

# SERIES: EPS 6W | DESCRIPTION: AC-DC POWER SUPPLY

#### FEATURES

- up to 6 W power
- compact size
- single output from  $3\sim$ 24 V
- over voltage and short circuit protections
- custom designs available



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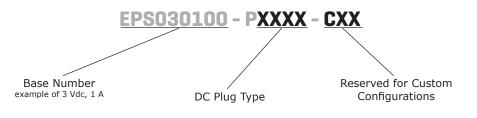


| MODEL     | output<br>voltage<br>(Vdc) | output<br>current<br>max<br>(A) | output<br>power<br>max<br>(W) | ripple<br>and noise <sup>1</sup><br>max<br>(mVp-p) | efficiency<br>level |
|-----------|----------------------------|---------------------------------|-------------------------------|--|---------------------|
| EPS030100 | 3                          | 1                               | 3                             | 100  | IV                  |
| EPS033100 | 3.3                        | 1                               | 3.3                           | 100  | IV                  |
| EPS045100 | 4.5                        | 1                               | 4.5                           | 100  | V                   |
| EPS050100 | 5                          | 1                               | 5                             | 100  | V                   |
| EPS060100 | 6                          | 1                               | 6                             | 100  | V                   |
| EPS075080 | 7.5                        | 0.8                             | 6                             | 100  | IV                  |
| EPS090066 | 9                          | 0.66                            | 6                             | 100  | V                   |
| EPS120050 | 12                         | 0.5                             | 6                             | 120  | V                   |
| EPS150040 | 15                         | 0.4                             | 6                             | 150  | V                   |
| EPS180033 | 18                         | 0.33                            | 6                             | 180  | V                   |
| EPS240025 | 24                         | 0.25                            | 6                             | 240  | IV                  |

Notes: 1. At full load, 100 ~ 132 Vac input, 20 MHz bandwidth oscilloscope, each output terminated with 10 µF aluminum electrolytic and 0.1 µF ceramic capacitors.

### PART NUMBER KEY

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#### INPUT

| parameter                   | conditions/description            |                          | min | typ | max        | units  |
|-----------------------------|-----------------------------------|--------------------------|-----|-----|------------|--------|
| voltage                     |                                   |                          | 100 |     | 132        | Vac    |
| frequency                   |                                   |                          | 47  |     | 63         | Hz     |
| current                     |                                   |                          |     |     | 0.15       | А      |
| inrush current <sup>1</sup> | 15V, 18V and 24V model            | at 100 Vac<br>at 132 Vac |     |     | 15<br>30   | A<br>A |
|                             | all other models                  | at 132 Vac               |     |     | 40         | А      |
| no load power consumption   | level IV models<br>level V models |                          |     |     | 0.5<br>0.3 | W<br>W |

Notes: 1. inrush lasts no longer than 0.5 ms before settling to steady state current

#### OUTPUT

| parameter               | conditions/description                            | min | typ      | max | units  |
|-------------------------|---|-----|----------|-----|--------|
| line regulation         | all other models<br>7.5V model                    |     | ±1<br>±2 |     | %<br>% |
| load regulation         |   |     | ±5       |     | %      |
| temperature coefficient | 0 ~ 40°C, full load, after initial 1 hour warm-up |     | ±0.02    |     | %/°C   |
| start-up                | time needed to reach regulation                   |     |          | 3   | S      |
| hold-up                 | at 115 Vac, full load                             | 10  |          |     | ms     |

#### PROTECTIONS

| parameter                | conditions/description                          | min | typ | max | units |
|--------------------------|---|-----|-----|-----|-------|
| over voltage protection  | clamped by internal protection zener            |     |     |     |       |
| short circuit protection | continuous, auto-recovery upon removal of short |     |     |     |       |

### **SAFETY & COMPLIANCE**

| parameter            | conditions/description                | min | typ | max            | units      |
|----------------------|---------------------------------------|-----|-----|----------------|------------|
| isolation voltage    | input to output at 10 mA for 1 minute |     |     | 3,000<br>4,242 | Vdc<br>Vdc |
| isolation resistance | input to output at 500 Vdc            | 100 |     |                | MΩ         |
| safety approvals     | UL 1310                               |     |     |                |            |
| safety               | class II                              |     |     |                |            |
| EMI/EMC              | FCC Part 15 Class B                   |     |     |                |            |
| leakage current      |                                       |     |     | 0.25           | mA         |
| RoHS compliant       | yes                                   |     |     |                |            |

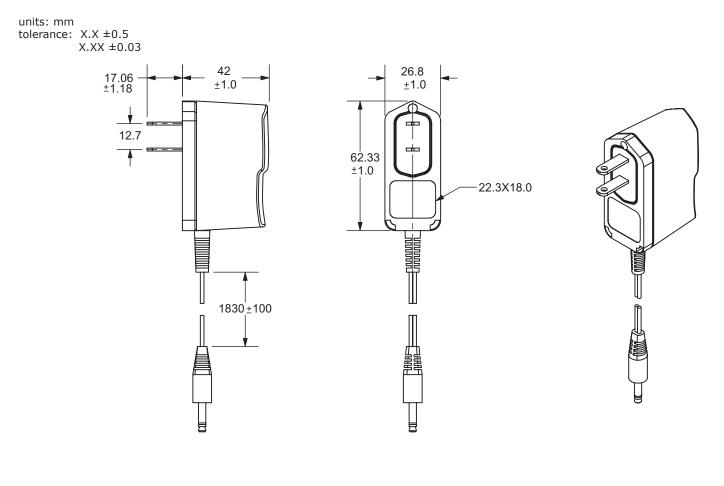
## **ENVIRONMENTAL**

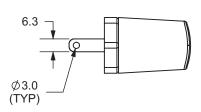
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -10 |     | 70  | °C    |
| operating humidity    |                        | 20  |     | 80  | %     |
| storage humidity      |                        | 10  |     | 90  | %     |

### **MECHANICAL**

| parameter  | conditions/description                         | min | typ | max | units |
|------------|--|-----|-----|-----|-------|
| dimensions | 62.33 x 26.8 x 42 (2.454 x 1.055 x 1.654 inch) |     |     |     | mm    |
| input plug | fixed US                                       |     |     |     |       |

### **MECHANICAL DRAWING**



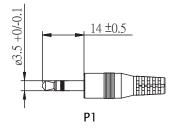


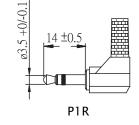
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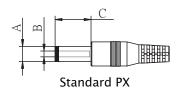
### **OUTPUT PLUG OPTIONS**

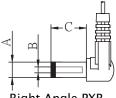
## 3.5 mm Phono Plug





# **Standard DC Plug**

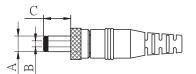




**Right Angle PXR** 

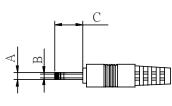
|          | А  | В    | С               | Unit |  |  |
|----------|--|------|-----------------|------|--|--|
| P5/P5R   | 5.5  | 2.1  | 12 <sup>1</sup> | mm   |  |  |
| P6/P6R   | 5.5  | 2.5  | 12              | mm   |  |  |
| P7/P7R   | 3.5  | 1.35 | 9.5             | mm   |  |  |
| P8/P8R   | 3.8  | 1.35 | 9.5             | mm   |  |  |
| P9/P9R   | 3.8  | 1.05 | 9.5             | mm   |  |  |
| Notes: 1 | Notes: 1. EPS050100-P5P has a 9.5mm dc plug length |      |                 |      |  |  |

Locking DC Plug

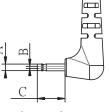


|     | А   | В   | С   | Unit |
|-----|-----|-----|-----|------|
| P10 | 5.5 | 2.1 | 9.5 | mm   |
| P11 | 5.5 | 2.5 | 9.5 | mm   |

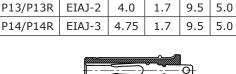
### **EIAJ Plugs**







**Right Angle PXXR** 



А

2.35

4.0

В

0.7

1.7

С

9.5

9.5

D

NA

5.0

Unit

mm

mm

mm

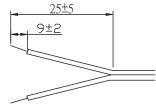
EIAJ

EIAJ-1

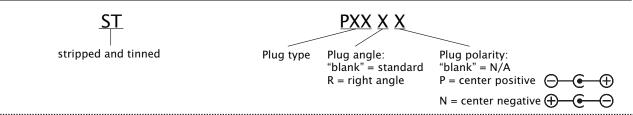
EIAJ-2

P12/P12R

**Stripped and Tinned** 



# DC PLUG TYPE



#### **REVISION HISTORY**

| rev. | description  | date       |
|------|--|------------|
| 1.0  | initial release  | 06/29/2006 |
| 1.01 | applied new spec template                                    | 12/28/2010 |
| 1.02 | removed multiple models, applied new spec template           | 05/26/2011 |
| 1.03 | updated P7/P7R B dimension                                   | 04/13/2012 |
| 1.04 | V-Infinity branding removed, safety and EMI/EMC data updated | 08/16/2012 |
| 1.05 | added 7.5V model   | 09/24/2012 |
| 1.06 | updated P5 & P6 plug lengths                                 | 04/18/2013 |

The revision history provided is for informational purposes only and is believed to be accurate.



Headquarters 20050 SW 112th Ave. Tualatin, OR 97062 800.275.4899

Fax 503.612.2383 cui.com techsupport@cui.com

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CUI offers a one (1) year limited warranty. Complete warranty information is listed on our website.

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