CUI INC
a bel group

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

FEATURES

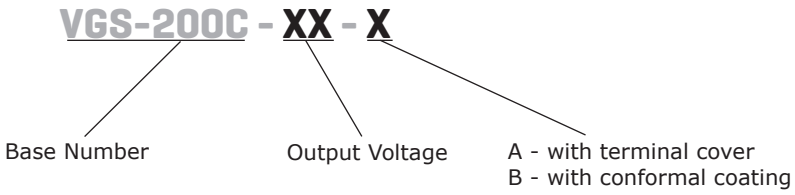
- UL/EN/IEC 62368 certified
- designed to meet IEC/EN 61558, IEC/EN 60335, and GB4943 system requirements
- short-circuit, over-current, over-voltage, over-temperature protections
- output adjustable via trimpot +/- 10%

RoHS c UL us CE

MODEL	output voltage		output current	output power	ripple and noise[1]	efficiency[2]
	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) ac input, high voltage (switch in position of 230) dc input, (switch in position of 230)	90 180 240		132 264 373	Vac Vac Vdc
frequency range		47		63	Hz
current	at 115 Vac at 230 Vac			5 3	A A
inrush current	at 115 Vac, cold start at 230 Vac, cold start		60 60		A 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 12 V model 15 V model 24 V model 36 V model 48 V model			10,000 4,000 3,300 1,500 1,500 470	µF µF µF µF µF µF
initial set point acuracy	5 V model, full load range 12 V model, full load range all other models, full load range		±3 ±1.5 ±1		% % %
line regulation	rated load		±0.5		%
load regulation	5 V model, 0~100% load 12 V model, 0~100% load all other models, 0~100% load		±2 ±1 ±0.5		% % %
switching frequency			65		kHz
hold-up time	at 115 Vac at 230 Vac	12 16			ms 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 12 V model, output shut down, latching 15 V model, output shut down, latching 24 V model, output shut down, latching 36 V model, output shut down, latching 48 V model, output shut down, latching			8.0 18.0 22.0 33.6 46.8 60.0	Vdc Vdc Vdc Vdc Vdc 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 input to ground, 1 min, <10 mA output to ground, 1 min, <5 mA	3,000 2,000 500			Vac Vac 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)				

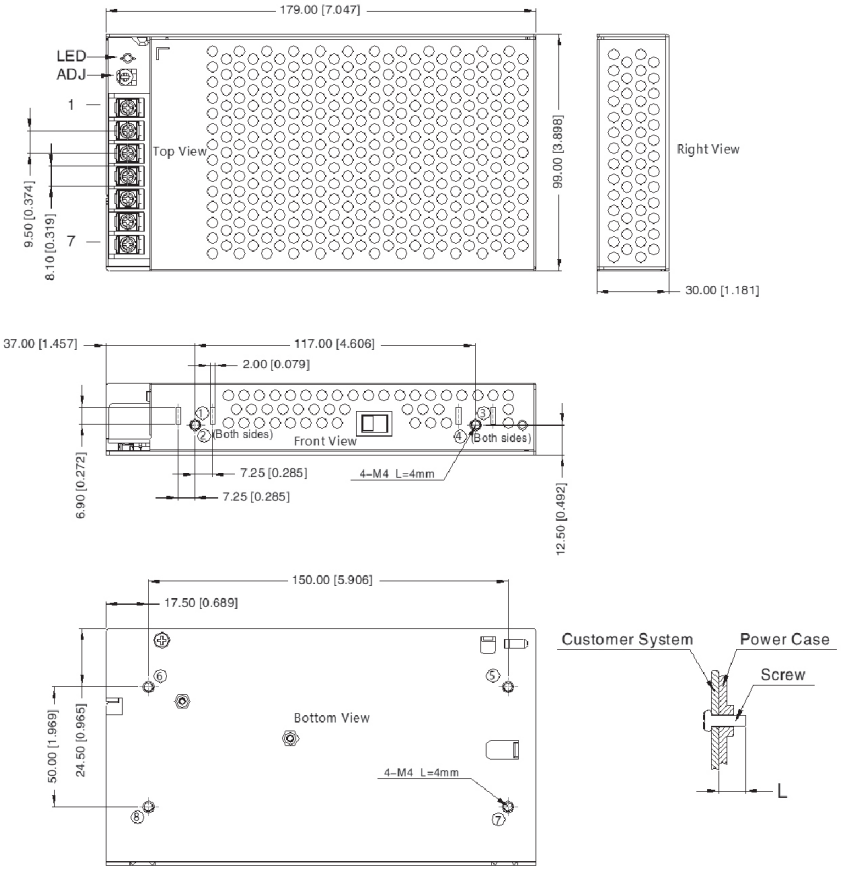
MECHANICAL DRAWING

units: mm [inch]
tolerance: ±1.00 [±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. ⏚

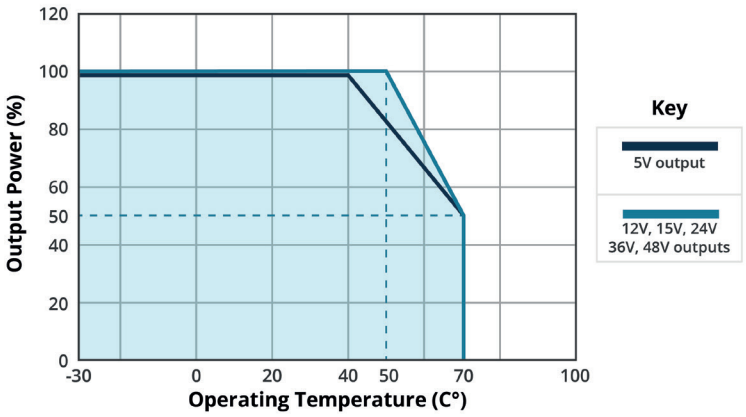
Switch	AC input	DC input
115V	90-132 Vac	---
230V	180-264 Vac	240-373 Vdc



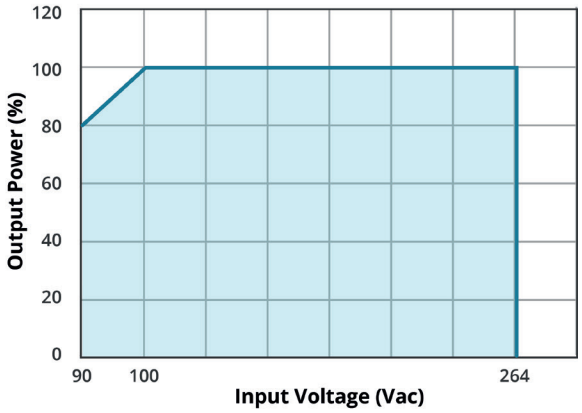
Position	Screw Spec.	L (max)	Torque (max)
① ~ ⑧	M4	4 mm	0.9 N·m

DERATING CURVES

TEMPERATURE DERATING CURVE



INPUT VOLTAGE DERATING CURVE (25°C)



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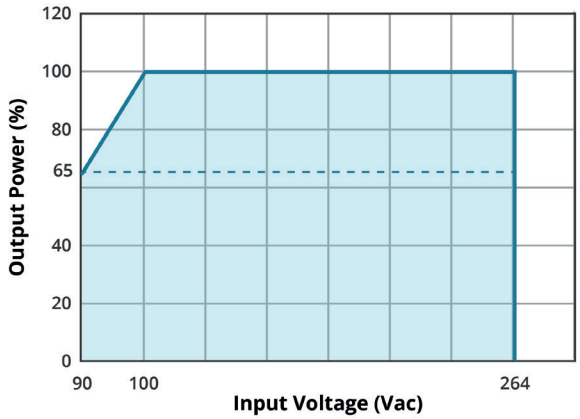
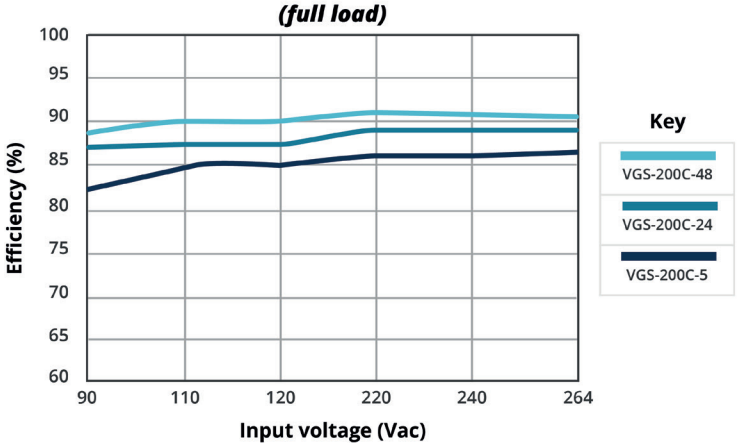
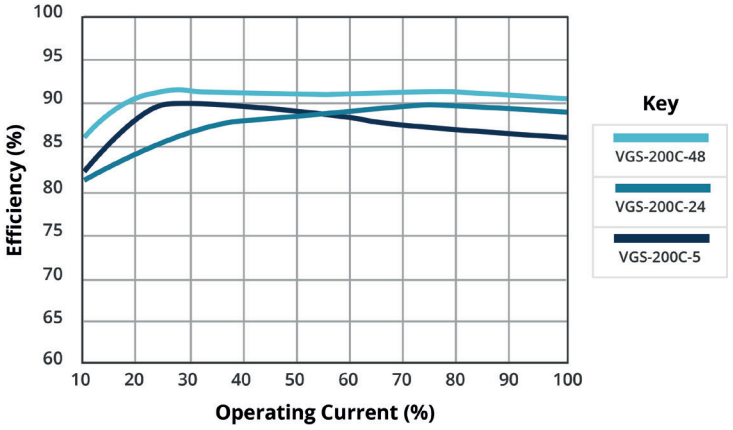


EFFICIENCY CURVES

EFFICIENCY VS INPUT VOLTAGE (full load)



EFFICIENCY VS OUTPUT LOAD



REVISION HISTORY

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.

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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.