PRODUCT SPECIFICATION

Digital Power
Flexible Power Solutions

HD1000 SERIES | HIGH DENSITY

1000 W ITE Switching Power Supply

MODEL: HD1000 | CATEGORY: AC-DC | RATED POWER: 1000 W | FORM: Enclosed

PRODUCT OVERVIEW

Key Product Features

- Enclosed ITE Switching Power Supply
- I/O Isolation 4300 VAC
- 5000 m Altitude Application (OVC III: 2000 m)
- Over-Voltage Category OVC III (New Edition)
- Remote ON/OFF Function
- Standby 5V @ 1A
- High Efficiency up to 93%
- With P.F.C. Function > 0.9
- Ultra Compact Size: 7.66 × 4.02 × 1.62 Inches
- Safety Approval to UL / IEC / EN 62368-1

PRODUCT DESCRIPTION

The HD1000 Series is a high-density 1000 W AC-DC switching power supply in a compact enclosed form factor (7.66 × 4.02 × 1.62 inches), designed for high-power OEM and embedded equipment. It delivers stable DC output across a wide 90–264 VAC input range with active PFC (PF > 0.9) and efficiency up to 93%. The series is certified to UL / IEC / EN 62368-1 with Over-Voltage Category III (OVC III) per the new edition, 4300 VAC I/O isolation, and 5000 m operating altitude (OVC III: 2000 m). A 5V @ 1A standby output and remote ON/OFF support flexible system integration for industrial, networking, and embedded applications.

SAFETY CERTIFICATES

- Safety Approval: [UL60950-1 / UL/IEC/EN 62368-1]
- Input-to-Output Isolation: [3000 / 4000 / 4300] VAC
- EMC: EN 55032 Conducted Class B, Radiated Class A
- EMS: [EN 55024 / EN 55035 / EN 55024 + EN 60601-1-2]
- Agency Marks: cURus (E199779), CE, CB
- RoHS compliant design

E199779

APPLICATIONS

- Open-frame embedded power assemblies
- Industrial automation and controls
- ITE and networking equipment
- Embedded electronics and OEM systems
- Security and surveillance equipment

ELECTRICAL SPECIFICATIONS

MODEL INFORMATION

Parameter	HD1000-112	HD1000-124	HD1000-148
Max Output Wattage	800W	1000W	1000W
Output Voltage (V.DC.)	12V	24V	48V
Current	66.67 A	41.67 A	20.84 A
Maximum Capacitive Load	7000 uF	3500 uF	1750 uF
Ripple & Noise (typ.) (Note 1)	160mV	240mV	480mV
Efficiency (at 230 VAC)	89%	92%	93%

SPECIFICATION INFORMATION

[INPUT]	Value
Voltage (Note 5)	90-264 VAC
Frequency	50 / 60 Hz
Current (Full load)	< 11 A max. (115 VAC) / < 5.5 A max. (230 VAC)
Inrush Current (<2ms)	Cold Start: < 70 A max. (115 VAC) / < 105 A max. (230 VAC)
Leakage Current	< 0.1 mA max. (Input-Output)
Power Factor (at 230 VAC)	PF > 0.9 at Full Load

[OUTPUT]	Value
Voltage Accuracy	±2%
Voltage Adj. Range	±5% Output Voltage
Line Regulation (115-264 VAC)	±0.5%
Load Regulation (10-100%)	±1% typ.
Hold-up Time (at 115 VAC) (Note 2)	3 ms min.

[FUNCTION]	Value
5V Standby	5VSB: 5V @ 1A; Tolerance ±10%
DC OK Signal (Power Good)	Turn ON: 3.7~5.7V; Turn OFF: 0~1V
Remote Control	+RC / -RC: Power ON = open; Power OFF = short

For quotes and customization requests, contact Digital Power sales at (877) 634-0982 or sales@digipwr.com.

ELECTRICAL SPECIFICATIONS

SPECIFICATION INFORMATION

[PROTECTION]	Value
Over Power Protection	Auto recovery
Over Voltage Protection	Auto recovery
Over Temperature Protection	Auto recovery
Short Circuit Protection	Auto recovery

[ISOLATION]	Value
Input-Output (Note 3)	4300 VAC or 6000 VDC
Input-PE	2000 V
Output-PE	1500 V

[ENVIRONMENT]	Value
Operating Temperature	-20°C to +70°C (with derating)
Storage Temperature	-35°C to +85°C
Temperature Coefficient	±0.03%/°C (0~50°C); ±0.06%/°C (-30~0°C)
Altitude During Operation	OVC II = 5000m; OVC III = 2000m
Humidity	95% RH
Atmospheric Pressure	56 kPa to 106 kPa
MTBF	> 100,000 h @ 25°C (MIL-HDBK-217F)
Vibration	IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)
Shock	IEC60068-2-27

[PHYSICAL]	Value
Dimensions (L x W x H)	7.66 × 4.02 × 1.62 Inches (194.5 × 102.0 x 41.0 mm); Tolerance ±0.5 mm
Weight	950 g

[SAFETY]	Value
Approval	UL / IEC / EN 62368-1

[EMC]	Value
Conducted and Radiated EMI	EN55032 conducted class B, Radiated Class A
EMS	EN55035

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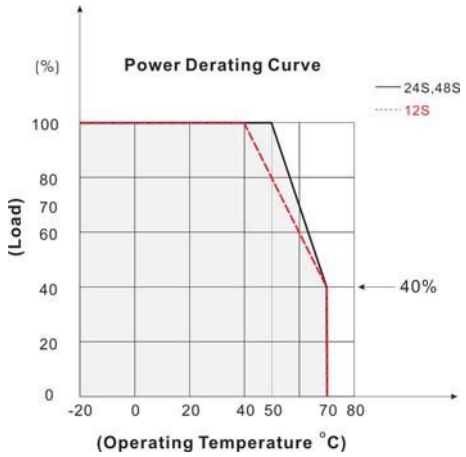
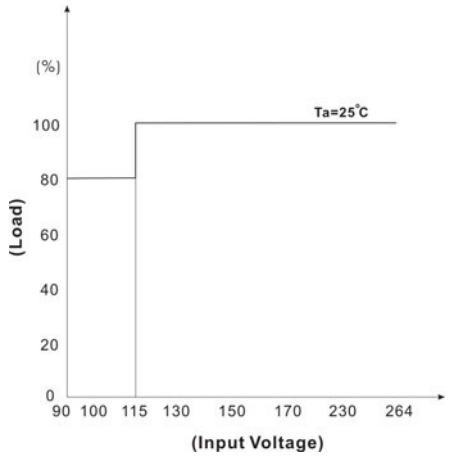
FUNCTION MANUAL & APPLICATION NOTE

- General Baseline: All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.
- Note 1: Ripple & Noise are measured at 20MHz bandwidth by using a 6″ twisted pair-wire terminated with a 0.1uF and 47uF parallel capacitor.
- Note 2: Hold-up Time measured at 90% Vout.
- Note 3: Strongly recommend conducting this test with DC voltage. If testing with AC voltage, disconnect all Y-capacitors from the Digital Power Corporation power supply.
- Note 4: CAUTION: Double pole, neutral fusing. Disconnect mains before servicing. ATTENTION: 2 poles avec fusible sur le neutre. Deconnecter le secteur avant intervention.
- Note 5: Please check the derating curve for more details.

DERATING





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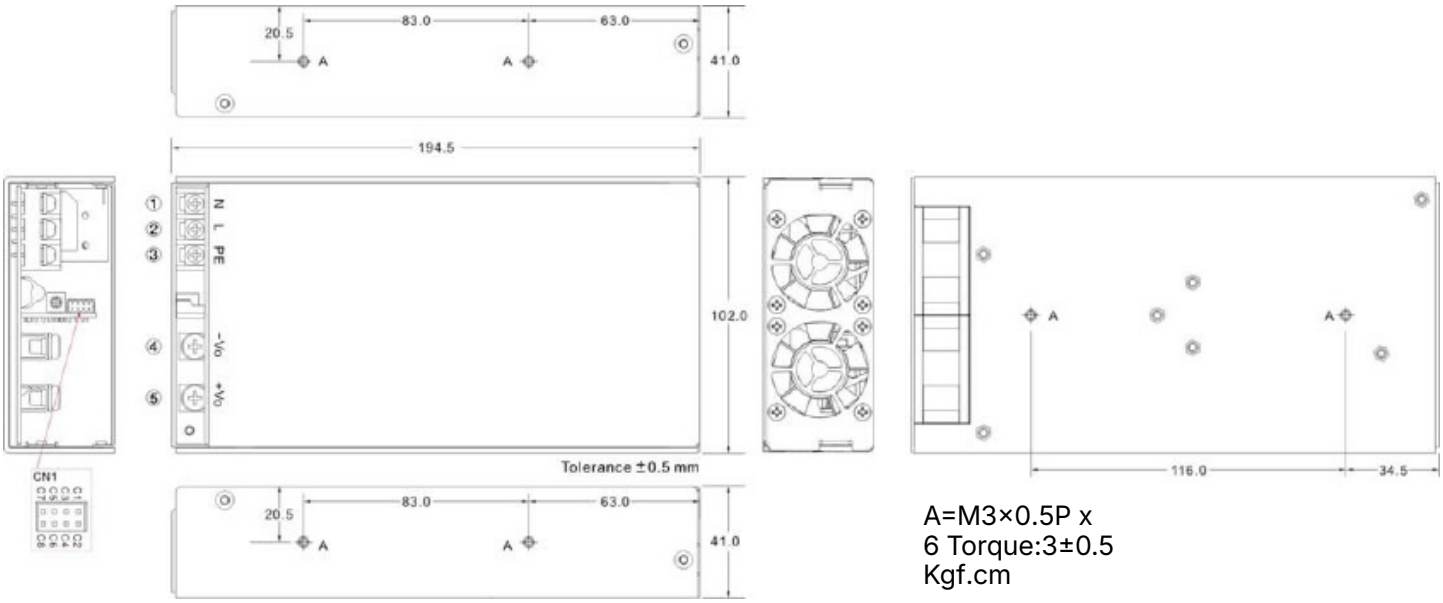
ELECTRICAL SPECIFICATIONS

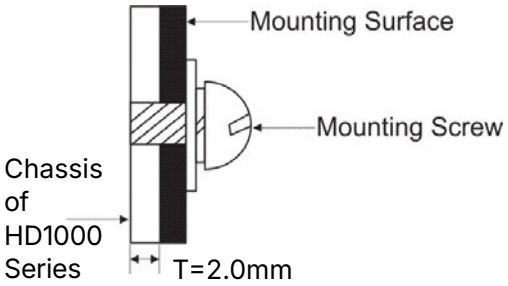


A=M3×0.5P x 6 Torque:3±0.5 Kgf.cm

Brands		Terminal
PIN#	Single	
1	AC IN (N)	DINKLE DT-49-B01W-03
2	AC IN (L)	
3	PE	
4	-DC OUT	M5 Pan HD screw in 2 positions Torque to 8 lbs-in(90 cNm) max.
5	+DC OUT	

ASSEMBLY INSTRUCTIONS

∗U Case T=2.0mm Customer is advised to screw into the threads no more than 2.0mm



Connector Pin (CN1)

Brands		Cherng Weei		JST	
PIN#	Single	Mating Housing	Terminal	Mating Housing	Terminal
C1	+S	PHD-H20-2X4P	PHD-T20	PHDR-08VS	SPHD-001T-P0.5
C2	-S				
C3	NC				
C4	-5V SB				
C5	GND / -RC				
C6	+RC				
C7	PG				
C8	+5V SB				

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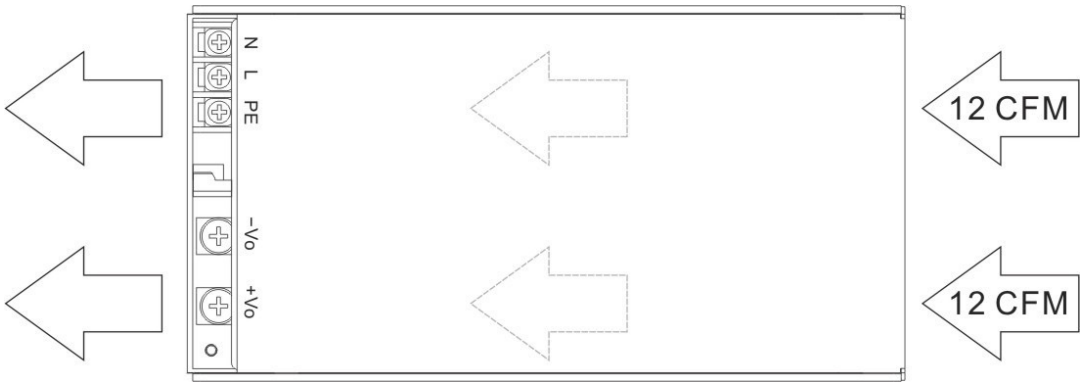
ELECTRICAL SPECIFICATIONS

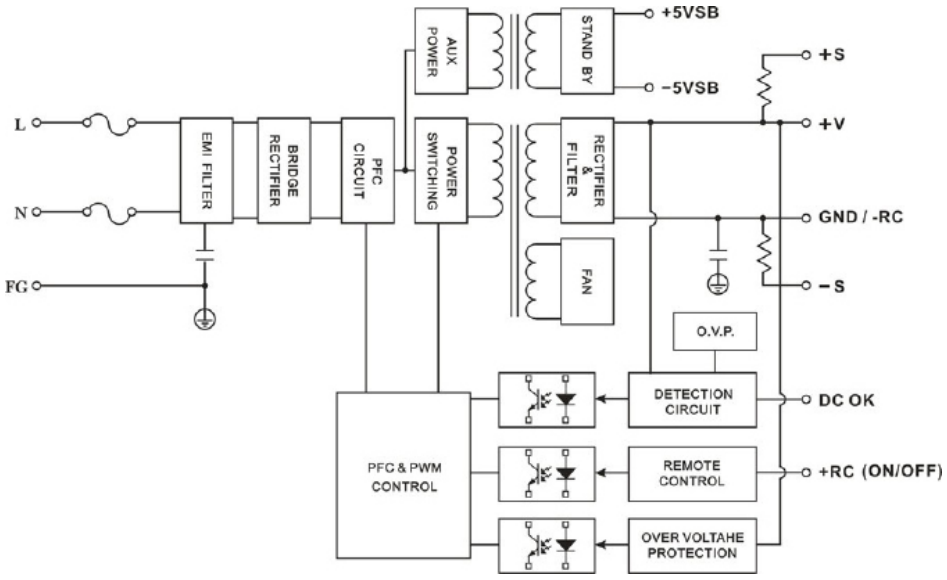
FUNCTION DESCRIPITON of CN1

Pin No.	Function	Description
C1	+S	Remote sensing (+)
C2	-S	Remote sensing (-)
C3	NC	
C4	-5V SB	This pin connects to the negative terminal(-V)
C5	GND / -RC	This pin connects to the negative terminal(-V). Return for DC-OK signal output.
C6	+RC	Turns the output on and off by electrical or dry contact between pin C5 (GND / -RC), Short: Power OFF, Open: Power ON.
C7	+PG	DC-OK Signal is a DC output. (DC-OK)
C8	+5V SB	Stand by voltage output ground 4.4~5.5V, referenced to pin C4 or C5(GND). The maximum load current is 1A.

AIR FLOW DIRECTION



BLOCK DIAGRAM



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