

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

**FEATURES**

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



| 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  $\mu$ F aluminum electrolytic and 0.1  $\mu$ F ceramic capacitors.

**PART NUMBER KEY**

**EPS030100 - PXXXX - CXX**

Base Number  
example of 3 Vdc, 1 A

DC Plug Type

Reserved for Custom  
Configurations

## INPUT

| parameter                   | conditions/description | min        | typ | max  | units |
|-----------------------------|------------------------|------------|-----|------|-------|
| voltage                     |                        | 100        |     | 132  | Vac   |
| frequency                   |                        | 47         |     | 63   | Hz    |
| current                     |                        |            |     | 0.15 | A     |
| inrush current <sup>1</sup> | 15V, 18V and 24V model | at 100 Vac |     | 15   | A     |
|                             |                        | at 132 Vac |     | 30   | A     |
|                             | all other models       | at 132 Vac |     | 40   | A     |
| no load power consumption   | level IV models        |            |     | 0.5  | W     |
|                             | level V models         |            |     | 0.3  | 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                                  |     | ±1    |     | %     |
|                         | 7.5V model                                        |     | ±2    |     | %     |
| 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 | Vdc   |
|                      |                                       |     |     | 4,242 | 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

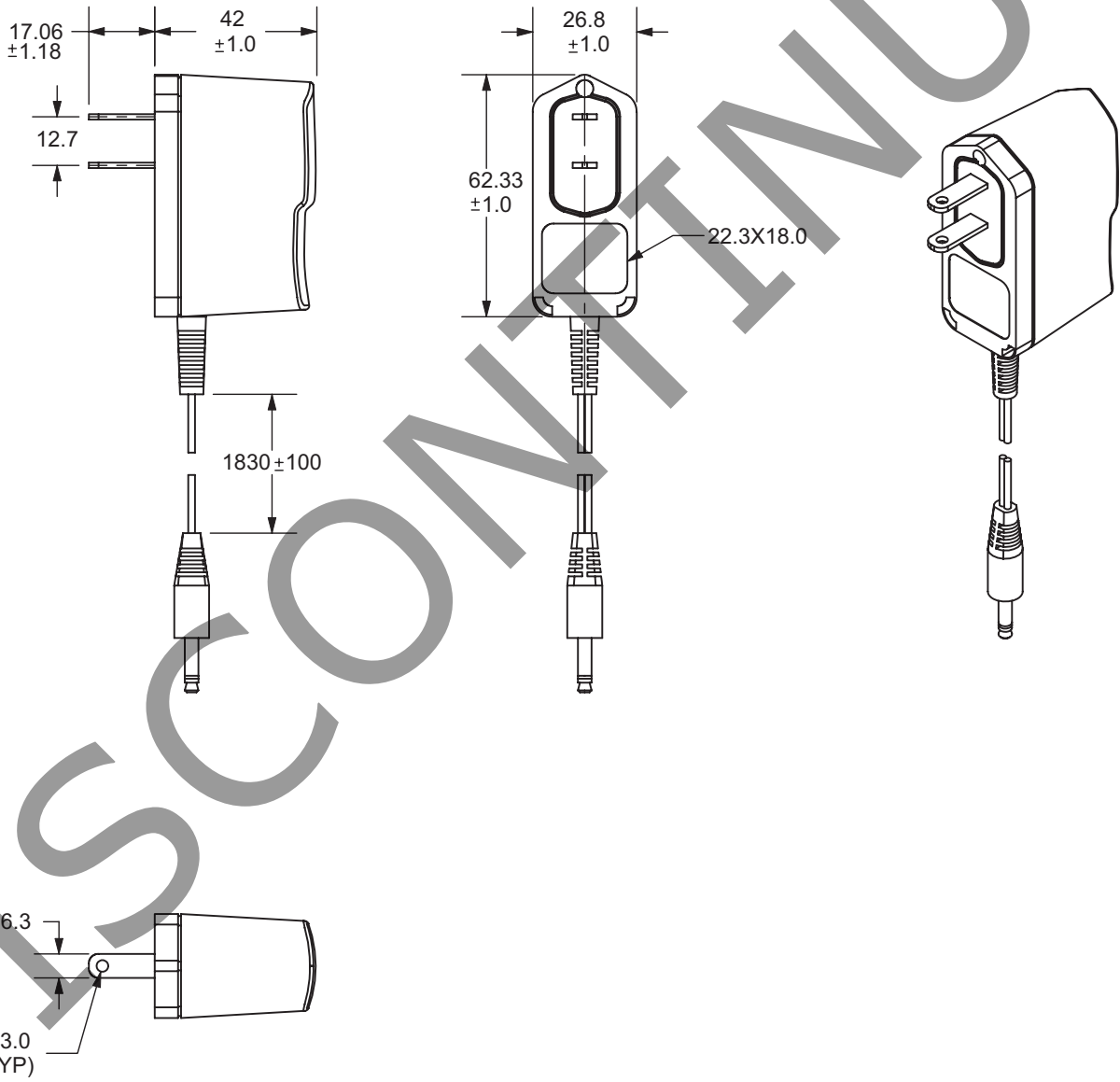
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -10 |     | 70  | °C    |
| 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                                       |     |     |     |       |

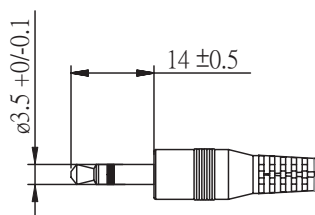
MECHANICAL DRAWING

units: mm  
tolerance: X.X ±0.5  
              X.XX ±0.03

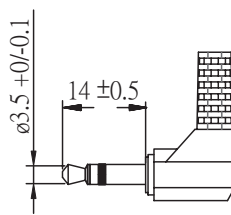


## OUTPUT PLUG OPTIONS

### 3.5 mm Phono Plug

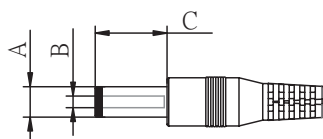


P1

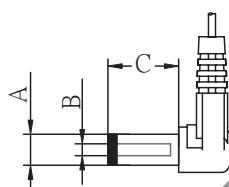


P1R

### Standard DC Plug



Standard PX

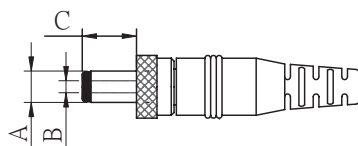


Right Angle PXR

|        | A   | B    | C               | 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   |

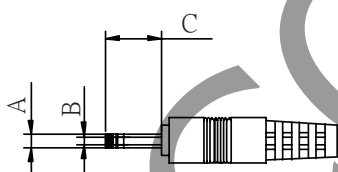
Notes: 1. EPS050100-P5P has a 9.5mm dc plug length

### Locking DC Plug

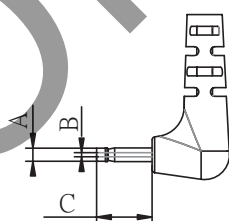


|     | A   | B   | C   | Unit |
|-----|-----|-----|-----|------|
| P10 | 5.5 | 2.1 | 9.5 | mm   |
| P11 | 5.5 | 2.5 | 9.5 | mm   |

### EIAJ Plugs

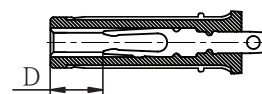


Standard PXX

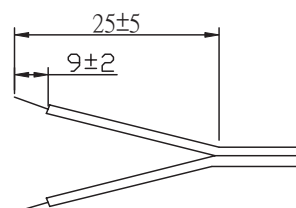


Right Angle PXXR

|          | EIAJ   | A    | B   | C   | D   | Unit |
|----------|--------|------|-----|-----|-----|------|
| P12/P12R | EIAJ-1 | 2.35 | 0.7 | 9.5 | NA  | mm   |
| P13/P13R | EIAJ-2 | 4.0  | 1.7 | 9.5 | 5.0 | mm   |
| P14/P14R | EIAJ-3 | 4.75 | 1.7 | 9.5 | 5.0 | mm   |



### Stripped and Tinned



### DC PLUG TYPE

ST

stripped and tinned

PXX X X

Plug type

Plug angle:  
"blank" = standard  
R = right anglePlug polarity:  
"blank" = N/A  
P = center positive

N = center negative



## 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.

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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.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

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