

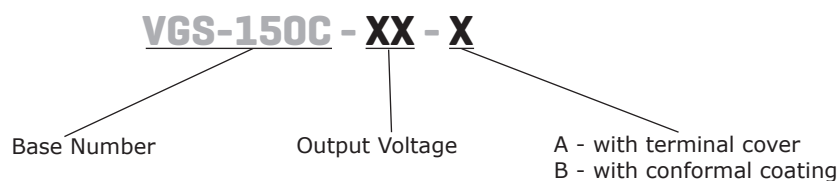
**SERIES: VGS-150C | DESCRIPTION: INTERNAL AC-DC POWER SUPPLY**
**FEATURES**

- universal input range (85 ~ 264 VAC)
- UL/EN/IEC 62368 certified
- designed to meet IEC/EN 61558, IEC/EN 60335, and GB4943 system requirements
- short-circuit, over-current, over-voltage, over-temperature protections
- CISPR/EN55032 Class B radiated/conducted emissions
- output adjustable via trimpot +/- 10%



| MODEL       | output voltage | output current | output power | ripple and noise <sup>1</sup> | efficiency <sup>2</sup> |
|-------------|----------------|----------------|--------------|-------------------------------|-------------------------|
|             | (Vdc)          | max (A)        | max (W)      | typ (mVp-p)                   | typ (%)                 |
| VGS-150C-12 | 12             | 12.5           | 150.0        | 150                           | 86                      |
| VGS-150C-15 | 15             | 10.0           | 150.0        | 150                           | 87                      |
| VGS-150C-24 | 24             | 6.5            | 156.0        | 200                           | 88                      |
| VGS-150C-36 | 36             | 4.3            | 154.8        | 200                           | 88                      |
| VGS-150C-48 | 48             | 3.3            | 158.4        | 200                           | 89                      |

Notes: 1. Ripple & noise are measured at 20 MHz BW with 47  $\mu$ F aluminum electrolytic capacitor and 0.1  $\mu$ F ceramic capacitor on the output.  
 2. Measured at 230 Vac

**PART NUMBER KEY**


## INPUT

| parameter                 | conditions/description | min | typ | max  | units |
|---------------------------|------------------------|-----|-----|------|-------|
| voltage                   | ac input               | 85  |     | 264  | Vac   |
|                           | dc input               | 120 |     | 373  | Vdc   |
| frequency                 |                        | 47  |     | 63   | Hz    |
| current                   | at 115 Vac             |     |     | 4    | A     |
|                           | at 230 Vac             |     |     | 2    | A     |
| inrush current            | at 115 Vac, cold start |     | 30  |      | A     |
|                           | at 230 Vac, cold start |     | 60  |      | A     |
| leakage current           | at 240 Vac             |     |     | 0.75 | mA    |
| no load power consumption |                        |     |     | 0.5  | W     |

## OUTPUT

| parameter                  | conditions/description | min | typ   | max    | units |
|----------------------------|------------------------|-----|-------|--------|-------|
| capacitive load            | 12 Vdc output          |     |       | 10,000 | μF    |
|                            | 15 Vdc output          |     |       | 6,000  | μF    |
|                            | 24 Vdc output          |     |       | 2,400  | μF    |
|                            | 36 Vdc output          |     |       | 1,200  | μF    |
|                            | 48 Vdc output          |     |       | 600    | μF    |
| initial set point accuracy | at full load           |     | ±1    |        | %     |
| line regulation            |                        |     | ±0.5  |        | %     |
| load regulation            | 0%~100% load           |     | ±0.5  |        | %     |
| adjustability              | built in trim pot      | ±10 |       |        | %     |
| hold-up time               | at 115 Vac             | 8   |       |        | ms    |
|                            | at 230 Vac             | 16  |       |        | ms    |
| switching frequency        |                        |     | 65    |        | kHz   |
| temperature coefficient    |                        |     | ±0.05 |        | %/°C  |

## PROTECTIONS

| parameter                   | conditions/description                         | min | typ | max   | units |
|-----------------------------|--|-----|-----|-------|-------|
| over voltage protection     | 12 Vdc output, output shut-down, auto-recovery |     |     | 16.2  | Vdc   |
|                             | 15 Vdc output, output shut-down, auto-recovery |     |     | 21.75 | Vdc   |
|                             | 24 Vdc output, output shut-down, auto-recovery |     |     | 33.6  | Vdc   |
|                             | 36 Vdc output, output shut-down, auto-recovery |     |     | 48.6  | Vdc   |
|                             | 48 Vdc output, output shut-down, auto-recovery |     |     | 60.0  | Vdc   |
| over current protection     | auto-recovery                                  | 110 |     | 150   | %     |
| short circuit protection    | hiccup, continuous, auto-recovery              |     |     |       |       |
| over temperature protection | auto-recovery                                  |     |     |       |       |

## SAFETY & COMPLIANCE

| parameter          | conditions/description   | min    | typ       | max | units |
|--------------------|--|--------|-----------|-----|-------|
| isolation voltage  | input to ground  | 2,000  |           |     | Vac   |
|                    | input to output  | 4,000  |           |     | Vac   |
|                    | output to ground   | 1,250  |           |     | Vac   |
| safety approvals   | certified to:  | 62368: | IEC/EN/UL |     |       |
|                    | designed to meet:  | 60335: | IEC/EN    |     |       |
|                    | designed to meet:  | 61558: | IEC/EN    |     |       |
|                    | designed to meet:  | 4943:  | GB        |     |       |
| safety class       | Class I  |        |           |     |       |
| EMI/EMC            | CISPR32/EN55032 Class B, IEC/EN61000-3-2 Class A (≤80% load)             |        |           |     |       |
| ESD                | IEC/EN 61000-4-2 Contact ±6KV /Air ±8KV, perf. Criteria A                |        |           |     |       |
| radiated immunity  | IEC/EN 61000-4-3 10V/m, perf. Criteria A                                 |        |           |     |       |
| EFT/burst          | IEC/EN 61000-4-4 ±4KV, perf. Criteria A                                  |        |           |     |       |
| surge              | IEC/EN 61000-4-5 line to line ±2KV/line to ground ±4KV, perf. Criteria A |        |           |     |       |
| conducted immunity | IEC/EN61000-4-6 10 Vr.m.s, perf. Criteria A                              |        |           |     |       |

## SAFETY & COMPLIANCE

| parameter                      | conditions/description                     | min     | typ | max | units |
|--------------------------------|--|---------|-----|-----|-------|
| voltage dips and interruptions | IEC/EN61000-4-11 0%, 70%, perf. Criteria B |         |     |     |       |
| MTBF                           | as per MIL-HDBK-217F at 25°C               | 300,000 |     |     | hours |
| RoHS                           | yes  |         |     |     |       |

## ENVIRONMENTAL

| parameter             | conditions/description | min | typ | max | units |
|-----------------------|------------------------|-----|-----|-----|-------|
| operating temperature |                        | -30 |     | 70  | °C    |
| storage temperature   |                        | -40 |     | 85  | °C    |
| operating humidity    | non-condensing         | 20  |     | 90  | %     |
| storage humidity      | non-condensing         | 10  |     | 95  | %     |

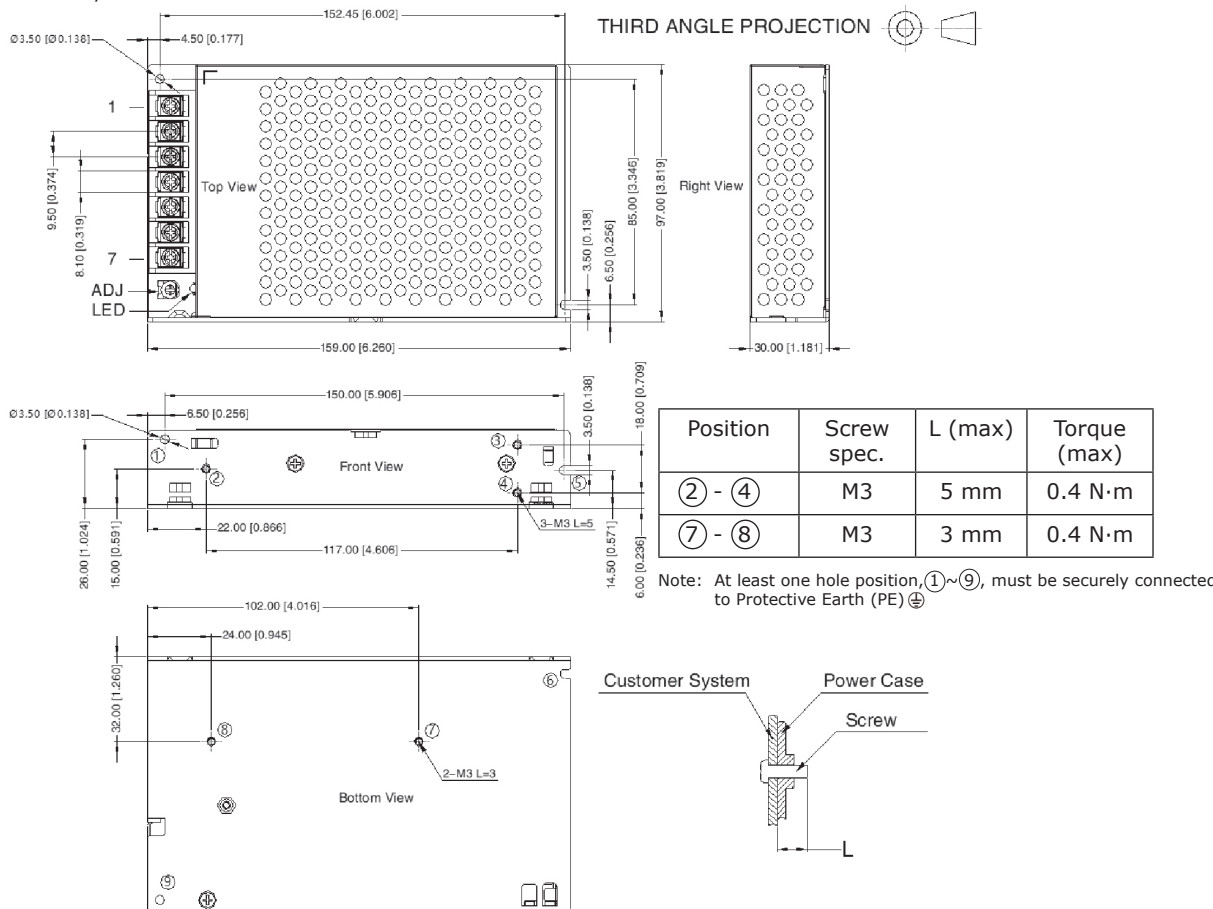
## MECHANICAL

| parameter     | conditions/description | min | typ | max | units |
|---------------|------------------------|-----|-----|-----|-------|
| dimensions    | 159.00 x 97.00 x 30.00 |     |     |     | mm    |
| weight        |                        |     | 410 |     | g     |
| cooling       | natural convection     |     |     |     |       |
| case material | metal (AL1100, SGCC)   |     |     |     |       |

## MECHANICAL DRAWING

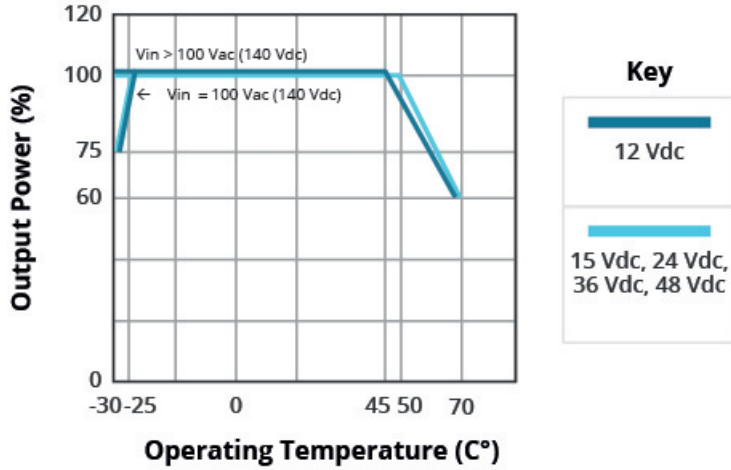
units: mm [inch]  
 tolerance: ±1.0 [±0.039]  
 wire range: 22-12 AWG  
 connector tightening torque: M3.5, 0.8 N·m

| PIN CONNECTIONS |          |
|-----------------|----------|
| PIN             | Function |
| 1               | AC(L)    |
| 2               | AC(N)    |
| 3               |          |
| 4               | -Vo      |
| 5               | -Vo      |
| 6               | +Vo      |
| 7               | +Vo      |

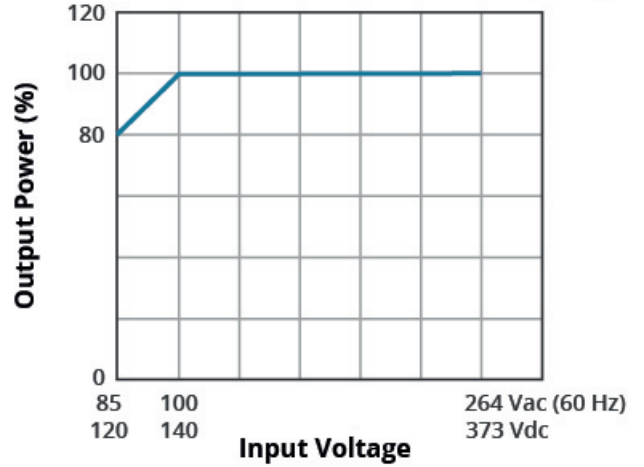


## DERATING CURVE

**TEMPERATURE DERATING CURVE**

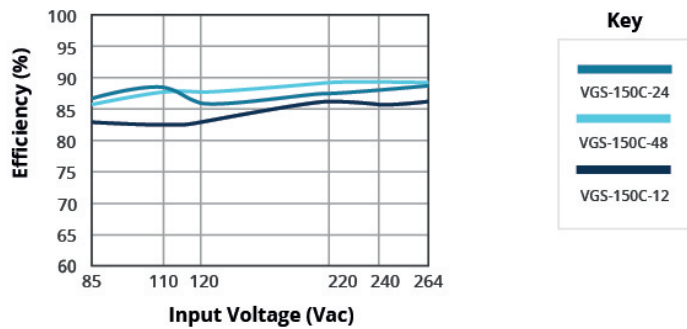


**INPUT VOLTAGE DERATING CURVE (25°C)**

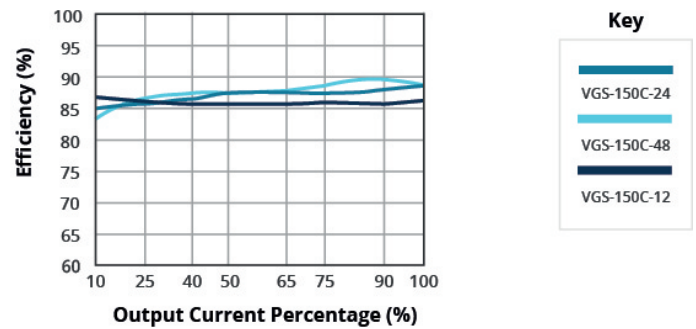


## EFFICIENCY CURVES

**EFFICIENCY VS INPUT VOLTAGE (FULL LOAD)**



**EFFICIENCY VS OUTPUT LOAD**



## REVISION HISTORY

---

| rev. | description  | date       |
|------|--|------------|
| 1.0  | initial release  | 09/28/2020 |
| 1.01 | over temperature protection added to protections section | 04/06/2021 |

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



**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.

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.

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Switching Power Supplies](#) category:*

*Click to view products by [CUI Inc](#) manufacturer:*

Other Similar products are found below :

[70841011](#) [73-551-0005](#) [73-551-0048](#) [PS3E-B12F](#) [PS3E-E12F](#) [AAD600S-4-OP](#) [R22095](#) [KD0204](#) [9021](#) [LDIN100150](#) [LPM000-BBAR-01](#)  
[LPX17S-C](#) [EVS57-10R6/R](#) [FP80](#) [FRV7000G](#) [22929](#) [PS3E-F12F](#) [CQM1IA121](#) [40370121900](#) [VI-PU22-EXX](#) [40370121910](#) [LDIN5075](#)  
[LPM615-CHAS](#) [LPX140-C](#) [09-160CFG](#) [70841025](#) [VPX3000-CBL-DC](#) [VI-LUL-IU](#) [LPM000-BBAR-05](#) [LPM000-BBAR-08](#) [LPM124-](#)  
[OUTA1-48](#) [LPM000-BBAR-07](#) [LPM109-OUTA1-10](#) [LPM616-CHAS](#) [08-30466-1055G](#) [08-30466-2175G](#) [08-30466-2125G](#) [DMB-EWG](#)  
[TVQF-1219-18S](#) [6504-226-2101](#) [CQM1IPS01](#) [SP-300-5](#) [CQM1-IPS02](#) [VI-MUL-ES](#) [22829](#) [08-30466-0065G](#) [VI-RU031-EWWX](#) [08-30466-](#)  
[0028G](#) [EP3000AC48INZ](#) [VP-C2104853](#)