

## 15 Watts

- US DoE Energy efficiency level VI
- Interchangeable input plugs
- Class II
- Single outputs 5 to 48V
- EN55022 Level B conducted & radiated
- 5 Year warranty



The EPT15 range of wall plug adaptors are compliant with the latest energy efficiency Level VI standard. The units offer 15 watts of output power in a compact, encapsulated package with output voltages available between 5 and 48VDC. The EPT15 caters for customers working within global markets, accepting universal AC input and providing interchangeable mains plugs. The range is cost competitive and comes with an impressive FiDUS 5 year warranty.

Dimensions:

2.36 x 1.71 x 1.58" (60.0 x 43.5 x 40.2mm)

## Models & Ratings

SELECT YOUR CONNECTOR PG5

| Model Number <sup>(1)</sup> | Output Power | Output voltage | Output Current | Total Regulation <sup>(2)</sup> | Efficiency <sup>(3)</sup> |
|-----------------------------|--------------|----------------|----------------|---------------------------------|---------------------------|
| EPT1505                     | 12W          | 5V             | 2.4A           | ±5%                             | 82%                       |
| EPT1507                     | 12W          | 7V             | 1.71A          | ±5%                             | 84%                       |
| EPT1509                     | 13.5W        | 9V             | 1.5A           | ±5%                             | 84%                       |
| EPT1512                     | 15W          | 12V            | 1.25A          | ±5%                             | 84%                       |
| EPT1515                     | 15W          | 15V            | 1.0A           | ±5%                             | 84%                       |
| EPT1518                     | 15W          | 18V            | 0.83A          | ±5%                             | 85%                       |
| EPT1524                     | 15W          | 24V            | 0.62A          | ±5%                             | 85%                       |
| EPT1528                     | 15W          | 28V            | 0.53A          | ±3%                             | 85%                       |
| EPT1536                     | 15W          | 36V            | 0.41A          | ±3%                             | 86%                       |
| EPT1548                     | 15W          | 48V            | 0.31A          | ±3%                             | 86%                       |

### Notes

1. Add plug indicator suffix to the part number for pre-fitted mains plug. See mechanical details pg.4. E.g. EPT1505-UK for UK plug fitted, -ALL for all
2. Includes line & load regulation.
3. At full rated load and nominal input.
5. Alternative output connectors available, please see page 5 connector selector.

## Key specifications

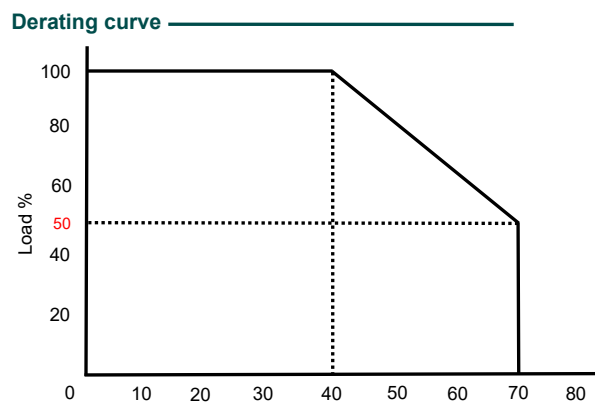
| Parameter             | Minimum  | Typical | Maximum | Units | Notes & Conditions  |
|-----------------------|--|---------|---------|-------|---|
| AC Input range        | 90   |         | 264     | VAC   | No derating   |
| Operating temperature | 0  |         | 70      | °C    | De-rate linearly from 100% load at 40°C to 50% load at 70°C |
| Efficiency            | 82   |         | 86      | %     |   |
| Dimensions            | 2.36 x 1.71 x 1.58" ±0.04 (60.0 x 43.5 x 40.2mm ±1.0)  |         |         |       |   |
| EMC                   | EN55022 Level B Conducted and Radiated. EN61000-3 and EN61000-4, harmonics, flicker, Surge, EFT, ESD, conducted and radiated |         |         |       |   |
| Safety                | UL 60950-1:2nd Edition, IEC 60950-1:2005 /A2:2013, EN60950-1:2006 /A2:2013, CE   |         |         |       |   |

| Input                 |         |         |         |       |   |
|-----------------------|---------|---------|---------|-------|---|
| Parameter             | Minimum | Typical | Maximum | Units | Notes & Conditions                                |
| Input voltage         | 90      |         | 264     | VAC   | No derating                                       |
| Input frequency       | 47      |         | 63      | Hz    |   |
| Power factor          |         |         |         |       | EN61000-3-2 class A compliant                     |
| Input current         |         |         | 0.4     | A     | Low line. Full load, Vin=100VAC                   |
|                       |         |         | 0.3     |       | High line. Full load, Vin=240VAC                  |
| Inrush current        | 40      |         | 45      | A     | Low line. Full load, 25°C cool start, Vin=100VAC  |
|                       | 80      |         | 90      |       | High line. Full load, 25°C cool start, Vin=240VAC |
| No load input power   |         |         | 0.075   | W     |   |
| Earth leakage current |         |         |         |       | Class II construction                             |

| Output                     |                         |         |         |       |   |
|----------------------------|-------------------------|---------|---------|-------|---|
| Parameter                  | Minimum                 | Typical | Maximum | Units | Notes & Conditions  |
| Output voltage             | 5                       |         | 48      | VDC   |   |
| Total regulation           | ±3                      |         | ±5      | %     | Includes line & load regulation. See models and rating table.   |
| Line regulation            | 0.5                     |         | 1       | %     | Full load, Vin=100 to 120VAC. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load              |
| Load regulation            | 3                       |         | 5       | %     | Vin=230VAC, 10 to 90% load change at condition. Load regulation is defined by changing ±40% of measured output load from 60% rated load |
| Minimum load               | 0                       |         |         | %     |   |
| Time of Transient response |                         |         | 4       | ms    | Full load, Vin=110VAC   |
| Ripple & Noise             | 5V output 50mVp-p       |         |         | mVp-p | All models measured with 47uF capacitor. 20 MHz bandwidth.  |
|                            | 7V output 65mVp-p       |         |         |       |   |
|                            | 9V output 80mVp-p       |         |         |       |   |
|                            | 12-36V outputs 100mVp-p |         |         |       |   |
| Hold up time               | 12                      |         |         | ms    |   |
| Overload protection        |                         |         |         |       | Not fitted. But output protected to short circuit conditions  |
| Short circuit protection   |                         |         |         |       | Automatic recovery  |

| General             |         |         |         |                   |                               |
|---------------------|---------|---------|---------|-------------------|-------------------------------|
| Parameter           | Minimum | Typical | Maximum | Units             | Notes & Conditions            |
| Efficiency          | 82      |         | 86      | %                 | See models & Ratings table    |
| Isolation           |         | 3000    |         | VAC               | Input to output               |
| Switching frequency |         | 65      |         | kHz               |                               |
| Power density       |         |         | 2.4     | W/in <sup>3</sup> |                               |
| MTBF                | 100     |         |         | KHrs              | As per MIL-HDBK-217F, 25°C GB |
| Weight              |         | 165     |         | g                 |                               |

| Environmental           |         |         |         |       |   |
|-------------------------|---------|---------|---------|-------|---|
| Parameter               | Minimum | Typical | Maximum | Units | Notes & Conditions  |
| Operating temperature   | 0       |         | 70      | °C    | De-rate linearly from 100% load at 40°C to 50% load at 70°C |
| Storage temperature     | -40     |         | 85      | °C    |   |
| Cooling                 |         |         |         |       | Convection cooled   |
| Temperature coefficient |         |         | ±0.04   | %/°C  |   |
| Humidity                |         |         | 95      | % RH  | Non-condensing  |
| Vibration               | 10      |         | 500     | Hz    | 5G. 10min/1cycle, 60 mins along x,y, z axes                 |

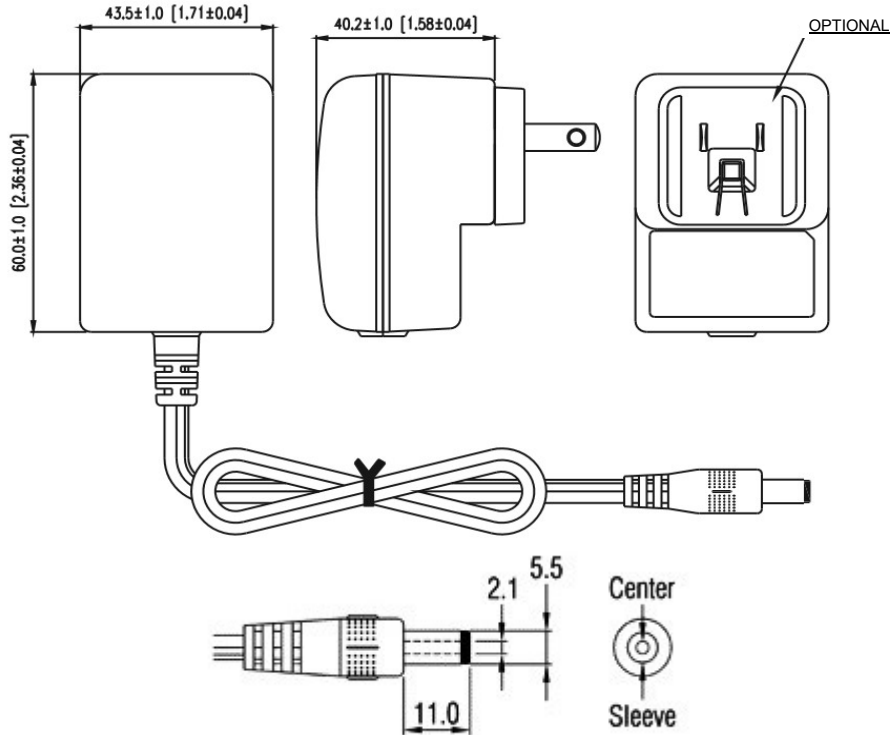


| EMC: Emissions   |             |            |          |                    |
|------------------|-------------|------------|----------|--------------------|
|                  | Standard    | Test level | Criteria | Notes & Conditions |
| Conducted        | EN55022     | B          |          |                    |
| Radiated         | EN55022     | B          |          |                    |
| Harmonic current | EN61000-3-2 | Class A    |          |                    |
| Voltage flicker  | EN61000-3-3 |            |          |                    |

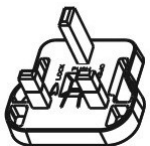
| EMC: Immunity          |              |  |          |  |
|------------------------|--------------|--|----------|--|
|                        | Standard     | Test level   | Criteria | Notes & Conditions                                 |
| ESD                    | EN61000-4-2  | 2/3  | A        | Level 2 for contact (±4kV), Level 3 for air (±8kV) |
| Radiated               | EN61000-4-3  | 2  | A        |  |
| EFT                    | EN61000-4-4  | 2  | A        |  |
| Surges                 | EN61000-4-5  | Installation Class 3   | A        |  |
| Conducted              | EN61000-4-6  | 2  | A        | 3V   |
| Dips and interruptions | EN61000-4-11 | Interruptions: >95% for 250 periods, Dips: 30% for 25 periods, >95% for 0.5 periods. Perf criteria C,A,A |          |  |

| Safety Approvals           |                           |  |
|----------------------------|---------------------------|--|
|                            | Safety standard           | Notes & Conditions   |
| UL                         | UL 60950-1:2nd Edition    |  |
| CB                         | IEC 60950-1:2005 /A2:2013 |  |
| TUV                        | EN60950-1:2006 /A2:2013   |  |
| CE                         |                           | 2011/65/EU RoHS Directive and 2014/35/EU Low voltage directive |
| CCC                        |                           | China Compulsory Certification                                 |
| Equipment protection class |                           | Class II   |

## Mechanical Details



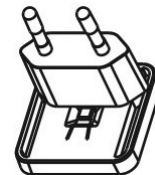
## Mains plug options



UK—add suffix '-UK'



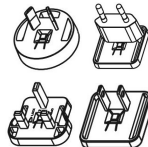
USA—add suffix '-US'



EU—add suffix '-EU'



Australia —add suffix '-AU'



All—add suffix '-ALL'

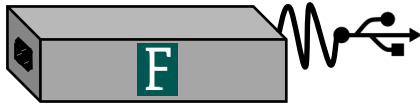
## Notes

1. All dimensions in mm (inches)

2. Output connector : Barrel female plug: OD: 5.5mm, ID: 2.1mm, L: 11mm. Other available for production, contact sales

3. 5-18V models use AWG18 4ft, others AWG20 4ft

## Connector Selector



The EPT15 series is available with an range of output connectors, allowing customers to use the connector that best fits their industry and product.

- + Rapid prototypes for evaluation
- + Available for high & low volume applications

### EPT15 SERIES - [CONNECTOR SELECTOR]

|  |                            |   |  |  |                      |              |
|--|----------------------------|---|--|--|----------------------|--------------|
|  | <b>Universal Simple</b>    | 5.5mm/2.5mm Straight Barrel Jack (11mm length)  |  |  | All models           | <b>-P01N</b> |
|  | <b>Universal Simple</b>    | 5.5mm/2.1mm Straight Barrel Jack (9.5mm length) |  |  | All models           | <b>-P01J</b> |
|  | <b>Universal Simple</b>    | 5.5mm/2.5mm Straight Barrel Jack (9.5mm length) |  |  | All models           | <b>-P01M</b> |
|  | <b>Compact Tidy</b>        | 5.5mm/2.1mm Right Angle Jack (11mm length)      |  |  | All models           | <b>-P02K</b> |
|  | <b>Compact Tidy</b>        | 5.5mm/2.5mm Right Angle Jack (9mm length)       |  |  | All models           | <b>-P02M</b> |
|  | <b>Friction locking</b>    | DIN-5 plug Friction locking Male                |  |  | All models           | <b>-P05B</b> |
|  | <b>Friction locking</b>    | DIN-4 plug friction locking Male                |  |  | All models           | <b>-P09B</b> |
|  | <b>Modern Recognisable</b> | Micro USB Male                                  |  |  | All models accept 5V | <b>-P88D</b> |
|  | <b>Locking Unique</b>      | Molex 43025-0600 or CVILUX CP35006S0010         |  |  | All models           | <b>-P35C</b> |

Still can't find your ideal connector? Contact sales for assistance  
+44 (0)1183 420 730 sales@fiduspower.com