SERIES: VGSM-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 60601-1 certified
- operating temperature -20°C to 70°C (with derating)
- short-circuit protection, over power protection, overvoltage protection
- 2 x MOPP (BF rated)
- main output power ON LED indicators
- low no load power consumption (<0.150 W)
- chassis mounting

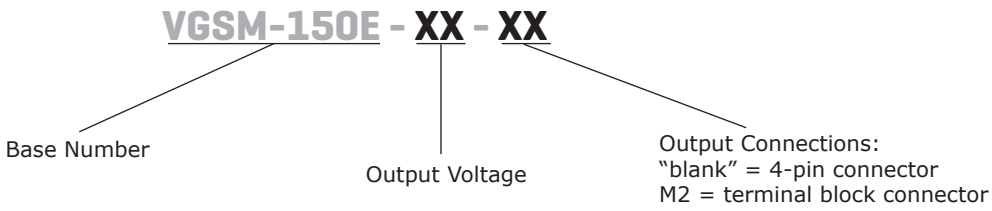


MODEL

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



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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	μA μA
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[5])	12 Vdc output model 15 Vdc output model 18 Vdc output model 24 Vdc output model 28 Vdc output model 36 Vdc output model 48 Vdc output model 54 Vdc output model			8.34 / 12.5 6.67 / 10.0 5.56 / 8.34 4.17 / 6.25 3.58 / 5.36 2.78 / 4.17 2.09 / 3.13 1.86 / 2.78	A A A A A A A A
load regulation	12, 15, 18, 24, 28 Vdc output models all other output models		±3 ±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 ±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 15 Vdc output, output shut-down with latch 18 Vdc output, output shut-down with latch 24 Vdc output, output shut-down with latch 28 Vdc output, output shut-down with latch 36 Vdc output, output shut-down with latch 48 Vdc output, output shut-down with latch 54 Vdc output, output shut-down with latch	13.2 16.5 19.8 26.4 30.8 39.6 52.8 59.4		15.6 19.5 23.4 31.2 36.4 46.8 62.4 64.8	Vdc Vdc Vdc Vdc Vdc Vdc Vdc Vdc
over current protection	auto-recovery	105		160	%
short circuit protection	auto-recovery				
over temperature protection	latching type, power recycle				

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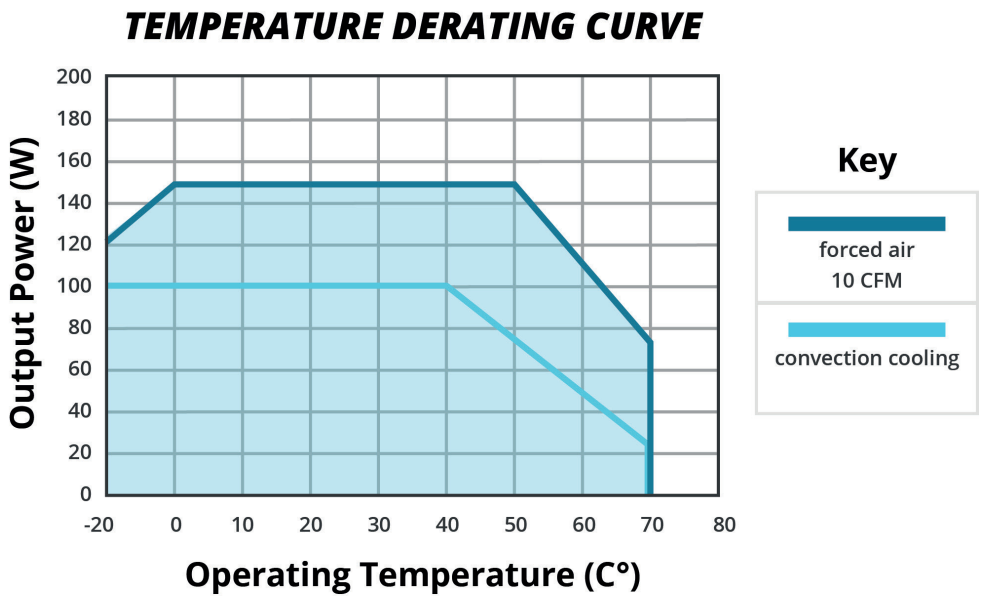
SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, for 4 seconds (Class I & II) input to frame ground, for 4 seconds (Class I) output to frame ground, for 4 seconds (Class I)	5,656 2,121 2,121			Vdc Vdc Vdc
safety approvals	certified to 60601-1: IEC/EN/UL				
safety class	Class I, Class II				
EMI/EMC	EN55011 Class B & EN60601-1-2 FCC Part 18 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



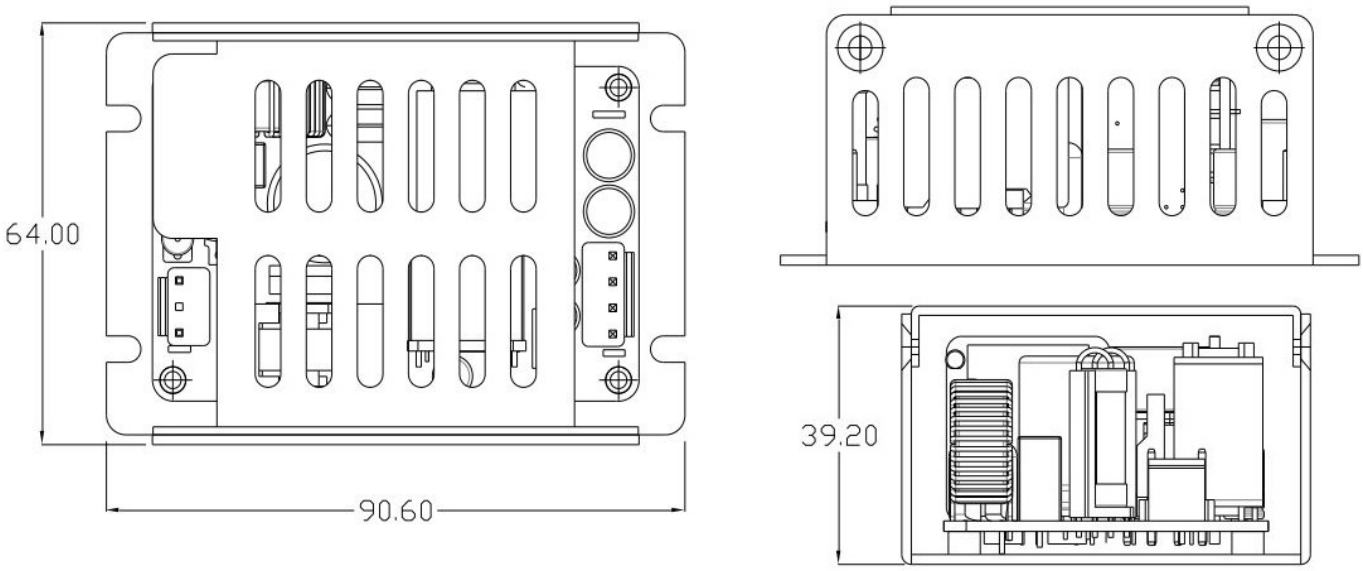
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MECHANICAL

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

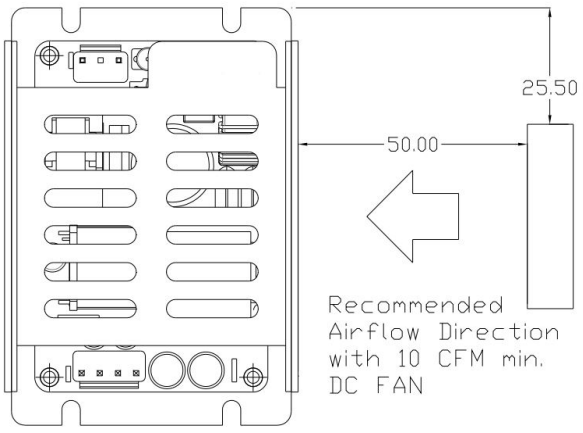
units: mm [inch]



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 (1.5mm2) Wire range
PIN	Function	Function
1	GND	GND
2	GND	GND
3	+Vout	+Vout
4	+Vout	+Vout

DC FAN Recommended Direction



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REVISION HISTORY

rev.	description	date
1.0	initial release	06/18/2025

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

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