

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

FEATURES

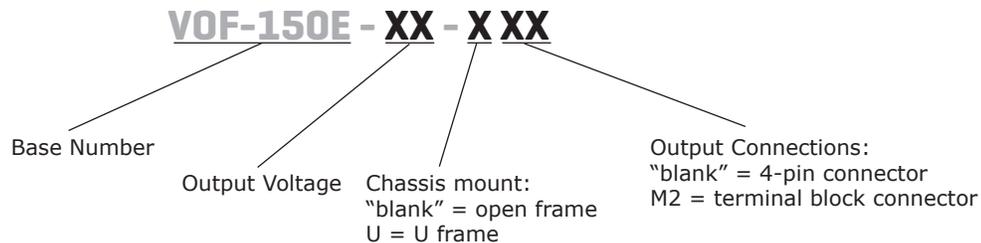
- 100 W with natural convection, 150 W with forced air cooling
- 3"x2" compact size, industrial design
- IEC/EN/UL 62368-1 certified
- operating temperature -20°C to 70°C (with derating)
- short-circuit protection, over power protection, overvoltage protection
- main output power ON LED indicators
-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



MODEL	output voltage	output current ¹	output power ^{1,2}	ripple and noise ³	efficiency level ⁴
	typ (Vdc)	max (A)	max (W)	typ (mVp-p)	typ (%)
VOF-150E-12	12	12.5	150	120	92
VOF-150E-15	15	10.0	150	150	92
VOF-150E-18	18	8.34	150	180	92
VOF-150E-24	24	6.25	150	240	92
VOF-150E-28	28	5.36	150	280	92
VOF-150E-36	36	4.17	150	360	92
VOF-150E-48	48	3.13	150	360	92
VOF-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	μ A μ 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 ⁵)	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

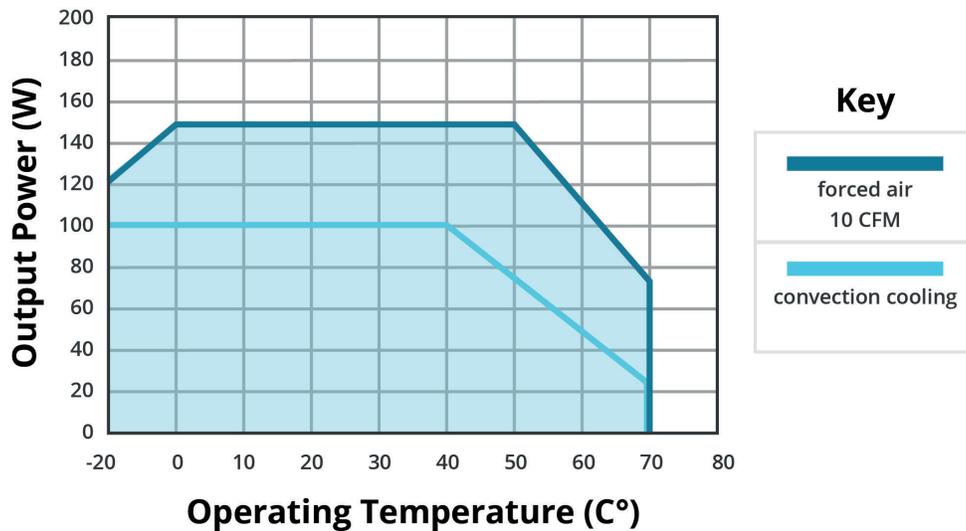
parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, for 4 seconds (Class I & II)	5,656			Vdc
	input to frame ground, for 4 seconds (Class I)	2,121			Vdc
	output to frame ground, for 4 seconds (Class I)	2,121			Vdc
safety approvals	certified to 62368-1: IEC/EN/UL				
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

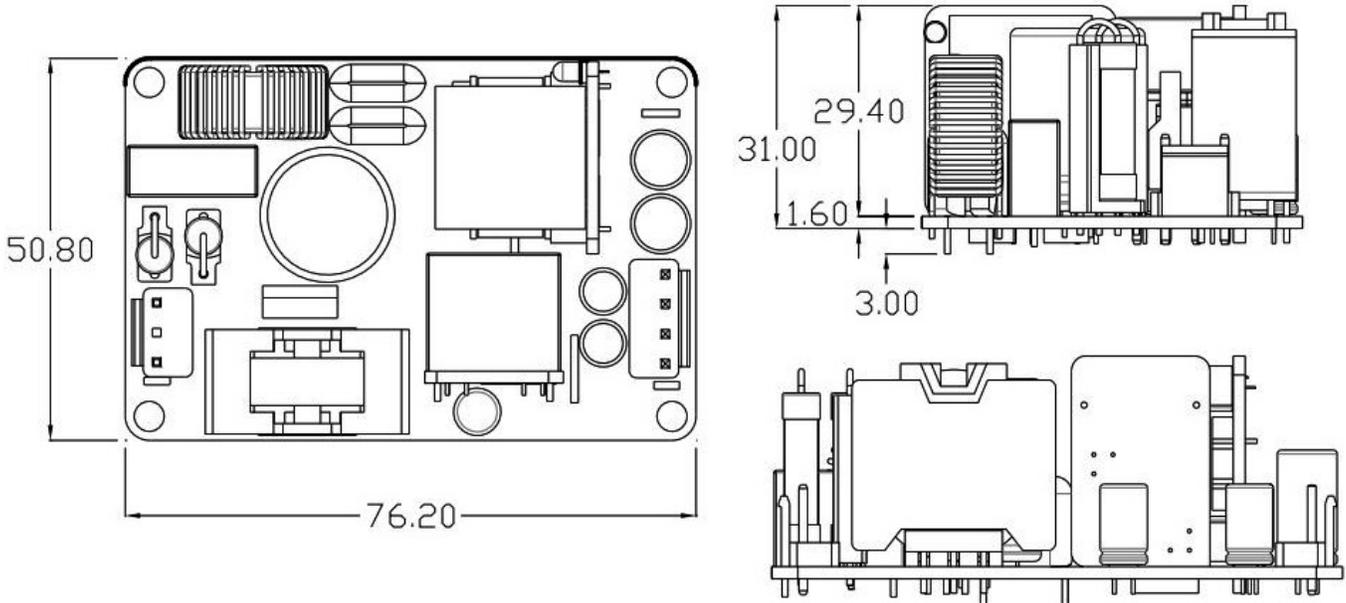


MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	open frame: 76.2 x 50.8 x 31.0 [3.00 x 2.00 x 1.22 inch]				mm
	U-frame: 90.6 x 64.0 x 38.0 [3.57 x 2.52 x 1.50 inch]				mm
weight	open frame:		150		g
	U-frame:		200		g
cooling	forced air 10 CFM				

MECHANICAL DRAWING

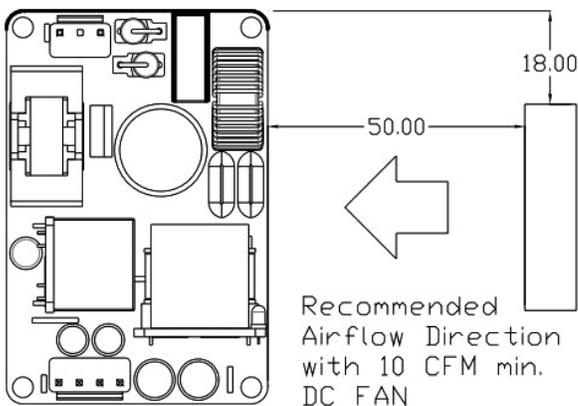
Open frame
units: mm [inch]



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)

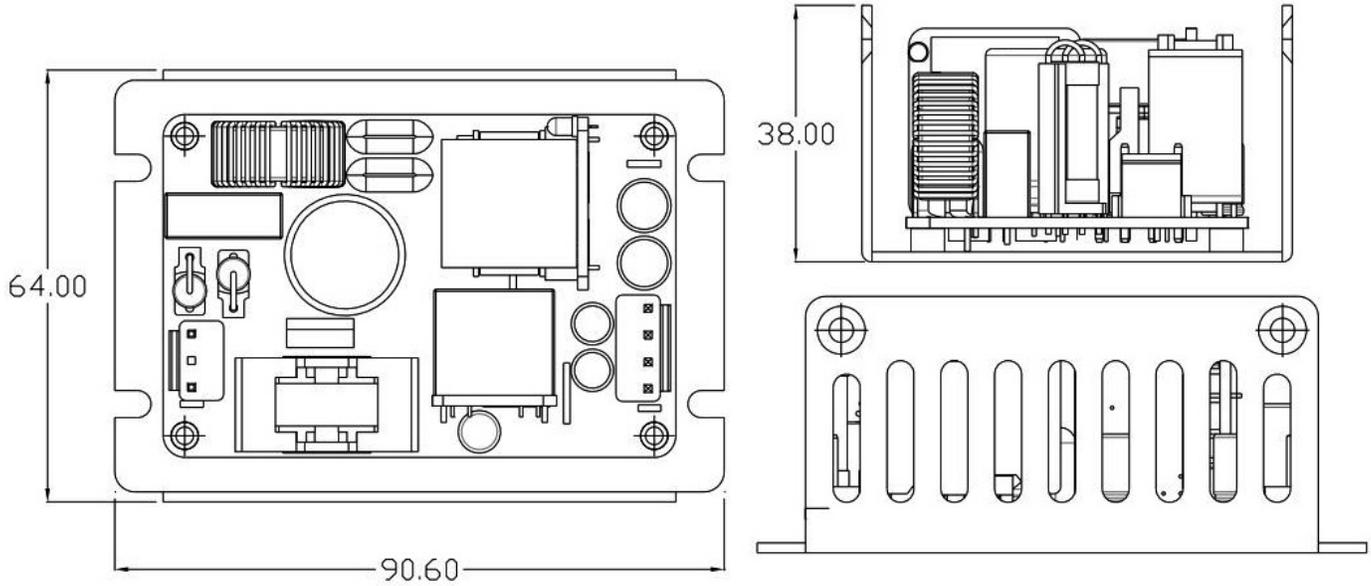
CN2: Main Output Connector (pitch: 3.96mm / 3.50mm)		
JST B4P-VH-B or equivalent Mates with JST VHR-4N or equivalent		Eurostyle P.C.B. 3.50mm Terminal Block 16-24 AWG (1.5mm ²) Wire range
PIN	Function	Function
1	GND	GND
2	GND	GND
3	+Vout	+Vout
4	+Vout	+Vout

DC FAN Recommended Direction



MECHANICAL DRAWING

U-frame frame
units: mm [inch]



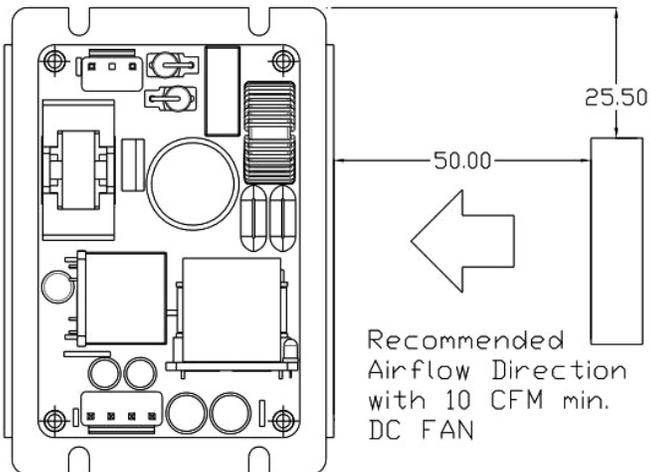
CN1: Input Connector (pitch: 3.96mm)
JST B3P-VH-B or equivalent
Mates with JST VHR-3N or equivalent

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

DC FAN Recommended Direction



REVISION HISTORY

rev.	description	date
1.0	initial release	06/16/2025

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



15575 SW Sequoia Pkwy #100
Portland, OR 97224
800.275.4899

Fax 503.612.2383
Belfuse.com
powersupport@belf.com

CUI offers a two (2) year limited warranty. Complete warranty information is listed on our website.

CUI reserves the right to make changes to the product at any time without notice. Information provided by CUI is believed to be accurate and reliable. However, no responsibility is assumed by CUI for its use, nor for any infringements of patents or other rights of third parties which may result from its use.

CUI products are not authorized or warranted for use as critical components in equipment that requires an extremely high level of reliability. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.