

**SERIES: VOF-130 | DESCRIPTION: AC-DC POWER SUPPLY**
**FEATURES**

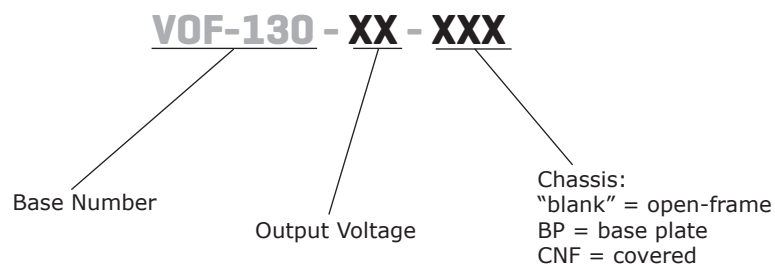
- 80 ~ 264 Vac input voltage range
- 2" x 3" open frame chassis
- 100 W power output with natural convection
- 130 W power output with forced air cooling
- active PFC
- IEC 62368-1 approved
- IEC Class I & Class II safety approved



MODEL	output voltage	output current <sup>1</sup>	output power <sup>2</sup>	ripple and noise <sup>3</sup>	efficiency <sup>4</sup>
	(Vdc)	max (A)	max (W)	max (mVp-p)	typ (%)
VOF-130-12	12	10.8	130	120	93
VOF-130-24	24	5.4	130	240	93
VOF-130-36	36	3.6	130	360	94
VOF-130-48	48	2.7	130	480	94

Notes:

1. Maximum output power of 130 W with 10 CFM forced air cooling, and 100 W with natural convection. See derating curves.
2. With forced air (10 CFM).
3. At full load, nominal input, 20 MHz bandwidth oscilloscope with 10  $\mu$ F electrolytic and 0.1  $\mu$ F ceramic capacitors.
4. At 230 Vac, 25°C, 75% load.

**PART NUMBER KEY**


## INPUT

parameter	conditions/description	min	typ	max	units
voltage		80		264	Vac
frequency		47		60	Hz
current	at 100 Vac, full load			1.8	A
inrush current	at 240 Vac, cold start			100	A
leakage current				0.1	mA

## OUTPUT

parameter	conditions/description	min	typ	max	units
output capacitance	12 Vdc output model			8,400	μF
	24 Vdc output model			4,200	μF
	36 Vdc output model			2,720	μF
	48 Vdc output model			2,040	μF
initial set point accuracy	at full load			±2	%
line regulation	100 ~ 240 Vac, full load			±0.5	%
load regulation	10 ~ 100% load			±1	%
hold-up time	at 115 Vac, 25°C		20		ms
switching frequency			105		kHz

## PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	auto recovery				
	12 Vdc output model		13.5		Vdc
	24 Vdc output model		30		Vdc
	36 Vdc output model		42		Vdc
	48 Vdc output model		54		Vdc
over current protection	auto recovery	115	130	145	%
short circuit protection	auto recovery				

## SAFETY & COMPLIANCE

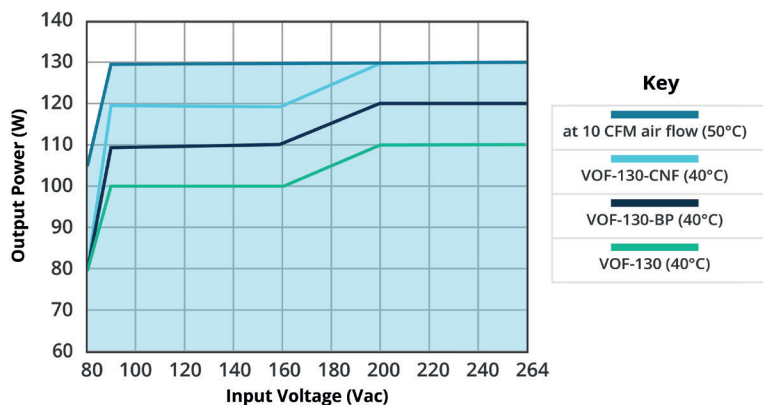
parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, for 1 minute	3,000			Vac
	input to ground, for 1 minute	1,500			Vac
	output to ground, for 1 minute	500			Vac
safety approvals	certified to 62368: IEC/EN/UL				
safety class	class I, class II				
conducted emissions	EN 55032, 47 CFR FCC Part 15 (Class I & Class II meets Class B)				
radiated emissions	EN 55032, 47 CFR FCC Part 15 (Class I Meet Class B; Class II Meet Class A)				
harmonic current	EN 61000-3-2:2014				
voltage fluctuations and flicker	EN 61000-3-3:2013				
ESD	IEC 61000-4-2:2008 Air Discharge: ±8kV, Contact Discharge: ±4kV, perf. Criteria A				
radiated immunity	IEC 61000-4-3:2010, perf. Criteria A				
EFT/burst	IEC 61000-4-4:2012, ±1kV, ±2kV, perf. Criteria A				
surge	IEC 61000-4-5:2014, L-N: ±0.5kV, ±1kV, L-E(Ground): ±0.5kV, ±1kV, ±2kV, perf. Criteria A				
conducted immunity	IEC 61000-4-6:2013				
voltage dips and interruptions	IEC 61000-4-11:2004, Dip: 30% Reduction, Dip >95% Reduction, perf. Criteria A				
	IEC 61000-4-11:2004, >95% Reduction, perf. Criteria B				
MTBF	as per MIL-HDBK-217F at 25°C		400,000		hours
RoHS	yes				

## ENVIRONMENTAL

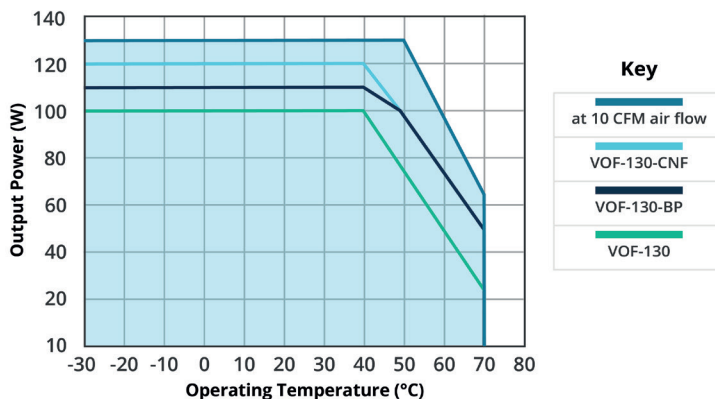
parameter	conditions/description	min	typ	max	units
operating temperature	see derating curve	-30		70	°C
storage temperature		-40		85	°C
operating humidity	non-condensing			93	%

## DERATING CURVES

**INPUT VOLTAGE DERATING CURVE**

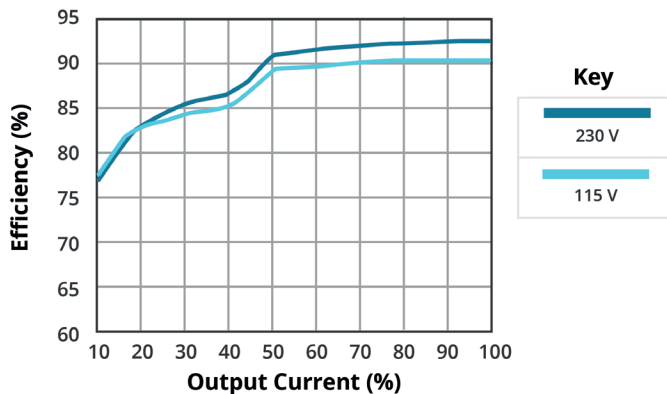


**TEMPERATURE DERATING CURVE**

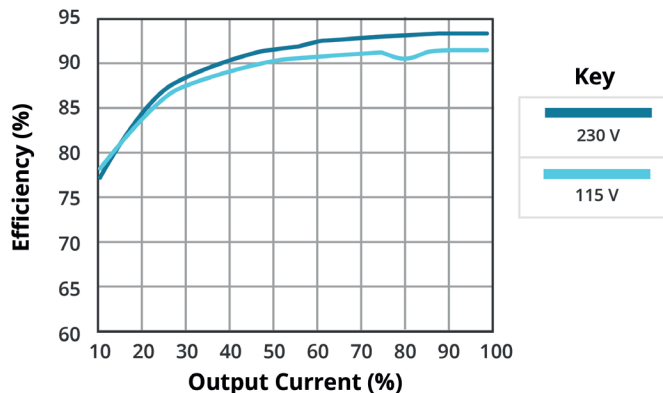


## EFFICIENCY CURVES

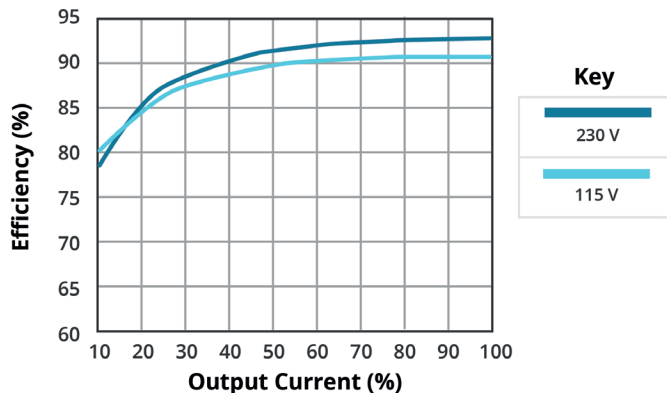
**EFFICIENCY VS OUTPUT LOAD  
VOF-130-12**



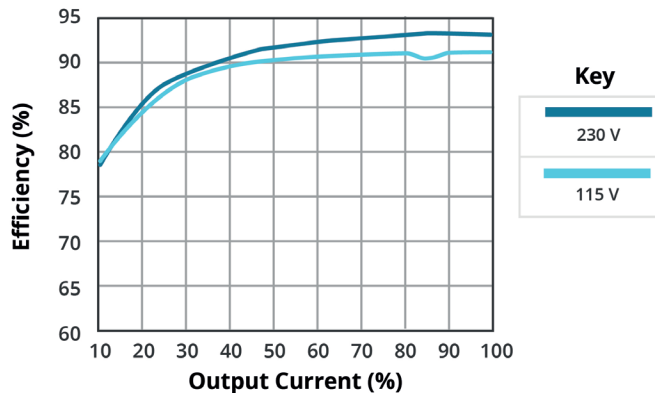
**EFFICIENCY VS OUTPUT LOAD  
VOF-130-24**



**EFFICIENCY VS OUTPUT LOAD  
VOF-130-36**



**EFFICIENCY VS OUTPUT LOAD  
VOF-130-48**



## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	open frame models: 3.000 x 2.000 x 1.201 [76.2 x 50.8 x 30.5 mm]				inches
	base plate models: 3.598 x 2.000 x 1.299 [91.4 x 50.8 x 33.0 mm]				inches
	covered models: 3.598 x 2.520 x 1.358 [91.4 x 64.0 x 34.5 mm]				inches
weight	open frame models		135		g
	base plate models		170		g
	covered models		218		g
cooling	natural convection (no integrated fan), see derating curve		100		W
	10 CFM		130		W

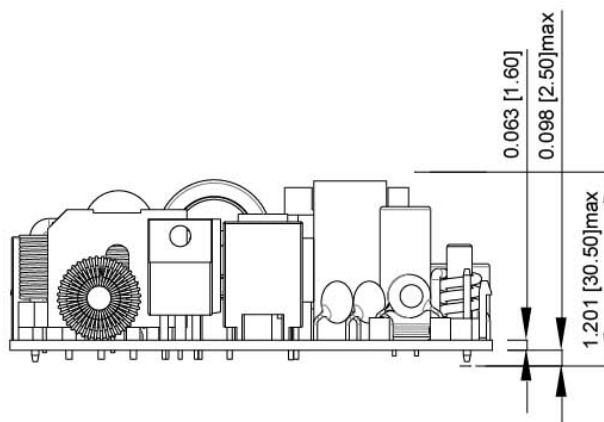
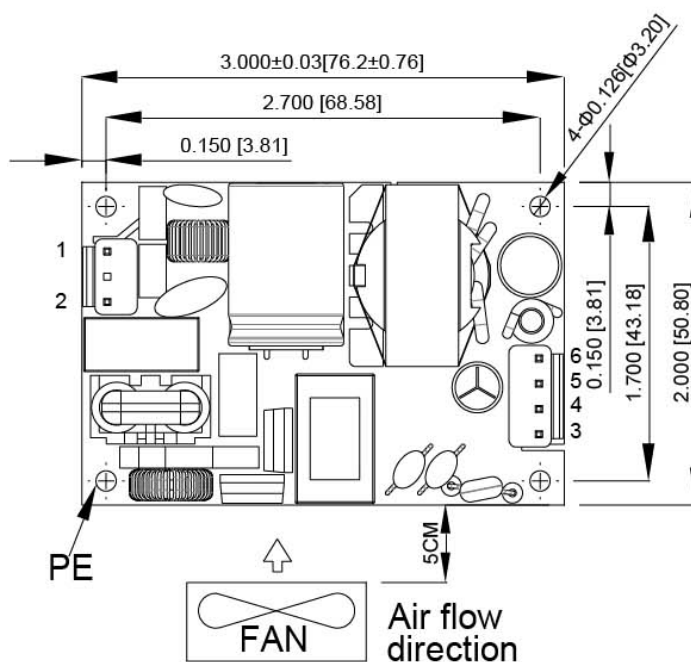
## MECHANICAL DRAWING

### Open-frame

units: inch [mm]

general tolerance:  $\pm 0.02$  [ $\pm 0.5$ ]

PIN-OUT	
PIN	Function
1	AC (L)
2	AC (N)
3	-Vo
4	-Vo
5	+Vo
6	+Vo



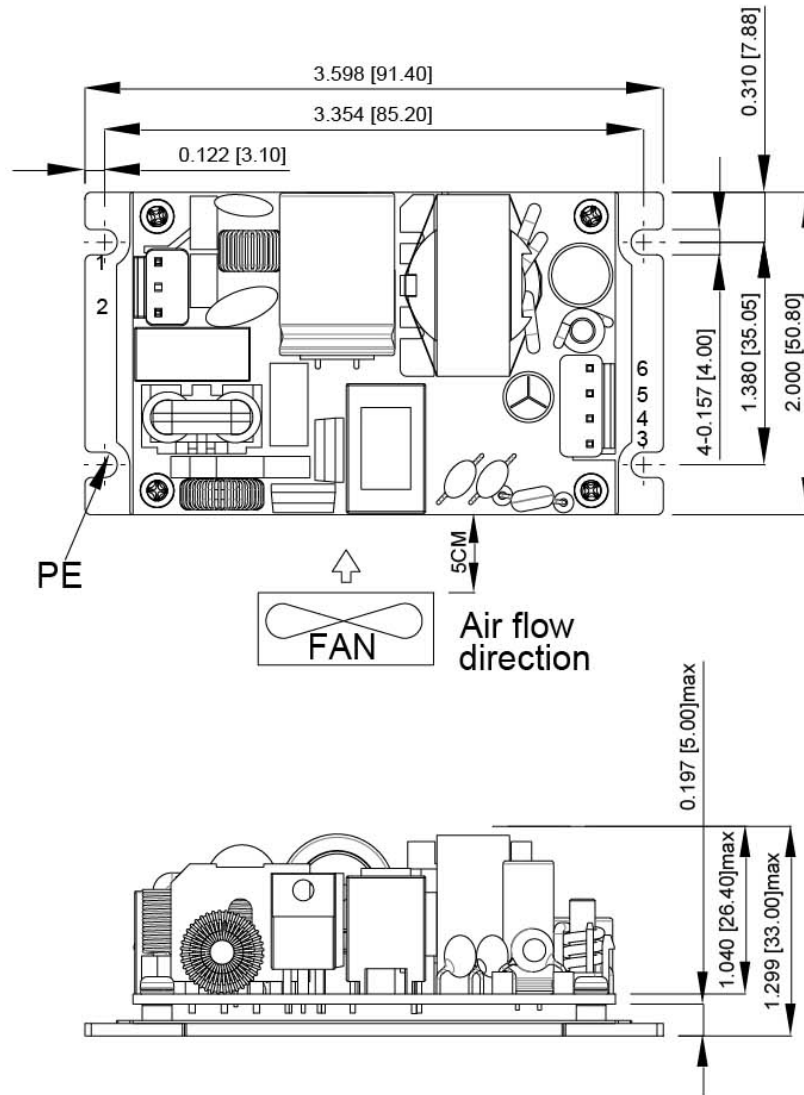
## MECHANICAL DRAWING (CONTINUED)

### Base plate

units: inch [mm]

general tolerance:  $\pm 0.02$  [ $\pm 0.5$ ]

PIN-OUT	
PIN	Function
1	AC (L)
2	AC (N)
3	-Vo
4	-Vo
5	+Vo
6	+Vo



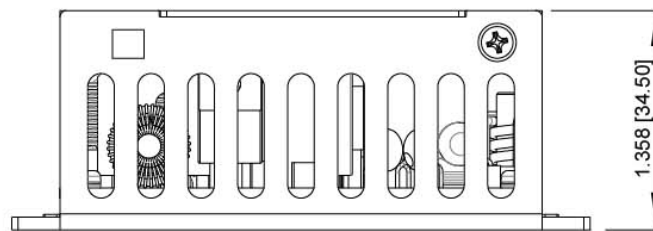
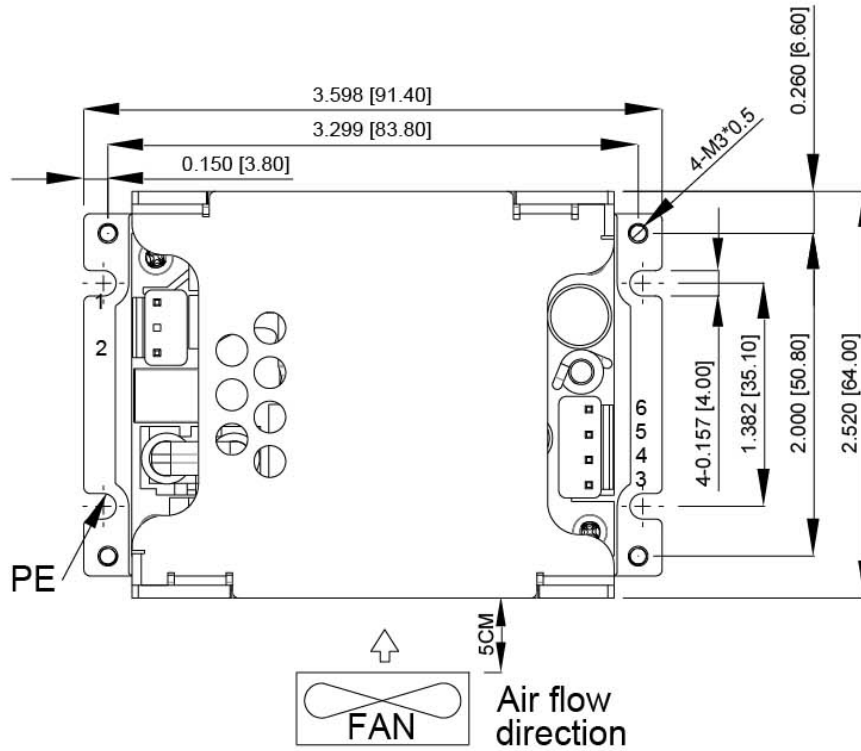
## MECHANICAL DRAWING (CONTINUED)

**Covered**

units: inch [mm]

general tolerance: ±0.02 [±0.5]

PIN-OUT	
PIN	Function
1	AC (L)
2	AC (N)
3	-Vo
4	-Vo
5	+Vo
6	+Vo



## REVISION HISTORY

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rev.	description	date
1.0	initial release	11/08/2021

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



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