

## 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 <sup>(6)</sup> |
|--------------|----------------|----------------|------------------|---------------------------|
| 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. |         |         |       |                                       |

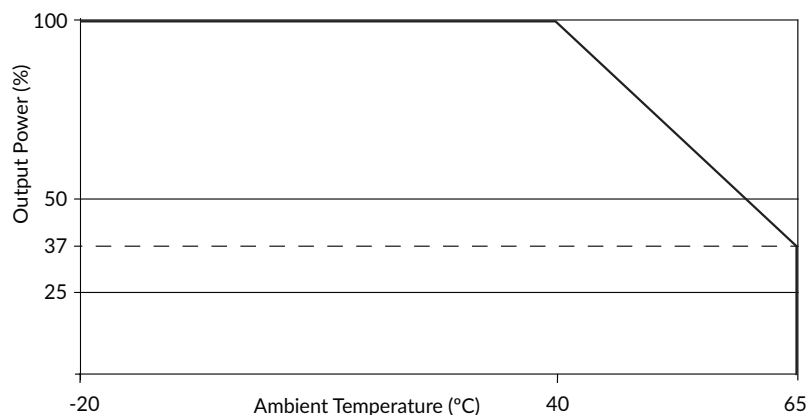
## Output

| 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

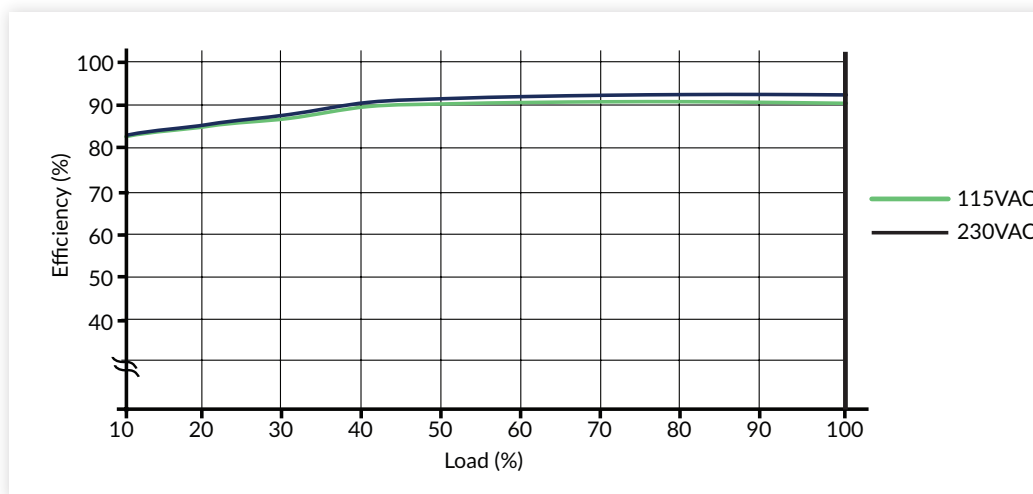
| Characteristic             | Minimum                                | Typical    | Maximum | Units             | Notes & Conditions                          |
|----------------------------|----------------------------------------|------------|---------|-------------------|---------------------------------------------|
| 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 <sup>3</sup> |                                             |
| Mean Time Between Failure  |                                        | 300        |         | khrs              | 24V version, MIL-HDBK-217F, 25°C GB, 115VAC |
| Weight                     |                                        | 1.27 (575) |         | lb(g)             |                                             |

## EMC: Emissions

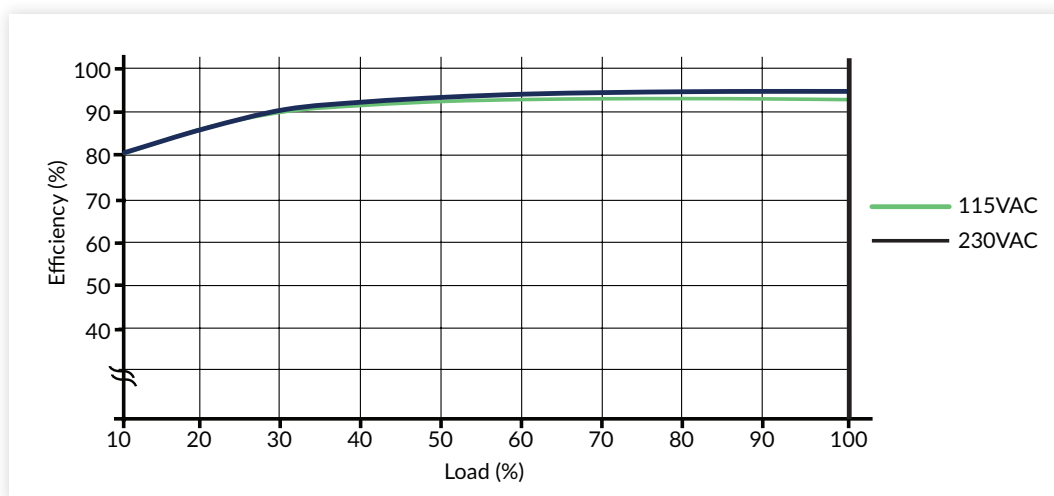
| Phenomenon        | Standard    | Test Level | Notes & Conditions   |
|-------------------|-------------|------------|----------------------|
| Emissions         | EN55032     | Level B    | Conducted & Radiated |
| Harmonic Currents | EN61000-3-2 | Class A    |                      |
| Voltage Flicker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

## Efficiency Curves

AEJ160PS12



AEJ160PS24



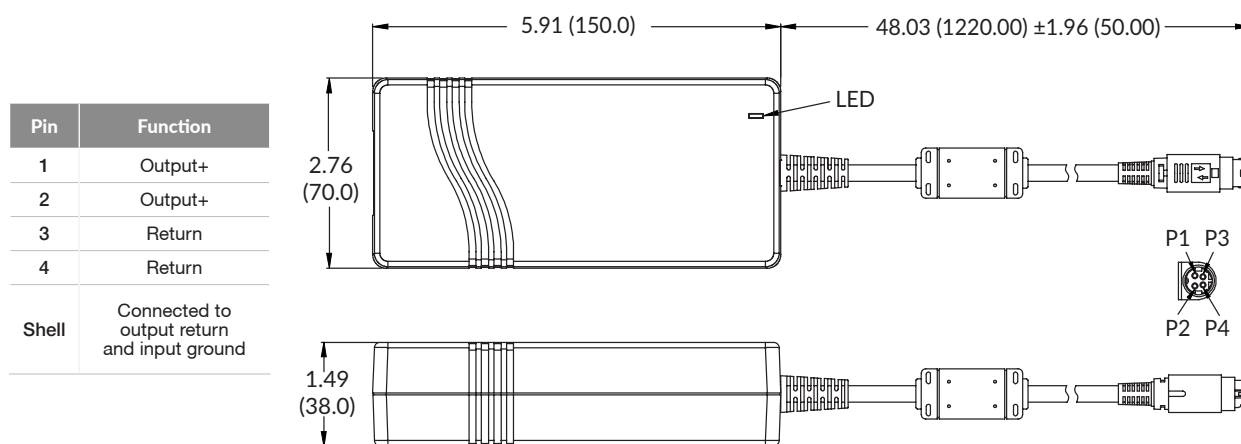
## EMC: Immunity

| 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



### 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 lead is 950mm for 12V version, 1220mm for other models.
5. Standard output connector is power mini DIN and mates with KYCON KPJX-4S or equivalent.
6. 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.