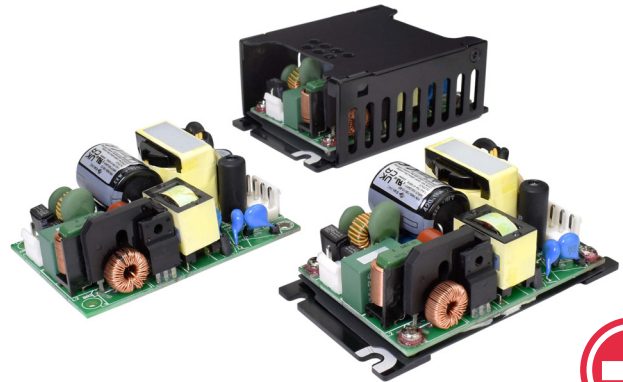


**SERIES:** VMS-130 | **DESCRIPTION:** AC-DC POWER SUPPLY

**FEATURES**

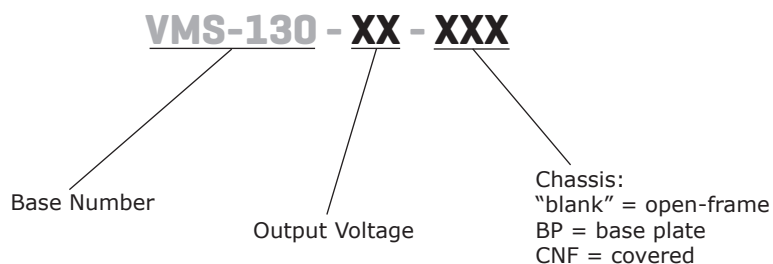
- 80 ~ 264 Vac input voltage range
- 2" x 3" open frame chassis
- 100 W power output with natural convection
- 130 W power output with forced air cooling
- active PFC
- IEC 60601-1 approved
- IEC Class I & Class II safety approved



| MODEL      | output voltage | output current <sup>1</sup> | output power <sup>2</sup> | ripple and noise <sup>3</sup> | efficiency <sup>4</sup> |
|------------|----------------|-----------------------------|---------------------------|-------------------------------|-------------------------|
|            | (Vdc)          | max (A)                     | max (W)                   | max (mVp-p)                   | typ (%)                 |
| VMS-130-12 | 12             | 10.8                        | 130                       | 120                           | 93                      |
| VMS-130-24 | 24             | 5.4                         | 130                       | 240                           | 93                      |
| VMS-130-36 | 36             | 3.6                         | 130                       | 360                           | 94                      |
| VMS-130-48 | 48             | 2.7                         | 130                       | 480                           | 94                      |

- Notes:
1. Maximum output power of 130 W with 10 CFM forced air cooling, and 100 W with natural convection. See derating curves.
  2. With forced air (10 CFM).
  3. At full load, nominal input, 20 MHz bandwidth oscilloscope with 10  $\mu$ F electrolytic and 0.1  $\mu$ F ceramic capacitors.
  4. At 230 Vac, 25°C, 75% load.

**PART NUMBER KEY**



## INPUT

| parameter       | conditions/description   | min | typ | max        | units  |
|-----------------|--------------------------|-----|-----|------------|--------|
| voltage         |                          | 80  |     | 264        | Vac    |
| frequency       |                          | 47  |     | 63         | Hz     |
| current         | at 240 Vac<br>at 100 Vac |     |     | 0.8<br>1.5 | A<br>A |
| inrush current  | at 240 Vac, cold start   |     |     | 100        | A      |
| leakage current |                          |     |     | 0.1        | mA     |

## OUTPUT

| parameter                  | conditions/description   | min | typ   | max | units |
|----------------------------|--------------------------|-----|-------|-----|-------|
| initial set point accuracy | at full load             |     | ±2    |     | %     |
| line regulation            | 100 ~ 240 Vac, full load |     | ±0.5  |     | %     |
| load regulation            | 10 ~ 100% load           |     | ±1    |     | %     |
| hold-up time               | at 230 Vac, 25°C         | 20  |       |     | ms    |
| temperature coefficient    |                          |     | ±0.05 |     | %/°C  |
| switching frequency        |                          |     | 105   |     | kHz   |

## PROTECTIONS

| parameter                | conditions/description                                                                                    | min | typ | max                    | units                    |
|--------------------------|-----------------------------------------------------------------------------------------------------------|-----|-----|------------------------|--------------------------|
| over voltage protection  | auto recovery<br>12 Vdc output model<br>24 Vdc output model<br>36 Vdc output model<br>48 Vdc output model |     |     | 13.5<br>30<br>42<br>54 | Vdc<br>Vdc<br>Vdc<br>Vdc |
| short circuit protection | auto recovery, hiccup                                                                                     |     |     |                        |                          |

## SAFETY & COMPLIANCE

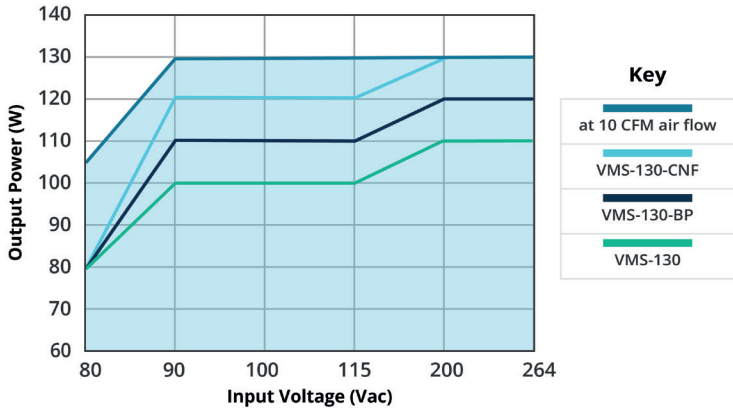
| parameter                        | conditions/description                                                                            | min     | typ | max | units |
|----------------------------------|---------------------------------------------------------------------------------------------------|---------|-----|-----|-------|
| isolation voltage                | input to output                                                                                   | 4,000   |     |     | Vac   |
| safety approvals                 | certified to 60601: IEC/EN/UL                                                                     |         |     |     |       |
| safety class                     | class I, class II                                                                                 |         |     |     |       |
| conducted emissions              | EN55011 Class B when test condition is Class I, Class II                                          |         |     |     |       |
| radiated emissions               | EN55011 Class B when test condition is Class I<br>EN55011 Class A when test condition is Class II |         |     |     |       |
| harmonic current                 | IEC 61000-3-2                                                                                     |         |     |     |       |
| voltage fluctuations and flicker | IEC 61000-3-3:2013                                                                                |         |     |     |       |
| ESD                              | IEC 61000-4-2                                                                                     |         |     |     |       |
| radiated immunity                | IEC 61000-4-3                                                                                     |         |     |     |       |
| EFT/burst                        | IEC 61000-4-4                                                                                     |         |     |     |       |
| surge                            | IEC 61000-4-5                                                                                     |         |     |     |       |
| conducted immunity               | IEC 61000-4-6                                                                                     |         |     |     |       |
| voltage dips and interruptions   | IEC 61000-4-11                                                                                    |         |     |     |       |
| MTBF                             | as per MIL-HDBK-217F at 25°C                                                                      | 400,000 |     |     | hours |
| RoHS                             | yes                                                                                               |         |     |     |       |

## ENVIRONMENTAL

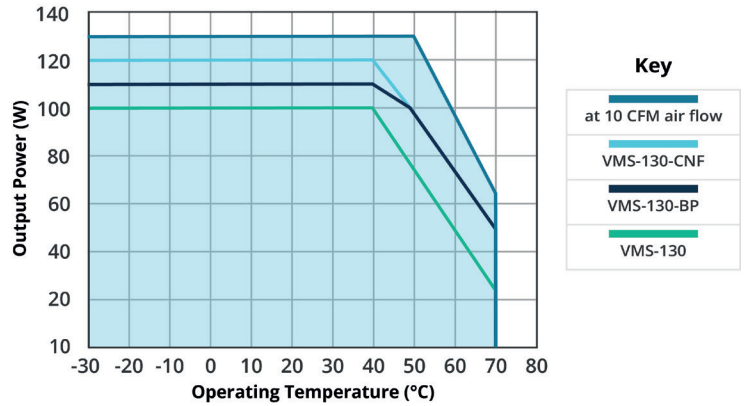
| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature | see derating curve     | -30 |     | 70  | °C    |
| storage temperature   |                        | -40 |     | 85  | °C    |
| operating humidity    | non-condensing         |     |     | 93  | %     |

## DERATING CURVES

**INPUT VOLTAGE DERATING CURVE**



**TEMPERATURE DERATING CURVE**



## MECHANICAL

| parameter  | conditions/description                                           | min | typ | max | units  |
|------------|------------------------------------------------------------------|-----|-----|-----|--------|
| dimensions | open frame models: 3.000 x 2.000 x 1.200 [76.2 x 50.8 x 30.5 mm] |     |     |     | inches |
|            | base plate models: 3.598 x 2.000 x 1.299 [91.4 x 50.8 x 33.0 mm] |     |     |     | inches |
|            | covered models: 3.598 x 2.520 x 1.358 [91.4 x 64.0 x 34.5 mm]    |     |     |     | inches |
| weight     | open frame models                                                |     | 135 |     | g      |
|            | base plate models                                                |     | 170 |     | g      |
|            | covered models                                                   |     | 218 |     | g      |
| cooling    | natural convection (no integrated fan), see derating curve       |     | 100 |     | W      |
|            | 10 CFM                                                           |     | 130 |     | W      |

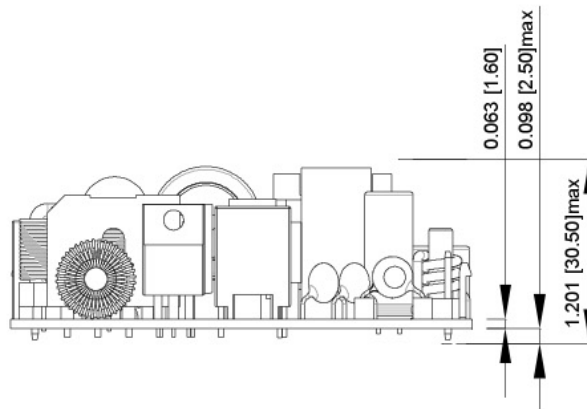
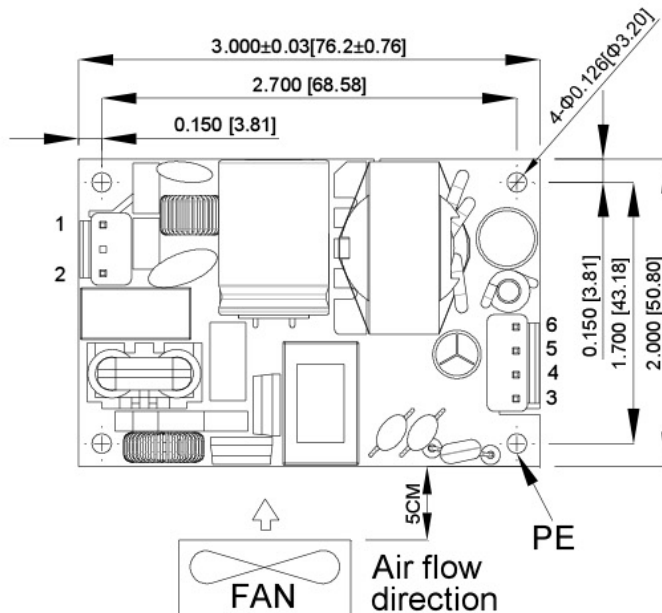
## MECHANICAL DRAWING

### Open-frame

units: inch [mm]

general tolerance: ±0.02 [±0.5]

| PIN-OUT |          |
|---------|----------|
| PIN     | Function |
| 1       | AC (L)   |
| 2       | AC (N)   |
| 3       | -Vo      |
| 4       | -Vo      |
| 5       | +Vo      |
| 6       | +Vo      |



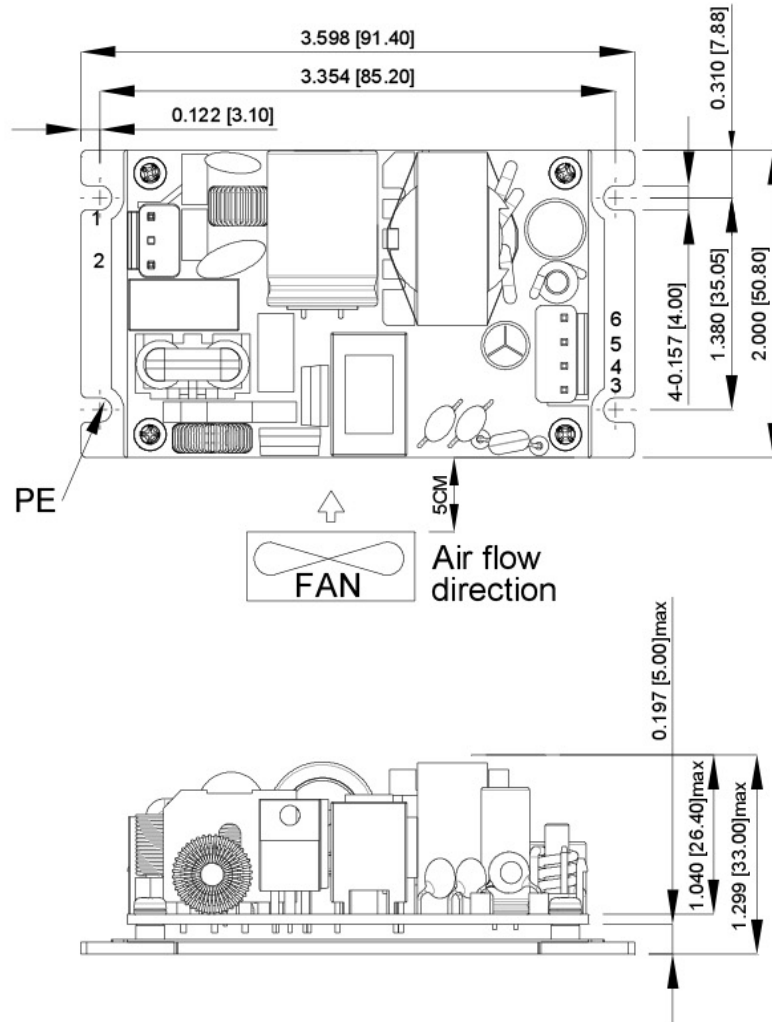
## MECHANICAL DRAWING (CONTINUED)

### Base plate

units: inch [mm]

general tolerance:  $\pm 0.02$  [ $\pm 0.5$ ]

| PIN-OUT |          |
|---------|----------|
| PIN     | Function |
| 1       | AC (L)   |
| 2       | AC (N)   |
| 3       | -Vo      |
| 4       | -Vo      |
| 5       | +Vo      |
| 6       | +Vo      |



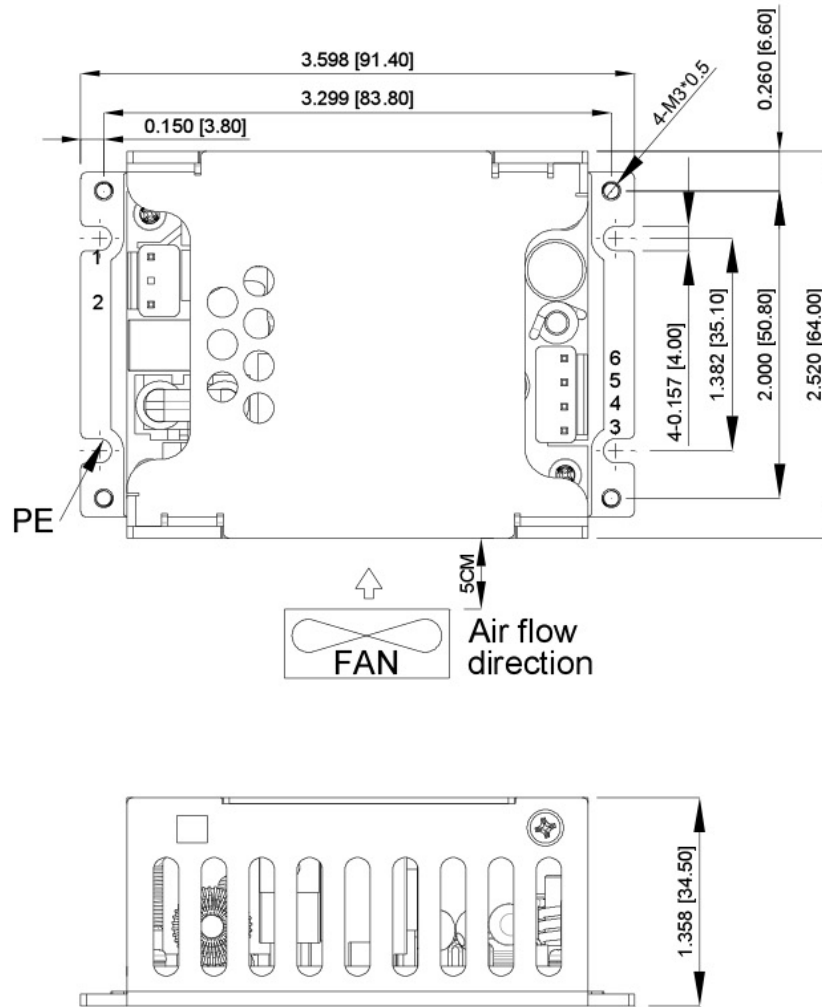
## MECHANICAL DRAWING (CONTINUED)

**Covered**

units: inch [mm]

general tolerance:  $\pm 0.02$  [ $\pm 0.5$ ]

| PIN-OUT |          |
|---------|----------|
| PIN     | Function |
| 1       | AC (L)   |
| 2       | AC (N)   |
| 3       | -Vo      |
| 4       | -Vo      |
| 5       | +Vo      |
| 6       | +Vo      |



## REVISION HISTORY

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| rev. | description                | date       |
|------|----------------------------|------------|
| 1.0  | initial release            | 11/09/2021 |
| 1.01 | mechanical drawing updated | 07/13/2022 |
| 1.02 | medical icon added         | 05/04/2023 |

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



**CUI INC**

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**Headquarters**  
20050 SW 112th Ave.  
Tualatin, OR 97062  
**800.275.4899**

Fax 503.612.2383  
**cui.com**  
techsupport@cui.com

CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

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