

**SERIES:** VGS-150E | **DESCRIPTION:** INTERNAL AC-DC POWER SUPPLY

**FEATURES**

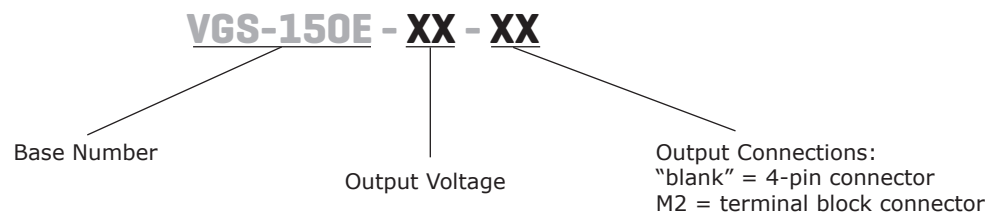
- 100 W with natural convection, 150 W with forced air cooling
- 3"x2" compact size, industrial design
- IEC/EN/UL 62368-1 certified
- operating temperature -20°C to 70°C (with derating)
- short-circuit protection, over power protection, overvoltage protection
- main output power ON LED indicators
- low no load power consumption (<0.150 W)
- chassis mounting



MODEL	output voltage	output current <sup>1</sup>	output power <sup>1,2</sup>	ripple and noise <sup>3</sup>	efficiency level <sup>4</sup>
	(Vdc)	max (A)	max (W)	typ (mVp-p)	typ (%)
VGS-150E-12	12	12.5	150	120	92
VGS-150E-15	15	10.0	150	150	92
VGS-150E-18	18	8.34	150	180	92
VGS-150E-24	24	6.25	150	240	92
VGS-150E-28	28	5.36	150	280	92
VGS-150E-36	36	4.17	150	360	92
VGS-150E-48	48	3.13	150	360	92
VGS-150E-54	54	2.78	150	360	92

- Notes:
1. With forced air (10 CFM).
  2. Maximum output power is 150 W with 10 CFM forced air cooling, and 100 W with natural convection cooling.
  3. Ripple and noise are measured at oscilloscope 20MHz bandwidth by a 10µF electrolytic capacitor and a 0.1µF ceramic capacitor in parallel at output connector.
  4. At full load, 230 Vac.

**PART NUMBER KEY**



**INPUT**

parameter	conditions/description	min	typ	max	units
voltage		90	115~230	264	Vac
frequency		47	50~60	63	Hz
current	at 115 Vac/50 Hz			2	A
inrush current	at 230 Vac, cold start			100	A
leakage current	earth at 264 Vac (Class I) touch at 264 Vac (Class II)			300 100	$\mu$ A $\mu$ A
no load power consumption				0.15	W
power factor		0.9			

**OUTPUT**

parameter	conditions/description	min	typ	max	units
output current (natural convection/forced air <sup>5</sup> )	12 Vdc output model			8.34 / 12.5	A
	15 Vdc output model			6.67 / 10.0	A
	18 Vdc output model			5.56 / 8.34	A
	24 Vdc output model			4.17 / 6.25	A
	28 Vdc output model			3.58 / 5.36	A
	36 Vdc output model			2.78 / 4.17	A
	48 Vdc output model			2.09 / 3.13	A
	54 Vdc output model			1.86 / 2.78	A
load regulation	12, 15, 18, 24, 28 Vdc output models all other output models		$\pm$ 3 $\pm$ 2		%
hold-up time		10			ms
transient response	10% to full load deviation recovery time <20mS 10% max				
overshoot	turn-on and turn-off overshoot shall not exceed $\pm$ 10% of the voltage regulation tolerance				
switching frequency	at full load	75		90	kHz

Notes: 5. With forced air 10 CFM.

**PROTECTIONS**

parameter	conditions/description	min	typ	max	units
over voltage protection	12 Vdc output, output shut-down with latch	13.2		15.6	Vdc
	15 Vdc output, output shut-down with latch	16.5		19.5	Vdc
	18 Vdc output, output shut-down with latch	19.8		23.4	Vdc
	24 Vdc output, output shut-down with latch	26.4		31.2	Vdc
	28 Vdc output, output shut-down with latch	30.8		36.4	Vdc
	36 Vdc output, output shut-down with latch	39.6		46.8	Vdc
	48 Vdc output, output shut-down with latch	52.8		62.4	Vdc
	54 Vdc output, output shut-down with latch	59.4		64.8	Vdc
over current protection	auto-recovery	105		160	%
short circuit protection	auto-recovery				
over temperature protection	latching type, power recycle				

## SAFETY & COMPLIANCE

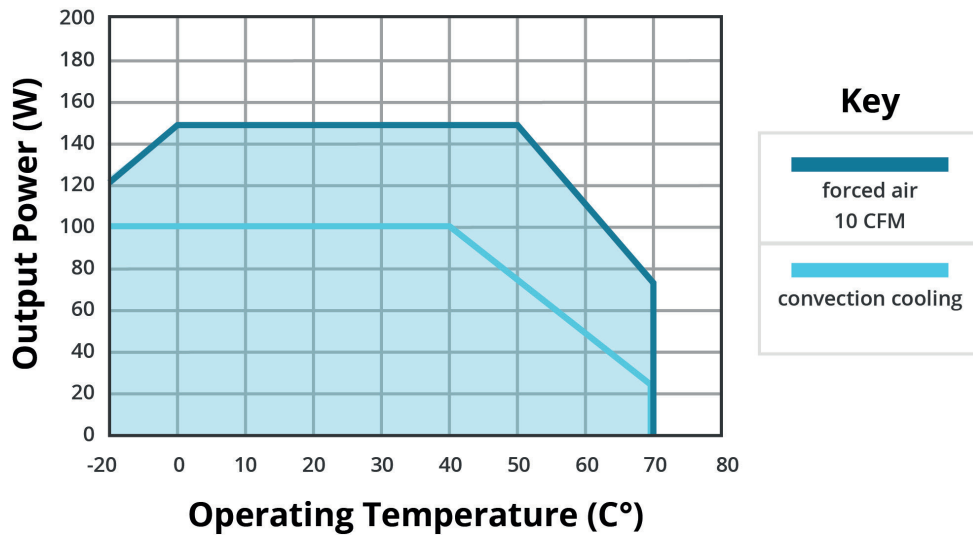
parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, for 4 seconds (Class I & II)	5,656			Vdc
	input to frame ground, for 4 seconds (Class I)	2,121			Vdc
	output to frame ground, for 4 seconds (Class I)	2,121			Vdc
safety approvals	certified to 62368-1: IEC/EN/UL				
safety class	Class I, Class II				
EMI/EMC	EN55032 Class B & EN55035 FCC Part 15 Class B				
MTBF	as per Telcordia (Bellcore TR-332) at 25°C	400,000			hours
RoHS	yes				

## ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature		-20		70	°C
storage temperature		-20		85	°C
operating humidity	non-condensing	10		95	%
storage humidity	non-condensing	0		95	%
altitude				5,000	m

## DERATING CURVE

### TEMPERATURE DERATING CURVE

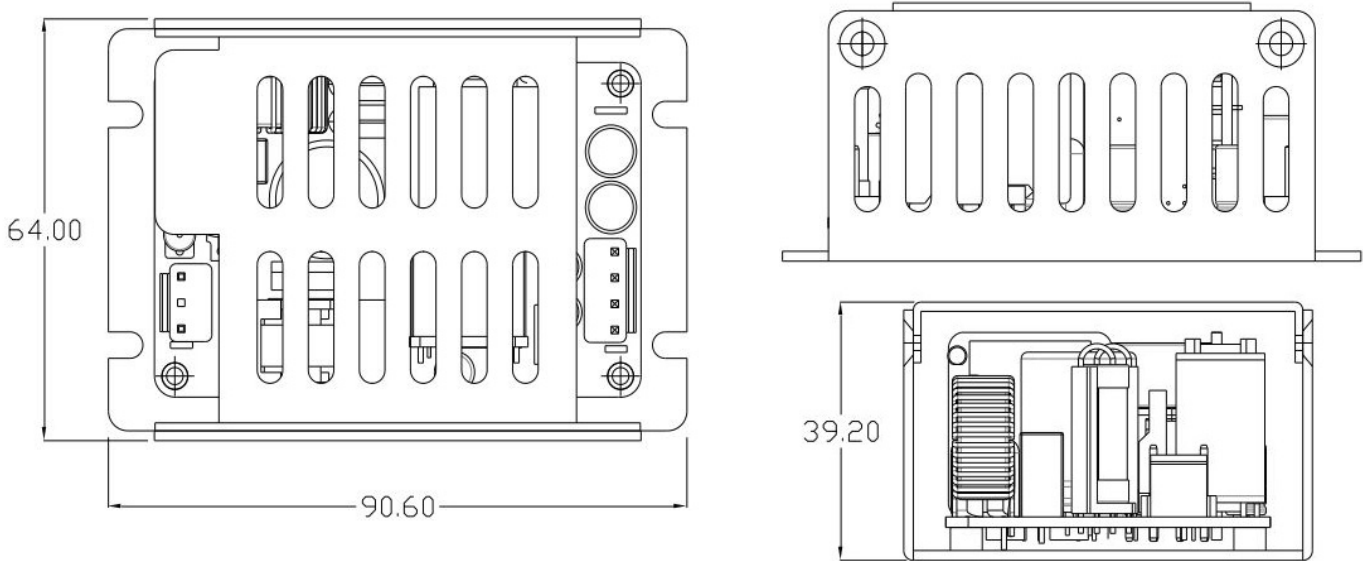


## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	90.6 x 64.0 x 39.2 [3.57 x 2.52 x 1.55 inch]				mm
weight			210		g
cooling	forced air 10 CFM				

## MECHANICAL DRAWING

units: mm [inch]



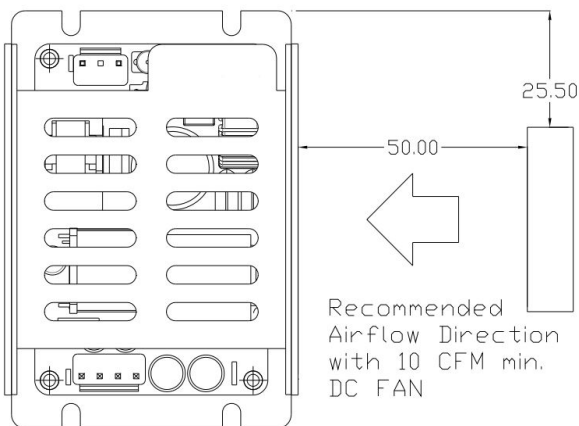
**CN1:** Input Connector (pitch: 3.96mm)  
JST B3P-VH-B or equivalent  
Mates with JST VHR-3N or equivalent

PIN	Function
1	AC(L)
2	AC(N)

**CN2:** Main Output Connector  
(pitch: 3.96mm / 3.50mm)

JST B4P-VH-B or equivalent Mates with JST VHR-4N or equivalent		Eurostyle P.C.B. 3.50mm Terminal Block 16-24 AWG (1.5mm <sup>2</sup> ) Wire range
PIN	Function	Function
1	GND	GND
2	GND	GND
3	+Vout	+Vout
4	+Vout	+Vout

### DC FAN Recommended Direction



## REVISION HISTORY

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rev.	description	date
1.0	initial release	07/07/2025

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



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