

SERIES: VGS-25W | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

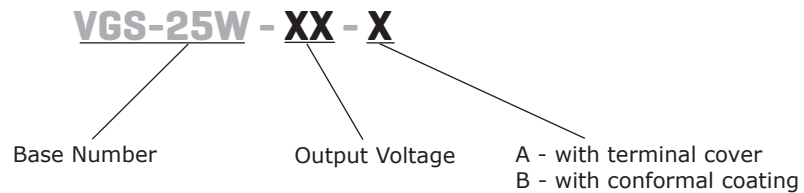
- wide input range (85 ~ 305 Vac)
- available with conformal coating or terminal cover options
- UL/EN/IEC 62368 certified
- designed to meet IEC/EN 61558 system requirements
- short-circuit, over-current, over-voltage protections
- input over voltage category III design
- CISPR/EN55032 Class B radiated/conducted emissions



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-25W-3	3.3	2.85~3.6	6.0	19.8	100	78
VGS-25W-5	5	4.5~5.5	5.0	25.0	100	81
VGS-25W-12	12	10.8~13.2	2.1	25.2	100	85
VGS-25W-15	15	13.5~16.5	1.7	25.2	100	86
VGS-25W-24	24	22.0~27.6	1.1	26.4	100	87
VGS-25W-48	48	42.0~54.0	0.57	27.36	120	88

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

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
voltage range	ac input	85		305	Vac
	dc input	100		430	Vdc
frequency range		47		63	Hz
current	at 115 Vac			0.6	A
	at 230 Vac			0.34	A
inrush current	at 115 Vac, cold start		20		A
	at 230 Vac, cold start		40		A
leakage current	at 277 Vac			0.5	mA
no load power consumption	48 V models, at 230 Vac			0.5	W
	all other models, at 230 Vac			0.3	W

OUTPUT

parameter	conditions/description	min	typ	max	units
capacitive load	3.3 V models			5,000	μF
	5 V models			4,000	μF
	12 V models			3,000	μF
	15 V models			2,000	μF
	24 V models			1,000	μF
	48 V models			500	μF
initial set point accuracy	3.3 V models, full load range		±3		%
	5 V models, full load range		±2		%
	all other models, full load range		±1		%
line regulation	3.3 & 5 V models, rated load		±0.5	±1	%
	all other models, rated load		±0.5		%
load regulation	3.3 & 5 V models, 0~100% load		±1	±2	%
	all other models, 0~100% load		±0.5	±1	%
switching frequency			65		kHz
start-up time			0.3		s
hold-up time	at 115 Vac		8		ms
	at 230 Vac		60		ms

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over current protection	auto recovery	110		300	%
over voltage protection	3.3 V models, auto recovery, hiccup			6.75	Vdc
	5 V models, auto recovery, hiccup			7.75	Vdc
	12 V models, auto recovery, hiccup			16.2	Vdc
	15 V models, auto recovery, hiccup			20.25	Vdc
	24 V models, auto recovery, hiccup			32.4	Vdc
	48 V models, auto recovery, hiccup			60.0	Vdc
short circuit protection	continuous, auto recovery, hiccup				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, 1 min, <10 mA	4,000			Vac
	input to ground, 1 min, <10 mA	2,000			Vac
	output to ground, 1 min, <10 mA	1,250			Vac
safety approvals	certified to 62368: IEC, EN, UL designed to meet 61558: IEC, EN				
safety class	class I				
conducted emissions	CISPR32/EN55032 CLASS B				

SAFETY & COMPLIANCE (CONTINUED)

parameter	conditions/description	min	typ	max	units
radiated emissions	CISPR32/EN55032 CLASS B				
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 ±1KV/line to ground ±2KV, 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		450,000		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	20		90	%
storage humidity	non-condensing	0		95	%
temperature coefficient			0.03		%/°C

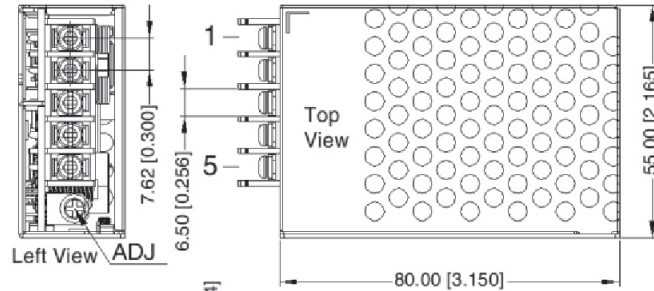
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	80.00 x 55.00 x 25.00				mm
weight			115		g
cooling	natural convection				
case material	metal (AL5052, SGCC)				

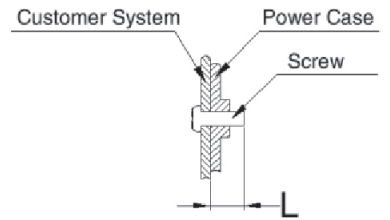
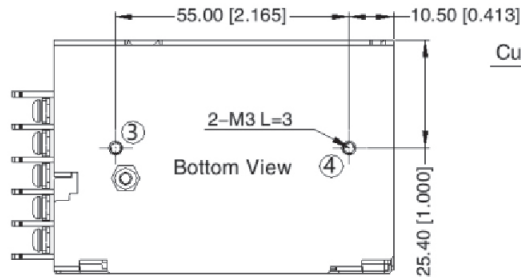
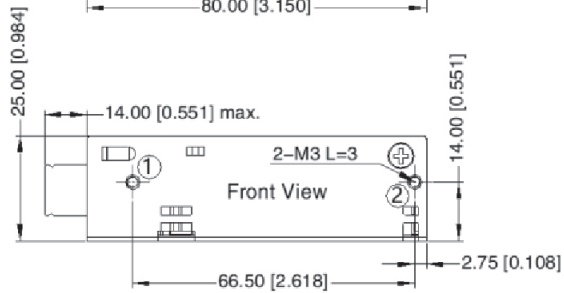
MECHANICAL DRAWING

units: mm [inches]
 tolerance: ± 1.00 [± 0.039]
 wire range: 22~12 AWG
 connector tightening torque: M3, 0.4 N·m

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



Note: At least one position ①~④ must be securely connected to the GND. ⊥

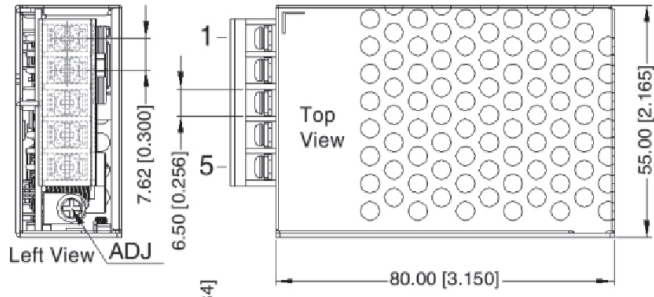


Position	Screw Spec.	L (max)	Torque (max)
① ~ ④	M3	3 mm	0.4 N·m

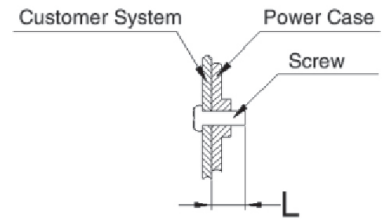
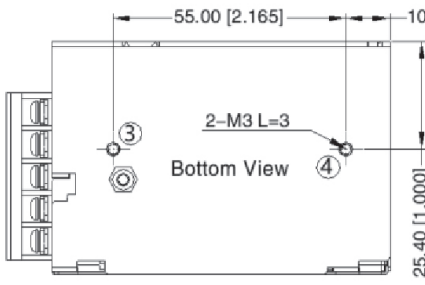
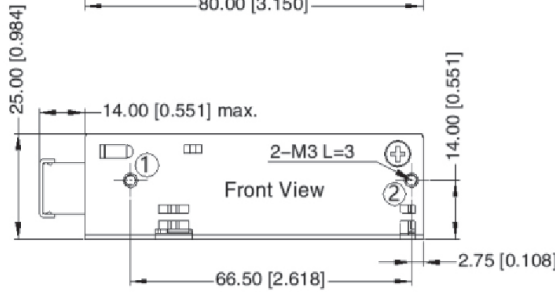
MECHANICAL DRAWING (CONTINUED)

units: mm [inches]
 tolerance: ± 1.00 [± 0.039]
 wire range: 22~12 AWG
 connector tightening torque: M3, 0.4 N·m

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



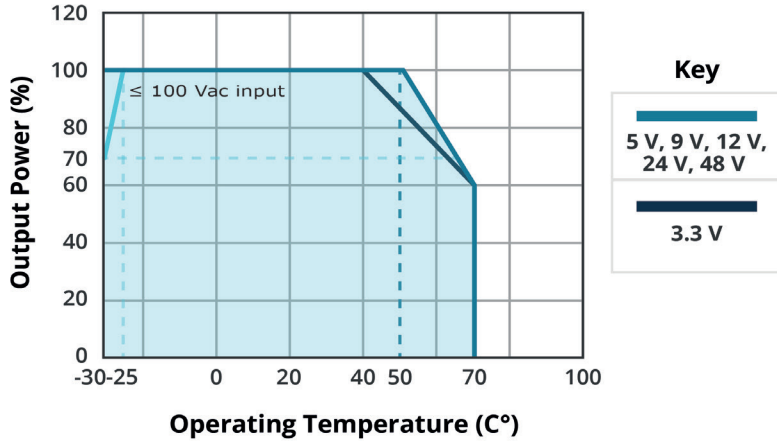
Note: At least one position ①~④ must be securely connected to the GND. \perp



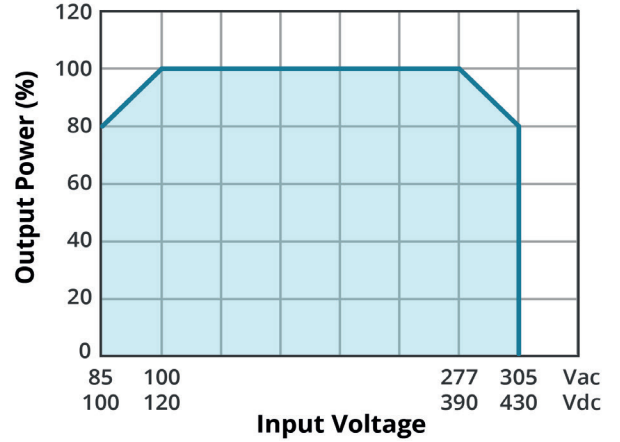
Position	Screw Spec.	L (max)	Torque (max)
① ~ ④	M3	3 mm	0.4 N·m

DERATING CURVES

TEMPERATURE DERATING CURVE

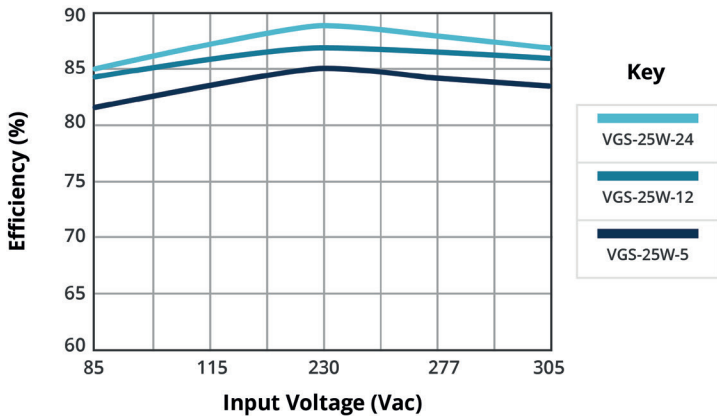


INPUT VOLTAGE DERATING CURVE (25°C)

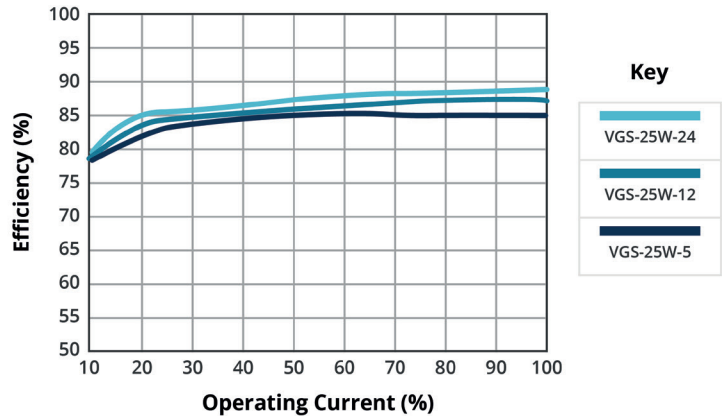


EFFICIENCY CURVES

EFFICIENCY VS INPUT VOLTAGE (Full load)



EFFICIENCY VS OUTPUT LOAD (Vin = 230 Vac)



REVISION HISTORY

rev.	description	date
1.0	initial release	02/10/2021
1.01	UKCA mark added	09/09/2021

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.

Please read our datasheet & drawing disclaimer [here](#).