



## SERIES: ETMA 30W | DESCRIPTION: MEDICAL AC-DC POWER SUPPLY

### FEATURES

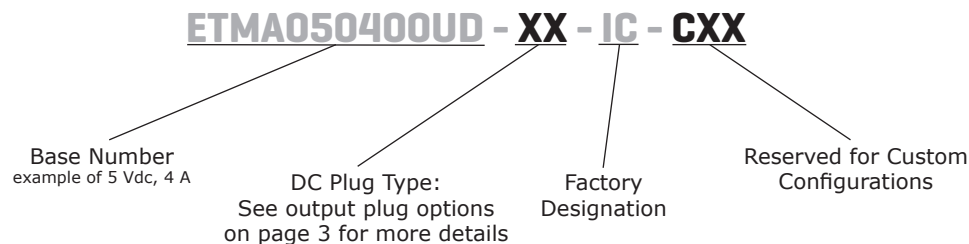
- up to 30 W power
- universal input (90~264 Vac)
- single regulated output from 5~24 Vdc
- over voltage and short circuit protections
- full medical safety approvals
- level V efficiency
- custom designs available



| MODEL        | output voltage<br>(Vdc) | output current max<br>(A) | output power max<br>(W) | ripple and noise <sup>1</sup> max<br>(mVp-p) | efficiency level |
|--------------|-------------------------|---------------------------|-------------------------|----------------------------------------------|------------------|
| ETMA050400UD | 5                       | 4                         | 20                      | 50                                           | V                |
| ETMA090300UD | 9                       | 3                         | 27                      | 90                                           | V                |
| ETMA120250UD | 12                      | 2.5                       | 30                      | 120                                          | V                |
| ETMA150200UD | 15                      | 2                         | 30                      | 150                                          | V                |
| ETMA180165UD | 18                      | 1.65                      | 30                      | 180                                          | V                |
| ETMA240125UD | 24                      | 1.25                      | 30                      | 240                                          | V                |

1. at full load, 100 ~ 240 Vac input, 20 MHz bandwidth oscilloscope, each output terminated with a 10  $\mu$ F aluminum 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    |
| input current             |                        |     |     | 0.6 | A     |
| inrush current            | at 240 Vac             |     |     | 50  | A     |
| no load power consumption |                        |     |     | 0.3 | W     |

## OUTPUT

| parameter                    | conditions/description | min | typ   | max | units |
|------------------------------|------------------------|-----|-------|-----|-------|
| line regulation <sup>1</sup> |                        |     | ±1    |     | %     |
| load regulation <sup>2</sup> | 5 Vdc output           |     | ±6    |     | %     |
|                              | 9 Vdc output           |     | ±4    |     | %     |
|                              | 12, 15 Vdc outputs     |     | ±3    |     | %     |
|                              | 18, 24 Vdc outputs     |     | ±2    |     | %     |
| voltage accuracy             |                        |     | ±2    |     | %     |
| hold-up time                 | at 115 Vac             |     | 16    |     | ms    |
| switching frequency          |                        |     | 70    |     | kHz   |
| temperature coefficient      |                        |     | ±0.05 |     | %/°C  |

Note: 1. measured from 100 ~ 240 Vac, full load  
2. measured from 60% to full load and from 60 ~ 20% load (60% ±40% load)

## PROTECTIONS

| parameter                | conditions/description   |
|--------------------------|--------------------------|
| over voltage protection  | TVS component to clamp   |
| short circuit protection | continuous, auto restart |

## SAFETY & COMPLIANCE

| parameter         | conditions/description                   | min     | typ | max   | units |
|-------------------|------------------------------------------|---------|-----|-------|-------|
| isolation voltage | input to output                          |         |     | 5,656 | Vdc   |
| safety approvals  | IEC 60601-1, EN 60601-1, UL 60601-1      |         |     |       |       |
| EMI/EMC           | EN 55011, EN 60601-1-2, EN 61000-3-(2,3) |         |     |       |       |
| MTBF              | as per MIL-HDBK-217F, 115 Vac, 25 °C     | 300,000 |     |       | hours |
| RoHS              | 2011/65/EU                               |         |     |       |       |

## ENVIRONMENTAL

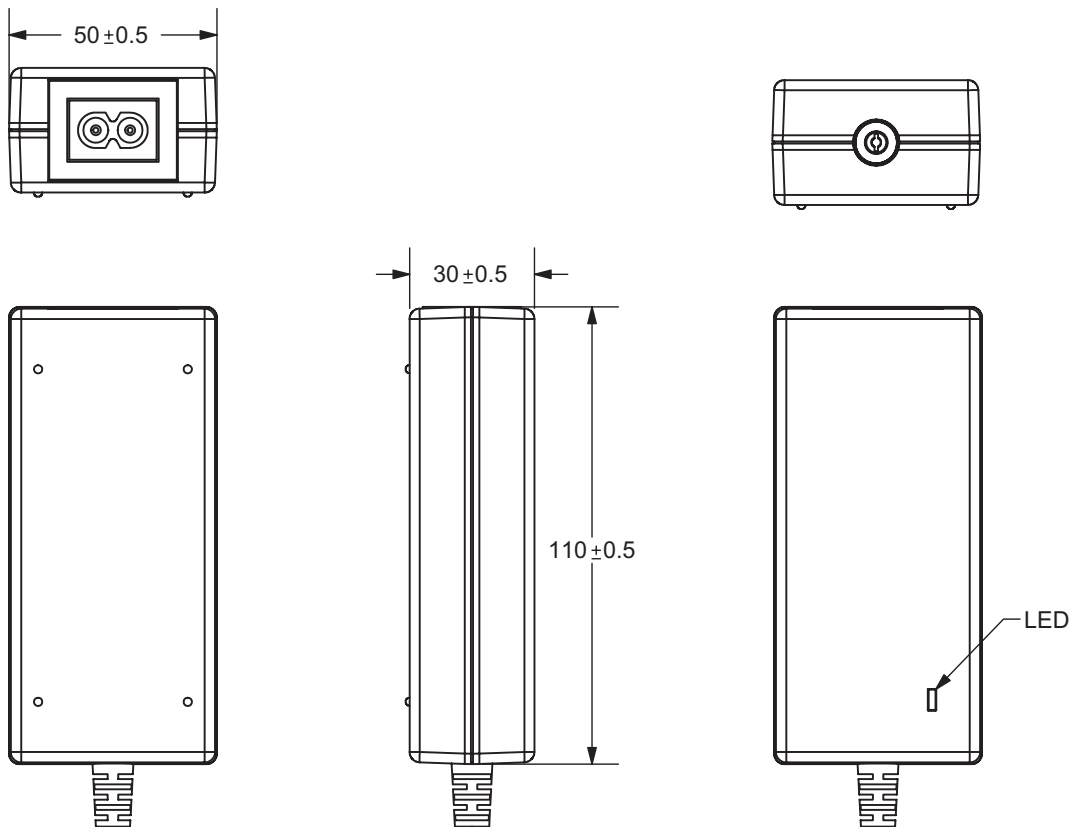
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | 0   |     | 40  | °C    |
| storage temperature   |                        | -20 |     | 85  | °C    |
| humidity              | non-condensing         |     |     | 93  | %     |

## MECHANICAL

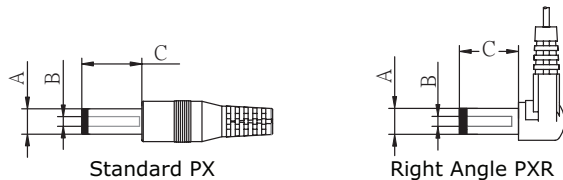
| parameter  | conditions/description                     | min | typ | max | units |
|------------|--------------------------------------------|-----|-----|-----|-------|
| dimensions | 110 x 50 x 30 (4.331 x 1.969 x 1.181 inch) |     |     |     | mm    |
| input plug | IEC320 / C8                                |     |     |     |       |
| weight     |                                            |     | 220 |     | g     |

## MECHANICAL DRAWING

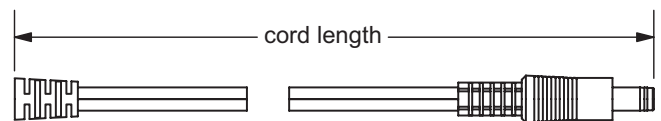
units: mm



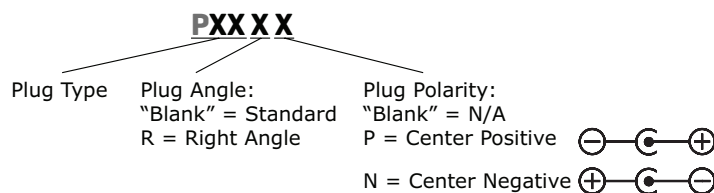
## DC OUTPUT PLUG OPTIONS / DC CORD



|        | A   | B   | C   | Unit |
|--------|-----|-----|-----|------|
| P5/P5R | 5.5 | 2.1 | 9.5 | mm   |
| P6/P6R | 5.5 | 2.5 | 9.5 | mm   |



| MODEL NO.    | CABLE GAUGE | CORD LENGTH       |
|--------------|-------------|-------------------|
| ETMA050400UD | 18 AWG      | 720 mm $\pm$ 50   |
| ETMA090300UD | 18 AWG      | 1,220 mm $\pm$ 50 |
| ETMA120250UD | 18 AWG      | 1,800 mm $\pm$ 50 |
| ETMA150200UD | 18 AWG      | 1,800 mm $\pm$ 50 |
| ETMA180165UD | 18 AWG      | 1,800 mm $\pm$ 50 |
| ETMA240125UD | 18 AWG      | 1,800 mm $\pm$ 50 |



## REVISION HISTORY

| rev. | description                 | date       |
|------|-----------------------------|------------|
| 1.0  | initial release             | 12/02/2011 |
| 1.01 | updated P7/P7R B dimension  | 03/23/2012 |
| 1.02 | V-Infinity branding removed | 08/21/2012 |
| 1.03 | updated datasheet           | 07/10/2015 |

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.

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