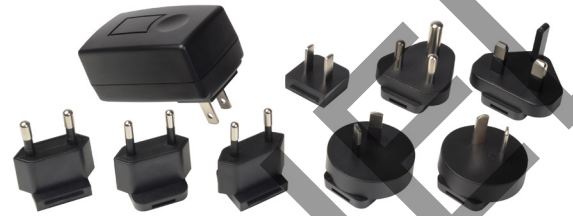


SERIES: EMSA 18W UN | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

- 18 W power
- universal input (90~264 Vac)
- worldwide safety approvals
- ac input - 9 country blades
- single regulated output
- over voltage and short circuit protections
- level V efficiency
- custom designs available



| MODEL | output voltage (Vdc) | output current max (A) | output power max (W) | ripple and noise ¹ max (mVp-p) | efficiency level |
|---------------|-------------------------|------------------------------|----------------------------|---|---------------------|
| EMSA120150-UN | 12 | 1.5 | 18 | 150 | V |

Notes: 1. Ripple and noise measured with 20 MHz bandwidth oscilloscope, each output terminated with 10 µF aluminum electrolytic and 0.1 µF ceramic capacitors.

PART NUMBER KEY

EMSA120150 - UN - XX - SZ - CXX

Base Number
example of 12 Vdc, 1.50 A

Blades:
UN = North American,
European, United
Kingdom, Australian,
China, Korea,
Argentina, Brazil,
South Africa

DC Plug Type:
see output plug
options on page 4

Factory
Designation

Reserved for Custom
Configurations

INPUT

| parameter | conditions/description | min | typ | max | units |
|---------------------------|--|-----|-----|----------|--------|
| voltage | | 90 | | 264 | Vac |
| frequency | | 47 | | 63 | Hz |
| current | RMS | | | 0.6 | A |
| inrush current | at 115 Vac, cold start at 230 Vac, cold start | | | 40 80 | A A |
| leakage current | | | | 0.25 | mA |
| no load power consumption | | | | 0.3 | W |

OUTPUT

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

PROTECTIONS

| parameter | conditions/description | min | typ | max | units |
|--------------------------|---|-----|-----|-----|-------|
| over voltage protection | output voltage clamped by internal protection zener | | | | |
| short circuit protection | output shutdown and auto restart | | | | |

SAFETY & COMPLIANCE

| parameter | conditions/description | min | typ | max | units |
|----------------------|--|-----|----------------|-----|------------|
| isolation voltage | input to output for 1 minute at 10mA max | | 3,000 4,242 | | Vac Vdc |
| isolation resistance | input to output at 500 Vdc | 100 | | | MΩ |
| safety standards | UL 60950-1, EN 60950-1, IEC 60950-1 | | | | |
| safety approvals | UL/cUL, GS, Australia, China, Japan, Korea, Argentina, Brazil, Israel, Malaysia, Mexico, Ukraine, Russia, Singapore, South Africa, Saudi Arabia, Taiwan | | | | |
| EMI/EMC | FCC Part 15 Subpart B, Class B, CE | | | | |
| RoHS | 2011/65/EU | | | | |

ENVIRONMENTAL

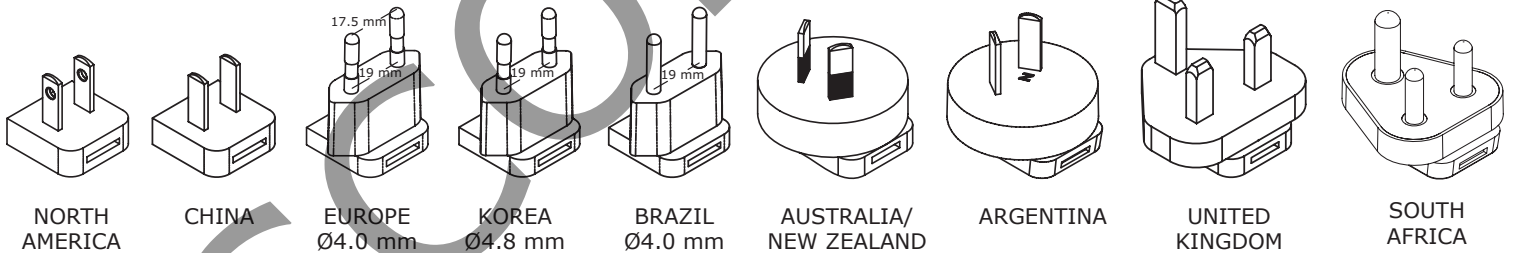
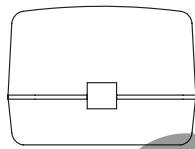
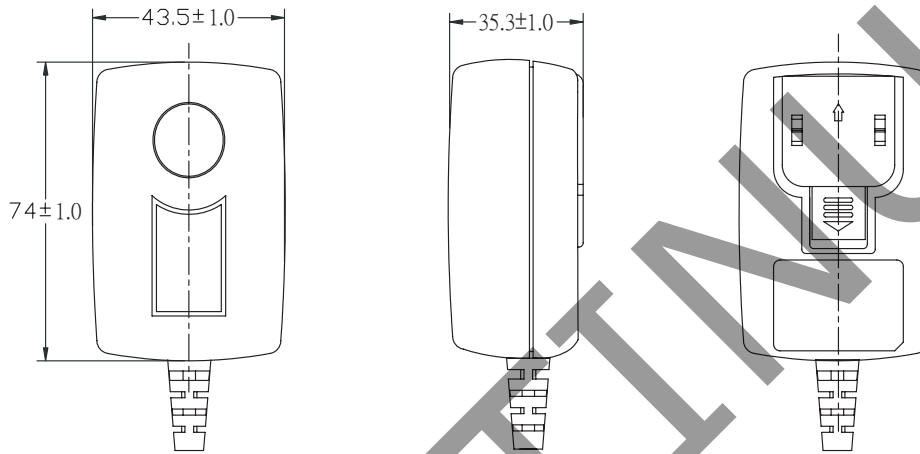
| parameter | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | | 0 | | 40 | °C |
| storage temperature | | -10 | | 70 | °C |
| operating humidity | non-condensing | 20 | | 80 | % |
| storage humidity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

MECHANICAL

| parameter | conditions/description | min | typ | max | units |
|-------------|---|-----|-----|-----|-------|
| dimensions | 74.0 x 43.5 x 35.3 | | | | mm |
| input blade | Interchangeable: US, UK, Europe, Australia, China, Korea, Argentina, Brazil, South Africa | | | | |
| weight | including input blades | | 238 | | g |

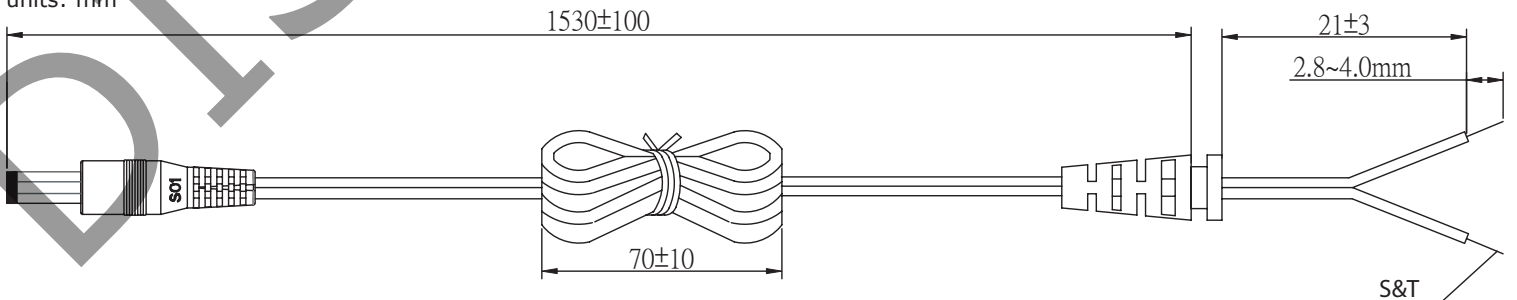
MECHANICAL DRAWING

units: mm
tolerance: ±1 mm



DC CORD

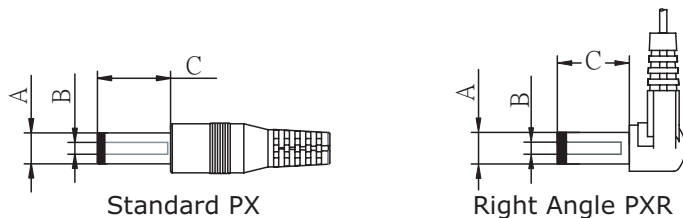
units: mm



| MODEL NO. | CABLE GAUGE | WIRE OD | CORD LENGTH |
|------------|-------------|------------|-------------|
| EMSA120150 | 20 AWG | Ø1.9 x 3.8 | 1,530 ±100 |

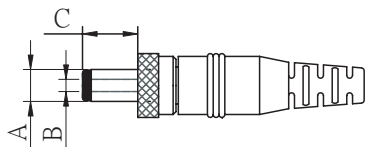
OUTPUT PLUG OPTIONS

Standard DC Plug



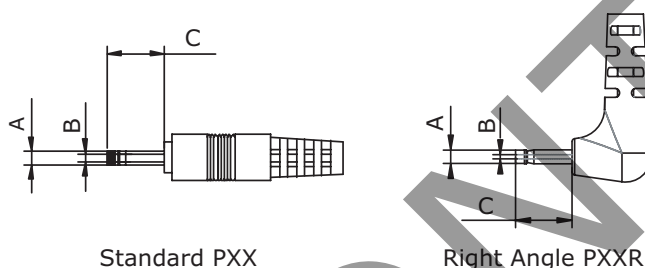
| | A | B | C | Unit |
|--------|-----|------|-----|------|
| P5/P5R | 5.5 | 2.1 | 9.5 | mm |
| P6/P6R | 5.5 | 2.5 | 9.5 | mm |
| P7/P7R | 3.5 | 1.35 | 9.5 | mm |
| P8/P8R | 3.8 | 1.35 | 9.5 | mm |
| P9/P9R | 3.8 | 1.05 | 9.5 | mm |

Locking DC Plug

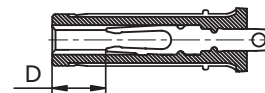


| | A | B | C | Unit |
|-----|-----|-----|-----|------|
| P10 | 5.5 | 2.1 | 9.5 | mm |
| P11 | 5.5 | 2.5 | 9.5 | mm |

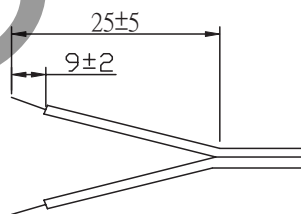
EIAJ DC Plug



| | 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

PXX XX

Plug Type:
PXX = See above plug options
ST = Stripped and Tinned

Plug Angle:
"blank" = Straight
R = Right Angle

Plug Polarity:
P = Center Positive 
N = Center Negative 

*Contact CUI for additional plug options

REVISION HISTORY

| rev. | description | date |
|------|-----------------|------------|
| 1.0 | initial release | 08/04/2014 |

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

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.



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