

**SERIES:** VOF-65C | **DESCRIPTION:** AC-DC POWER SUPPLY

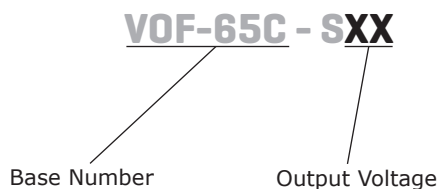
**FEATURES**

- universal input voltage range (85~264 VAC)
- 3 × 2 × 1.2 in (76.2 × 50.8 × 30 mm)
- class B EMI performance, meets CISPR32 / EN55032
- output short circuit, overcurrent & overvoltage protection
- safety certified: IEC/EN/UL 62368



MODEL	output voltage (Vdc)	output current		output power max (W)	ripple and noise <sup>1</sup> max (mVp-p)	efficiency <sup>2</sup> typ (%)
		min (mA)	max (mA)			
VOF-65C-S5	5	0	10000	50	150	80
VOF-65C-S9	9	0	6600	60	150	83
VOF-65C-S12	12	0	5420	65	150	85
VOF-65C-S15	15	0	4340	65	150	85
VOF-65C-S24	24	0	2710	65	150	87
VOF-65C-S48	48	0	1360	65	150	87

Notes: 1. At full load, nominal input, 20 MHz bandwidth oscilloscope, with 1  $\mu$ F ceramic and 10  $\mu$ F electrolytic capacitors on the output.  
 2. At 230 Vac input.  
 3. All specifications are measured at T<sub>a</sub>=25°C, humidity <75%, nominal input voltage, and rated output load unless otherwise specified.

**PART NUMBER KEY**


**INPUT**

parameter	conditions/description	min	typ	max	units
voltage		85		264	Vac
		100		370	Vdc
frequency		47		63	Hz
current	at 115 Vac			1600	mA
	at 230 Vac			900	mA
inrush current	at 115 Vac		35		A
	at 230 Vac		50		A
no load power consumption				0.5	W

**OUTPUT**

parameter	conditions/description	min	typ	max	units
capacitive load	5 Vdc output models			40,000	μF
	9 Vdc output models			12,000	
	12 Vdc output models			8,000	
	15 Vdc output models			7,000	
	24 Vdc output models			1,500	
	48 Vdc output models			1,000	
initial set point accuracy			±2		%
line regulation	at full load		±0.5		%
load regulation	from 5~100% load		±1		%
hold-up time	at 230 Vac, full load		35		ms
switching frequency			65		kHz
temperature coefficient			±0.02		%/°C

**PROTECTIONS**

parameter	conditions/description	min	typ	max	units
over voltage protection	output voltage clamp, auto recovery			7.5	Vdc
	5 Vdc output models			9	
	9 Vdc output models			16	
	12 Vdc output models			20	
	15 Vdc output models			24	
	24 Vdc output models			35	
	48 Vdc output models			60	
over current protection	hiccup, auto-recovery	120		300	%
short circuit protection	hiccup, continuous, auto-recovery				

**SAFETY & COMPLIANCE**

parameter	conditions/description	min	typ	max	units
isolation voltage	input to output electric strength test for 1 minute, leakage current <5 mA	3,000			Vac
safety approvals	IEC/UL/EN 62368-1 certified				
safety class	Class II				
conducted emissions	CISPR32/EN55032, Class B				
radiated emissions	CISPR32/EN55032, Class B				
ESD	IEC/EN61000-4-2, Contact ±6KV, Perf. Criteria B				
radiated immunity	IEC/EN61000-4-3 10V/m perf. Criteria A				

**SAFETY & COMPLIANCE (CONTINUED)**

parameter	conditions/description	min	typ	max	units
EFT/burst	IEC/EN61000-4-4, ±2 kV, perf. Criteria B				
surge	IEC/EN61000-4-5, line to line ±1KV, perf. Criteria B				
conducted immunity	IEC/EN61000-4-6, 10 Vrms, Perf. Criteria A				
voltage dips & interruptions	IEC/EN61000-4-11 , 0%,70%, perf. Criteria B				
MTBF	as per MIL-HDBK-217F at 25°C	300,000			hours
RoHS	yes				

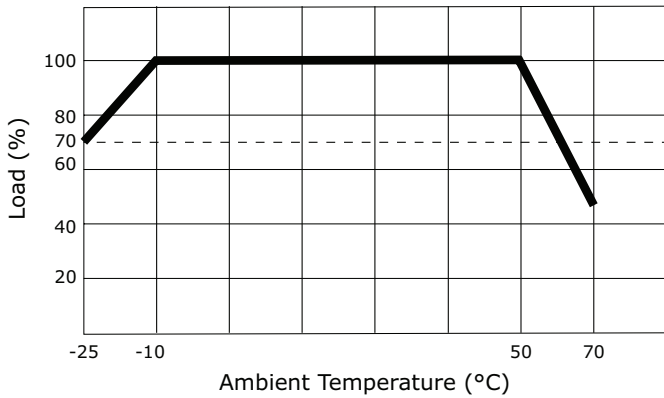
Notes: 4. The power supply is considered a component which will be installed into final equipment. The final equipment still must be tested to meet the necessary EMC directives.

**ENVIRONMENTAL**

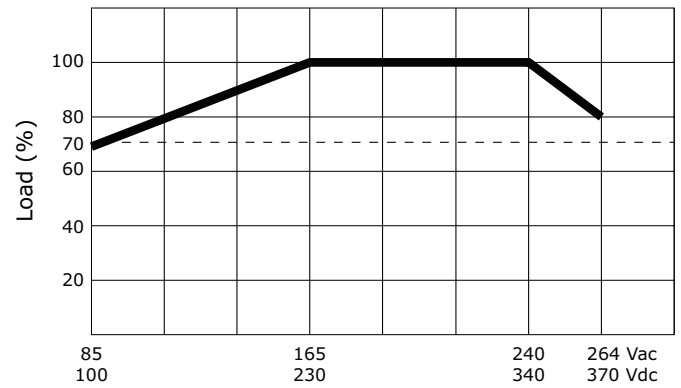
parameter	conditions/description	min	typ	max	units
operating temperature	see derating curves	-25		70	°C
storage temperature		-25		85	°C
storage humidity	non-condensing			90	%

## DERATING CURVES

Load vs. Ambient Temperature  
(at 85~264 Vac / 100~370 Vdc Input Voltage)

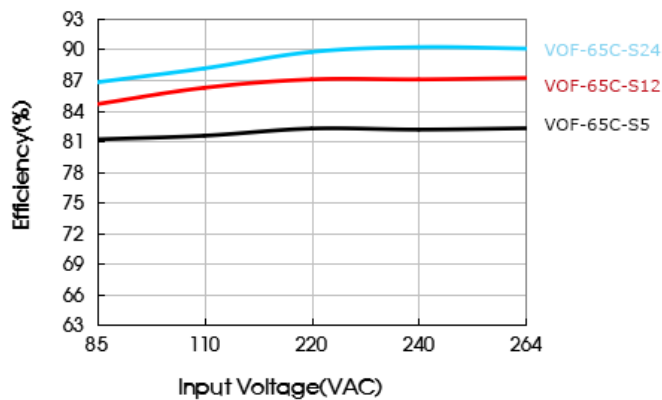


Load vs. Input Voltage  
(at 25°C Ambient Temperature)

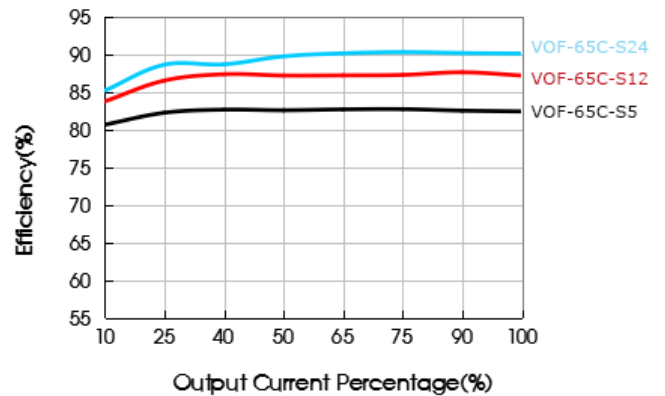


## EFFICIENCY CURVES

Efficiency vs. Input Voltage  
(at full load)



Efficiency vs. Load Current  
(at 230 Vac)



## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	76.20 x 50.80 x 30.00				mm
weight			95		g

## MECHANICAL DRAWING

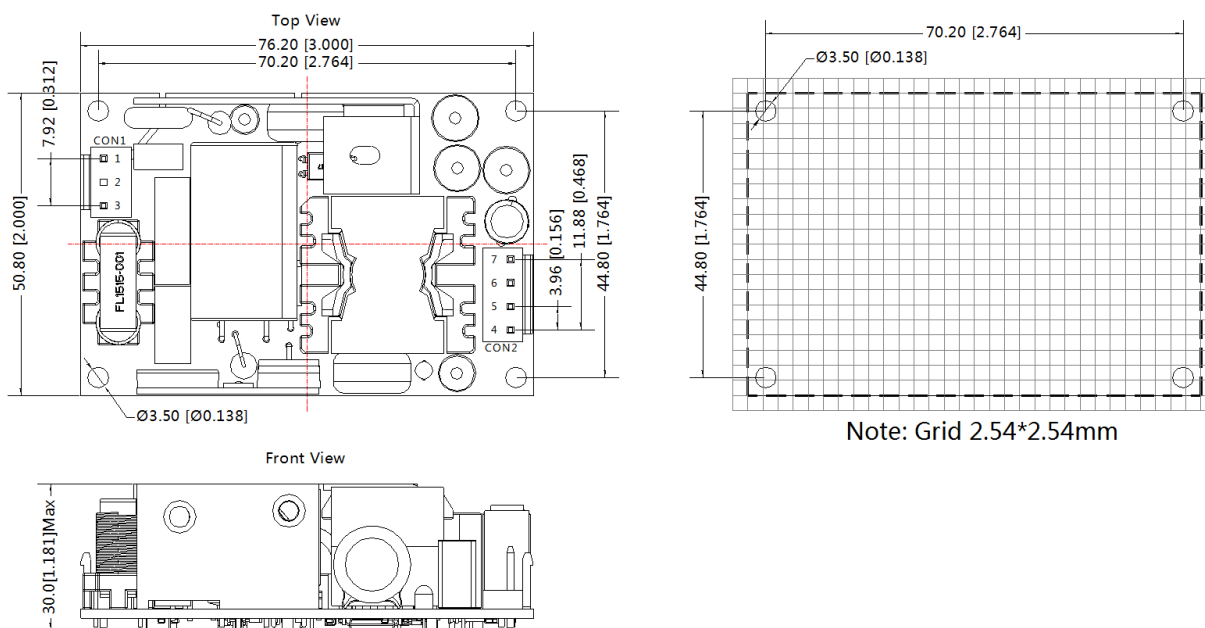
units: mm[inch]

tolerance: ±0.50[±0.020]

In CON1 model: VH-3A, Recommended terminal: VH-3Y

Out CON2 model: VH-4A, recommended terminal: VH-4Y

Mounting hole screwing torque: Max 0.4 N·m



PIN-Out			
PIN	Function	Connector	Terminal
1	AC(L)	VH-3A or B2P3-VH or the same Spec.	VH-3Y or VHR-3N or the same Spec.
2	NoPin		
3	AC(N)		
4	-Vo	VH-4A or B4P-VH or the same Spec.	VH-4Y or VHR-4N or the same Spec.
5	-Vo		
6	+Vo		
7	+Vo		

## REVISION HISTORY

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rev.	description	date
1.0	initial release	10/17/2019

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



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