Additional Resources: Product Page | 3D Model



late 09/02/2020

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SERIES: VGS-150W | DESCRIPTION: INTERNAL 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 and IEC/EN 60335 system requirements
- short-circuit, over-current, over-voltage protections
- CISPR/EN55032 Class B radiated/conducted emissions

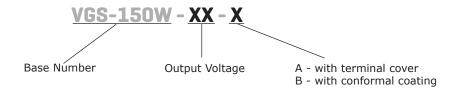




MODEL	output voltage	output current	output power	ripple and noise¹	efficiency ²
	(Vdc)	max (A)	max (W)	typ (mVp-p)	typ (%)
VGS-150W-12	12	12.5	150	150	86
VGS-150W-15	15	10.0	150	150	87
VGS-150W-24	24	6.5	156	200	88
VGS-150W-36	36	4.3	154	200	88
VGS-150W-48	48	3.3	158	200	89

Notes:

PART NUMBER KEY



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^{1.} Ripple & noise are measured at 20 MHz BW with 47 μ F aluminum electrolytic capacitor and 0.1 μ F ceramic capacitor on the output.

^{2.} Measured at 230 Vac.

INPUT

parameter	conditions/description	min	typ	max	units
voltage	ac input dc input	85 120		305 431	Vac Vdc
frequency		47		63	Hz
current	at 115 Vac at 230 Vac			4 2	A A
inrush current	at 115 Vac at 230 Vac		30 60		A A
leakage current	at 277 Vac			0.75	mA
no load power consumption	at 250 Vac			0.5	W

OUTPUT

parameter	conditions/description	min	typ	max	units
	12 Vdc output			10,000	μF
	15 Vdc output			6,000	μF
capacitive load	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	at rated load		±0.5		%
load regulation	0% ~ 100% load		±0.5		%
hold-up time	at 115 Vac	8			ms
noid-up time	at 230 Vac	40			ms
switching frequency			65		kHz
temperature coefficient			±0.03		%/°C
adjustability	built in trim pot		±10		%

PROTECTIONS

parameter	conditions/description	min	typ	max	units
	12 Vdc output, hiccup			16.2	Vdc
	15 Vdc output, hiccup			21.75	Vdc
over voltage protection	24 Vdc output, hiccup			33.6	Vdc
	36 Vdc output, hiccup			48.6	Vdc
	48 Vdc output, hiccup			60	Vdc
over current protection	auto recovery 110		150	%	
short circuit protection	hiccup, continuous, auto recovery				
over-temperature protection	shut-down, auto recovery				°C

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units	
	input to ground, 1 min. <10mA	2,000			Vac	
isolation voltage	input to output, 1 min. <10mA	4,000			Vac	
	output to ground, 1 min. <10mA	1,250			Vac	
	certified to 62368: IEC, EN, UL					
safety approvals	designed to meet 60335: IEC, EN					
	designed to meet 61558: IEC, EN					
safety class	class I					
EMI/EMC	CISPR 32/EN 55032 Class B, IEC 61000-3-2 Class A (≤80% load)					
ESD	IEC/EN 61000-4-2 Contact ±6KV/Air ±8KV perf. criteria A					
radiated immunity	IEC/EN 61000-4-3 10 V/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					

SAFETY & COMPLIANCE

conducted immunity	IEC/EN 61000-4-6 10 Vr.m.s perf. criteria A		
voltage dips and interuption	IEC/EN 61000-4-11 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				inch
weight	12V, 15V models 24V, 36V, 48V models		430 410		g g
cooling	free air convection				
case material	metal (AL1100, SGCC)				

MECHANICAL DRAWING

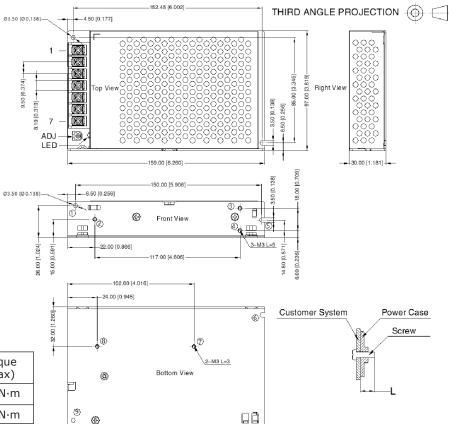
units: mm

tolerance: ± 1 [± 0.039]

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

wire range: 22-12 AWG

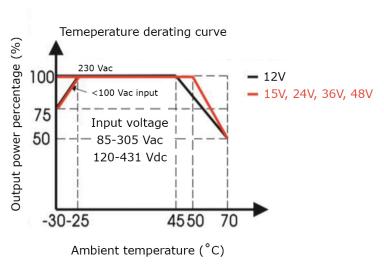
connector tightening torque: M3.5, 0.8N·m

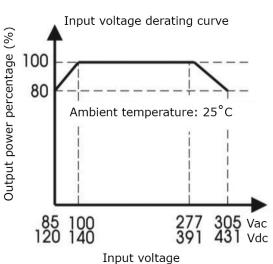


Position	Screw spec.	L (max)	Torque (max)
2 - 3	М3	5 mm	0.4 N·m
6 - 7	М3	3 mm	0.4 N·m

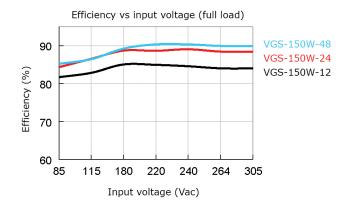
Note: At least one hole position, \bigcirc ~ \bigcirc must be securely connected to Protective Earth (PE) \bigcirc

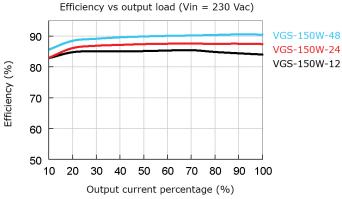
DERATING CURVE





EFFICIENCY CURVES





Additional Resources: Product Page | 3D Model

CUI Inc | SERIES: VGS-150W | DESCRIPTION: AC-DC POWER SUPPLY date 09/02/2020 | page 5 of 5

REVISION HISTORY

rev.	description	date
1.0	initial release	09/02/2020

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.

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