

Product Specification

Universal AC Input with PFC,
3" x 5" Footprint
Single Main Output plus 5V standby and
Aux. 12V

Key Product Features

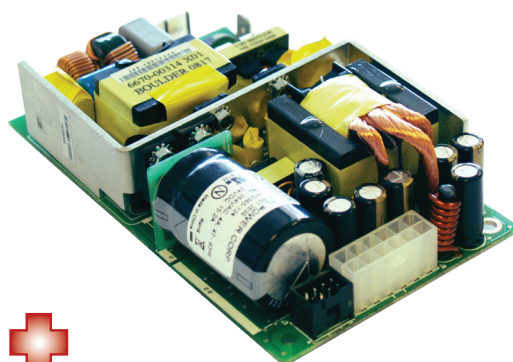
- Medical (2 MOPP) Safety Approved
- ITE Safety Approved
- High Density
- Active PFC
- Low Profile (1.30" height)
- High Efficiency 90% typ.
- 200W Convection rated
- 5V, 2A Standby Output
- 12V, 1A Aux (Fan) Output

Safety and EMC

- CSA/UL 60601-1-1 3rd Ed. Safety
- CSA/UL 60950-1 ITE Safety
- NEMKO EN60601-1/EN60950-1
- CE Mark (LVD)
- EN50022 (CISPR 22) Conducted Class A
- EN61000-3-2 Class D Harmonics
- EN61000-3-3 Voltage Fluctuations
- EN61000-4-2, 3, 4, 5, 6, 11 Immunity

HD365 Series

365 Watt High Density AC/DC Power Supply



Description

The HD365 Series of open frame switching power supplies utilizes a highly advanced circuit topology to deliver 365 Watts in an industry standard package that has a 5.00 x 3.00 inch footprint and 1U (1.300 in.) height. The series has been designed meet the requirements of Medical, Telecom and Industrial applications and operates over the universal AC input range. These supplies have active power factor correction (PFC), flexible output configurations a 5V, 2A housekeeping (standby) supply and an auxiliary 12V output that can be used to drive a fan. They are fully and compliant with worldwide safety and EMC standards.

Ratings

Input Voltage Range	90 to 264 VAC, 47 to 63 Hz or 170 to 370 VDC
Output Power—200 LFM Forced Air	365W
Output Power—Free Air	200W
Power Factor	0.98 at 230VAC
Efficiency	90%
Output Ripple	1% pk-pk, 0 to 20MHz
Stand byOutput	5V, 2.0A (1.0A convection)
Aux. Fan Output	12V, 1.0A (0.5A convection)
Size	Industry Standard 3 in. x 5 in. x 1.3 in.

Model Selection

Model	Main Output Ratings ¹	Standby Output ²	Fan Output ²
HD365-112	12V, 30.4A (16.6A)	5V, 2A (1A)	12V, 1A (0.5A)
HD365-115	15V, 24.3A (13.3A)	5V, 2A (1A)	12V, 1A (0.5A)
HD365-119	19V, 19.2A (10.5A)	5V, 2A (1A)	12V, 1A (0.5A)
HD365-124	24V, 15.2A (8.3A)	5V, 2A (1A)	12V, 1A (0.5A)
HD365-129	29V, 12.5A (6.9A)	5V, 2A (1A)	12V, 1A (0.5A)
HD365-132	32V, 11.4A (6.2A)	5V, 2A (1A)	12V, 1A (0.5A)
HD365-136	36V, 10A (5.5A)	5V, 2A (1A)	12V, 1A (0.5A)
HD365-148	48V, 7.6A (4.16A)	5V, 2A (1A)	12V, 1A (0.5A)

Notes: 1. Output ratings given for 200LFM airflow and (no airflow).

2. Total continuous output power must not exceed 365W with 200LFM airflow (200W with no airflow).

Electrical Specifications

Input

AC Input Voltage	90-264VAC (47-63Hz) or 170-370 VDC
Input Current	4A Max Continuous
Input Reflected Ripple	FCC 68 part 15 Class B
Power Factor Correction	0.98 at 220VAC (typical)
Input Line Protection	6.3A 250VAC IEC Type
Hold-up Time	>16msec @ Full Load
Efficiency	90% Typical
Leakage	275uA @ 230 VAC (max)

Output

Line Regulation	$\pm 0.1\%$ for V_{in} (min.) to V_{in} (max.)
Load Regulation	$V_1 = \pm 1\% / V_2 = \pm 5\%$ Max
Adjustment Range	$\pm 5\%$ Minimum
Min. Load Requirement	None
Ripple	$\pm 1\%$ (20MHz)
Transient Response	Better than 5% For 50% Step Load
Over-Voltage Protection	115-150% (Latched Shut-down)
Turn-On Delay	1 Sec. Max.
Initial Setting Accuracy	$\pm 1\%$
Over-Current	110-130% of I-Max (Auto-Recovery)

EMC and Safety Certifications

Electromagnetic Compatibility

Electrostatic Discharge	EN61000-4-2, ± 4 KV Contact / ± 8 KV Air Discharge
Radiated Susceptibility	EN61000-4-3, 26-1000MHz, 10V/M, 80% AM
EFT / Bursts	EN61000-4-4, ± 2 KV
Surges	EN61000-4-5, ± 2 KV Line-Earth, ± 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
Fluctuations & Flicker	EN61000-3-3

Safety & Emissions

Safety Approvals (pending)	CSA/UL 22.2 No. 60950-1-M90 & 60601-1-M90, VDE EN60950-1 / EN60601-1, CE Mark (LVD)
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Environmental Specifications

Operation Temperature	-20 ~ +50C Derate of 2.5%/C up to +70C
Storage Temperature	-20C ~ +85C
Cooling	Forced Air Cooling 200LFM, 220W Max Convection
Humidity	Up to 95% RH Non-condensing
Shock & Vibration	0.75G Peak Half Sine, 6 Axes
MTBF	>300,000 Hours

Status/Control

Remote Sense	Compensates for <250mV Drop
PS Enable	PS Enable PS is off until Enable Signal (TTL or Ground) is applied
DC OK	Signal Goes TTL High to indicate DC Regulation
5V Standby	2.0A current, always on when AC input is present
12V Auxiliary	1.0A current to power cooling fan(s)

Mechanical Outline

