

ASM1000

1000W HIGH POWER DENSITY MEDICAL GRADE POWER SUPPLY

The Astrodyne TDI ASM1000 power supply series offers an advanced high-power density solution specifically tailored for demanding medical applications. The ASM1000 is meticulously engineered and equipped with Class I input protection, 2-MOPP isolation, and BF leakage current specifications, all of which are critical for ensuring the utmost patient safety and adherence to stringent medical standards. These power supplies can operate efficiently within an expansive input voltage range of 80 to 264 VAC at a frequency of 50-60Hz. They deliver up to 1000 Watts of regulated DC output power, all within 1U height requirements, allowing for seamless integration into compact medical equipment and systems.



UL US CE CB

**Pending Approval*

HOW TO ORDER

ASM1000-150-BET-S00

BET = ENCLOSED W/TERMINAL BLOCKS

VOLTAGE = 120 = 12VDC
 150 = 15VDC
 180 = 18VDC
 240 = 24VDC
 280 = 28VDC
 360 = 36VDC
 480 = 48VDC
 560 = 56VDC

OUTPUT POWER: 1000W

FAMILY: ASM SERIES

FEATURES

UNIVERSAL AC INPUT

80VAC-264VAC 50/60Hz input nominal

DC INPUT RANGE

120-370 VDC

OPERATING TEMPERATURE

-20 to +45°C at full load, up to +70°C at reduced load
 See the derating chart for detail

SAFETY APPROVALS

Medical IEC 60601-1 3rd Edition Safety
 EN 60601-1-2 4th Edition EMC
 EMI: EN 55011 (CISPR11) Class B Emissions

BF Leakage Rating (<100uA) input to output.

60uA typ at 264VAC

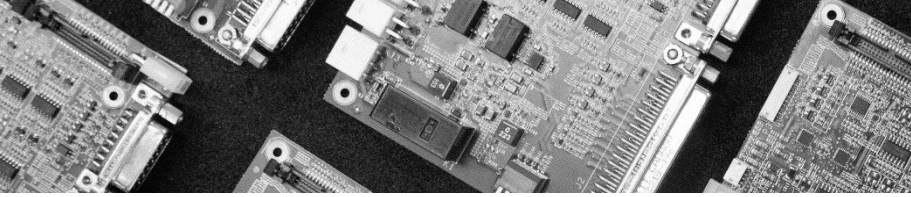
5V auxiliary outputs

Remote output enable and power good signal

Remote sense input

High efficiency, up to 90%

Variable speed fans for low load noise reduction



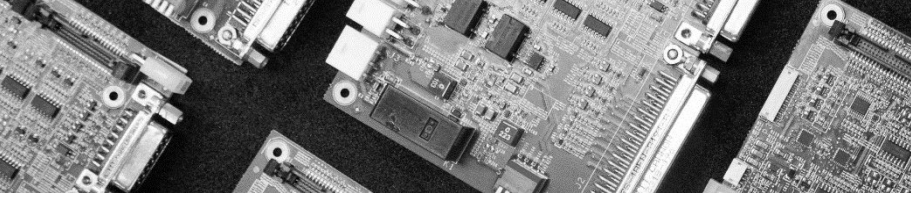
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PARAMETERS

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AC Input Voltage Range	Full load rated for 100VAC-240VAC 50/60Hz input nominal (with de-rated operation in the range of 80VAC-109VAC)
Input Frequency	47-63 Hz (50/60 Hz nominal)
DC Input Voltage Range	120-370 VDC
Input Current	11.0A max at 100VAC- 240VAC
Earth Leakage Current	100uA at 90VAC
Touch Leakage Current	60uA typ at 264VAC
Output Voltage	12, 15, 18, 24, 28, 36, 48, 56VDC
Output Power	1000W max – see derating
Minimum Load	No minimum load required
Set Point Accuracy	±1% max
Load Regulation	Load regulation of ±1% max, across 90-264VAC input.
Line Regulation	Line regulation of ±0.25% max , across 90-264VAC input.
Efficiency	90%
Hold-up Time	15ms @ 115VAC with full load.
Ripple and Noise	200mV max., measured a 20MHz BW, with 47uF aluminum and 0.1uF ceramic capacitors at output
Input to Output Isolation	Input to Output: 4,000 VAC, 2 MOPP
Input to Earth (Class I)	Input to Earth: 2,000 VAC, 1 MOPP
Output to Earth (Class I)	Output to Earth 1,500 VAC, 1 MOPP
Over Current *	105 to 135% Rated Current
Short Circuit *	Hiccup Mode, Automatic recovery
Over Voltage *	130% Vo max, Latching; Recycle Input to Reset
Over Temperature *	Automatic recovery
<i>All specifications are typical at nominal input, full load, 25°C unless specified otherwise.</i>	



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PARAMETERS

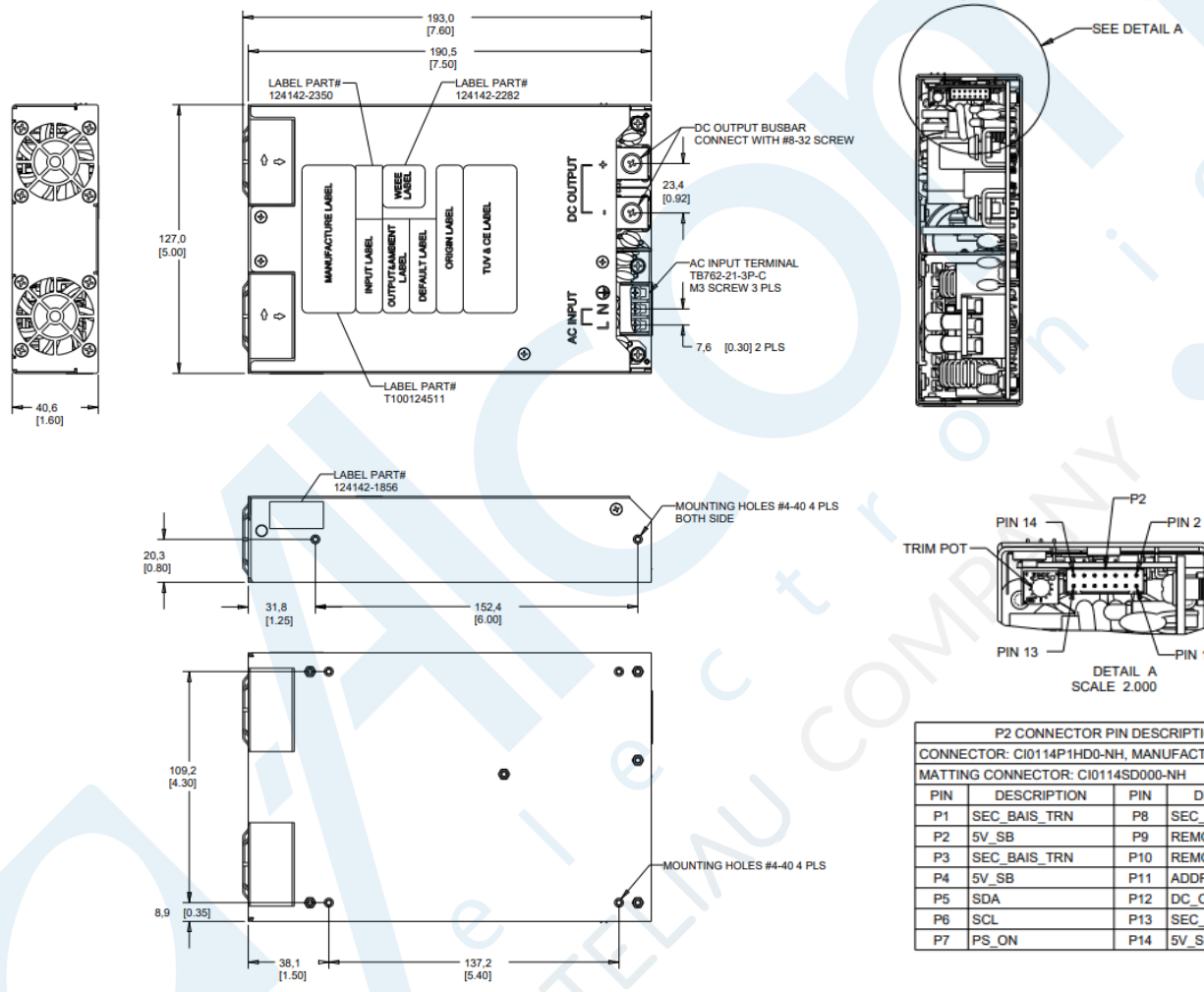
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Safety Approvals	Certification for Medical: IEC 60601-1-1 3rd Edition
Means of Protection	Primary to Secondary -> 4,000VAC 2 MOPP Primary to Ground -> 2,000VAC 1 MOPP Secondary to Ground -> 1,500VAC 1 MOPP
EMC Immunity: ESD	EN61000-4-2 Level 4, 15kV Air/8kV Contact
EMC Immunity: RF Field Susceptibility	EN61000-4-3 Level 3, 10V/m (80MHz-2.7GHz) Table 9, 9-28V/m(385MHz-5.78GHz)
EMC Immunity: EFT Bursts	EN61000-4-4 Level 3, 2kV Power, 1kV Signal
EMC Immunity: Surge Susceptibility	EN61000-4-5 Level 3 2kV Line/PE, 1kV Line/Line
EMC Immunity: Conducted Susceptibility	EN61000-4-6 Level 3, 10V/m
EMC Immunity: Magnetic Field Immunity	EN61000-4-8 Level 4, 30A/m
EMC Immunity: Voltage Dip Interruption	EN61000-4-11 100% dip 1 period, 30% dip 25 periods 100% interruption 250 periods
EMC Emissions: Conducted Emissions	EN55032 (CISPR32) Class B EN55011 (CISPR11) Class B
EMC Emissions: Radiated Emissions	EN55032 (CISPR32) Class B EN55011 (CISPR11) Class B
EMC Emissions: Harmonic Current	EN61000-3-2 Class B
EMC Emissions: Voltage Flicker	EN61000-3-3 - PASS
Operating Temperature	-20 to +45°C at full load, up to +70°C at reduced load
Cooling	Two variable speed fans
Storage Temperature*	-40 to +85°C
Operating Humidity*	0% to 95%, non-condensing
Operating Altitude	Operate up to 5km altitude
Size **	7.5" L x 5" W x 1.6" H 190.5 x 127 x 40.64 mm
Connectors	Terminal block connection for input AC and bus bar connections for output DC

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ENCLOSED MODELS (INTEGRATED FAN) WITH TERMINAL BLOCKS



P2 CONNECTOR PIN DESCRIPTIONS			
CONNECTOR: C10114P1HD0-NH, MANUFACTURER: CVILUX			
MATING CONNECTOR: C10114SD000-NH			
PIN	DESCRIPTION	PIN	DESCRIPTION
P1	SEC_BAIS_TRN	P8	SEC_BAIS_TRN
P2	5V_SB	P9	REMOTE_SENSE_RTN
P3	SEC_BAIS_TRN	P10	REMOTE_SENSE
P4	5V_SB	P11	ADDR
P5	SDA	P12	DC_OK
P6	SCL	P13	SEC_BAIS_TRN
P7	PS_ON	P14	5V_SB

MODEL	OUTPUT VOLTAGE	OUTPUT CURRENT	5V AUX. CURRENT	EFFICIENCY (TYP) 230 /115 VAC
ASM1000-120-BET-S00	12 VDC	83.3A	2A	90% / 88%
ASM1000-150-BET-S00	15 VDC	66.7A	2A	90% / 88%
ASM1000-180-BET-S00	18 VDC	55.6A	2A	90% / 88%
ASM1000-240-BET-S00	24 VDC	41.7A	2A	92% / 88%
ASM1000-280-BET-S00	28 VDC	35.7A	2A	92% / 88%
ASM1000-360-BET-S00	36 VDC	27.8A	2A	92% / 88%
ASM1000-480-BET-S00	48 VDC	20.8A	2A	92% / 88%
ASM1000-560-BET-S00	56 VDC	17.9A	2A	92% / 88%