

# VHD300 Series

## 300 Watts

### Single Output Switching Power Supply

#### Features:

- \* High Density 3 x 5" Open Frame Switcher
- \* Universal AC Input with Active Power Factor Correction
- \* 300 Watts with 20 cfm Airflow
- \* 150 Watts Convection Cooled Operation
- \* Remote on/off, Remote Sense, and DC OK Functions
- \* 5VSB and 12V Fan Outputs
- \* 100,000 hours MTBF (25°C Full Load Operation)
- \* International Safety Approvals & CE Mark
- \* Class B Emissions
- \* 3 Year Warranty



#### Input Specifications:

Input Range	Universal VAC (90-264 VAC) & 120-370 VDC
Input Frequency	47-63 Hz or DC
Inrush Current	25A @ 115VAC / 50A @ 230VAC max (cold start)
Input Current	5A @ 90 VAC / 2.5A @ 200 VAC Maximum
Input Reflected Ripple	FCC 68 part 15 Class B
Efficiency	85% Typical @ 120 VAC (depending on output model)
Input Protection	Single Fused (10 Amp / 250 V)
Hold-up Time	One Cycle Minimum @ 120 VAC and 80% load
Leakage Current	< 750 $\mu$ A maximum @ 264 VAC
Harmonics	EN61000-3-2 Class D

#### Output Specifications:

Adjustment Range	$\pm 10\%$ of Main Output
Minimum Load	None
Regulation	3% Maximum (Line, Load & Temp)
Ripple / Noise	$\pm 1\%$ pk-pk max (20MHz)
Transient Response	+/- 5% Deviation / < 1msec recovery
Set-Point Accuracy	$\pm 2\%$
Short Circuit Protection	Continuous
Over Load Protection	125-150%, automatic recovery
Over Voltage Protection	115-135%, latched shutdown (toggle control to reset)

#### Emissions Standards

FCC Part 15J, Part 2	Within Class B Limits
EN55022 / CISPR22	Within Class B Limits

#### Status / Control Signals

Standby	5VSB (1A Convection / 2A with 20cfm airflow)
Fan Output	12V (0.5A Convection / 1A with 20 cfm airflow), $\pm 15\%$ regulation, 240mV Ripple
Remote Sense	Compensates for up to 250mV drop
DC OK	TTL Compatible (High = OK)

#### Electromagnetic Compatibility:

Electrostatic Discharge	EN61000-4-2, $\pm 4$ KV Contact / $\pm 8$ KV Air Discharge
Radiated Susceptibility	EN61000-4-3, 26-1000MHz, 10V/M, 80% AM
EFT / Bursts	EN61000-4-4, $\pm 2$ KV
Surges	EN61000-4-5, $\pm 2$ KV Line-Earth, $\pm 1$ KV Line-Line
Conducted Immunity	EN61000-4-6, 0.15 - 800MHz, 10V, 80% AM
Voltage Dips	EN61000-4-11, 95% Dip & 10ms, 30% Dip & 500ms
Voltage Interruptions	EN61000-4-11, 95% Reduction, 5s
Radiated Emissions	FCC 68 part 15 Class B
Conducted Emissions	FCC 68 part 15 Class B
Harmonic Current	EN61000-3-2 Class D
Fluctuations & Flicker	EN61000-3-3

#### Environmental Specifications:

Operating Temp	0 ~ 50°C (De-Rate 2.5%/1°C Rise To +70°C)
Storage Temp	-20 ~ +85°C
Cooling	20 cfm airflow required for full, or derate 50%
Temp Co-Efficient	0.4% per °C
Humidity	5 to 95% RH Non-Condensing
Vibration	3 Axes 1 Oct/min, 5 min at 4 Res. 0.75G Pk, 5-500Hz
Shock	20G Peak Acceleration
Reliability	> 100k hours MTBF (Full Load and 25°C Operation)

#### International Safety Approvals

Qualified to Meet	UL 60950 (3rd Edition) File # E158470
	CSA 22.2 No. 60950
	CB Report (IEC 60950 3rd Edition) File # E158470
	CE Mark (LVD)

**PowDec**  
Technologies, Inc.

PowDec Technologies (Taiwan) Inc.  
No. 9, Alley 9, Lane 392, Fu Teh  
1st Road Hsi Chih, Taipei Hsien, Taiwan, 22150  
Tel: (02)2694-2760  
Fax: (02)2694-2753  
E-mail: powdec@ms3.hinet.net  
http://www.powdec.com.tw

PowDec Technologies (USA) Inc.  
7013 Realm Drive, Suite E  
San Jose, CA 95119 U.S.A.  
Tel: (800) 299-3209  
Fax: (408) 362-9355  
E-mail: tedkang@powdec.com  
http://www.powdec.com

**Output Table:**

Model Number	Vout	--- Output Current Max---	
		Convection	20 cfm
VHD300-12V	12V	9.0A	18.0A
VHD300-18V	18V	6.5A	13.0A
VHD300-24V	24V	5.5A	11.0A
VHD300-36V	36V	3.75A	7.5A
VHD300-48V	48V	3.0A	6.0A

**Mechanical Specifications:**

Construction: Open Frame

Weight: 0.903lb / 0.410 kg

**CN1 Mating Connector:**

Molex 09-65-2038 (5273 series)  
 Mates with 09-52-4034 (5239 series)  
 CN1 AC Input  
 CN1-1 Line  
 CN1-2 Neutral

Quick Disconnect Tab 0.250"x0.032 for field ground

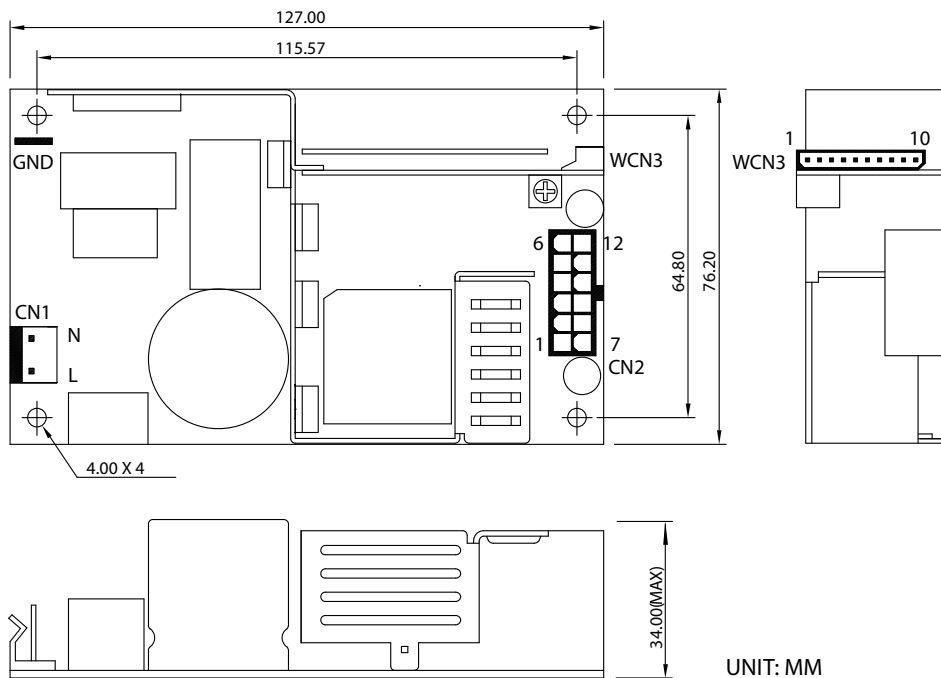
**CN2 Mating Connector:**

Molex 39-28-1123, Minifit JR,  
 Vertical Dual Row, 12pin 0.165" pitch  
 CN2-1 ~6 V1  
 CN2-7 ~12 V1-RTN

**WCN3 Mating Connector:**

Molex 22-05-7105 (5268 series)  
 Mates with 50-37-5103 (5264series)

- WCN3-1 5Vsb
- WCN3-2 5Vsb
- WCN3-3 5Vsb & Signal Return
- WCN3-4 5Vsb & Signal Return
- WCN3-5 - Remote Sense
- WCN3-6 + Remote Sense
- WCN3-7 I/O / Remote On/Off
- WCN3-8 DC.OK / Power Good
- WCN3-9 FAN (12V)
- WCN3-10 FAN-RTN (12V)



Note: V1-RTN, 5Vsb/Signal Return, and 12V Fan Return are isolated to others.