

**SERIES: 6 W MULTI-BLADE**
**DESCRIPTION: SWITCHING POWER SUPPLY**

## FEATURES

- universal AC input
- regulated output voltage
- interchangeable input blades
- short circuit, over load protection
- meets EISA / efficiency level IV regulations
- custom designs available



| MODEL     | output voltage    | output current |            | output wattage | ripple*         | efficiency level | cord length<br>(mm) |
|-----------|-------------------|----------------|------------|----------------|-----------------|------------------|---------------------|
|           | nominal<br>(V dc) | min<br>(A)     | max<br>(A) | max<br>(W)     | max.<br>(mVp-p) |                  |                     |
| EMS050120 | 5                 | 0              | 1.2        | 6              | 100             | IV               | 1830 +150/-0        |
| EMS060100 | 6                 | 0              | 1          | 6              | 100             | IV               | 1830 +150/-0        |
| EMS090066 | 9                 | 0              | 0.66       | 6              | 100             | IV               | 1830 +150/-0        |
| EMS120050 | 12                | 0              | 0.5        | 6              | 100             | IV               | 1830 +150/-0        |
| EMS150040 | 15                | 0              | 0.4        | 6              | 150             | IV               | 1830 +150/-0        |
| EMS180033 | 18                | 0              | 0.33       | 6              | 180             | IV               | 1830 +150/-0        |
| EMS240025 | 24                | 0              | 0.25       | 6              | 240             | IV               | 1830 +150/-0        |

\*at full load, 100 ~ 240 V ac input, measured at 20MHz bandwidth with a 10 uF electrolytic cap and a 0.1 uF ceramic cap on the output

## PART NUMBER KEY

**EMS050120 - PXXXX - SZ - CXX**

Base Number  
example of 5 V dc, 1.2 A

DC Plug type:  
see output plug options  
on page 5

Factory  
Designation

Reserved for custom  
configurations

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## INPUT

| parameter                 | conditions/description                | min | nom | max | units |
|---------------------------|---------------------------------------|-----|-----|-----|-------|
| rated input voltage       |                                       | 100 |     | 240 | V ac  |
| input voltage range       |                                       | 90  |     | 264 | V ac  |
| rated frequency           |                                       | 50  |     | 60  | Hz    |
| frequency range           |                                       | 47  |     | 63  | Hz    |
| rated input current       |                                       |     |     | 0.3 | A     |
| inrush current            | 115 V ac, full load, cold start, 25°C |     |     | 15  | A     |
|                           | 230 V ac, full load, cold start, 25°C |     |     | 30  | A     |
| no load power consumption | 100 ~ 240 V ac input                  |     |     | 0.3 | W     |

## OUTPUT

| parameter                | conditions/description            | min  | nom | max  | units |
|--------------------------|-----------------------------------|------|-----|------|-------|
| line regulation          |                                   |      | ±1  |      | %     |
| load regulation          |                                   |      | ±5  |      | %     |
| over voltage protection  | output shut down                  | 140% |     | 200% | V dc  |
| short circuit protection | output shut down and auto-restart |      |     |      |       |

## SAFETY & EMI

| parameter             | conditions/description                         | min | nom | max  | units |
|-----------------------|------------------------------------------------|-----|-----|------|-------|
| HI-POT                | input to output at 10 mA for 1 second          |     |     | 3000 | V ac  |
|                       |                                                |     |     | 4242 | V ac  |
| insulation resistance | input to output at 500 V dc                    | 100 |     |      | MΩ    |
| safety approvals      | UL/cUL, CB (IEC60950-1), CE (GS/TUV EN60950-1) |     |     |      |       |
| EMI standard          | FCC part 15 class B, CE (EN55022, EN55024)     |     |     |      |       |
| leakage current       |                                                |     |     | 0.25 | mA    |
| RoHS compliant        | yes                                            |     |     |      |       |

## ENVIRONMENTAL

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

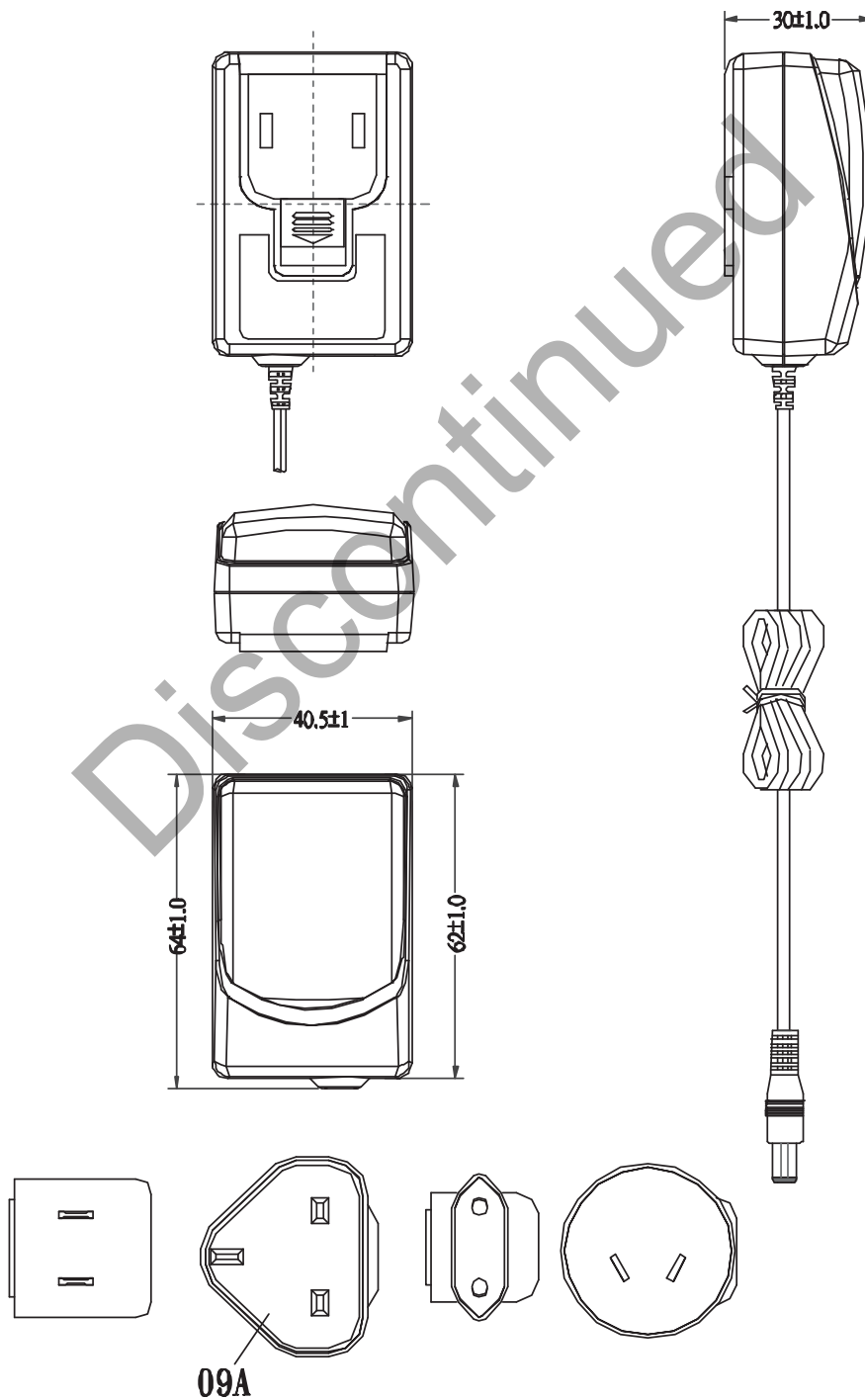


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## MECHANICAL DRAWING

|            |                                                  |
|------------|--------------------------------------------------|
| input plug | interchangeable pin<br>(UL, UK, VDE, SAA)        |
| case size  | 64 L x 40.5 W x 30 H mm<br>tolerance: $\pm 1$ mm |

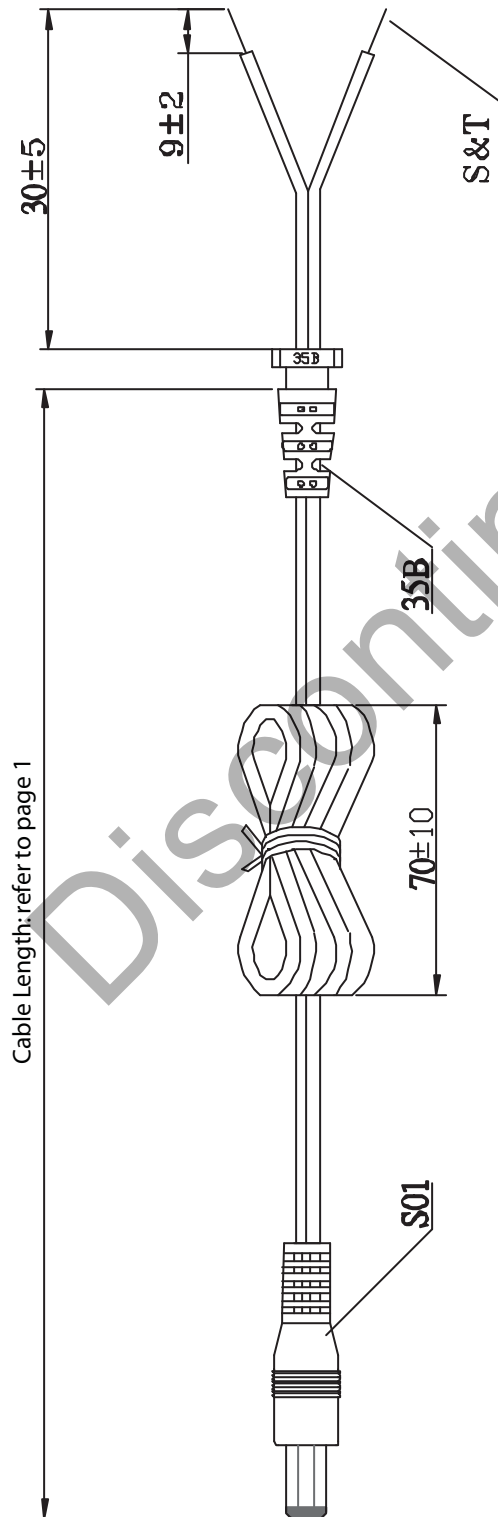




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## DC CORD



Black wire, white stripe: Positive

| Cable Gauge |        |
|-------------|--------|
| EMS050120   | 20 AWG |
| EMS060100   | 20 AWG |
| EMS090066   | 22 AWG |
| EMS090166   | 22 AWG |
| EMS120050   | 22 AWG |
| EMS150040   | 22 AWG |
| EMS180033   | 22 AWG |
| EPS240025   | 22 AWG |

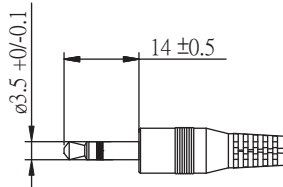


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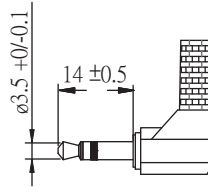
DESCRIPTION: SWITCHING POWER SUPPLY

## OUTPUT PLUG OPTIONS

### 3.5 mm Phono Plug



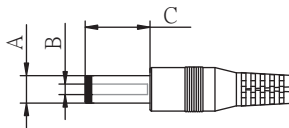
P1



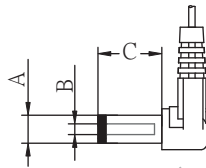
P1R

\*Tip positive

### Standard DC Plug



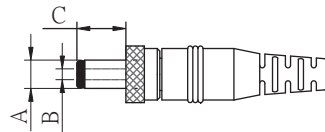
Standard PX



Right Angle PXR

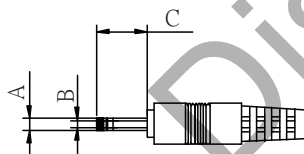
|        | A   | B    | C   | Unit |
|--------|-----|------|-----|------|
| P5/P5R | 5.5 | 2.1  | 9.5 | mm   |
| P6/P6R | 5.5 | 2.5  | 9.5 | mm   |
| P7/P7R | 3.5 | 1.3  | 9.5 | mm   |
| P8/P8R | 3.8 | 1.35 | 9.5 | mm   |
| P9/P9R | 3.8 | 1.05 | 9.5 | mm   |

### Locking DC Plug

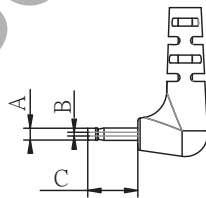


|     | A   | B   | C   | Unit |
|-----|-----|-----|-----|------|
| P10 | 5.5 | 2.1 | 9.5 | mm   |
| P11 | 5.5 | 2.5 | 9.5 | mm   |

### EIAJ Plugs

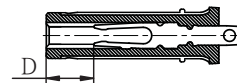


Standard PXX

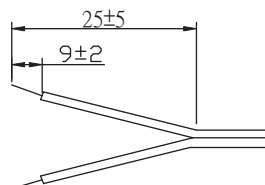


Right Angle PXXR

|          | 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 angle

Plug polarity:  
"blank" = N/A  
P = center positive  
N = center negative



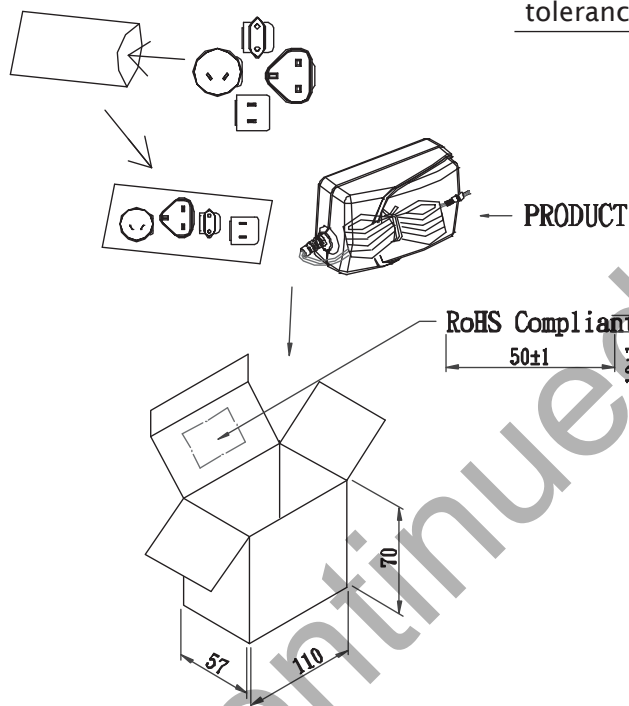
\*Contact CUI for additional output plug options.



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## INDIVIDUAL PACKAGING



## PACKAGING

tolerance +7 / -0 mm

CARTON INTERNAL SIZE: 450\*308\*300mm

Q' TY: 80PCS(20\*4)

"RoHS Compliant"

