



SERIES: EMSA 6W

DESCRIPTION: SWITCHING POWER SUPPLY

**FEATURES**

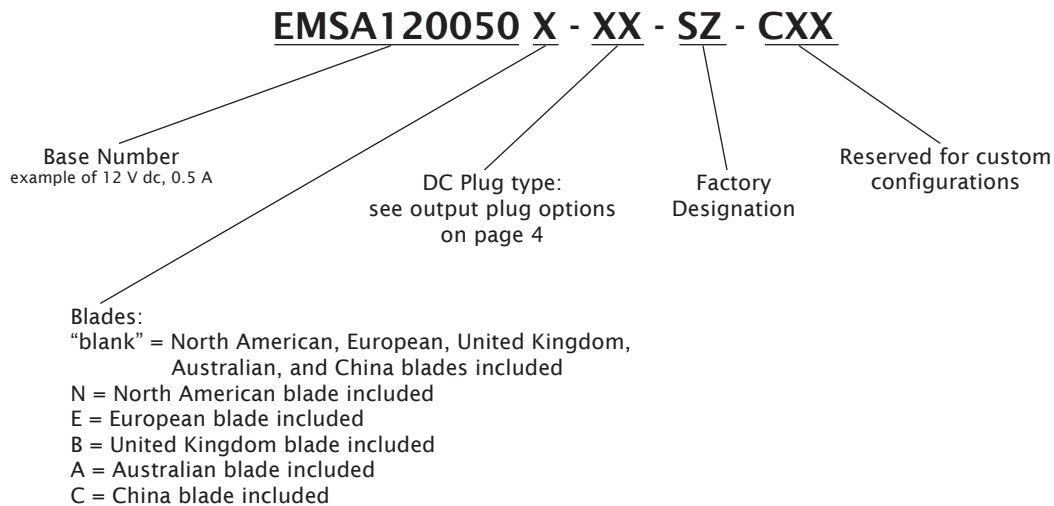
- universal AC input
- regulated output voltage
- short circuit protection
- meets EISA / efficiency level V regulations
- custom designs available



| 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) |                  |                     |
| EMSA050120 | 5                 |  | 0              | 1.2        | 6              | 150             | V                | 1530 ±100           |
| EMSA090067 | 9                 |  | 0              | 0.67       | 6              | 150             | V                | 1530 ±100           |
| EMSA120050 | 12                |  | 0              | 0.50       | 6              | 120             | V                | 1530 ±100           |
| EMSA150040 | 15                |  | 0              | 0.40       | 6              | 150             | V                | 1530 ±100           |

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

**PART NUMBER KEY**





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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            | 9 V output: 115 V ac, cold start<br>9 V output: 230 V ac, cold start<br>all other outputs: 115 V ac, cold start<br>all other outputs: 230 V ac, cold start |     |     | 15<br>30<br>30<br>60 | A<br>A<br>A<br>A |
| no load power consumption |  |     |     | 0.3                  | W                |

## OUTPUT

| parameter                | conditions/description            | min | nom | max | units |
|--------------------------|-----------------------------------|-----|-----|-----|-------|
| line regulation          |                                   |     | ±3  |     | %     |
| load regulation          |                                   |     | ±5  |     | %     |
| 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 minute |     |     | 3,000<br>4,242 | V ac<br>V dc |
| insulation resistance | input to output at 500 V dc           | 100 |     |                | MΩ           |
| safety approvals      | UL/cUL, GS, CE, RCM, CCC              |     |     |                |              |
| EMI standard          | FCC part 15 class B, EN55022 class B  |     |     |                |              |
| leakage current       | 9 V output<br>all other outputs       |     |     | 0.25<br>0.1    | mA<br>mA     |
| RoHS compliant        | yes                                   |     |     |                |              |

## ENVIRONMENTAL

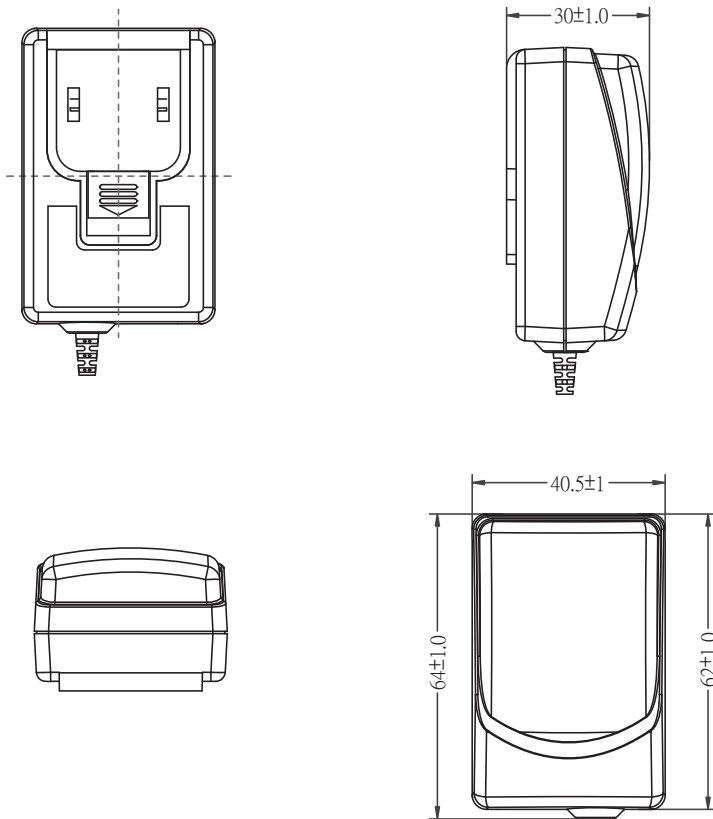
| parameter             | conditions/description | min | nom | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| operating humidity    |                        | 20  |     | 80  | %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



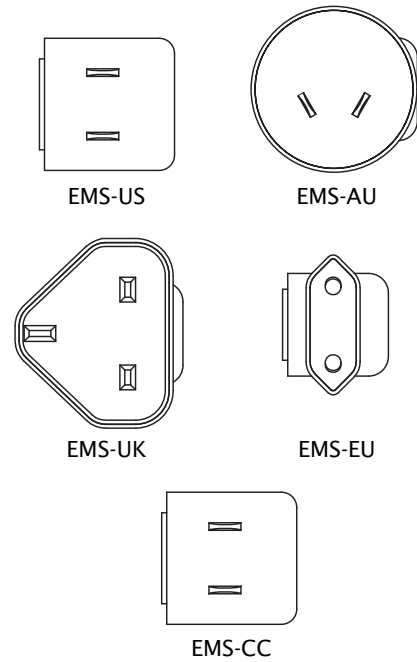
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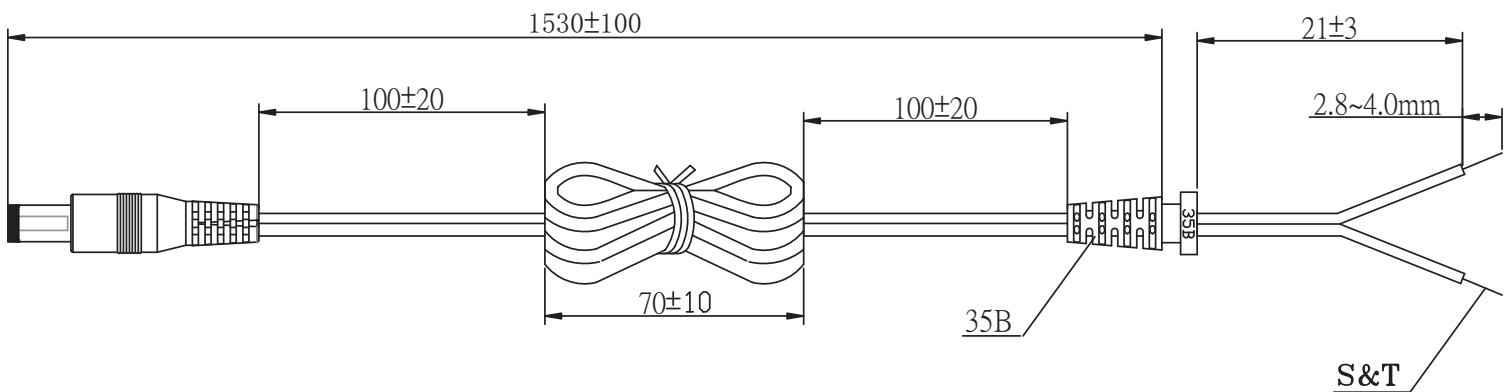
**MECHANICAL DRAWING**



|            |   |
|------------|---|
| input plug | multi-blade<br>(UL, VDE, UK, SAA, CCC)      |
| weight     | 127 g                                       |
| case size  | 64 L x 40.5 W x 30 H mm<br>tolerance: ±1 mm |



**DC CORD**



| Cable Gauge |        |
|-------------|--------|
| EMSA050120  | 20 AWG |
| EMSA090067  | 22 AWG |
| EMSA120050  | 22 AWG |
| EMSA150040  | 22 AWG |

Black wire, white stripe: Positive

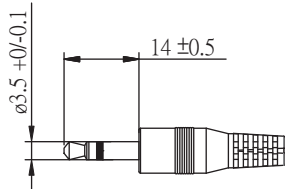


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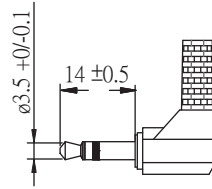
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**OUTPUT PLUG OPTIONS**

**3.5 mm Phono Plug**



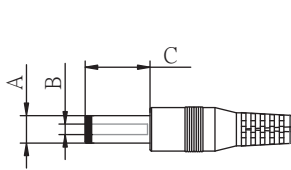
P1



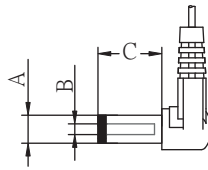
P1R

\*Tip positive

**Standard DC Plug**



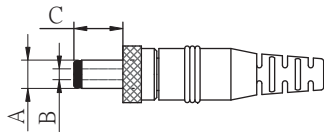
Standard PX



Right Angle PXR

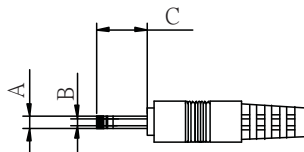
|        | A   | B    | C   | Unit |
|--------|-----|------|-----|------|
| P5/P5R | 5.5 | 2.1  | 9.5 | mm   |
| P6/P6R | 5.5 | 2.5  | 9.5 | mm   |
| P7/P7R | 3.5 | 1.3  | 9.5 | mm   |
| P8/P8R | 3.8 | 1.35 | 9.5 | mm   |
| P9/P9R | 3.8 | 1.05 | 9.5 | mm   |

**Locking DC Plug**

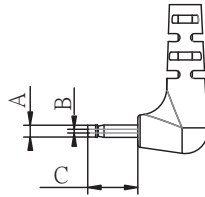


|     | A   | B   | C   | Unit |
|-----|-----|-----|-----|------|
| P10 | 5.5 | 2.1 | 9.5 | mm   |
| P11 | 5.5 | 2.5 | 9.5 | mm   |

**EIAJ Plugs**

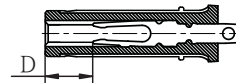


Standard PXX

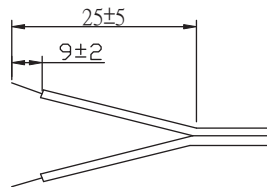


Right Angle PXXR

|          | 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

⊖ — ⊕      ⊕ — ⊖

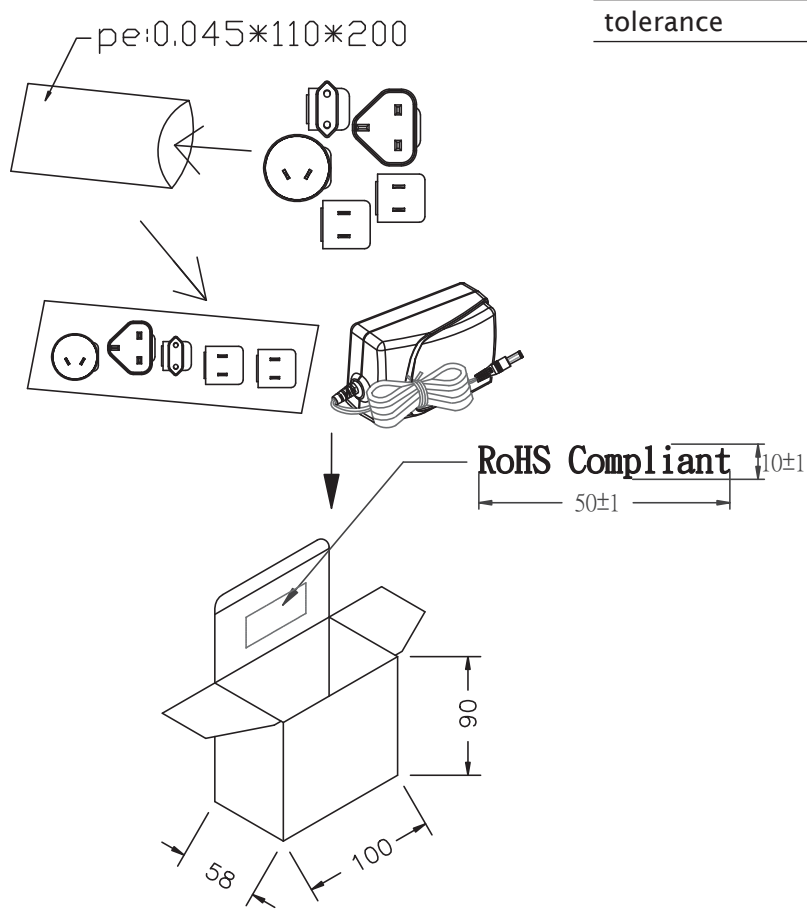
\*Contact CUI for additional output plug options.



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**INDIVIDUAL PACKAGING**



**PACKAGING**

tolerance  $+7 / -0$  mm

EXTERNAL CARTON MATERIAL:A=B(6mm)

INTERNAL CARTON MATERIAL:B3B(3mm)

CARTON SIZE: 485X428X210mm

Q'TY: 60pcs(20x3x1)

"RoHS Compliant"

