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DESCRIPTION: INTERNAL AC-DC POWER SUPPLY SERIES: VGS-100C

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 protections
- CISPR/EN55032 Class B radiated/conducted emissions
- output adjustable via trimpot +/- 10%

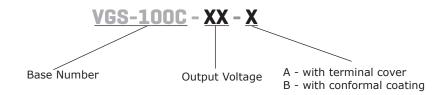




MODEL	output voltage	output current	output power	ripple and noise¹	efficiency ²
	(Vdc)	max (A)	max (W)	typ (mVp-p)	typ (%)
VGS-100C-5	5	18	90.0	100	86
VGS-100C-12	12	8.5	102.0	120	88
VGS-100C-15	15	7.0	105.0	120	88
VGS-100C-24	24	4.5	108.0	150	90
VGS-100C-36	36	2.8	100.8	200	90
VGS-100C-48	48	2.3	110.4	200	91

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

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
voltage	ac input dc input	85 120		264 373	Vac Vdc
frequency		47		63	Hz
current	at 115 Vac at 230 Vac			3 1.5	A A
inrush current	at 115 Vac, cold start at 230 Vac, cold start		35 65		A A
leakage current	at 240 Vac			0.75	mA
no load power consumption	5V, 12V, 15V, 24V at 230 Vac 36V, 48V at 230 Vac			0.3 0.5	W

OUTPUT

parameter	conditions/description	min	typ	max	units
	5 Vdc output			10,000	μF
	12 Vdc output			6,800	μF
annositive land	15 Vdc output			3,300	μF
capacitive load	24 Vdc output			2,200	μF
	36 Vdc output			1,000	μF
	48 Vdc output			470	μF
initial set point accuracy	5 Vdc output at full load		±2		%
	other outputs at full load		±1		%
line regulation			±0.5		%
land vaculation	5 Vdc output 0%~100% load		±1		%
load regulation	other outputs 0%~100% load		±0.5		%
adjustability	built in trim pot	±10			%
hold up time	at 115 Vac	5			ms
hold-up time	at 230 Vac	45			ms
switching frequency			65		kHz
temperature coefficient			±0.03		%/°C

PROTECTIONS

parameter	conditions/description	min	typ	max	units
	5 Vdc output, output shut-down, auto-recovery			7.5	Vdc
	12 Vdc output, output shut-down, auto-recovery			19.2	Vdc
avan valta aa musta stiam	15 Vdc output, output shut-down, auto-recovery			24.0	Vdc
over voltage protection	24 Vdc output, output shut-down, auto-recovery			38.4	Vdc
	36 Vdc output, output shut-down, auto-recovery			57.6	Vdc
	48 Vdc output, output shut-down, auto-recovery			60.0	Vdc
over current protection	auto-recovery	110		160	%
short circuit protection	hiccup, continuous, auto-recovery				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to ground input to output output to ground	2,000 4,000 1,250			Vac Vac Vac
safety approvals	certified to: 62368: IEC/EN/L designed to meet: 60335: IEC/EN designed to meet: 61558: IEC/EN designed to meet: 4943: GB	JL			
safety class	Class I				
EMI/EMC	CISPR32/EN55032 Class B, IEC/EN61	000-3-2 Class A			
ESD	IEC/EN 61000-4-2 Contact ±6KV /Air	±8KV, perf. Criteria A			

Additional Resources: Product Page | 3D Model

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SAFETY & COMPLIANCE

radiated immunity	IEC/EN 61000-4-3 10V/m, perf. Criteria A		
EFT/burst	IEC/EN 61000-4-4 ±2KV, 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	
voltage dips and interruptions	IEC/EN61000-4-11 0%, 70%, perf. Criteria	а В	
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	129.00 x 97.00 x 30.00				mm
weight	5 Vdc output other outputs		350 305		g g
cooling	natural convection				
case material	metal (AL1100, SGCC)				

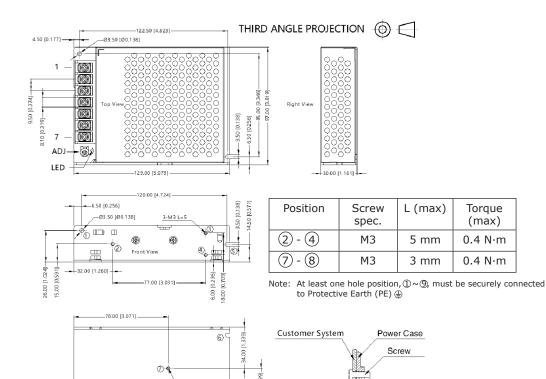
MECHANICAL DRAWING

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	<u></u>			
4	-Vo			
5	-Vo			
6	+Vo			
7	+Vo			



2-M3 L=3

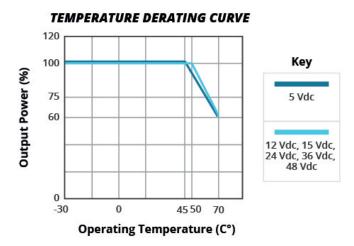
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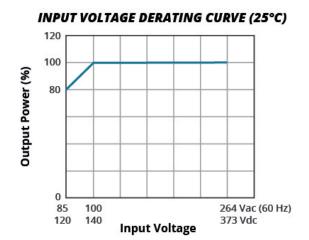
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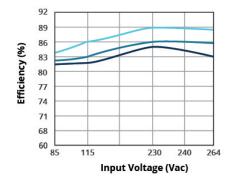
DERATING CURVE



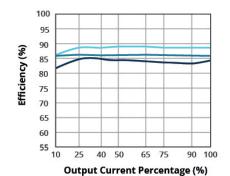


EFFICIENCY CURVES

EFFICIENCY VS INPUT VOLTAGE (FULL LOAD)







EFFICIENCY VS OUTPUT LOAD



Additional Resources: Product Page | 3D Model

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REVISION HISTORY

rev.	description	date
1.0	initial release	09/28/2020

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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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.

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