

**SERIES:** VGD-35 | **DESCRIPTION:** AC-DC POWER SUPPLY**FEATURES**

- universal input voltage range (85~264 Vac)
- provides dual outputs; independently isolated
- short circuit, over current and over voltage protections
- safety certified: IEC/EN/UL 62368
- designed to meet: IEC/EN/UL 60335
- class B EMI performance, meets CISPR32 / EN 55032



MODEL	output voltage (Vdc)	output current		output power <sup>1</sup> max (W)	ripple and noise <sup>2</sup> max (mVp-p)	efficiency typ (%)
		min (A)	max (A)			
VGD-35-D512	5	0.4	4	32	80	81
	12	0.1	1		150	
VGD-35-D524	5	0.22	2.2	35	80	83
	24	0.1	1		150	

Note: 1. Maximum total combined power.  
 2. Ripple & noise are measured at 20 MHz BW with 47  $\mu$ F aluminum electrolytic capacitor and 0.1  $\mu$ F ceramic capacitor on the output.

**PART NUMBER KEY**

## INPUT

parameter	conditions/description	min	typ	max	units
voltage		85		264	Vac
		120		373	Vdc
frequency		47		63	Hz
input current	115 Vac			0.75	A
	230 Vac			0.5	A
inrush current	115 Vac, full load, cold start		30		A
	230 Vac, full load, cold start		50		A

## OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation	Vo1, at full load		±0.5		%
	Vo2, at full load		±1.5		%
load regulation	Vo1, 10% ~ 100% (balanced load)		±0.5		%
	Vo2, 10% ~ 100% (balanced load)		±5.0		%
temperature coefficient			±0.03		%/°C
hold-up time	115 Vac, full load		5		ms
	230 Vac, full load		30		ms
adjustability	adjustable with built-in trim pot <sup>1</sup>	4.75		5.50	Vdc
output voltage accuracy	Vo1, full load range		±2.0		%
	Vo2, full load range		±8.0		%

Note: 1. Adjustment of 5 V output only.

## PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	output clamped	5.75		6.75	V
overload protection	hiccup mode, automatically recovers	110		220	%
short circuit protection	hiccup, continuous, self-recovery				

## SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	output to output		500		Vdc
	input to output		3,000		Vac
	input to ground		2,000		Vac
	output to ground		500		Vac
isolation resistance	input to output at 500 Vdc at 25°C	100			MΩ
safety approvals	IEC/EN/UL62368 (designed to meet IEC/EN/UL60335)				
safety class	Class I				
conducted emissions	CISPR32/ EN55032 Class B				
radiated emissions	CISPR32/ EN55032 Class B				
ESD	IEC/EN61000-4-2, 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/EN 61000-4-5, Line to Line ±2KV / Line to Ground±4KV, perf. Criteria A				
conducted immunity	IEC/EN61000-4-6, 10 Vrms, perf. Criteria A				

## SAFETY & COMPLIANCE (CONTINUED)

parameter	conditions/description	min	typ	max	units
power-frequency magnetic fields immunity	EN 61000-4-8				
voltage dips & interruptions	IEC/EN61000-4-11, 0%,70%, perf. Criteria B				
MTBF	MIL-HDBK-217F at 25°C	300,000			hrs
RoHS compliant	yes				

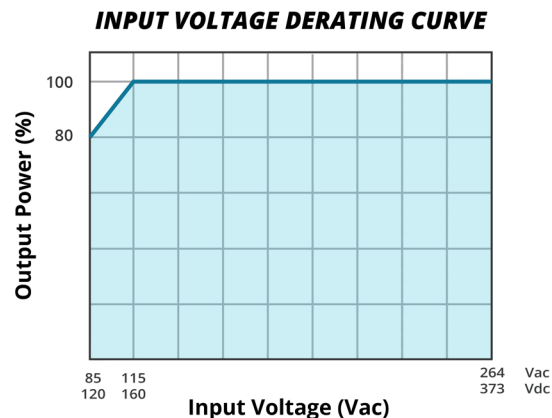
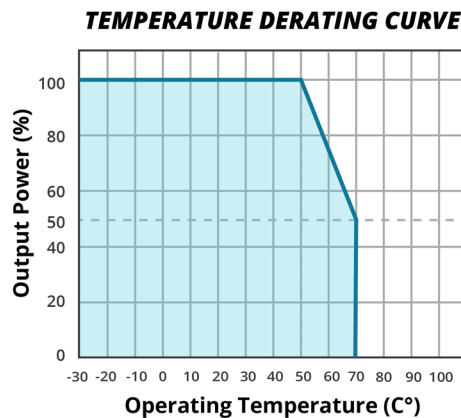
## ENVIRONMENTAL

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	10		95	%

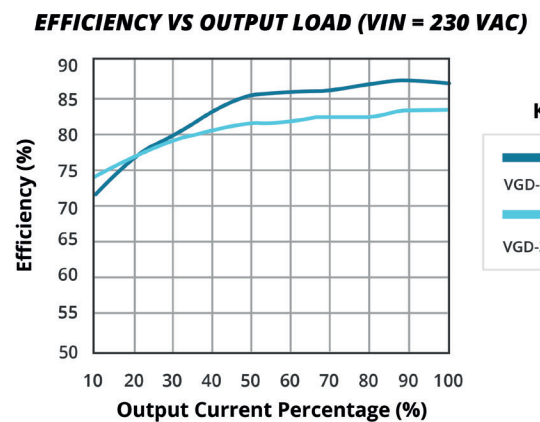
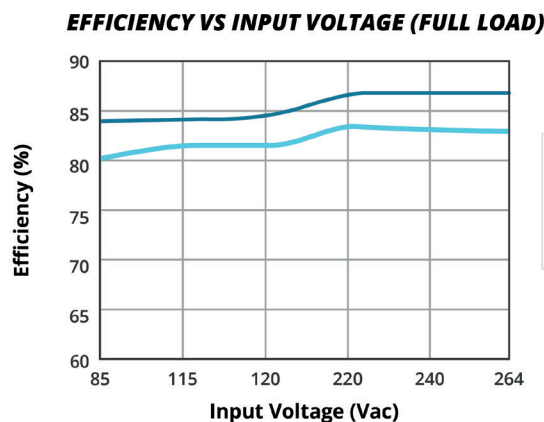
## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	3.9 x 3.8 x 1.2 (99 x 97 x 30 mm)				inch
cooling method	free air convection (see derating curve below)				
weight			210		g
case material	Metal (AL1100, SGCC)				

## DERATING CURVES



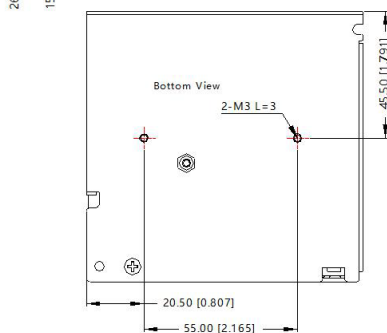
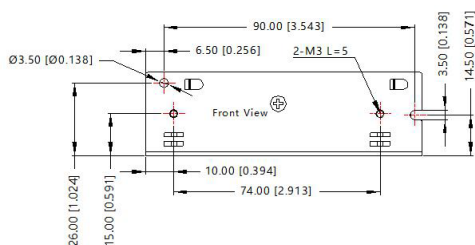
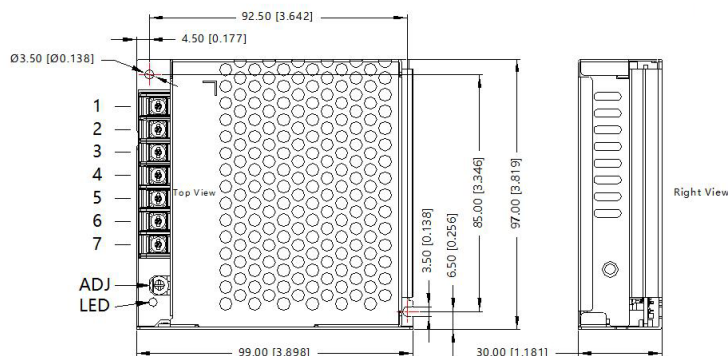
## EFFICIENCY CURVES



## MECHANICAL DRAWING

units: mm [inches]  
 tolerance: ±1.0 [±0.039]  
 wire range: 22-14 AWG  
 tightening torque: M3, 0.5N.m

PIN CONNECTIONS	
Pin	Function
1	AC (L)
2	AC (N)
3	⏏
4	-Vo2
5	+Vo2
6	-Vo1
7	+Vo1



## REVISION HISTORY

---

rev.	description	date
1.0	initial release	11/08/2019
1.01	company logo updated	12/22/2020
1.02	derating and efficiency curves updated	04/28/2021

The revision history provided is for informational purposes only and is believed to be accurate.



**CUI INC**  
a bel group

**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.