

### 220 Watts

- Energy Efficiency Level VI
- <0.21 W Standby Power
- 0 °C to 60 °C Operation
- High Power Density
- Low Earth Leakage Current
- ITE Safety Approvals
- 3 Year Warranty



#### Dimensions:

##### AHE220:

7.76 x 3.46 x 1.73" (197.0 x 88.0 x 44 mm)

### Models & Ratings

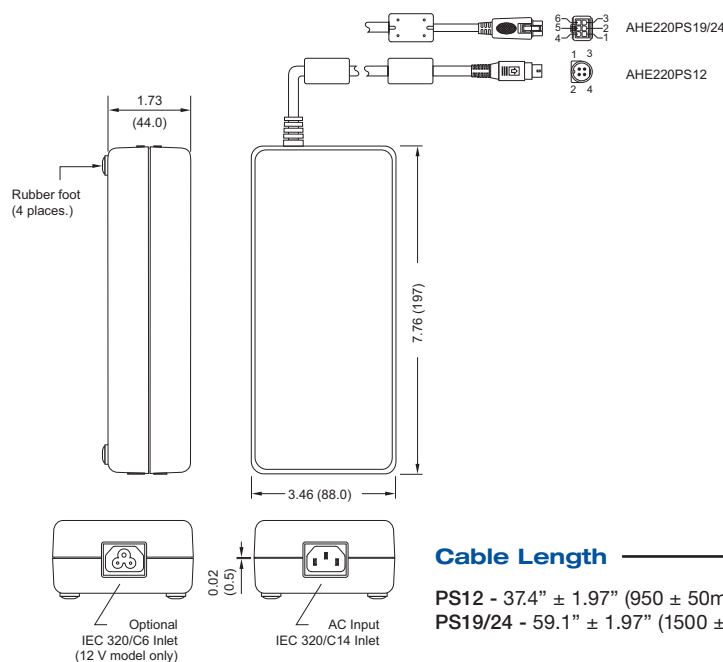
| Output Power | Output Voltage | Output Current | Total Regulation | Efficiency <sup>(1)</sup> | Model Number              |
|--------------|----------------|----------------|------------------|---------------------------|---------------------------|
| 180 W        | 12.0 V         | 15.0 A         | ±5%              | 90%                       | AHE220PS12 <sup>(2)</sup> |
| 220 W        | 19.0 V         | 11.57 A        |                  | 92%                       | AHE220PS19                |
|              | 24.0 V         | 9.16 A         |                  | 94%                       | AHE220PS24                |

### Notes

1. Typical efficiency measured at 100% load and 230 VAC input.

2. For IEC320-C6, add suffix 'C6' to the end of the part number e.g. AHE220PS12C6.

### Mechanical Details



#### Mains Leads Order Part:

UK - C14 inlet: UK-MAINS-IEC, C6 inlet: UK-MAINS-5

European - C14 inlet: EU-MAINS-IEC, C6 inlet: EU-MAINS-5

US - C14 inlet: US-MAINS-IEC, C6 inlet: US-MAINS-5

#### Pin Connector

##### AHE220PS12

| Pin   | Function           |
|-------|--------------------|
| 1     | Output +           |
| 2     | Output +           |
| 3     | Return/Input Earth |
| 4     | Return/Input Earth |
| Shell | Return/Input Earth |

##### AHE220PS19/24

| Pin | Function           |
|-----|--------------------|
| 1   | Return/Input Earth |
| 2   | Return/Input Earth |
| 3   | Return/Input Earth |
| 4   | Output +           |
| 5   | Output +           |
| 6   | Output +           |

#### Cable Length

PS12 - 37.4" ± 1.97" (950 ± 50mm)

PS19/24 - 59.1" ± 1.97" (1500 ± 50mm)

### Notes

1. Dimensions shown in inches (mm). Tolerance is 0.02 (0.5) maximum, except output cable length.

2. Weight: 2.31 lb (1050 g).

3. Optional output connectors available. Consult sales.

4. Output connector for AHE220PS12 is non locking 4 pin DC power plug and mates with Kycon KPJX-4S or equivalent.

Output connector for AHE220PS19/24 is molex Mini-Fit part number 39-01-2060 with 5556 terminals and mates with molex plug 39-01-2066 and 5558 terminals or equivalent.

5. Mains lead length is 76" (1930 mm) approx

### Input

| Characteristic        | Minimum                              | Typical   | Maximum | Units | Notes & Conditions                            |
|-----------------------|--------------------------------------|-----------|---------|-------|-----------------------------------------------|
| Input Voltage         | 90                                   |           | 264     | VAC   |                                               |
| Input Frequency       | 47                                   |           | 63      | Hz    |                                               |
| Input Current         |                                      | 2.34/0.98 |         | A     | Measured at 100/240 VAC                       |
| Inrush Current        |                                      |           | 80/160  | A     | 115/230 VAC, cold start at 25 °C              |
| Power Factor          | 0.9                                  |           |         |       | At 230 VAC and full load, EN61000-3-2 Class A |
| Earth Leakage Current |                                      | 220       | 250     | μA    | 264 VAC, 60 Hz                                |
| No Load Input Power   |                                      |           | 0.21    | W     |                                               |
| Input Protection      | T3.15A/250 VAC internal fuse in line |           |         |       |                                               |

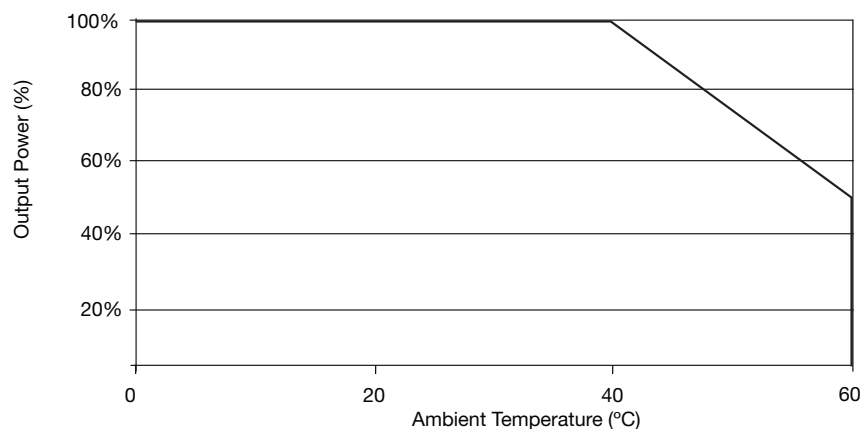
### Output

| Characteristic           | Min.                                      | Typ. | Max. | Units   | Notes & Conditions                                                                               |
|--------------------------|-------------------------------------------|------|------|---------|--------------------------------------------------------------------------------------------------|
| Output Voltage           | 12                                        |      | 24   | VDC     | See Models and Ratings table                                                                     |
| Initial Set Accuracy     |                                           |      | ±2   | %       | At 50% load                                                                                      |
| Minimum Load             |                                           |      |      |         | No minimum load required                                                                         |
| Start Up Delay           |                                           |      | 3    | s       |                                                                                                  |
| Start Up Rise Time       |                                           |      | 40   | ms      |                                                                                                  |
| Hold Up Time             | 10                                        |      |      | ms      | Full load and 115 VAC                                                                            |
| Line Regulation          |                                           |      | ±0.5 | %       |                                                                                                  |
| Total Regulation         |                                           |      | ±5   | %       |                                                                                                  |
| Transient Response       |                                           |      | 4    | %       | Maximum deviation, recovering to less than 1% within 500 μs for 25% step load                    |
| Ripple and Noise         |                                           |      | 7    | %/pk-pk | Measured with 20 MHz Bandwidth and 10 μF electrolytic in parallel with 0.1 μF ceramic capacitor. |
| Overshoot                |                                           |      | 5    | %       | At turn on / turn off                                                                            |
| Overload Protection      | 115                                       |      | 175  | %       |                                                                                                  |
| Overvoltage Protection   | 112                                       |      | 160  | %       | Recycle mains to reset                                                                           |
| Short Circuit Protection | Trip and restart (hiccup), auto resetting |      |      |         |                                                                                                  |
| Thermal Protection       | Measured internally, recycle AC to reset  |      |      |         |                                                                                                  |
| Temperature Coefficient  |                                           | 0.04 |      | %/°C    |                                                                                                  |

### Environmental

| Characteristic        | Minimum                                                             | Typical | Maximum | Units | Notes & Conditions                                  |
|-----------------------|---------------------------------------------------------------------|---------|---------|-------|-----------------------------------------------------|
| Operating Temperature | 0                                                                   |         | +60     | °C    | Derate from 100% load at 40 °C to 50% load at 60 °C |
| Cooling               | Natural convection                                                  |         |         |       |                                                     |
| Operating Humidity    | 5                                                                   |         | 90      | %RH   | Non-condensing                                      |
| Storage Temperature   | -10                                                                 |         | +80     | °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

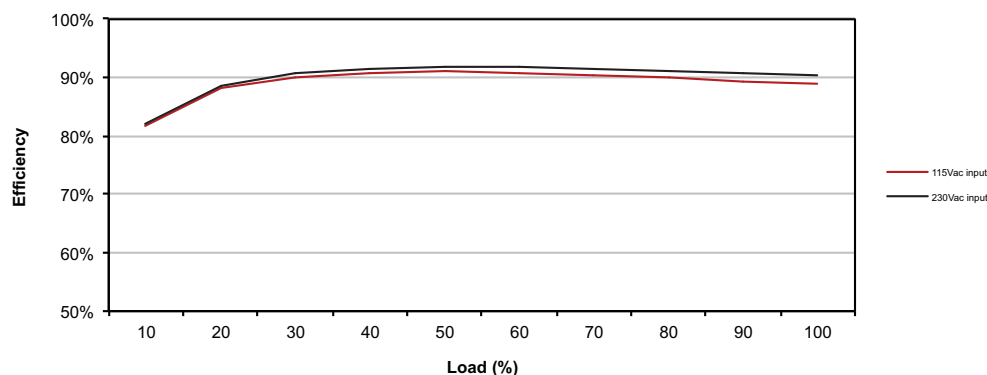


### General

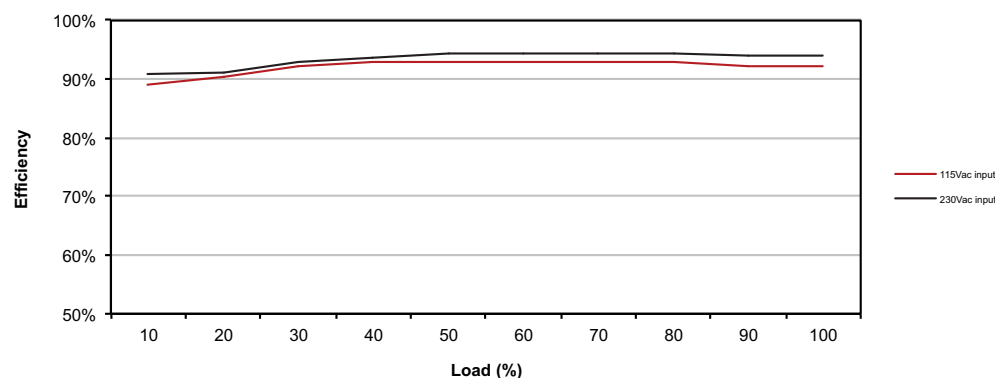
| Characteristic                                                    | Minimum | Typical     | Maximum | Units             | Notes & Conditions                        |
|-------------------------------------------------------------------|---------|-------------|---------|-------------------|-------------------------------------------|
| Efficiency                                                        |         | 91          |         | %                 | See Models and Ratings table and curves.  |
| Isolation: Input to Output<br>Input to Ground<br>Output to Ground | 3000    |             |         | VAC               |                                           |
|                                                                   | 1500    |             |         | VAC               |                                           |
|                                                                   |         |             |         | VAC               | Output return is connected to input earth |
| Switching Frequency                                               | 75      |             | 150     | kHz               |                                           |
| Power Density                                                     |         | 4.55        |         | W/in <sup>3</sup> |                                           |
| Mean Time Between Failure                                         |         | >500        |         | kHrs              | SR332 at 25 °C GB                         |
| Weight                                                            |         | 2.31 (1050) |         | lb (g)            |                                           |

### Efficiency Curves

#### AHE220PS12



#### AHE220PS24



### EMC: Emissions

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

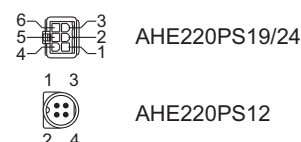
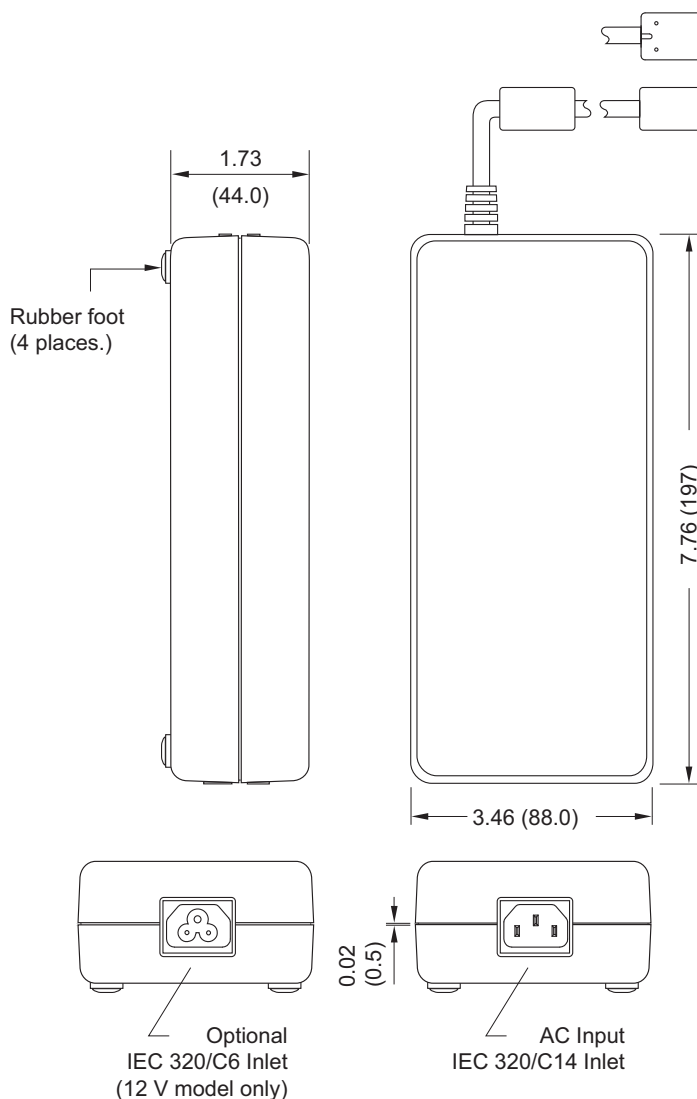
### EMC: Immunity

| Phenomenon             | Standard     | Test Level               | Criteria | Notes & Conditions               |
|------------------------|--------------|--------------------------|----------|----------------------------------|
| ESD                    | EN61000-4-2  | ±15 kV Air, ±8kV 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        | High Line with 65% load/Low Line |
|                        |              | Dip: 60% 200 ms          | A/B      |                                  |
|                        |              | Int: 100% 5000 ms        | B        |                                  |
|                        |              | Int: 100% 10 ms          | A        |                                  |

### Safety Approvals

| Safety Agency | Safety Standard                        | Notes & Conditions |
|---------------|----------------------------------------|--------------------|
| UL            | cUL60950-1                             |                    |
| TUV           | EN60950-1                              |                    |
| CB            | IEC60950-1                             |                    |
| CCC           | China Compulsory Certification, GB4943 |                    |
| AU/NZ         | AU/NZ 60950.1                          |                    |

### Mechanical Details



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- Mains lead length is 76" (1930 mm) approx



**Стандарт  
Электрон  
Связь**

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