFT/Burst | EN61000-4-4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

Safety Approvals

| Certification | Standard | Notes & Conditions |
|---------------|----------------------------------|--------------------|
| CB Report | IEC62368-1 | |
| UL | UL62368-1 | |
| EN | EN62368-1 | |
| AU/NZ | AU/NZ 62368-1 | |
| CE | Meets all applicable directives | |
| UKCA | Meets all applicable legislation | |

Mechanical Details

| Pin | Function |
|-------|---|
| 1 | Output+ |
| 2 | Output+ |
| 3 | Return |
| 4 | Return |
| Shell | Connected to output return and input ground |



Notes:

- All dimensions shown in inches (mm).
- Weight: 1.27lbs (575g) approx.
- Tolerance is ±0.02 (±0.5) maximum, except output cable length which is ±2" (±50mm)
- Output lead is 950mm for 12V version, 1220mm for other models.
- Standard output connector is power mini DIN and mates with KYCON KPJX-4S or equivalent.
- Optional output connector is 5.5mm dia. outer barrel, inner dia. is 2.5mm with a center + and outer shell - polarity. Add suffix -B, eg AEJ160PS24-B.