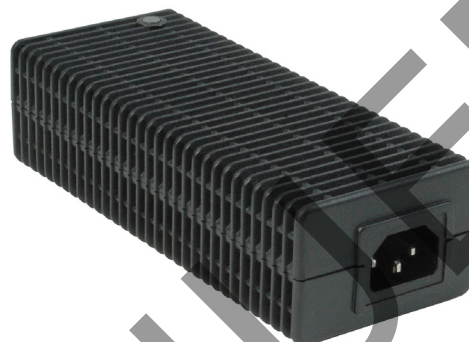


**SERIES:** ETS 150W U | **DESCRIPTION:** AC-DC POWER SUPPLY

**FEATURES**

- up to 150 W power
- universal input (90~264 Vac)
- single regulated output from 12~24 V
- over load and short circuit protections
- UL/cUL and TUV safety approvals
- level V efficiency
- custom designs available



| MODEL       | output<br>voltage | output<br>current<br>max | output<br>power<br>max | ripple <sup>1</sup><br>max | efficiency<br>level |
|-------------|-------------------|--------------------------|------------------------|----------------------------|---------------------|
|             | (Vdc)             | (A)                      | (W)                    | (mVp-p)                    |                     |
| ETS1201000U | 12                | 10                       | 120                    | 200                        | V                   |
| ETS135890U  | 13.5              | 8.9                      | 120.2                  | 200                        | V                   |
| ETS150830U  | 15                | 8.3                      | 124.5                  | 200                        | V                   |
| ETS160810U  | 16                | 8.1                      | 129.6                  | 200                        | V                   |
| ETS180750U  | 18                | 7.5                      | 135                    | 250                        | V                   |
| ETS190750U  | 19                | 7.5                      | 142.5                  | 250                        | V                   |
| ETS200710U  | 20                | 7.1                      | 142                    | 250                        | V                   |
| ETS240625U  | 24                | 6.25                     | 150                    | 250                        | V                   |

Notes: 1. At full load, 100 ~ 240 Vac input, 20 MHz bandwidth oscilloscope, each output terminated with 10  $\mu$ F aluminum electrolytic and 0.1  $\mu$ F ceramic capacitors.

**PART NUMBER KEY**

**ETS135890U X C - P51 - ET - CXX**

Base Number  
example of 13.5 Vdc, 8.9 A

AC Input Plug:  
blank = IEC 320 C14 plug  
T = IEC 3210 C6 plug

Input Cable:  
C = included  
blank = no cable

4 position  
"Power DIN"

Reserved for Custom  
Configurations  
Factory  
Designation

## INPUT

| parameter                 | conditions/description                                                                           | min         | typ | max | units |
|---------------------------|--------------------------------------------------------------------------------------------------|-------------|-----|-----|-------|
| voltage                   |                                                                                                  | 90          |     | 264 | Vac   |
| frequency                 |                                                                                                  | 47          |     | 63  | Hz    |
| current                   |                                                                                                  |             |     | 2.5 | A     |
| inrush current            | at 230 Vac, cool start                                                                           |             |     | 100 | A     |
| no load power consumption |                                                                                                  |             |     | 0.5 | W     |
| power factor correction   | complies with IEC 61000-3-2 class D, at 100 Vac harmonic standard, input power > 75W, at 240 Vac | 0.95<br>0.9 |     |     |       |

## OUTPUT

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

## PROTECTIONS

| parameter                | conditions/description | min | typ | max | units |
|--------------------------|------------------------|-----|-----|-----|-------|
| over voltage protection  |                        |     | 140 |     | %     |
| over current protection  |                        |     | 140 |     | %     |
| short circuit protection | auto restart           |     |     |     |       |

## SAFETY & COMPLIANCE

| parameter         | conditions/description                                                                                                                | min | typ | max    | units |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----|-----|--------|-------|
| isolation voltage | input to output at 10 mA for 1 second                                                                                                 |     |     | 1,800  | Vac   |
| safety approvals  | UL/cUL (60950-1), EN 60950-1/IEC 60950-1, CSA C22 60950-1-03                                                                          |     |     |        |       |
| EMI/EMC           | FCC Part 15 Class B, CE, CNS 13438 class B, CISPR 22 class B, EN 55022; EN 55024; EN 61000-(2, 3); IEC 61000-4-(2, 3, 4, 5, 6, 8, 11) |     |     |        |       |
| RoHS compliant    | yes                                                                                                                                   |     |     |        |       |
| MTBF              |                                                                                                                                       |     |     | 40,000 | hours |

## ENVIRONMENTAL

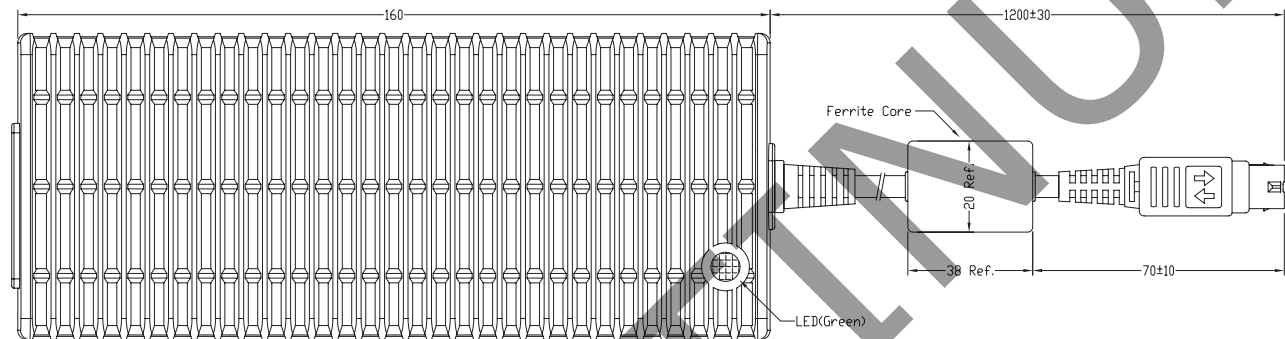
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -20 |     | 85  | °C    |
| operating humidity    |                        | 20  |     | 80  | %     |
| storage humidity      |                        | 0   |     | 90  | %     |

## MECHANICAL

| parameter  | conditions/description                   | min | typ | max | units |
|------------|------------------------------------------|-----|-----|-----|-------|
| dimensions | 160 x 65 x 49.5 (6.3 x 2.56 x 1.95 inch) |     |     |     | mm    |
| input plug | IEC320/C14 or IEC320/C6                  |     |     |     |       |

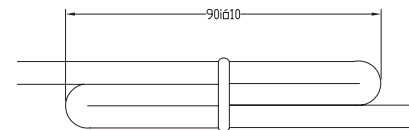
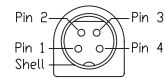
## MECHANICAL DRAWING

units: mm



Power DIN Plug 4P (With Lock):

Pin 1: +V  
 Pin 2: GND  
 Pin 3: GND  
 Pin 4: +V  
 Shell: GND

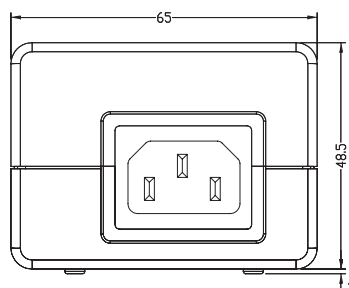


14AWG UL#1571 Black

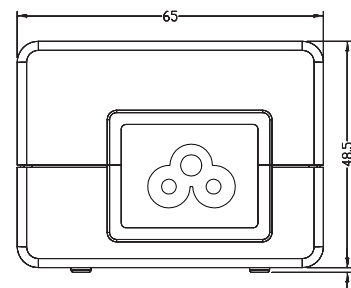
Unit: mm.

| COMMON TOLERANCE |       |  |
|------------------|-------|--|
| <= 5             | ±0.4  |  |
| > 5 <= 10        | ±0.6  |  |
| > 10 <= 50       | ±0.8  |  |
| > 50 <= 100      | ±1.0  |  |
| > 100            | ±1.0% |  |

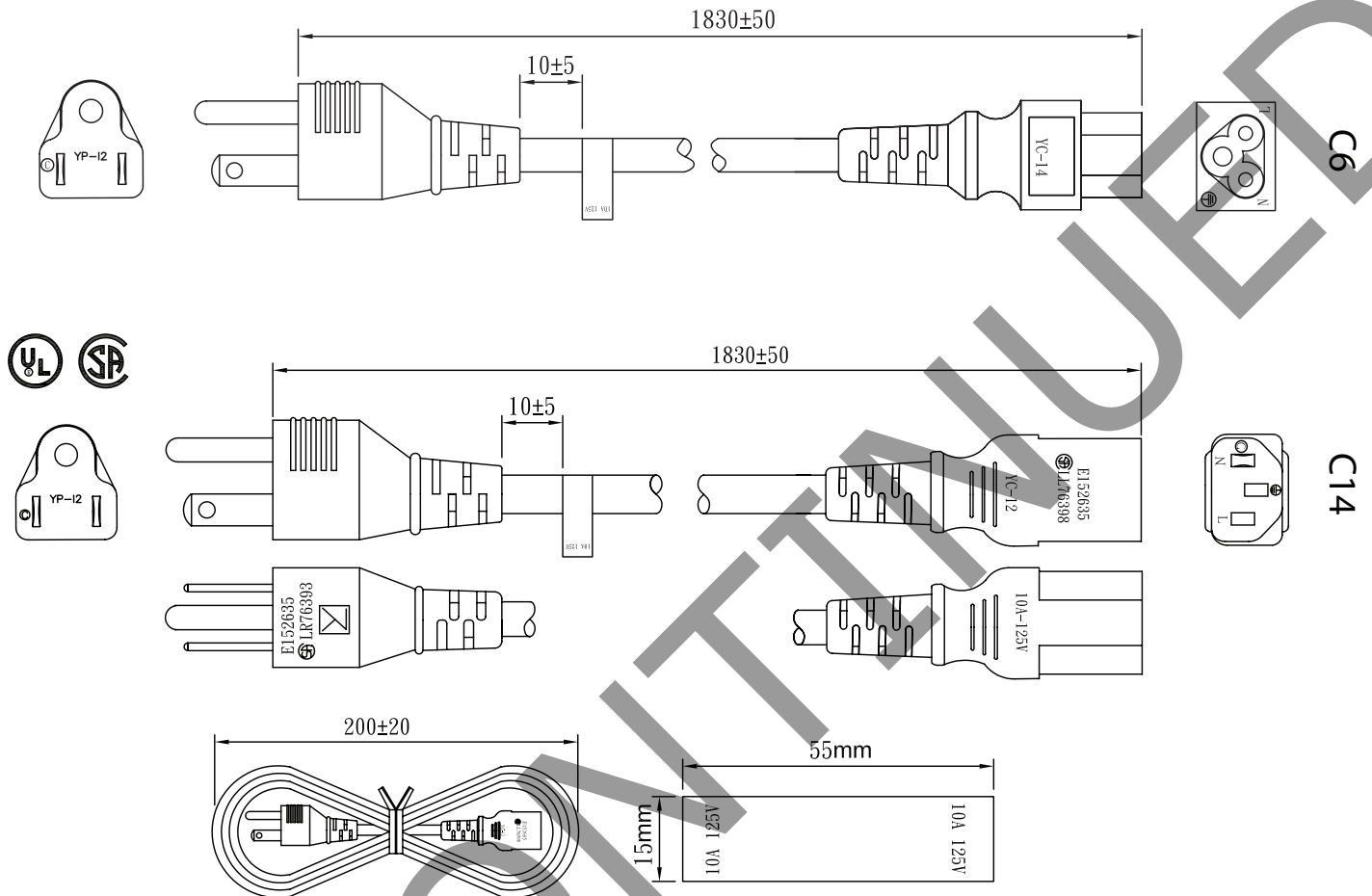
Standard:  
IEC 320 C14 input plug



Optional:  
IEC 320 C6 input plug



## AC CORD



## REVISION HISTORY

| rev. | description                                                  | date       |
|------|--------------------------------------------------------------|------------|
| 1.0  | initial release                                              | 10/22/2010 |
| 1.01 | V-Infinity branding removed, safety and EMI/EMC data updated | 08/13/2012 |
| 1.02 | updated datasheet                                            | 11/26/2014 |

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.

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.