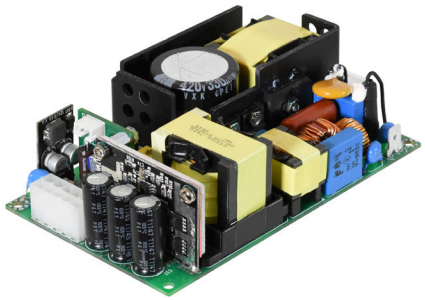
SERIES: VMS-450B | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

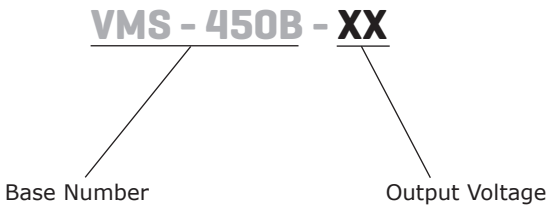
- up to 450 W continuous power
- universal input voltage range
- industry standard 3” x 5” footprint
- power factor correction
- 12 Vdc Fan output
- 5 Vdc AUX output
- certified to IEC/EN/UL 60601-1
- over voltage, over current, over temperature and short circuit protections



MODEL	output voltage (Vdc)	output current [1] max (A)	output power [1] max (W)	ripple and noise [2,3] max (mVp-p)	efficiency typ (%)
VMS-450B-12	12	37.5	450	240	90
VMS-450B-15	15	30.0	450	225	89
VMS-450B-19	19	23.7	450	190	92
VMS-450B-24	24	18.8	450	240	92
VMS-450B-36	36	12.5	450	360	91
VMS-450B-48	48	9.4	450	480	92
VMS-450B-54	54	8.3	450	540	92
VMS-450B-56	56	8.0	450	560	92

Notes: 1. Maximum power of main output must not exceed 250 W with convection cooling or 450 W with 13.8 CFM forced air.
2. Ripple and noise is measured with 20 MHz bandwidth with a 0.1 µF ceramic capacitor and a low ESR 47 µF electrolytic capacitor at output connector terminals.

PART NUMBER KEY



Please read our datasheet & drawing disclaimer here.

INPUT

parameter	conditions/description	min	typ	max	units
voltage		90	100~240	264	Vac
frequency		47	50~60	63	Hz
current	at 115 Vac, full load at 230 Vac, full load		5.3 2.2		A A
inrush current	at 230 Vac, cold start at 25 °C, full load			100	A
power factor	at full load	0.9			

OUTPUT

parameter	conditions/description	min	typ	max	units
regulation			±5		%
fan drive	12 Vdc / 600 mA for external fan		±5		%
aux	5 Vdc / 1 A Max		±5		%
remote on/off	on: open or short to 5 V off: short to DC RTN				

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	shut down			150	%
over current protection	automatically recovers			130	%
short circuit protection	automatically recovers after short-circuit fault is removed				
over temperature protection	shut down				

SAFETY & COMPLIANCE

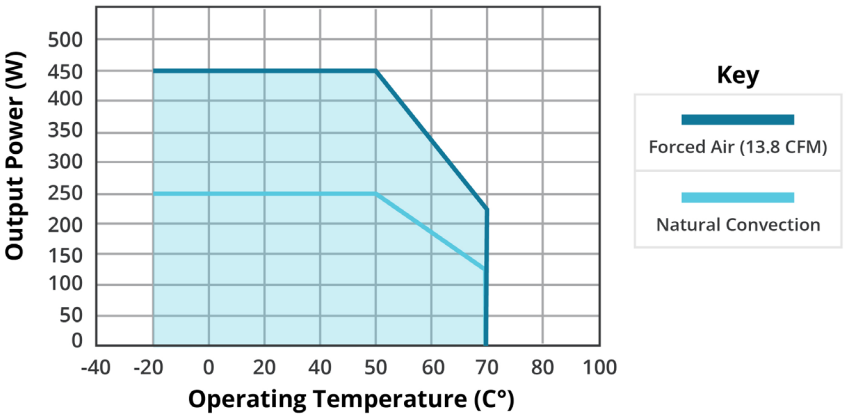
parameter	conditions/description	min	typ	max	units
isolation voltage	input to output, one minute input to ground, one minute	4,000 1,500			Vac Vac
certified to	IEC / EN / UL 60601-1				
safety class	class I				
conducted emissions	EN 60601-1-2:2015 and IEC 60601-1-2 ed 4.0				
radiated emissions	EN 60601-1-2:2015 and IEC 60601-1-2 ed 4.0				
harmonic current emissions	EN 61000-3-2:2014				
voltage fluctuation and flicker	EN 61000-3-3: 2013				
ESD	EN 60601-1-2:2015 and IEC 60601-1-2 ed 4.0, IEC 61000-4-2:2008				
radiated immunity	EN 60601-1-2:2015 and IEC 60601-1-2 ed 4.0, IEC61000-4-3:2006+A1: 2007+A2: 2010				
EFT/Burst	EN 60601-1-2:2015 and IEC 60601-1-2 ed 4.0, IEC 61000-4-4: 2012				
surge	EN 60601-1-2:2015 and IEC 60601-1-2 ed 4.0, IEC 61000-4-5:2014+A1: 2017				
conducted immunity	EN 60601-1-2:2015 and IEC 60601-1-2 ed 4.0, IEC 61000-4-6: 2013				
magnet field measurement	EN 60601-1-2:2015 and IEC 60601-1-2 ed 4.0, IEC 61000-4-8: 2009				
voltage dips and interruptions	EN 60601-1-2:2015 and IEC 60601-1-2 ed 4.0, IEC 61000-4-11:2004+A1: 2017				
MTBF	Telcordia SR-332, 250 W, 25 ºC		300,000		hrs
RoHS	yes				

ENVIRONMENTAL

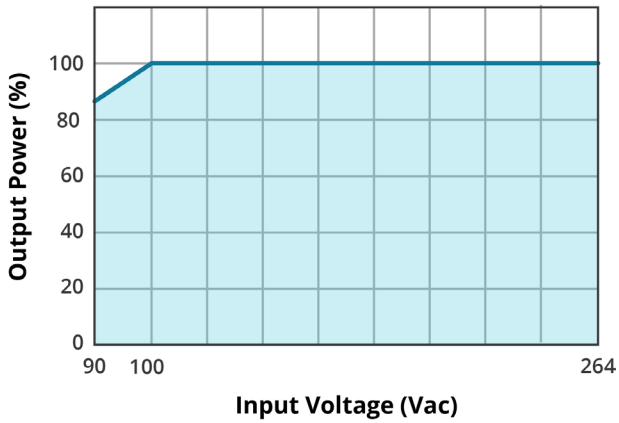
parameter	conditions/description	min	typ	max	units
operating temperature	see derating curve	-20		70	°C
storage temperature		-20		80	°C
operating humidity	non-condensing	20		80	%
storage humidity	non-condensing	10		90	%

DERATING CURVE

TEMPERATURE DERATING CURVE



INPUT VOLTAGE DERATING CURVE (25 °C)



MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	127 x 76.2 x 38.1 (5 x 3 x 1.5 inch)				mm
weight			390		g

MECHANICAL DRAWING (12 ~ 24 V models)

units: mm [inches]

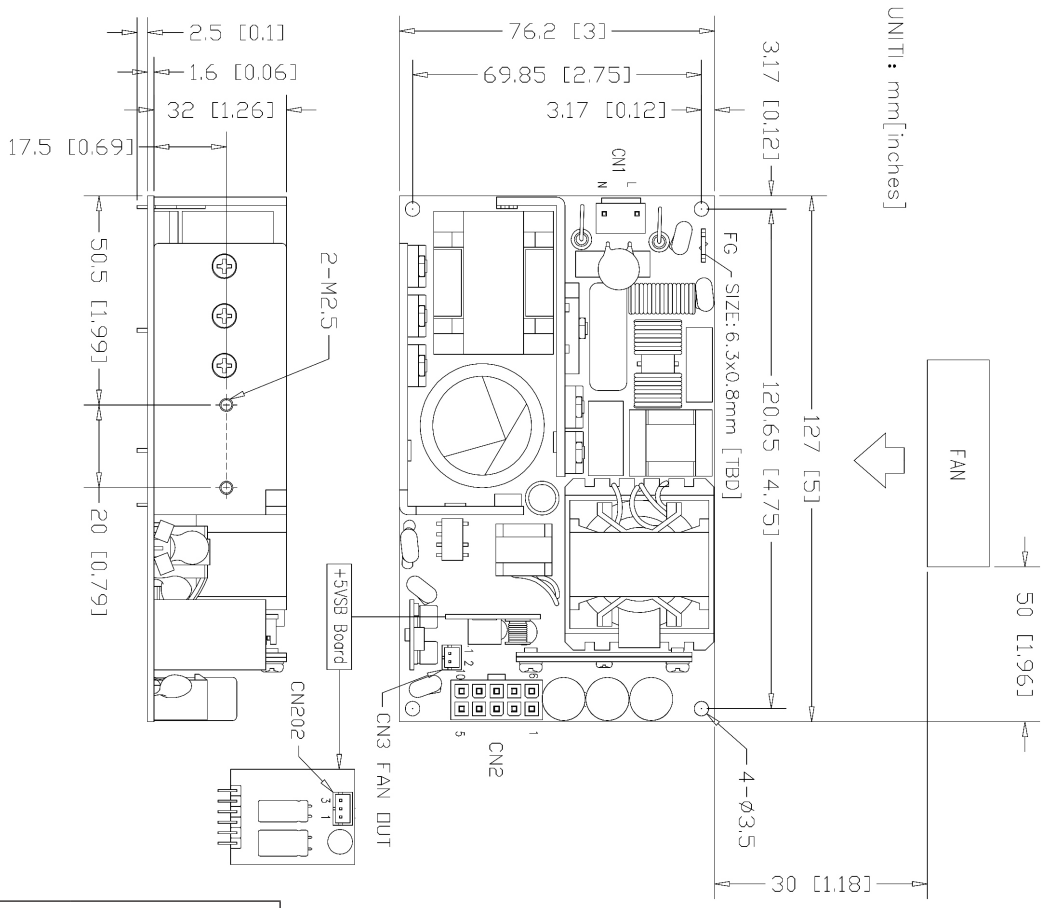
CN1	
PIN	Function
1	Line
2	Neutral

CN2	
PIN	Function
1	VO+
2	VO+
3	VO+
4	DC RTN
5	DC RTN
6	VO+
7	VO+
8	DC RTN
9	DC RTN
10	DC RTN

CN3	
PIN	Function
1	12 V for Fan
2	DC RTN

CN202	
PIN	Function
1	5 V for standby
2	DC RTN
3	Remote on / off

Metal tab (6.3 x 0.8 mm)	
FG	Ground



	CONNECTOR	MATE
CN 1:	JST, B2P3-VH, CW CV-W3961-03, or equivalent	JST, VAR-2, or equivalent
CN 2:	Joint Tech, C4255WVA-F2-2X05, or equivalent	Molex, 39-01-2100, or equivalent
CN 3:	Cherng Weei, CP-W20-02, or eqivalent	JST, PHR-2, or eqivalent
CN 202:	Cherng Weei, CP-W20-03, or eqivalent	JST, PHR-3, or eqivalent

MECHANICAL DRAWING (36 ~ 56 V models)

units: mm [inches]

CN1	
PIN	Function
1	Line
2	Neutral

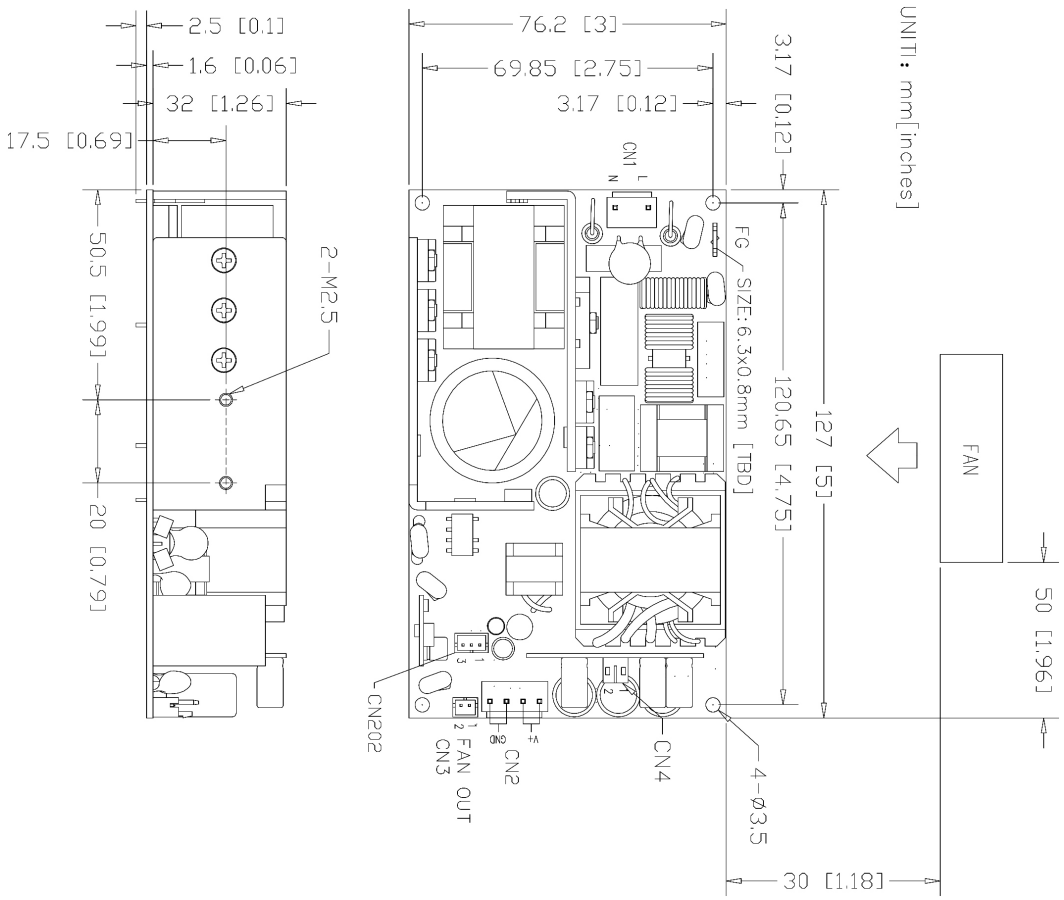
CN2	
PIN	Function
1	VO+
2	VO+
3	DC RTN
4	DC RTN

CN3	
PIN	Function
1	12 V for Fan
2	DC RTN

CN202	
PIN	Function
1	5 V for standby
2	DC RTN
3	Remote on / off

CN4	
PIN	Function
1	sense+
2	sense- (DC RTN)

Metal tab (6.3 x 0.8 mm)	
FG	Ground



	CONNECTOR	MATE
CN 1:	JST, B2P3-VH, CW CV-W3961-03, or equivalent	JST, VAR-2, or equivalent
CN 2:	Cherng Weei, CV-W3961-04, or eqivalent	JST, VHR-4N, or equivalent
CN 3:	Cherng Weei, CP-W20-02, or eqivalent	JST, PHR-2, or eqivalent
CN 202:	Cherng Weei, CP-W20-03, or eqivalent	JST, PHR-3, or eqivalent
CN 4:	Cherng Weei, CP-W20-02, or eqivalent	JST, PHR-2, or equivalent

REVISION HISTORY

rev.	description	date
1.0	initial release	02/12/2020
1.01	darkened drawings	05/07/2020
1.02	added FCC mark	07/09/2020
1.03	derating curves updated	04/20/2021
1.04	input voltage updated	01/18/2023
1.05	mechanical drawing section updated	06/16/2023
1.06	connectors updated	11/20/2024

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

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

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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.