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

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

PART NUMBER KEY

VGD-35 - DXXX

Base Number — Output Voltage

Please read our datasheet & drawing disclaimer here.

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INPUT

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

OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation	Vo1, at full load Vo2, at full load		±0.5 ±1.5		% %
load regulation	Vo1, 10% ~ 100% (balanced load) Vo2, 10% ~ 100% (balanced load)		±0.5 ±5.0		% %
temperature coefficient			±0.03		%/°C
hold-up time	115 Vac, full load 230 Vac, full load		5 30		ms ms
adjustability	adjustable with built-in trim pot[1]	4.75		5.50	Vdc
output voltage accuracy	Vo1, full load range Vo2, full load range		±2.0 ±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 input to output input to ground output to ground		500 3,000 2,000 500		Vdc Vac Vac 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				

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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

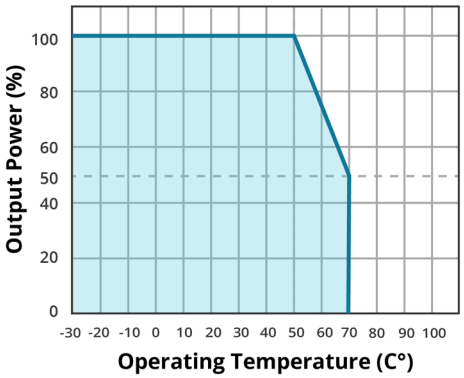
parameter	conditions/description	min	typ	max	units
operating temperature	see derating curve	-30		70	°C
storage temperature		-40		85	°C
operating humidity	non-condensing	10		95	%
storage humidity	non-condensing	10		95	%

MECHANICAL

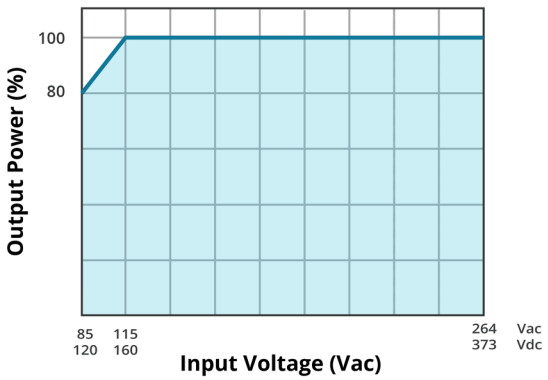
parameter	conditions/description	min	typ	max	units
dimensions	3.9 x 3.8 x 1.2 (99 x 97 x 30 mm)				inch
cooling method	free air convection (see derating curve below)				
weight			210		g
case material	Metal (AL1100, SGCC)				

DERATING CURVES

TEMPERATURE DERATING CURVE

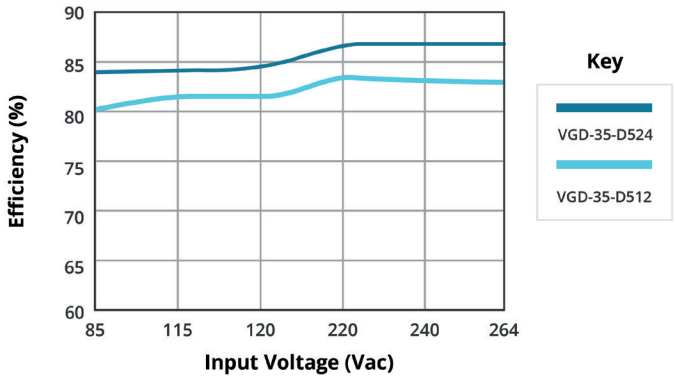


INPUT VOLTAGE DERATING CURVE

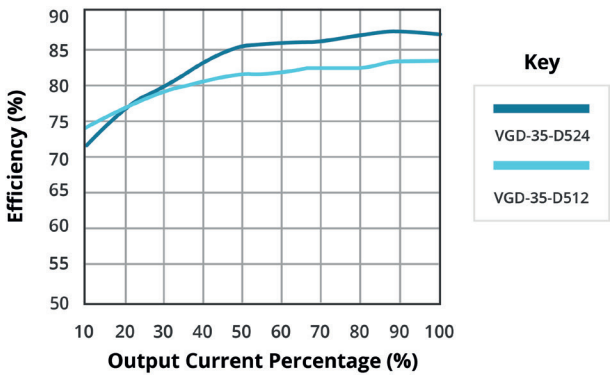


EFFICIENCY CURVES

EFFICIENCY VS INPUT VOLTAGE (FULL LOAD)



EFFICIENCY VS OUTPUT LOAD (VIN = 230 VAC)



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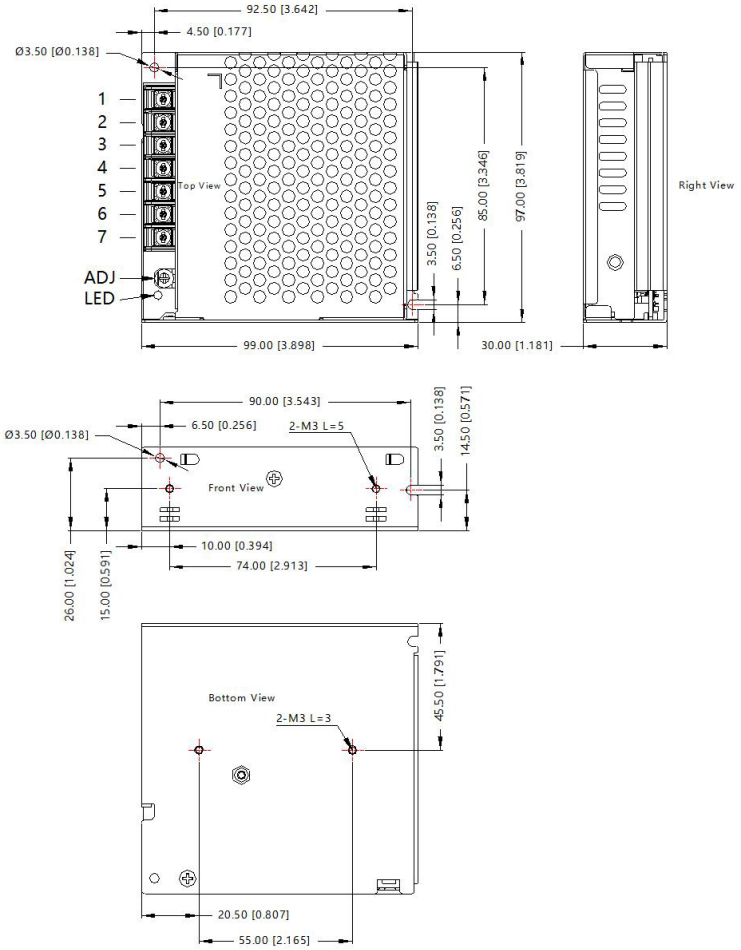
MECHANICAL DRAWING

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



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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.

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