

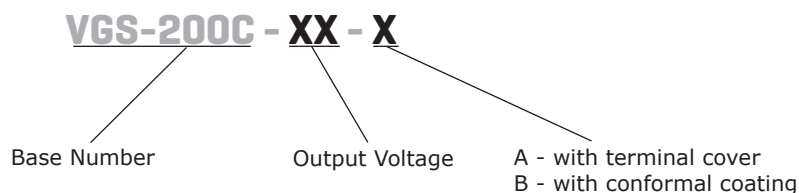
**SERIES: VGS-200C | DESCRIPTION: AC-DC POWER SUPPLY**
**FEATURES**

- 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
- output adjustable via trimpot +/- 10%



MODEL	output voltage		output current	output power	ripple and noise <sup>1</sup>	efficiency <sup>2</sup>
	typ (Vdc)	range (Vdc)	max (A)	max (W)	max (mVp-p)	typ (%)
VGS-200C-5	5	4.5~5.5	30.0	150.0	150	87.0
VGS-200C-12	12	10.2~13.8	17.0	204.0	150	87.5
VGS-200C-15	15	13.5~18.0	14.0	210.0	150	88.0
VGS-200C-24	24	21.6~28.8	8.8	211.2	150	88.5
VGS-200C-36	36	32.4~39.6	5.9	212.4	200	89.0
VGS-200C-48	48	43.2~52.8	4.4	211.2	200	89.5

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

**PART NUMBER KEY**


## INPUT

parameter	conditions/description	min	typ	max	units
voltage range	ac input, low voltage (switch in position of 115)	90		132	Vac
	ac input, high voltage (switch in position of 230)	180		264	Vac
	dc input, (switch in position of 230)	240		373	Vdc
frequency range		47		63	Hz
current	at 115 Vac			5	A
	at 230 Vac			3	A
inrush current	at 115 Vac, cold start		60		A
	at 230 Vac, cold start		60		A
no load power consumption	at 230 Vac, 25 °C			0.75	W

## OUTPUT

parameter	conditions/description	min	typ	max	units
capacitive load	5 V model			10,000	μF
	12 V model			4,000	μF
	15 V model			3,300	μF
	24 V model			1,500	μF
	36 V model			1,500	μF
	48 V model			470	μF
initial set point accuracy	5 V model, full load range		±3		%
	12 V model, full load range		±1.5		%
	all other models, full load range		±1		%
line regulation	rated load		±0.5		%
load regulation	5 V model, 0~100% load		±2		%
	12 V model, 0~100% load		±1		%
	all other models, 0~100% load		±0.5		%
switching frequency			65		kHz
hold-up time	at 115 Vac	12			ms
	at 230 Vac	16			ms

## PROTECTIONS

parameter	conditions/description	min	typ	max	units
over current protection	auto recovery	110		185	%
over voltage protection	5 V model, output shut down, latching			8.0	Vdc
	12 V model, output shut down, latching			18.0	Vdc
	15 V model, output shut down, latching			22.0	Vdc
	24 V model, output shut down, latching			33.6	Vdc
	36 V model, output shut down, latching			46.8	Vdc
	48 V model, output shut down, latching			60.0	Vdc
short circuit protection	continuous, auto recovery, hiccup				
over temperature protection	latching				

## SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, 1 min, <10 mA	3,000			Vac
	input to ground, 1 min, <10 mA	2,000			Vac
	output to ground, 1 min, <5 mA	500			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				
conducted emissions	CISPR32/EN55032 CLASS A				
radiated emissions	CISPR32/EN55032 CLASS A				

**SAFETY & COMPLIANCE (CONTINUED)**

parameter	conditions/description	min	typ	max	units
ESD	IEC/EN 61000-4-2 Contact ±6KV/Air ±8KV, perf. Criteria A				
radiated immunity	IEC/EN61000-4-3 10V/m, perf. Criteria A				
EFT/burst	IEC/EN61000-4-4 ±2KV, perf. Criteria A				
surge	IEC/EN61000-4-5 line to line ±2KV/line to ground ±4KV, perf. Criteria A				
conducted immunity	IEC/EN61000-4-6 10Vr.m.s, perf. Criteria A				
voltage dips and interruption	IEC/EN61000-4-11 0%, 70%, perf. Criteria B				
RoHS compliant	yes				
MTBF	as per MIL-HDBK-217F at 25 °C	300,000			hrs

**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	10		95	%
storage humidity	non-condensing	20		90	%
temperature coefficient				±0.03	%/°C

**MECHANICAL**


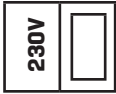
parameter	conditions/description	min	typ	max	units
dimensions	179.00 x 99.00 x 30.00				mm
weight			520		g
cooling	natural convection				
case material	metal (AL1100, SGCC)				

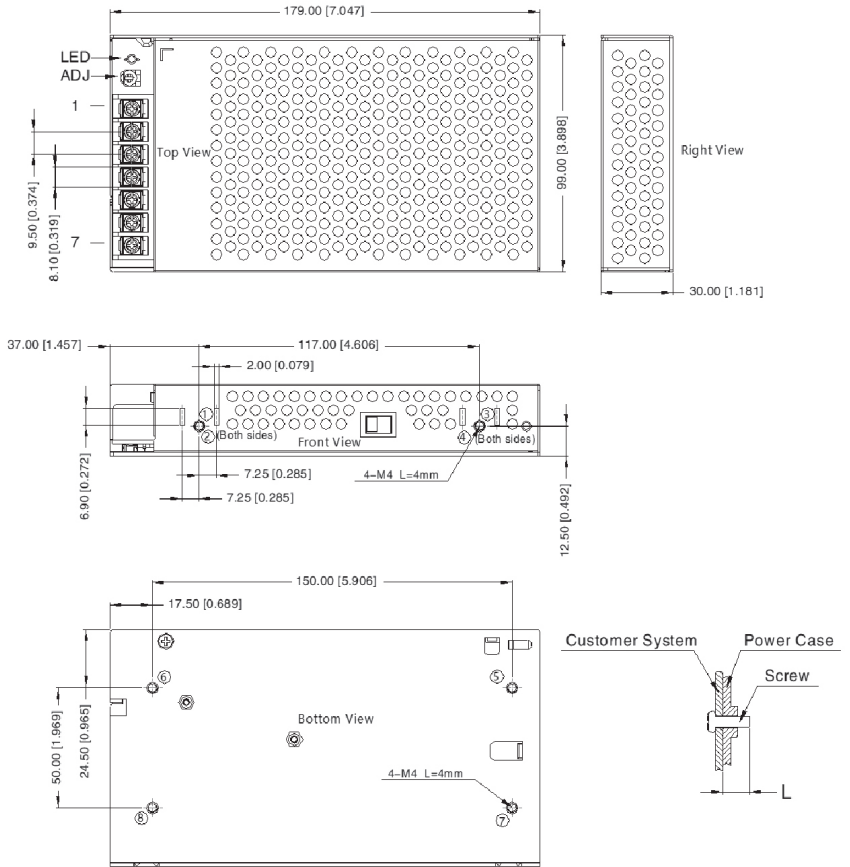
## MECHANICAL DRAWING

units: mm [inch]  
 tolerance:  $\pm 1.00$  [ $\pm 0.039$ ]  
 wire range: 22~12 AWG  
 connector tightening torque: M3.5, 0.8 N·m

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

Note: At least one position ①~⑧ must be securely connected to the GND. ⊥

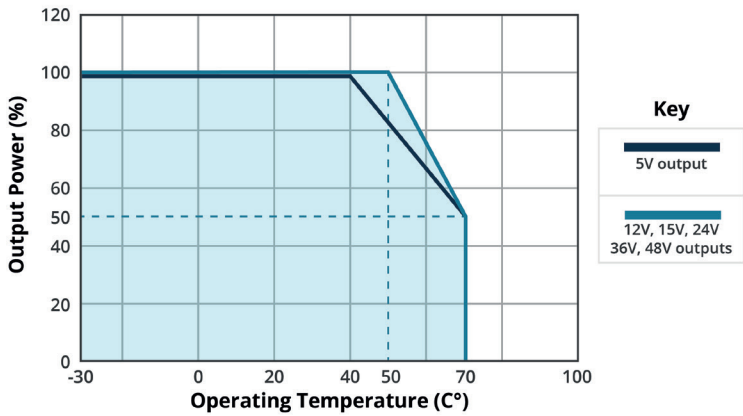
Switch	AC input	DC input
	90-132 Vac	---
	180-264 Vac	240-373 Vdc



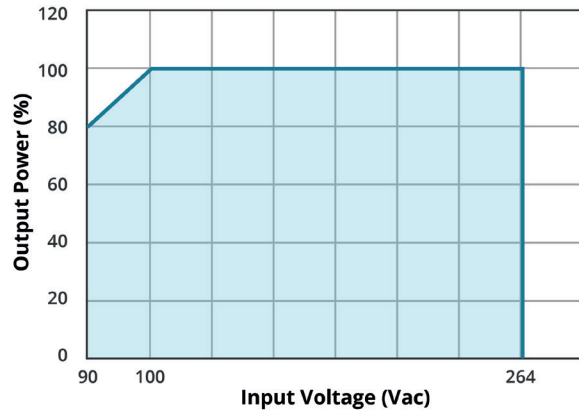
Position	Screw Spec.	L (max)	Torque (max)
① ~ ⑧	M4	4 mm	0.9 N·m

## DERATING CURVES

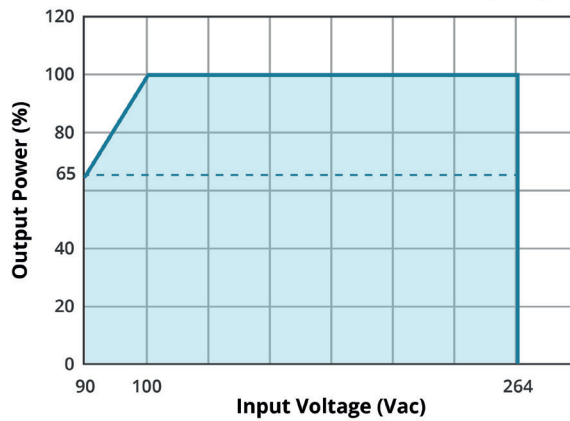
**TEMPERATURE DERATING CURVE**



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

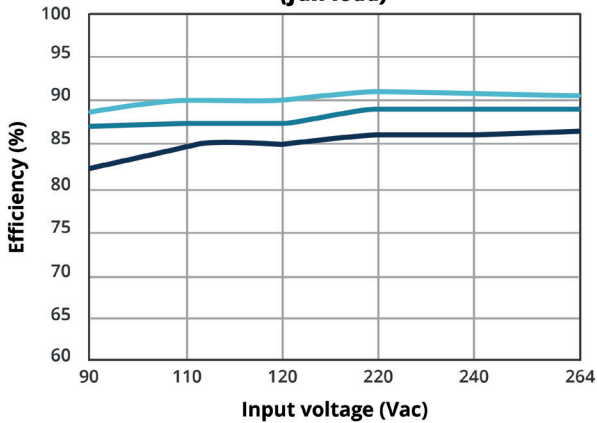


**INPUT VOLTAGE DERATING CURVE (25°C)**

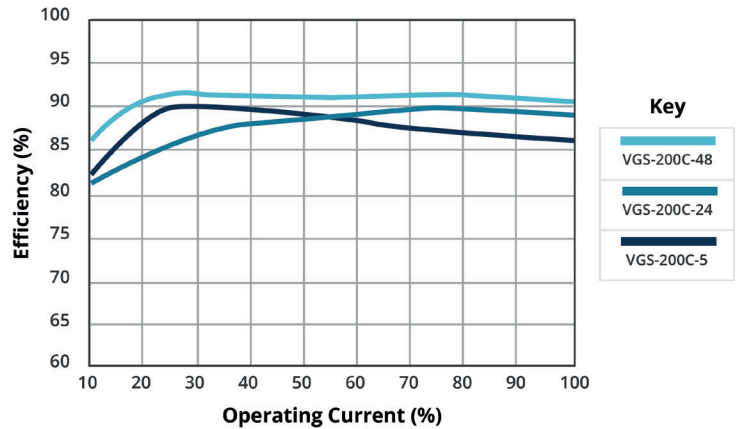


## EFFICIENCY CURVES

**EFFICIENCY VS INPUT VOLTAGE (full load)**



**EFFICIENCY VS OUTPUT LOAD**



## REVISION HISTORY

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rev.	description	date
1.0	initial release	03/09/2021
1.01	derating and efficiency curves updated	01/31/2022

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



**CUI INC**  
a bel group

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

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

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