

09/05/2017

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SERIES: VMS-275 **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

- up to 275 W continuous power
- -40°C to 70°C operating temperature
- industry standard foot print 3" x 5"
- low profile 0.75"
- power factor correction
- 12 V/0.5 A fan output
- standby power < 0.5 W
- efficiency up to 92%
- long life electrolytic capacitors
- complying with the latest EMI standard IEC 60601-1-2: 2014 (4th edition)



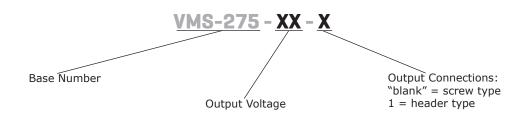


MODEL	output voltage	output current	output power ^{1,2}	ripple and noise ^{3,4}	efficiency
	(Vdc)	max (A)	max (W)	max (mVp-p)	typ (%)
VMS-275-12	12	22.92	275	240	88
VMS-275-15	15	18.33	275	300	88
VMS-275-24	24	11.46	275	240	90
VMS-275-30	30	9.17	275	300	90
VMS-275-48	48	5.73	275	480	92
VMS-275-58	58	4.74	275	580	92

Notes:

- 1. Maximum output power of 275 W with 13 CFM forced air cooling, and 160 W with natural convection cooling at 100 to 264 Vac.
- 2. Combined output power of main output and fan supply shall not exceed the max power rating.
- 3. Ripple is peak to peak with 20 MHz bandwidth and 10 µF tantalum capacitor in parallel with a 0.1 µF capacitor at rated line voltage and load ranges.
- 4. Output ripple can be more than 10% of the output voltage at -40°C.5. All specifications are measured at Ta=25°C, nominal input voltage, and rated output load unless otherwise specified.

PART NUMBER KEY



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INPUT

parameter	conditions/description	min	typ	max	units
voltage		80		264	Vac
frequency		47		63	Hz
current	at 115 Vac, full load at 230 Vac, full load		2.6 1.3		A A
inrush current	at 230 Vac, cold start			45	А
leakage current	at 230 Vac		0.3		mA
touch current				0.1	mA
power factor	at full load	0.95			
no load power consumption				0.5	W
input fuse	6.3 A/250 V time delay fuse (included)				

OUTPUT

parameter	conditions/description	min	typ	max	units
initial set point accuracy			±1		%
line regulation			±0.5		%
load regulation	from 100% to 10% load		±1		%
start-up delay time			2		S
rise time	at 115/230 Vac		55		ms
hold-up time	at 115/230 Vac		8		ms
adjustability¹	built in trim pot		±3		%
switching frequency		50		300	kHz
transient response	25% step load change, at 0.1 A/ μ S slew rate, 50% duty cycle, 50/60 Hz, max excursion 4%, recovery time 5 ms				
temperature coefficient	at 0~50°C		±0.05		%/°C
fan output²	12 Vdc / 500 mA				

Notes:

- Adjustment potentiometer is located on the SMT side of the PCB.
 Fan supply output voltage tolerance including set point accuracy, line and load regulation is ±10% and ripple and noise is less than 10%.

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	hiccup, auto recovery	110		140	%
over current protection	hiccup, auto recovery	110			%
short circuit protection	hiccup, auto recovery				

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
	input to output (2 x MOPP)		4,200		Vac
isolation voltage	input to ground (1 x MOPP)		1,500		Vac
	output to ground		1,500		Vac
	IEC 60601-1: 2005 +CORR1:2006				
	+CORR2:2007 +AM1:2012, EN 60601-1:2006				
safety approvals	+A11:2011 +A1:2013, ANSI/AAMI ES 60601-1				
salety approvals	(2005+CI:09+A2:10), AMD1:2012 CAN/CSA-				
	C22.2 No 60601-1 (2008) 60601-1:14 ISO 14971,				
	2nd edition complies with LVD directive				
safety class	class I				
conducted emissions	EN 55011 Class B				

Notes: 3. 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.

SAFETY & COMPLIANCE

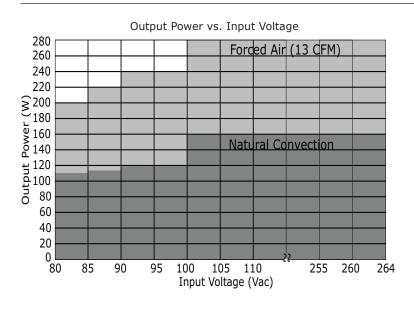
parameter	conditions/description	min	typ	max	units
radiated emissions		EN 55011 Class B (to be controlled in end system with external core (King core K5B RC 25 \times 12 \times 15-M in input cable (5 turns))			
input current harmonics	EN 61000-3-2, class D				
voltage fluctuation and flicker	EN 61000-3-3, pass				
ESD immunity	EN 61000-4-2, level 4, criterion A				
radiated field immunity	EN 61000-4-3, level 4, criterion A				
electrical fast transient immunity	EN 61000-4-4, level 4, criterion A				
surge immunity	EN 61000-4-5, level 4, criterion A				
conducted immunity	EN 61000-4-6, level 4, criterion A				
magnetic field immunity	EN 61000-4-8, level 4, criterion A				
voltage dips, interruptions	EN 61000-4-11, criterion B				
MTBF	as per Telcordia-SR332-issue 3		3,370,000		hours
RoHS	2011/65/EU				

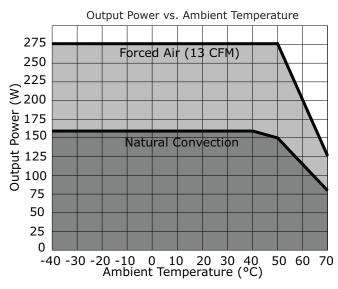
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ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature	see derating curves	-40		70	°C
storage temperature		-40		85	°C
operating humidity	non-condensing	20		90	%
storage humidity	non-condensing	20		90	%
operating altitude				16,000	ft

DERATING CURVES





MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	5.00 x 3.00 x 0.75 (127.00 x 76.20 x 19.05 mm)				inch
weight			200		g
cooling	external fan				
J1 input connector	Mates with JST housing VHR-3M; pins SVH-41T-P1.1 or equivalent				
J2 output connector	Screw Type: Accepts 28 ~ 16 AWG wire Header Type: Mates with JST housing VHR-6M; pins SVH-41T-P1.1 or equivalent				
J3 fan connector	Mates with Tyco 640440-2				

MECHANICAL DRAWINGS

Screw Type

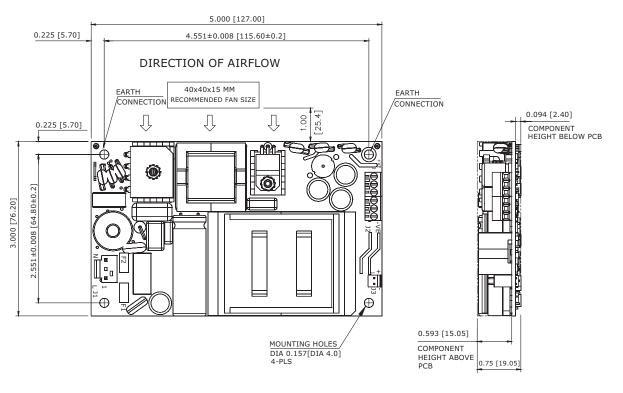
units: inch [mm]

tolerance: ± 0.04 [± 1.0]

J1		
PIN	Function	
1	L	
2	NC	
3	N	

J2		
PIN	Function	
1	+VE	
2	+VE	
3	+VE	
4	-VE	
5	-VE	
6	-VE	

	J3
PIN	Function
1	+FAN
2	-FAN

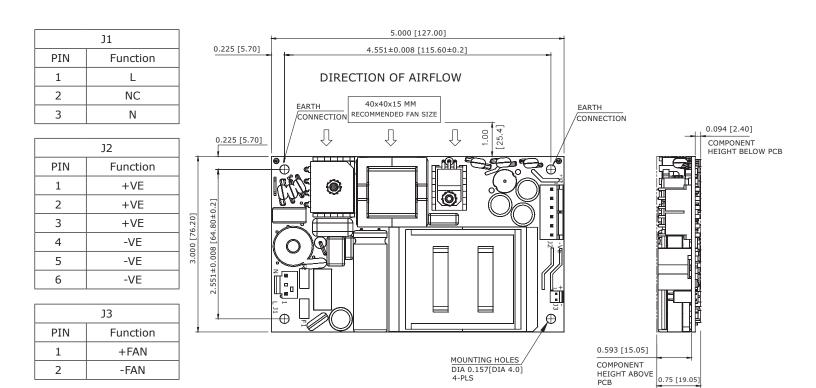


MECHANICAL DRAWINGS (CONTINUED)

Header Type

units: inch [mm]

tolerance: ± 0.04 [± 1.0]



REVISION HISTORY

rev.	description	date
1.0	initial release	09/05/2017

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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