

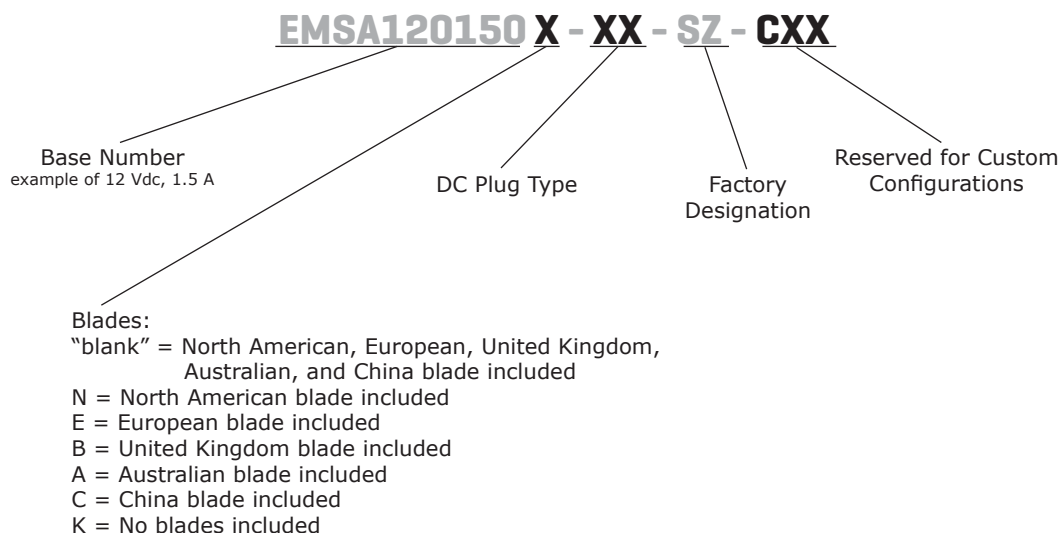
SERIES: EMSA 18W | DESCRIPTION: AC-DC POWER SUPPLY
FEATURES

- up to 18W power
- interchangeable AC blades
- universal input (85-264 Vac)
- single regulated output from 5 to 24V
- short circuit protections
- UL/cUL, GS, RCM, and CCC safety approvals
- level V efficiency
- custom designs available


V-Infinity

| MODEL | output voltage | output current max | output power max | ripple ¹ | efficiency level |
|------------|-------------------|--------------------------|------------------------|---------------------|---------------------|
| | (Vdc) | (A) | (W) | max (mVp-p) | |
| EMSA050300 | 5 | 3.0 | 15 | 150 | V |
| EMSA060300 | 6 | 3.0 | 18 | 150 | V |
| EMSA090200 | 9 | 2.0 | 18 | 150 | V |
| EMSA120150 | 12 | 1.5 | 18 | 150 | V |
| EMSA150120 | 15 | 1.2 | 18 | 150 | V |
| EMSA180100 | 18 | 1.0 | 18 | 180 | V |
| EMSA200090 | 20 | 0.9 | 18 | 200 | V |
| EMSA240075 | 24 | 0.75 | 18 | 240 | V |

1. at full load, 100 ~ 240, 20 MHz bandwidth oscilloscope, each with output terminated with a 10 μ F aluminum electrolytic and 0.1 μ F ceramic capacitors.

PART NUMBER KEY


INPUT

| parameter | conditions/description | min | nom | max | units |
|---------------------------|---|-----|-----|-----|-------|
| voltage | | 90 | | 264 | Vac |
| frequency | | 47 | | 63 | Hz |
| input current | | | | 0.6 | A RMS |
| inrush current | 5, 6 V output at 115 V ac, cold start | | | 30 | A |
| | 5, 6 V output at 230 V ac, cold start | | | 60 | A |
| | all other outputs: 115 V ac, cold start | | | 40 | A |
| | all other outputs: 230 V ac, cold start | | | 80 | A |
| no load power consumption | | | | 0.3 | W |

OUTPUT

| parameter | conditions/description | min | nom | max | units |
|-----------------|------------------------|-----|-----|-----|-------|
| line regulation | | | ±1 | | % |
| load regulation | | | ±5 | | % |

PROTECTIONS

| parameter | conditions/description | min | nom | max | units |
|--------------------------|---|-----|-----|-----|-------|
| over voltage protection | output voltage clamped by internal protection zener (5 V and 6 V models only) | | | | |
| short circuit protection | Output shut down and auto restart | | | | |

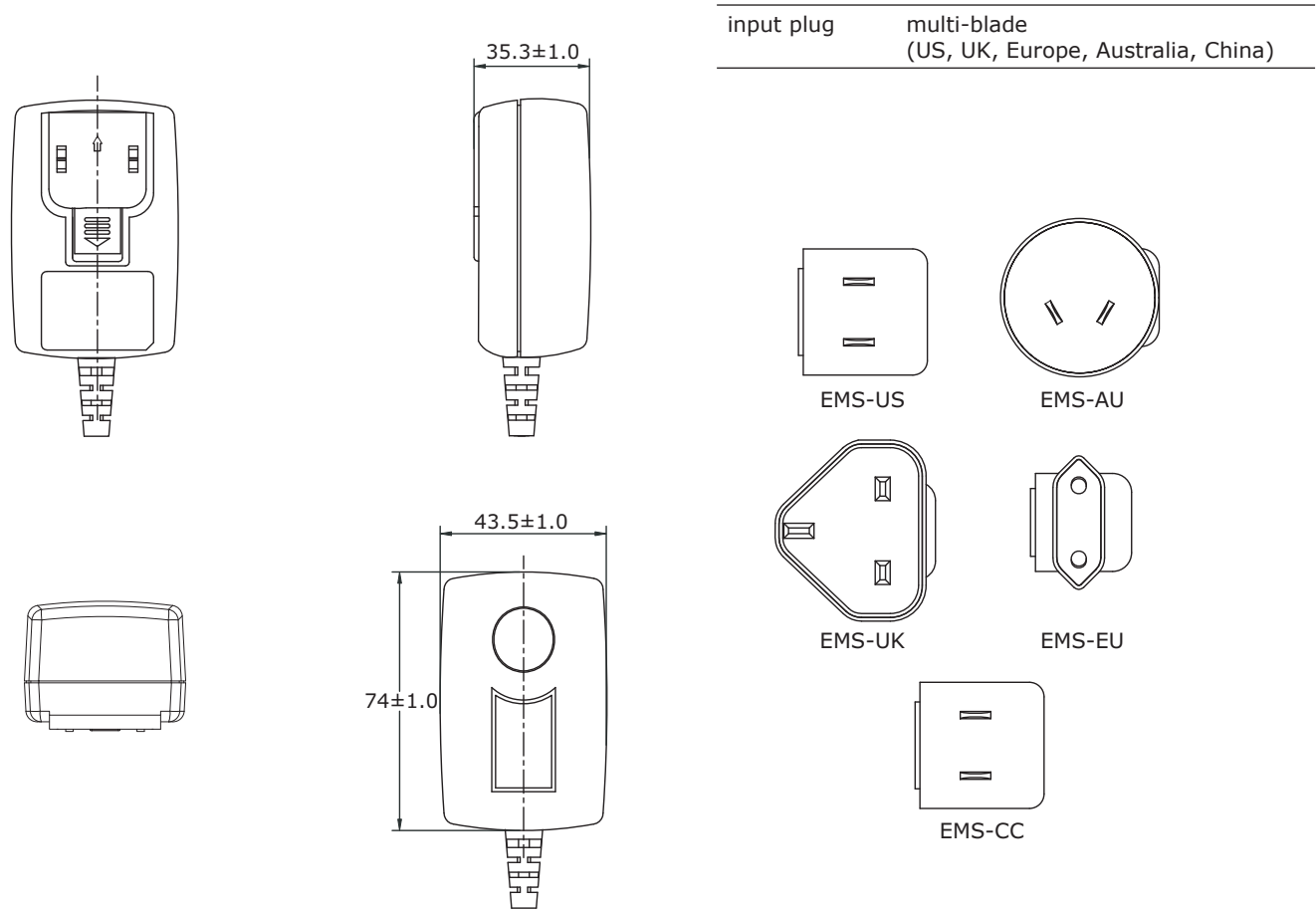
SAFETY & COMPLIANCE

| parameter | conditions/description | min | nom | max | units |
|----------------------|---------------------------------------|-----|-----|----------------|------------|
| isolation voltage | input to output at 10 mA for 1 minute | | | 3,000 4,242 | Vac Vdc |
| isolation resistance | input to output at 500 V dc | 100 | | | MΩ |
| safety approvals | UL/cUL, GS, RCM, CCC, PSE | | | | |
| EMI/EMC | FCC class B, EN55022, CE | | | | |
| leakage current | | | | 0.25 | mA |
| RoHS compliant | yes | | | | |

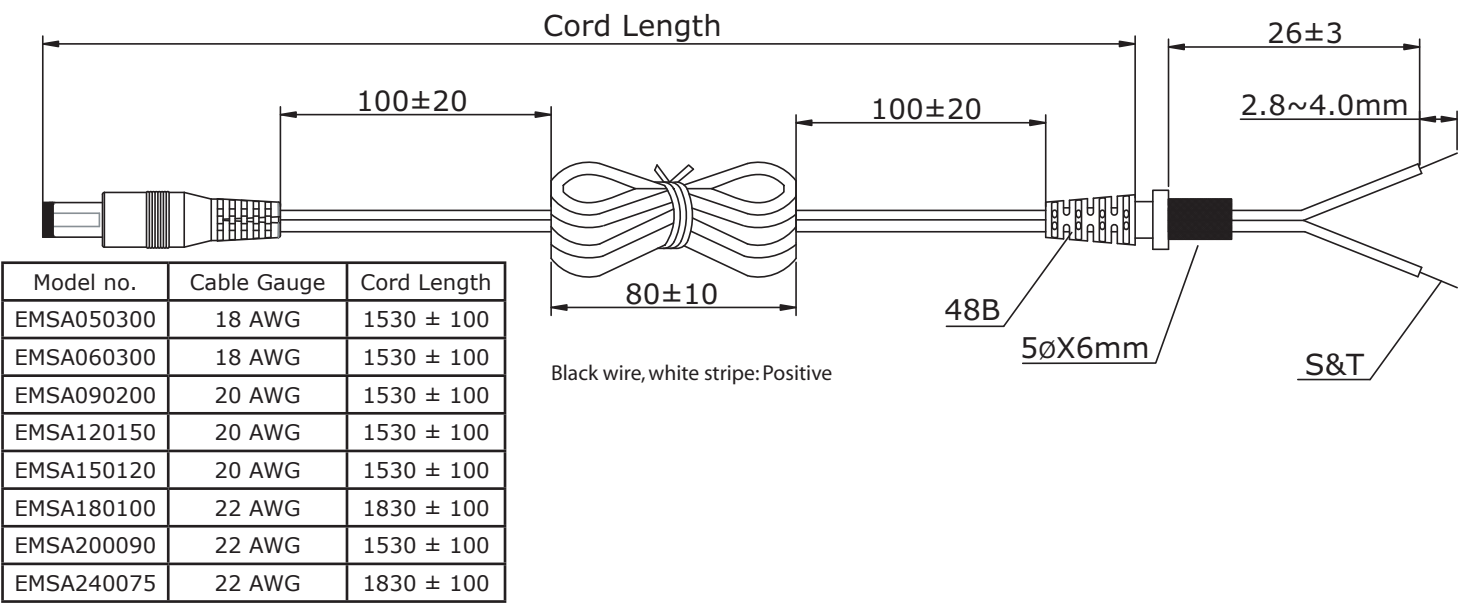
ENVIRONMENTAL

| parameter | conditions/description | min | nom | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | 0 | | 40 | °C |
| storage temperature | | -10 | | 75 | °C |
| operating humidity | | 20 | | 80 | % |
| storage humidity | | 10 | | 90 | % |

MECHANICAL DRAWING

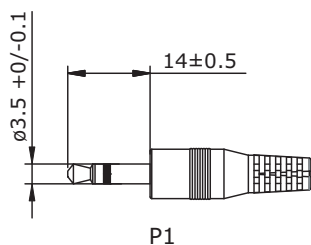


DC CORD

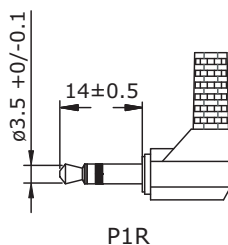


OUTPUT PLUG OPTIONS

3.5 mm Phono Plug



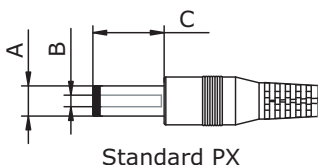
P1



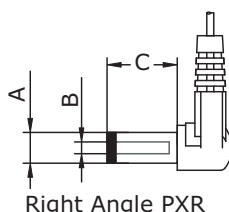
P1R

*Tip positive

Standard DC Plug



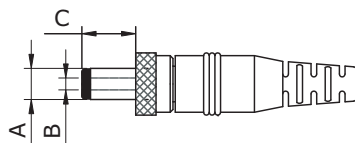
Standard PX



Right Angle PXR

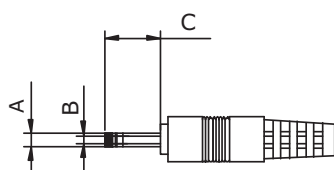
| | A | B | C | Unit |
|--------|-----|------|-----|------|
| P5/P5R | 5.5 | 2.1 | 9.5 | mm |
| P6/P6R | 5.5 | 2.5 | 9.5 | mm |
| P7/P7R | 3.5 | 1.3 | 9.5 | mm |
| P8/P8R | 3.8 | 1.35 | 9.5 | mm |
| P9/P9R | 3.8 | 1.05 | 9.5 | mm |

Locking DC Plug

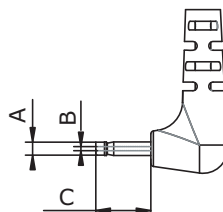


| | A | B | C | Unit |
|-----|-----|-----|-----|------|
| P10 | 5.5 | 2.1 | 9.5 | mm |
| P11 | 5.5 | 2.5 | 9.5 | mm |

EIAJ Plugs

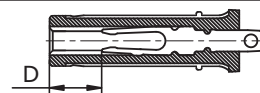


Standard PXX

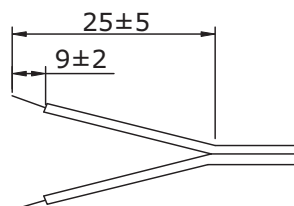


Right Angle PXXR

| | 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.

REVISION HISTORY

| rev. | description | date |
|------|-----------------|------------|
| 1.0 | initial release | 09/07/2011 |

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.

CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.