

**SERIES:** ETSA 100W U | **DESCRIPTION:** AC-DC POWER SUPPLY

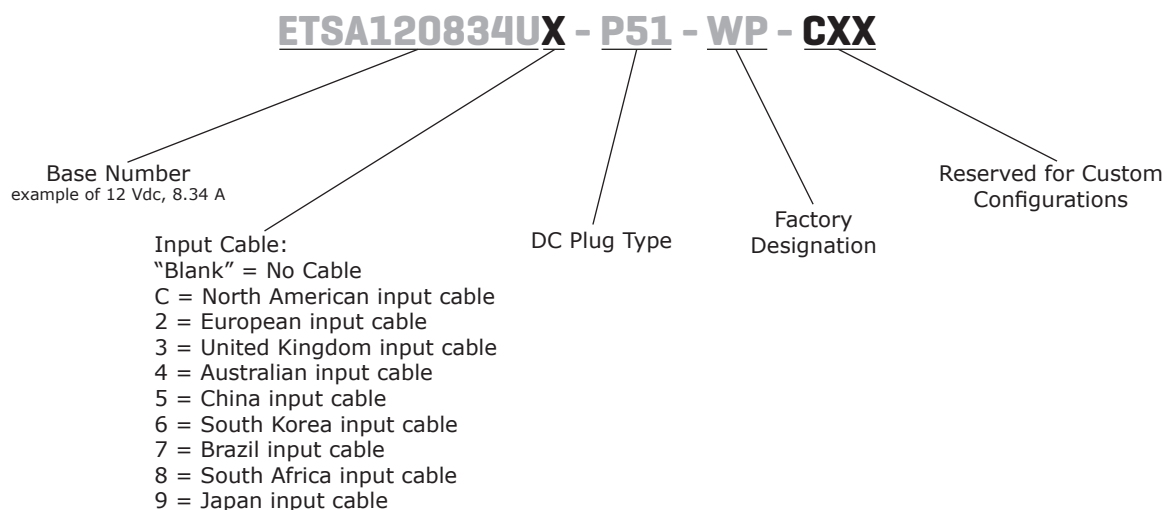
**FEATURES**

- 100 W power
- universal input (90~264 Vac)
- single regulated outputs
- over voltage, over current, and short circuit protections
- UL/cUL safety approvals
- level V efficiency
- power factor correction
- custom designs available



| MODEL       | output voltage | output current max | output power max | ripple and noise <sup>1</sup> max | efficiency level |
|-------------|----------------|--------------------|------------------|-----------------------------------|------------------|
|             | (Vdc)          | (A)                | (W)              | (mVp-p)                           |                  |
| ETSA120834U | 12             | 8.34               | 100              | 240                               | V                |
| ETSA160625U | 16             | 6.25               | 100              | 320                               | V                |
| ETSA190527U | 19             | 5.27               | 100              | 380                               | V                |
| ETSA240417U | 24             | 4.17               | 100              | 480                               | V                |
| ETSA360278U | 36             | 2.78               | 100              | 480                               | V                |
| ETSA480209U | 48             | 2.09               | 100              | 480                               | V                |

Notes: 1. Ripple and noise measured with 20 MHz bandwidth oscilloscope, each output terminated with 10  $\mu$ F/50 V electrolytic and 0.1  $\mu$ F ceramic capacitors.

**PART NUMBER KEY**


## INPUT

| parameter                 | conditions/description | min | typ | max | units |
|---------------------------|------------------------|-----|-----|-----|-------|
| voltage                   |                        | 90  |     | 264 | Vac   |
| frequency                 |                        | 47  |     | 63  | Hz    |
| current                   | at 90 Vac, 50 Hz       |     |     | 2.5 | A     |
| inrush current            | at 230 Vac, cold start |     |     | 150 | A     |
| power factor correction   | at full load           |     | 0.9 |     |       |
| no load power consumption |                        |     |     | 0.5 | W     |

## OUTPUT

| parameter               | conditions/description              | min | typ | max   | units |
|-------------------------|-------------------------------------|-----|-----|-------|-------|
| total regulation        |                                     | -2  |     | +5    | %     |
| hold-up                 | at 115/230 Vac, 50/60 Hz, full load | 16  |     |       | ms    |
| temperature coefficient |                                     |     |     | ±0.05 | %/°C  |

## PROTECTIONS

| parameter                | conditions/description                                 | min | typ | max | units |
|--------------------------|--------------------------------------------------------|-----|-----|-----|-------|
| over voltage protection  | auto latch off                                         | 110 |     | 130 | %     |
| over current protection  | auto restart when overload is removed                  | 110 |     | 160 | %     |
| short circuit protection | auto shutdown, auto restart when short circuit removed |     |     |     |       |

## SAFETY & COMPLIANCE

| parameter            | conditions/description                           | min     | typ | max | units |
|----------------------|--------------------------------------------------|---------|-----|-----|-------|
| isolation voltage    | input to output for 4 seconds                    | 4,242   |     |     | Vdc   |
|                      | input to ground for 4 seconds                    | 2,121   |     |     | Vdc   |
| isolation resistance | input to output at 500 Vdc                       | 20      |     |     | MΩ    |
|                      | input to ground at 500 Vdc                       | 20      |     |     | MΩ    |
| safety approvals     | UL/cUL, GS                                       |         |     |     |       |
| EMI/EMC              | FCC Part 15 Class B, EN55022/EN55024 Class B, CE |         |     |     |       |
| MTBF                 | at full load, 25°C                               | 140,000 |     |     | hrs   |
| RoHS                 | 2011/65/EU                                       |         |     |     |       |

## ENVIRONMENTAL

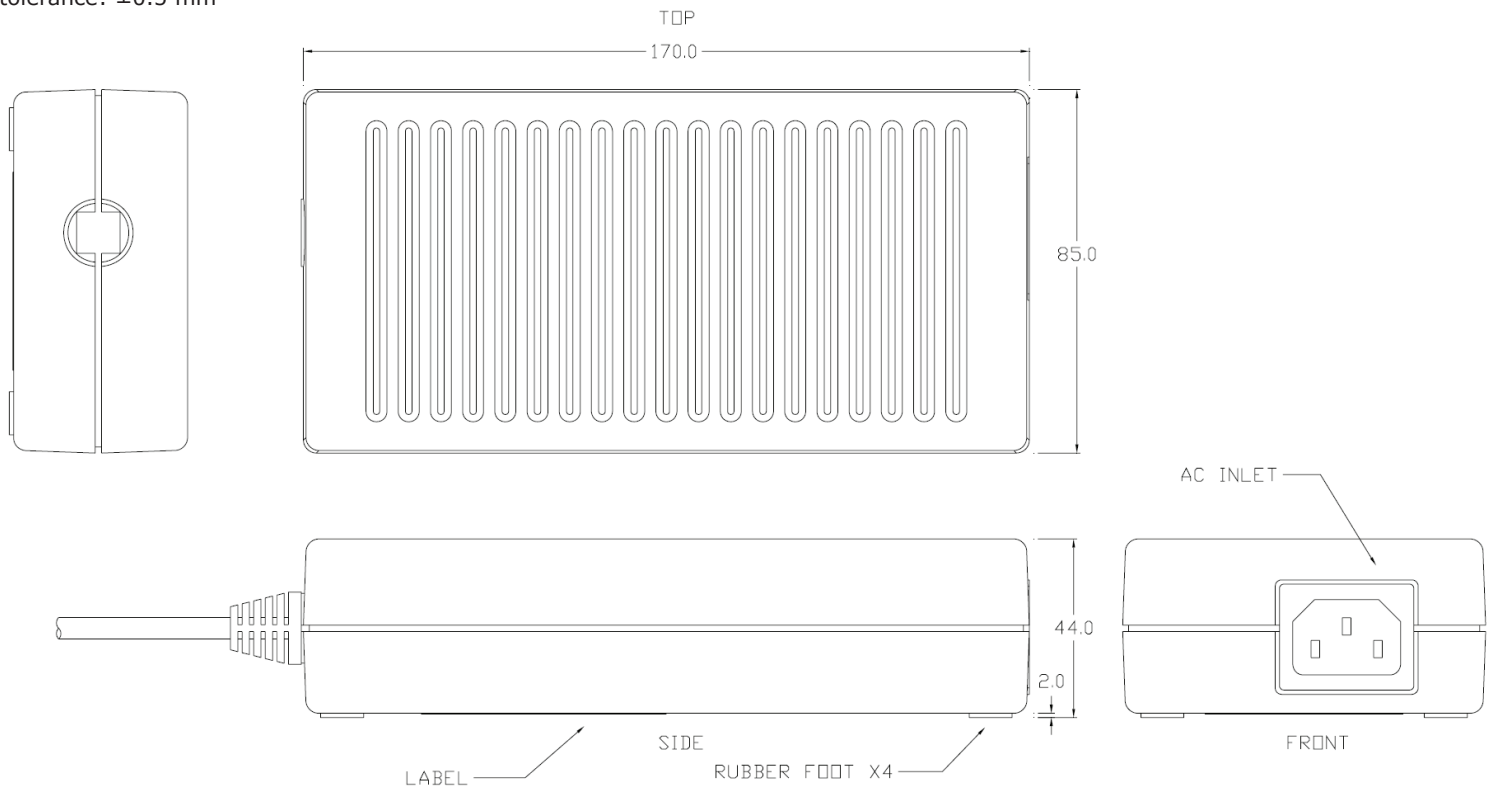
| parameter             | conditions/description                   | min | typ | max | units |
|-----------------------|------------------------------------------|-----|-----|-----|-------|
| operating temperature | derate linearly 2.5% per °C from 41~60°C | 0   |     | 60  | °C    |
| storage temperature   | 12 Vdc & 16 Vdc output models            | -10 |     | 85  | °C    |
|                       | all other models                         | -10 |     | 70  | °C    |
| operating humidity    | non-condensing                           | 20  |     | 90  | %     |
| storage humidity      | non-condensing                           | 20  |     | 90  | %     |

## MECHANICAL

| parameter  | conditions/description | min | typ | max | units |
|------------|------------------------|-----|-----|-----|-------|
| dimensions | 170 x 85 x 44          |     |     |     | mm    |
| input plug | IEC320 / C14           |     |     |     |       |

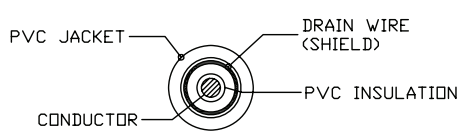
## MECHANICAL DRAWING

units: mm

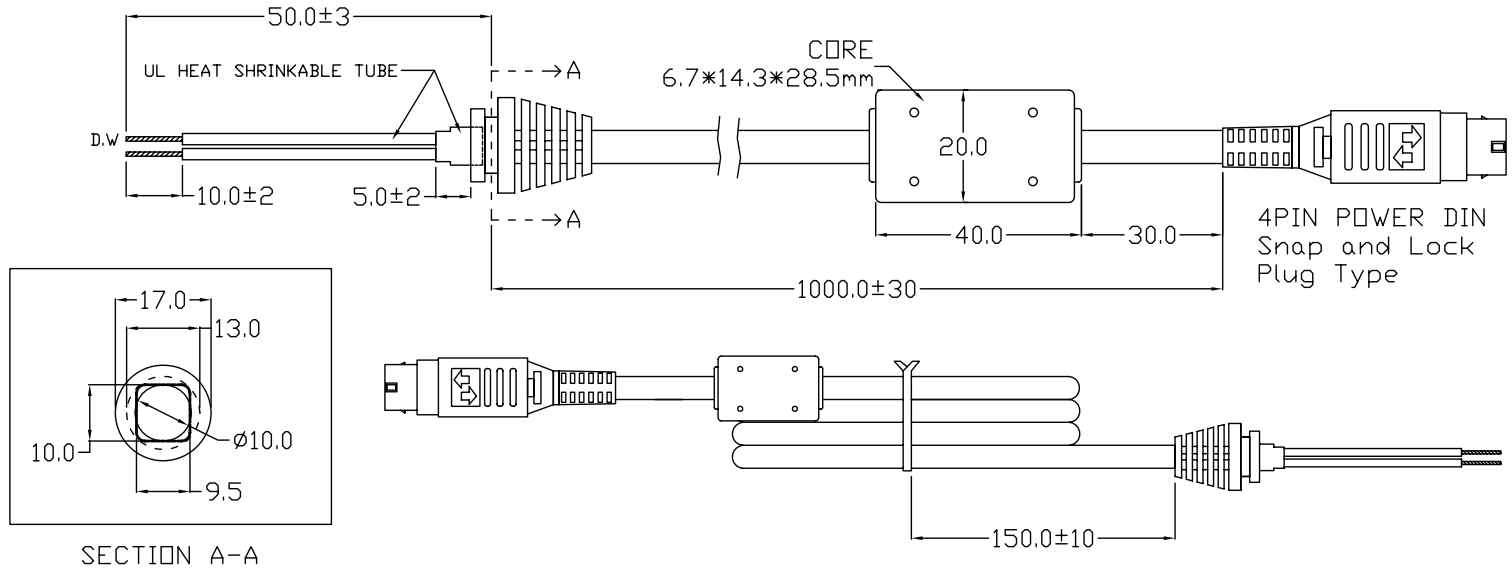
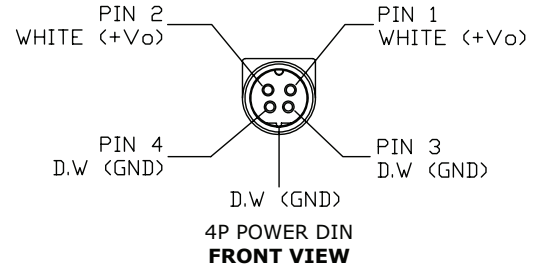
tolerance:  $\pm 0.5$  mm

## DC CORD

units: mm



See Table 1  
**SECTIONAL DRAWING**



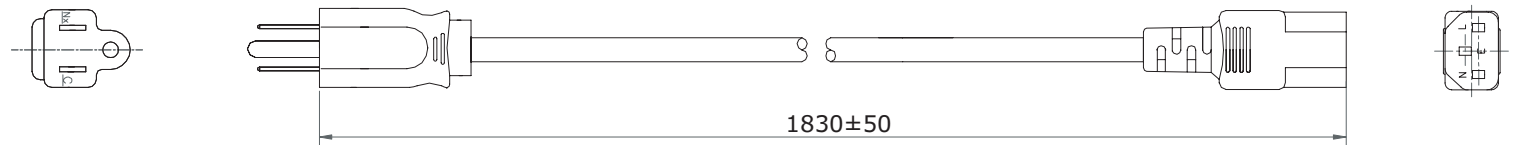
**Table 1**

| MODEL NO.   | CABLE                                                                      |
|-------------|----------------------------------------------------------------------------|
| ETSA120834U | 14 AWG, Black, UL1571, 80°C, 30 V, 14 AWGX1C + aluminum shield (14 AWG)    |
| ETSA160625U | 14 AWG, Black, UL1571, 80°C, 30 V, 14 AWGX1C + aluminum shield (14 AWG)    |
| ETSA190527U | 14 AWG, Black, UL1571, 80°C, 30 V, 14 AWGX1C + aluminum shield (14 AWG)    |
| ETSA240417U | 14 AWG, Black, UL1571, 80°C, 30 V, 14 AWGX1C + aluminum shield (14 AWG)    |
| ETSA360278U | 16 AWG, Black, UL1185 80/90°C, 300 V, 16 AWGX1C + aluminum shield (16 AWG) |
| ETSA480209U | 16 AWG, Black, UL1185 80/90°C, 300 V, 16 AWGX1C + aluminum shield (16 AWG) |

## AC CORD

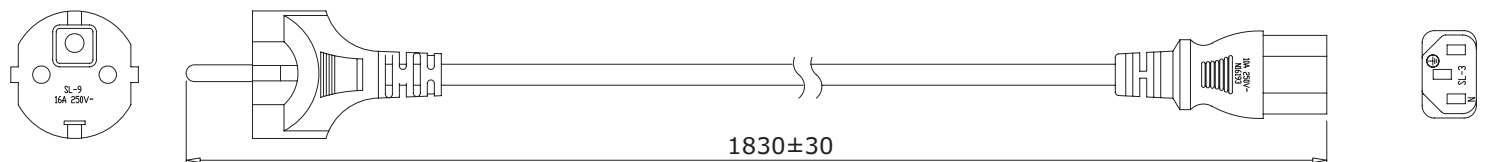
### NORTH AMERICAN INPUT CABLE

units: mm



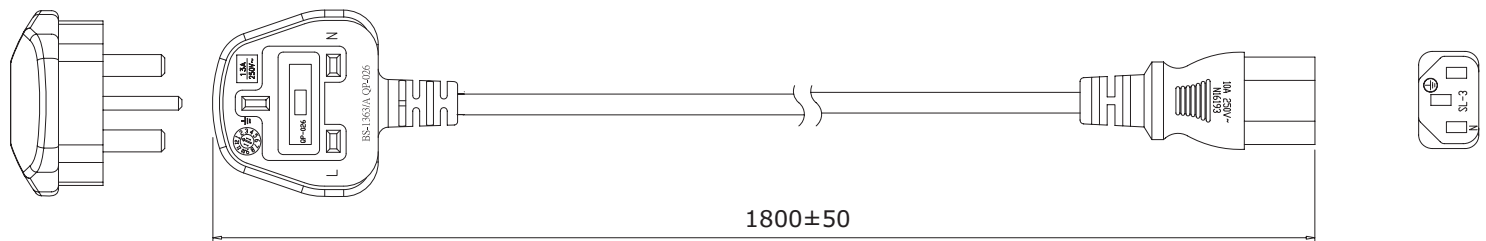
### EUROPEAN INPUT CABLE

units: mm



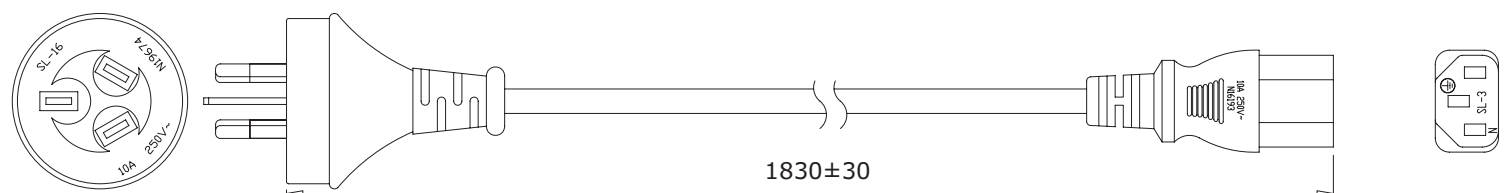
### UNITED KINGDOM INPUT CABLE

units: mm



### AUSTRALIAN INPUT CABLE

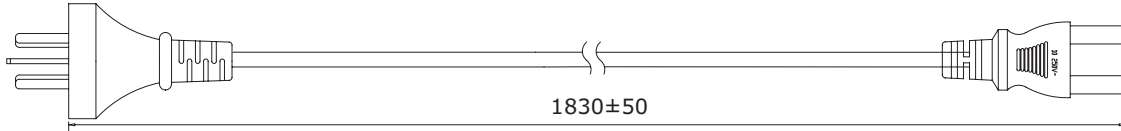
units: mm



## AC CORD (CONTINUED)

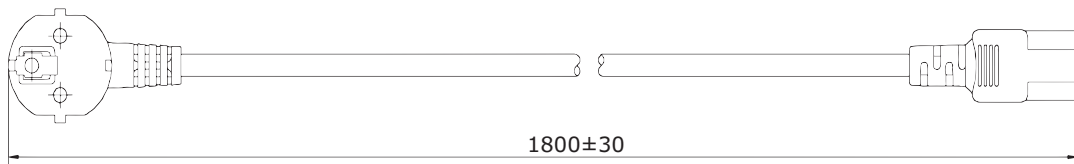
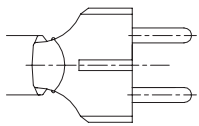
### CHINA INPUT CABLE

units: mm



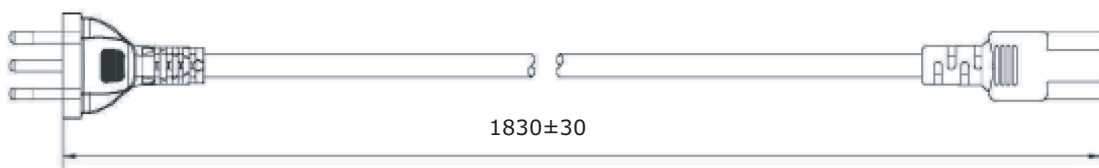
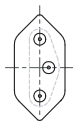
### SOUTH KOREA INPUT CABLE

units: mm



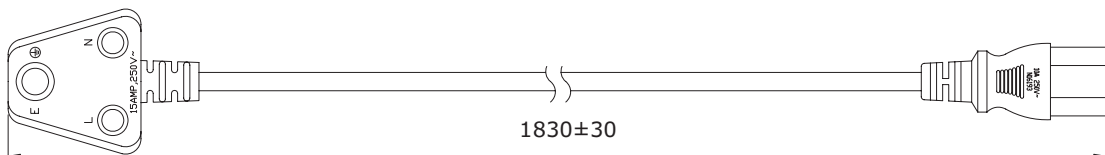
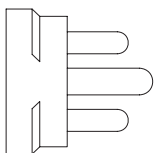
### BRAZIL INPUT CABLE

units: mm



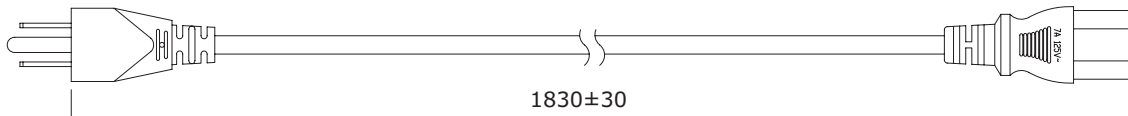
### SOUTH AFRICA INPUT CABLE

units: mm



### JAPAN INPUT CABLE

units: mm



## REVISION HISTORY

| rev. | description           | date       |
|------|-----------------------|------------|
| 1.0  | initial release       | 11/22/2013 |
| 1.01 | added ac cord options | 10/09/2014 |

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.

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