



VPAD100 Multi Series

2 X 3 Inch AC-DC POWER SUPPLIES

Up to 100 Watts

Your Power House
VP ELECTRONIQUE

5
YEARS
WARRANTY

ROHS
COMPLIANT

REACH
COMPLIANT



Medical



Automation



Datacom



IPC



Industry



Measurement



Telecom



Automobile



Boat



Charger



PV



Railway



2
x
MOPP

4000
VAC
Reinforced
Insulation

ADJ.
Output
Voltage

Internal
EN55032
Class
Filter **B**

LOW
Leakage
Current

LOW
Standby
Power

Protection
Class I
Class II

Operating
Altitude
5000
meter

OCP

OVP

SCP

VP

A

Package
Code

D

Dimension
Code

100

Output
Power
(W)

U

Input
Voltage
(VAC)

S

Output
Quantity

12

Output
Voltage
(VDC)

B

Protection
Type

-



Connector
Option

A: Open type
U: U chassis type
E: Enclosed type
D: Din rail type

U: Universal
85 ~ 264VAC

SSingle

12: 12V
15: 15V
18: 18V
24: 24V
28: 28V
36: 36V
48: 48V

B: CLASS II
Blank: CLASS I

Blank: JST
M: Molex
T: Terminal Block



TECHNICAL SPECIFICATION All specifications are typical at 230VAC input, full load and 25°C unless otherwise noted

Model Number	Input Range VAC	Output Voltage VDC	Output Current Natural convection A	Input Power No Load W	Efficiency %	Maximum Capacitor Load µF
VPAD100US12B UD100US12B ED100US12B DD100US12B	85 ~ 264	12	8.34	0.3	91	6950
VPAD100US15B UD100US15B ED100US15B DD100US15B	85 ~ 264	15	6.67	0.3	92	4450
VPAD100US18B UD100US18B ED100US18B DD100US18B	85 ~ 264	18	5.56	0.3	92	3100
VPAD100US24B UD100US24B ED100US24B DD100US24B	85 ~ 264	24	4.17	0.3	92	1750
VPAD100US28B UD100US28B ED100US28B DD100US28B	85 ~ 264	28	3.58	0.3	92	1280
VPAD100US36B UD100US36B ED100US36B DD100US36B	85 ~ 264	36	2.78	0.3	91	770
VPAD100US48B UD100US48B ED100US48B DD100US48B	85 ~ 264	48	2.09	0.3	91	430

INPUT SPECIFICATIONS						
Parameter	Conditions	Min.	Typ.	Max.	Unit	
Operating input voltage range	AC input	85		264	VAC	
	DC input	120		370	VDC	
Input frequency	AC input	47		63	Hz	
Input current	115VAC and Full Load			1.15	A	
	230VAC and Full Load			0.55	A	
No load input power	230VAC			0.3	Watts	
Leakage current	264VAC			75	µA	
Power Factor		0.95				
Start up time				1000	ms	
Rise time			20		ms	
Hold up time	115VAC and Full Load	16			ms	
Input inrush current	230VAC			60	A	
Input protection	Internal fuse in line and neutral			T3.15A/250VAC		



OUTPUT SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Output power					100	Watts
Initial set voltage accuracy	230VAC and Full Load		-1.0		+1.0	%
Line regulation	Low Line to High Line at Full Load		-0.2		+0.2	%
Load regulation	No Load to Full Load		-0.5		+0.5	%
	10% Load to 90% Load		-0.4		+0.4	
Voltage adjustability			-10		+10	%
Minimum load				0		%
Ripple and noise	Measured by 20MHz bandwidth			120		mVp-p
	With a 10µF/25V 1206 X7R MLCC		12Vout	150		
			15Vout	160		
			18Vout	160		
	With a 1µF/50V 1206 X7R MLCC		24Vout	180		
			28Vout	190		
			36Vout	340		
Temperature coefficient			-0.02		+0.02	%/°C
Transient response	Load step from 50 ~ 75% change at 2.5A/µs	Peak deviation			3	% Vout
		Recovery time		500		µs
Over voltage protection	% of Vout(nom); Latch mode		115		135	%
Over load protection	% of Iout rated; Hiccup mode		115		150	%
Short circuit protection			Continuous, automatic recovery			

GENERAL SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Isolation voltage	1 minute (2MOPP insulation)	Input to Output	4000			VAC
		Input (Output) to F.G.	1500			
Isolation resistance	500VDC		0.1			GΩ
Switching frequency				60		kHz
Safety approvals	IEC/ EN/ ANSI/AAMI ES 60601-1 IEC/ EN/ UL 60950-1					UL:E360199 UL:E193009 CB:UL(Demko)
Weight	VPAD					156g (5.50oz)
	VPUD					194g (6.84oz)
	VPED					210g (7.41oz)
	VPDD					232g (8.18oz)
MTBF	MIL-HDBK-217F Ta=25°C, Full load					7.903 x 10 ⁵ hrs

ENVIRONMENTAL SPECIFICATIONS						
Parameter	Conditions		Min.	Typ.	Max.	Unit
Operating ambient temperature	Natural convection	With derating	-25		+85	°C
Storage temperature range			-40		+85	°C
Operating altitude					5000	m
Shock						IEC60068-2-27
Vibration						IEC60068-2-6
Relative humidity	Non-condensing					5% to 95% RH



Your Power House
VP ELECTRONIQUE

Doc. EA-0367

VPAD100 Multi Series

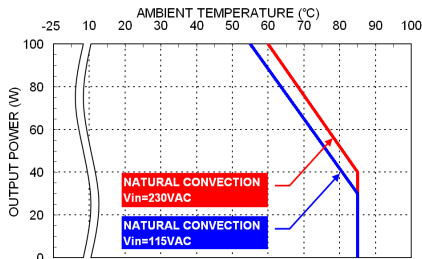
2 X 3 Inch AC-DC POWER SUPPLIES

Up to 100 Watts

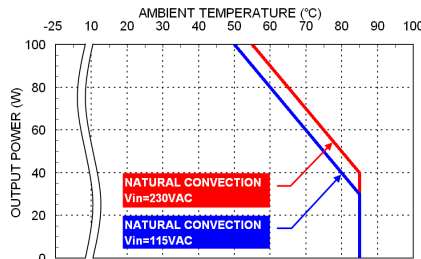
EMC SPECIFICATIONS

Parameter	Conditions	Level
EMI	EN55011, EN55032, EN60601-1-2 and FCC Part 18 / 15 External components may be required for class I application.	Conducted ClassB Radiated ClassA
Harmonic currents	EN61000-3-2 Full Load	Class A and D
Voltage flicker	EN61000-3-3	
EMS	EN55024 and EN60601-1-2	
ESD	EN61000-4-2 Air $\pm 15\text{kV}$ and Contact $\pm 8\text{kV}$	Perf. Criteria A
Radiated immunity	EN61000-4-3 20 V/m	Perf. Criteria A
Fast transient	EN61000-4-4 $\pm 2\text{kV}$	Perf. Criteria A
Surge	EN61000-4-5 DM $\pm 1\text{kV}$ and CM $\pm 2\text{kV}$	Perf. Criteria A
Conducted immunity	EN61000-4-6 20 Vr.m.s	Perf. Criteria A
Power frequency magnetic field	EN61000-4-8 10 A/m	Perf. Criteria A
Dip and interruptions	EN61000-4-11	

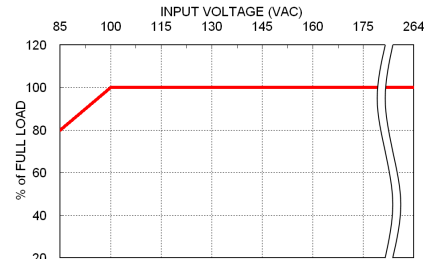
CHARACTERISTIC CURVE



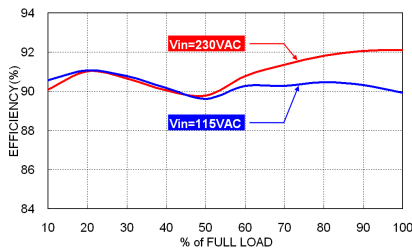
Derating Curve vs. Ambient Temperature
VPED100 & VPDD100



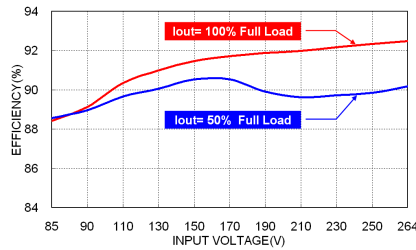
Derating Curve vs. Ambient Temperature
VPAD100 & VPUD100



Derating Curve vs. Input Voltage
VP□D100



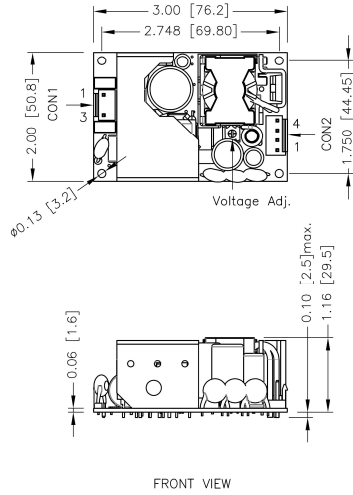
Efficiency vs. Output Load
VP□D100US24B



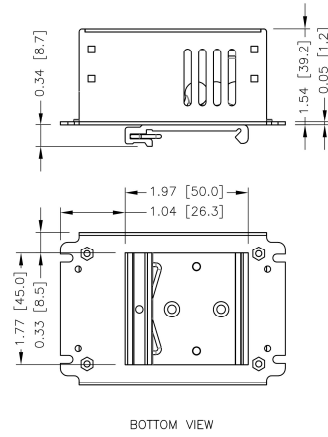
Efficiency vs. Input Voltage
VP□D100US24B

MECHANICAL DRAWING

VPAD Open type



VPDD Din rail typ e



1. All dimensions in inch [mm]
2. Tolerance : $x.xx \pm 0.02$ [$x.x \pm 0.5$] $x.xxx \pm 0.01$ [$x.xx \pm 0.25$]
3. M3×0.5 screw locked torque MAX 5Kgf.cm/0.49N.m

CONNECTORS CONNECTIONS

CON1 – Input Connector

Pin 1	Line
Pin 3	Neutral

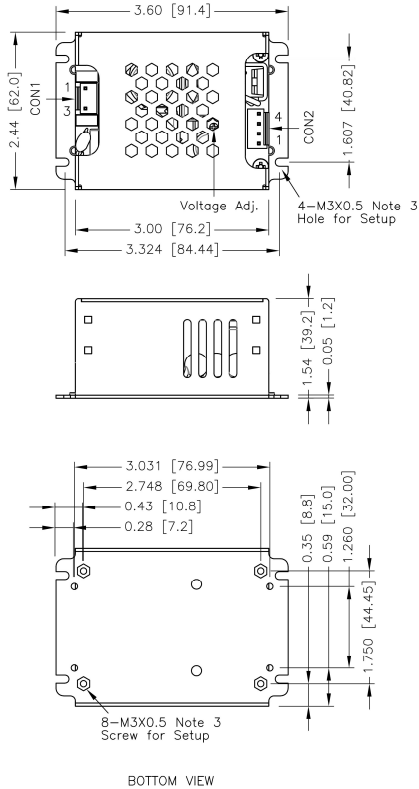
CON2 – Output Connector

Pin 1,2	-Vout
Pin 3,4	+Vout

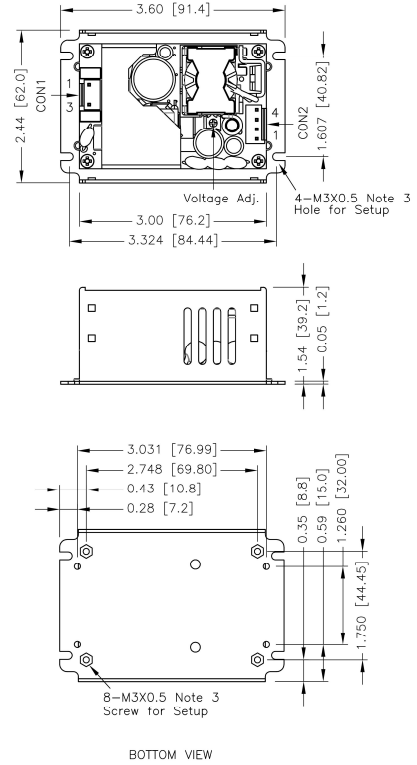
*Either one of four screws holes of Open / Chassis type can be considered as PE connection for CLASS I application.

MECHANICAL DRAWING(CONTINUED)

VPED Open type



VPUD Din rail type



1. All dimensions in inch [mm]
2. Tolerance : x.xx±0.02 [x.x±0.5] x.xxx±0.01 [x.xx±0.25]
3. M3×0.5 screw locked torque MAX 5Kgf.cm/0.49N.m




CONNECTORS CONNECTIONS

CON1 – Input Connector	
Pin 1	Line
Pin 3	Neutral

CON2 – Output Connector	
Pin 1,2	-Vout
Pin 3,4	+Vout

*Either one of four screws holes of Open / Chassis type can be considered as PE connection for CLASS I application.

CONNECTOR OPTIONS

Blank:	JST Type	-M	Molex Type	-T	Terminal Block
	Mates with housing CON1: VHR-3N CON2: VHR-4N Crimp terminals CON1: SVH-21T-P1.1 CON2: SVH-21T-P1.1		Mates with housing CON1: 09-50-8031 CON2: 09-50-8041 Crimp terminals CON1: SD-2478 CON2: SD-2478		Screw locked torque MAX 2Kgf.cm/0.2N.m Wire dimension range 26 ~ 16AWG