SERIES: VGS-350C | **DESCRIPTION:** INTERNAL AC-DC POWER SUPPLY

FEATURES

- selectable input range (90 ~ 132 Vac / 180 ~ 264 Vac)
- UL/EN/IEC 62368 certified
- designed to meet IEC/EN 60335, and GB4943 system requirements
- short-circuit, over-current, over-voltage, over-temperature protections
- integrated cooling fan
- output adjustable via trimpot +/- 10%

MODEL	output voltage (Vdc)	output current max (A)	output power max (W)	ripple and noise[1] typ (mVp-p)	efficiency[2] typ (%)
VGS-350C-5	5	60.0	300.0	150	84
VGS-350C-12	12	29.0	348.0	150	85
VGS-350C-15	15	23.2	348.0	150	87
VGS-350C-24	24	14.6	350.4	150	88
VGS-350C-36	36	9.7	349.2	200	88
VGS-350C-48	48	7.3	350.4	200	89

Notes: 1. Ripple & noise are measured at 20 MHz BW with 47 µF aluminum electrolytic capacitor and 0.1 µF ceramic capacitor on the output.
2. Measured at 230 Vac

PART NUMBER KEY

VGS-350C - XX - X

- VGS-350C: Base Number
- XX: Output Voltage
- X: A - with terminal cover; B - with conformal coating

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INPUT

parameter	conditions/description	min	typ	max	units
voltage	ac input (low voltage, switch at 115V) ac input (high voltage, switch at 230V) dc input (switch at 230V)	90 180 240		132 264 373	Vac Vac Vdc
frequency		47		63	Hz
current	at 115 Vac at 230 Vac			8 4	A A
inrush current	at 115 Vac, cold start at 230 Vac, cold start		60 60		A A
leakage current	at 240 Vac			0.75	mA
no load power consumption	at 230 Vac, 25°C			0.75	W

OUTPUT

parameter	conditions/description	min	typ	max	units
capacitive load	5 Vdc output 12 Vdc output 15 Vdc output 24 Vdc output 36 Vdc output 48 Vdc output			10,000 4,000 3,300 1,500 1,500 470	µF µF µF µF µF µF
initial set point accuracy	5 Vdc output, full load 12 Vdc ouput, full load other outputs, full load		±3 ±1.5 ±1		% % %
line regulation			±0.5		%
load regulation	5 Vdc output, 0%~100% load 12 Vdc ouput, 0%~100% load other outputs, 0%~100% load		±2 ±1 ±0.5		% % %
adjustability	built in trim pot	±10			%
hold-up time	at 115 Vac at 230 Vac		12 16		ms ms
switching frequency			65		kHz
temperature coefficient			±0.02		%/°C

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	5 Vdc output, hiccup, auto-recovery 12 Vdc output, hiccup, auto-recovery 15 Vdc output, hiccup, auto-recovery 24 Vdc output, hiccup, auto-recovery 36 Vdc output, hiccup, auto-recovery 48 Vdc output, hiccup, auto-recovery	5.75 13.8 18.0 28.8 41.4 55.2		6.75 16.2 21.0 33.6 46.8 59.5	Vdc Vdc Vdc Vdc Vdc Vdc
over current protection	auto-recovery	110		180	%
short circuit protection	hiccup, continuous, auto-recovery				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	input to ground input to output output to ground	2,000 3,000 500			Vac Vac Vac
safety approvals	certified to: 62368: IEC/EN/UL designed to meet: 60335: IEC/EN designed to meet: 61558: IEC/EN designed to meet: 4943: GB				
safety class	Class I				

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SAFETY & COMPLIANCE

EMI/EMC	CISPR32/EN55032 Class A		
ESD	IEC/EN 61000-4-2 Contact ±6KV /Air ±8KV, perf. Criteria A		
radiated immunity	IEC/EN 61000-4-3 10V/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 ground ±4KV, perf. Criteria A		
conducted immunity	IEC/EN61000-4-6 10 Vr.m.s, perf. Criteria A		
voltage dips and interruptions	IEC/EN61000-4-11 0%, 70%, perf. Criteria B		
MTBF	as 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	0		95	%

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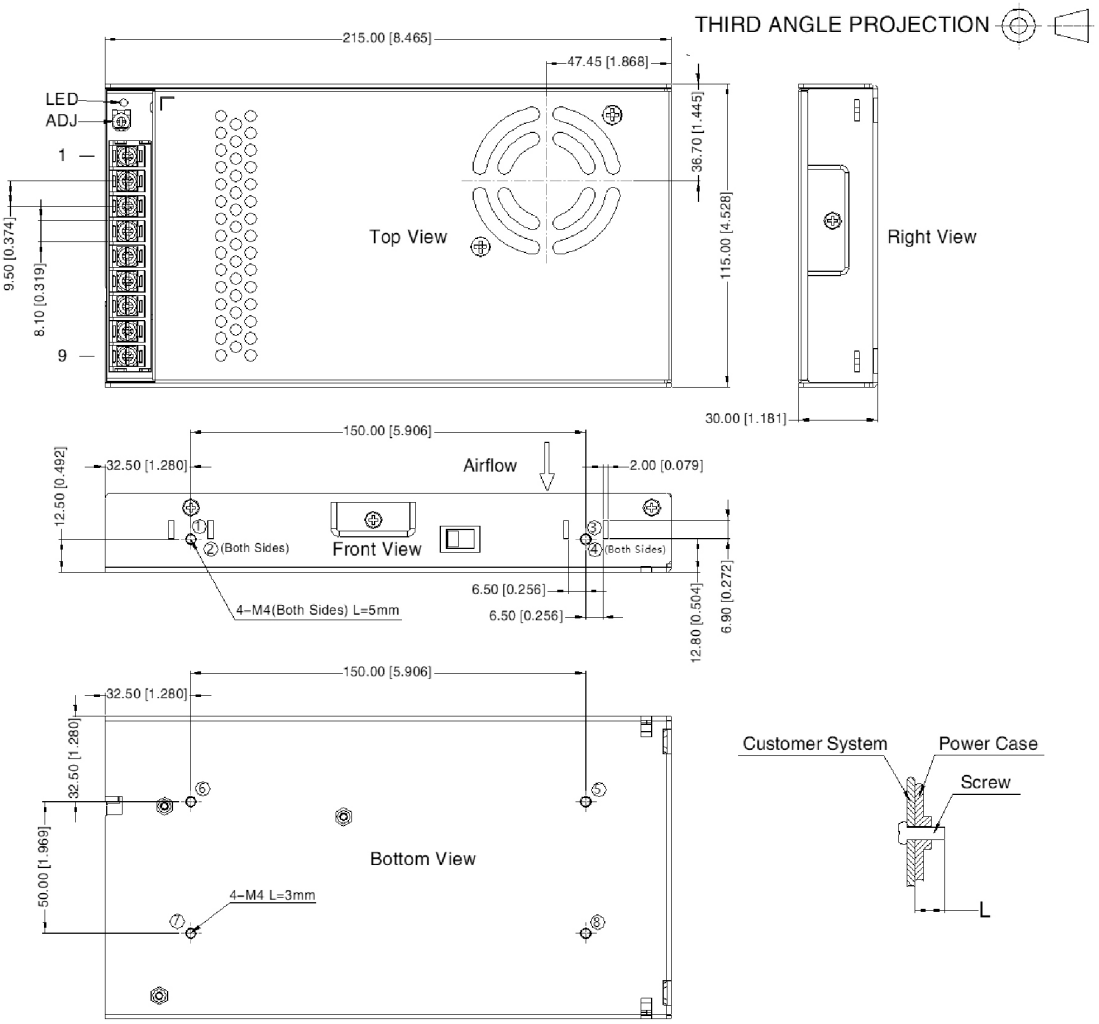
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	215.00 x 115.00 x 30.00				mm
weight			700		g
cooling	forced air cooling				
case material	metal (AL1100, SGCC)				

MECHANICAL DRAWING

units: mm [inch]
tolerance: ±1.0 [±0.039]
wire range: 22-12 AWG
connector tightening torque: M3.5, 0.8 N·m

PIN CONNECTIONS	
PIN	Function
1	+Vo
2	+Vo
3	+Vo
4	-Vo
5	-Vo
6	-Vo
7	⏚
8	AC(N)
9	AC(L)



Switch	ac input (Vac)	dc input (Vdc)
115V	90~132	-
230V	180~264	240~373

Position	Screw spec.	L (max)	Torque (max)
① - ④	M4	5 mm	0.9 N·m
⑤ - ⑧	M4	3 mm	0.9 N·m

Note: At least one hole position,①~⑧, must be securely connected to Protective Earth (PE) ⏚

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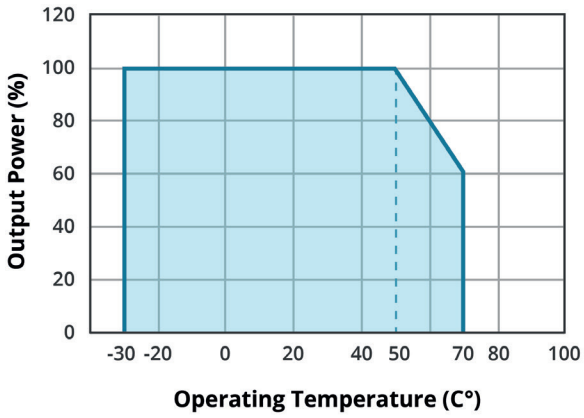
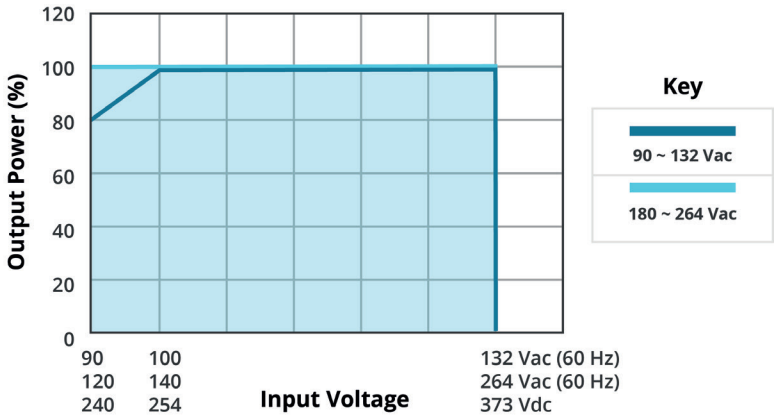
DERATING CURVE

TEMPERATURE DERATING CURVE

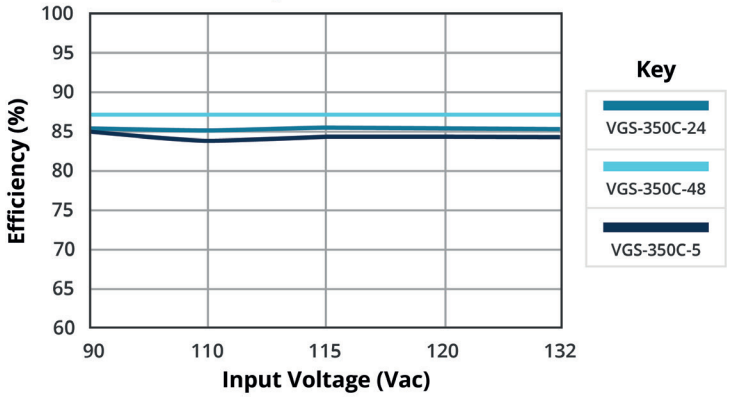


INPUT VOLTAGE DERATING CURVE (25°C)

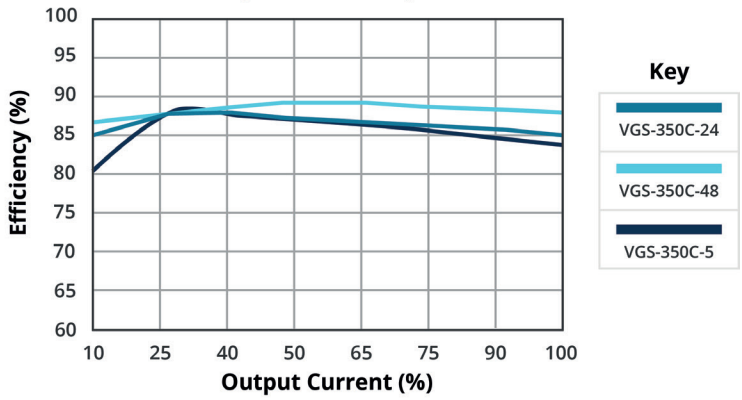


EFFICIENCY CURVES

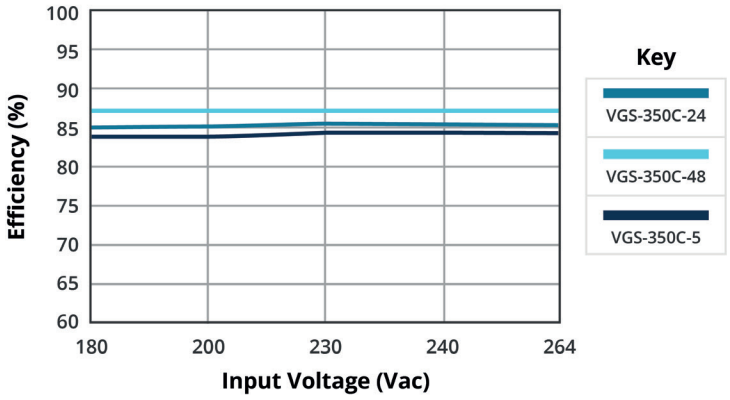
EFFICIENCY VS INPUT VOLTAGE (full load)



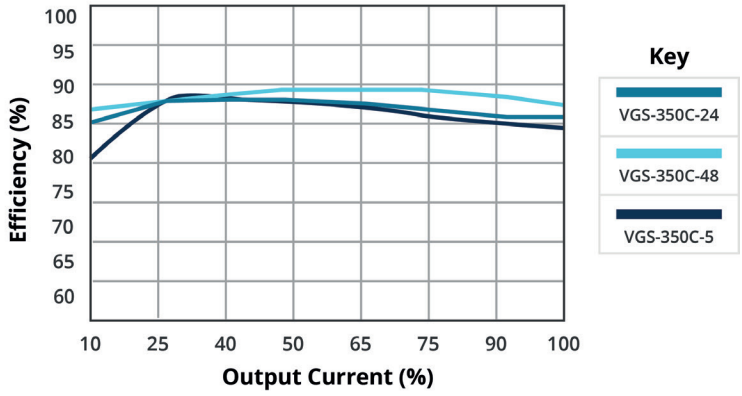
EFFICIENCY VS OUTPUT LOAD (Vin = 115 Vac)



EFFICIENCY VS INPUT VOLTAGE (full load)



EFFICIENCY VS OUTPUT LOAD (Vin = 230 Vac)



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REVISION HISTORY

rev.	description	date
1.0	initial release	12/10/2020
1.01	derating and efficiency curves updated	01/28/2022
1.02	UKCA mark added	06/06/2022

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

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