Additional Resources: Product Page | 3D Model



late 10/12/2020

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SERIES: VGS-35W | 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



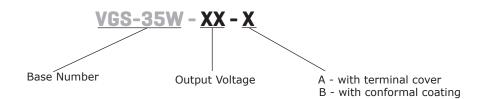


MODEL	output voltage	output current	output power	ripple and noise¹	efficiency ²
	(Vdc)	max (A)	max (W)	typ (mVp-p)	typ (%)
VGS-35W-5	5	7.0	35	80	81
VGS-35W-12	12	3.0	36	120	85
VGS-35W-15	15	2.4	36	120	86
VGS-35W-24	24	1.5	36	150	87

Notes:

2. Measured at 230 Vac.

PART NUMBER KEY



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

INPUT

parameter	conditions/description	min	typ	max	units
voltage	ac input	85		305	Vac
	dc input	120		430	Vdc
frequency		47		63	Hz
current	at 115 Vac			0.8	А
	at 230 Vac			0.6	
inrush current	at 115 Vac, cold start		30		Α
	at 230 Vac, cold start		50		
leakage current				0.75	mA
no load power consumption	on			0.3	W

OUTPUT

parameter	conditions/description	min	typ	max	units
capacitive load	5 Vdc output 12 Vdc output 15 Vdc output 24 Vdc output			8,000 1,500 1,000 750	μF μF μF μF
initial set point accuracy	5 Vdc output, full load other outputs, full load		±2 ±1		% %
line regulation	rated load		±0.5		%
load regulation	0% ~ 100% 5 Vdc output 0% ~ 100% other outputs		±1 ±0.5		% %
hold-up time	at 115 Vac at 230 Vac	8 30			ms ms
switching frequency			65		kHz
adjustability	built in trim pot		±10		%
temperature coefficient			±0.03		%/°C

PROTECTIONS

parameter conditions/description		min	typ	max	units
over voltage protection	5 Vdc output, hiccup, auto recovery			6.3	Vdc
	12 Vdc output, hiccup, auto recovery			16.2	Vdc
	15 Vdc output, hiccup, auto recovery			21.75	Vdc
	24 Vdc output, hiccup, auto recovery			33.6	Vdc
over current protection	at 230 Vac, auto recovery	110		200	%
short circuit protection	hiccup, continuous, auto recovery				

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/EN 61000-3-2 class A					
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 ±2KV perf. criteria A					
surge	IEC/EN 61000-4-5 line to line ±2KV/line to gr	ound ±4KV perf. cri	teria A			
conducted immunity	IEC/EN 61000-4-6 10 Vr.m.s perf. criteria A					
voltage dips and interruption	IEC/EN 61000-4-11 0%, 70% perf. criteria B					

SAFETY & COMPLIANCE

MTBF	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	-		95	%

MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	99.00 x 82.00 x 30.00 mm				inch
weight			170		g
cooling	free air convection				
case material	Metal (AL1100, SGCC)				

MECHANICAL DRAWING

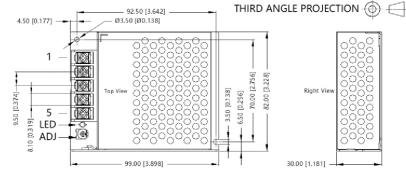
units: mm

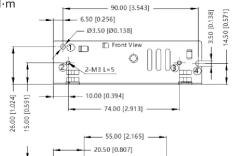
tolerance: ± 1 [± 0.039]

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

wire range: 22-12 AWG

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

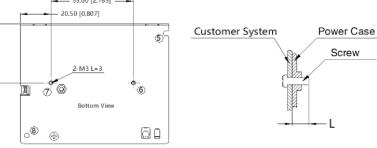




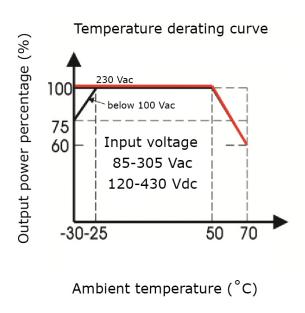
40.50 [1.594]

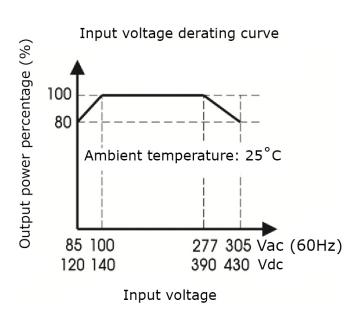
Position	Screw spec.	L (max)	Torque (max)
2 - 3	М3	5 mm	0.4 N·m
6 - 7	М3	3 mm	0.4 N·m

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

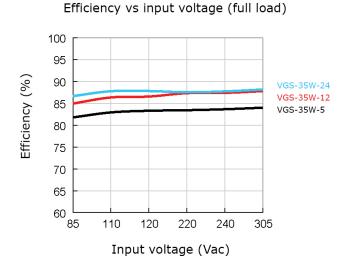


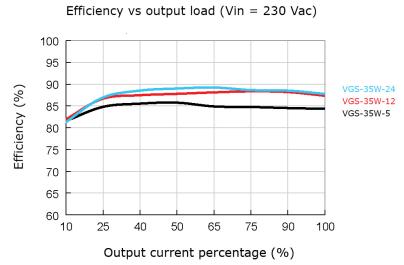
DERATING CURVE





EFFICIENCY CURVES





REVISION HISTORY

rev.	description	date
1.0	initial release	09/02/2020
1.01	added adjustability line	10/12/2020

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

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