SL POWER
CINT1200 SERIES

200 Watts Single Output
Industrial Grade

Industrial

Advanced Energy's SL Power CINT1200 family offering in high density single output open-frame AC/DC power supplies. Approved to EN/CSA/IEC/UL62368-1. The CINT1200 operates at universal input rang of 90 to 264 VAC and wide temperature range -10°C to +70°C, devering full rated output power up to +50°C.

AT A GLANCE

Total Power

200 Watts

Input Voltage

90 to 264 VAC

# of Outputs

Single

RoHS CE

SPECIAL FEATURES

- 2"W x 5"L x 1.3"H Size
- For 1U Applications
- Universal Input 90 to 264 VAC
- 200 W with 100LFM
  180 W Convection Cooled
- 90% Efficiency Typical
- Class B Conducted EMI
- ROHS Compliant
- 3 Years Warranty

SAFETY

- EN/CSA/IEC/UL62368-1

ELECTRICAL SPECIFICATIONS

Input	
Input Range	90 to 264 VAC, 47 to 63 Hz, 1Ø 127 to 370 VDC
Turn-On Input Voltage	82.7 VAC, norminal
Turn-Off Input Voltage	67.0 VAC, norminal
Power Factor	>0.9
Switching Frequency	PFC: 65 kHz fixed Main converter: Variable 35 to 200 kHz, 65 to 70 kHz at full load
Inrush Current	55 A max., cold start @ 264 VAC input
Input Current	115 VAC: 1.8 A, 230 VAC: 0.9 A
Input Fuses	3.15A, 250 VAC fuses provided on all models
Earth Leakage Current	<500 µA @ 264 VAC, 60 Hz, NC, <1 mA SFC
Efficiency	88% typical
Isolation Voltage	Input/Ground: 1800 VAC Input/Output: 4000 VAC Output/Ground: 1500 VAC
Output	
Maximum Power	200 W continuous with 100 LFM airflow, 180 W convection cooled
Ripple and Noise	0.5% rms, 1% pk-pk
Total Regulation	+/-3% combined line, load and initial setting
Minimum Load	Not required
Adjustment Range	Fixed output
Transient Response	500 us typical, return to 0.5% of nominal, 50% load step, $\Delta i/\Delta t<0.2$ A/µs. Max. voltage deviation is 3%
Turn-On Time	16 ms at 200 W, 120 VAC, 60 Hz
Hold-Up Time	Less than 3 sec, 115 VAC, full load
Reliability	
MTBF	401,000 hrs, 110 VAC input, 25°C ambient
Warranty	3 years
Protection	
Overvoltage Protection	Latch mode. See models chart for trip range.
Short Circuit protection	Hiccup mode, auto recovery
Thermal protection	Sensing temperature, 165°C at full load, latching mode, requires input power recycling to reset
Overload Protection	120 to 150% of rating, hiccup mode

EMI/EMC COMPLIANCE

Conducted Emissions	EN55011/22: Class B, FCC Part 15, Subpart B, Class B
Radiated Emissions	EN55011/22: Class A, FCC Part 15, Subpart B, Class A w/6db Margin
Line Harmonic Emissions	EN61000-3-2, Class A, B, C, D
Voltage Fluctuations & Flicker	EN61000-3-3, Complies (dmax<6%)
Static Discharge Immunity	EN61000-4-2, 6kV Contact, 8kV Air
Radiated RF EM Immunity	EN61000-4-3, 3 V/m
Electrical Fast Transients / Bursts	EN61000-4-4, 2 kV/5 Khz
Surges Line to Line (DM) and Line to Ground (CM)	EN61000-4-5, 1kV DM, 2kV CM
Conducted Disturbances Induced by RF Fields	EN61000-4-6, 3 Vrms
Power Frequency Magnetic Fields Immunity	EN61000-4-8, 3 A/m
Voltage Dips	EN61000-4-11, 100%, 10 ms; 30%, 275 ms; 60%, 100 ms; Criteria A at 70% Load

ENVIRONMENTAL SPECIFICATIONS

Vibration	Operating: 0.003 g/Hz, 1.5 grams overall, 3 axes, 10 min/axis Non-operating: 0.026 g^2/Hz, 5 grams overall, 3 axes, 1 hr/axis
Shock	Operating: Half-sine, 20 gpk, 10 ms, 3 axes, 6 shocks total. Non-operating: Half-sine waveform, 40 gpk, 10 ms, 3 axes, 6 shocks total
Operating Temperature	-10°C to +70°C, -40°C start up, full load
Temperature Derating	Derate output power above 50°C to 50% at 70°C
Storage Temperature	-40°C to +85°C
Altitude	Operating: -500 to 10,000 ft. Non-operating: -500 to 40,000 ft
Relative Humidity	5% to 95%, non-condensing
Weight	325 g

ORDERING INFORMATION

Model Number	Output Voltage[1]	Output Current		Minimum Load	Ripple & Noise[2]	Total Regulation	OVP Threshold[3]
		w/100 LFM air	Convection[1]				
CINT1200A1275K01	12 V	16.7 A	15.0 A	0 A	120 mV pk-pk	+/-3%	14.0 ± 1.1 V
CINT1200A1575K01	15 V	13.3 A	12.0 A	0 A	120 mV pk-pk	+/-3%	18.5 ± 1.2 V
CINT1200A1875K01	18 V	11.1 A	10.0 A	0 A	120 mV pk-pk	+/-3%	21.5 ± 2.0 V
CINT1200A2475K01	24 V	8.33 A	7.50 A	0 A	120 mV pk-pk	+/-3%	29.0 ± 2.5 V
CINT1200A2875K01	28 V	7.14 A	6.40 A	0 A	120 mV pk-pk	+/-3%	33.5 ± 2.5 V
CINT1200A3275K01	32 V	6.25 A	5.62 A	0 A	120 mV pk-pk	+/-3%	36.0 ± 3.0 V
CINT1200A3675K01	36 V	5.55 A	5.00 A	0 A	120 mV pk-pk	+/-3%	41.0 ± 3.0 V
CINT1200A4875K01	48 V	4.17 A	3.75 A	0 A	120 mV pk-pk	+/-3%	56.0 ± 3.0 V

Notes:
1. Total convection output power is 180 W.
2. Measured with noise probe directly across output terminals, and load terminated with 0.1µF ceramic and 10µF low ESR capacitors.

SAFETY

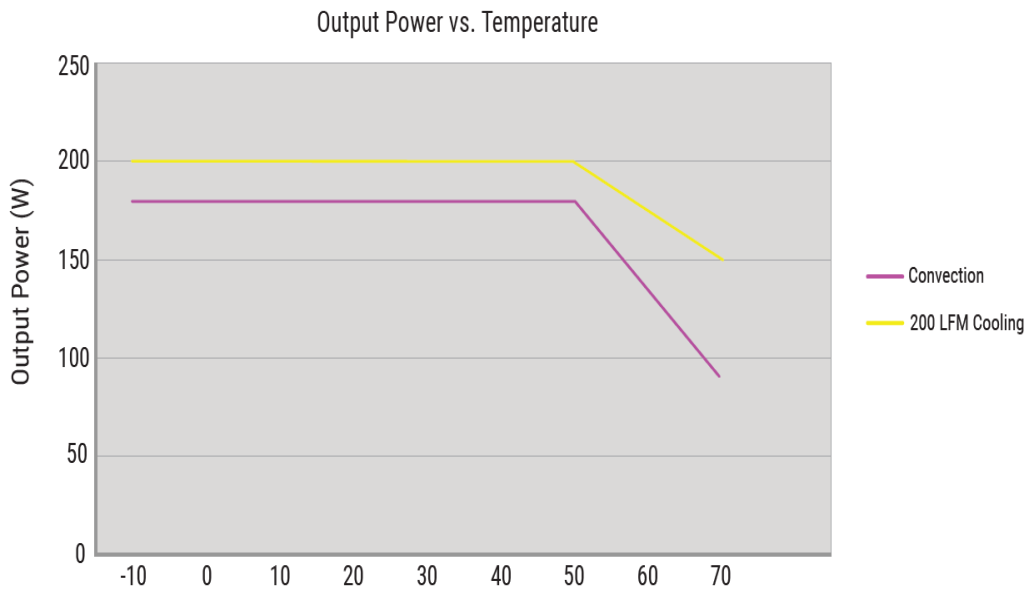
EN	EN62368-1
CSA	CAN/CSA-C22.2 No. 62368-1
IEC	IEC62368-1
UL	UL62368-1

PIN ASSIGNMENTS

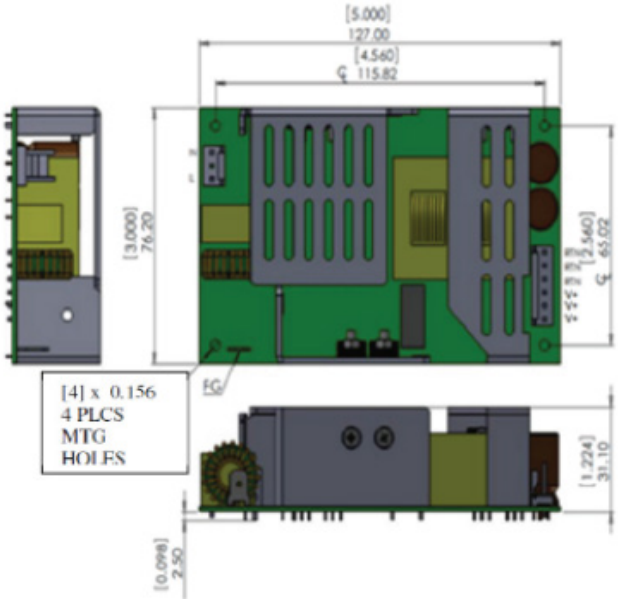
Type	Connector	Pin #	Assignment	Mating Connector
INPUT	J100	1	AC Line	Molex: 640250-3 Pins: 640250-2
		2	Empty	
		3	AC Neutral	
GROUND	G1	0.25" FASTON TAB		Molex: 190020001
MAIN OUTPUT	J2	1	-Vout	AMP: 640250-6 Pins: 640252-2
		2	-Vout	
		3	-Vout	
		4	+Vout	
		5	+Vout	
		6	+Vout	

DERATING CURVE

180 W convection cooled and 200 W continuous with 100 LFM airflow, derating output power to 50% at 70°C.



MECHANICAL DRAWING



Notes:
1. All dimensions in mm (inches).
2. Mounting holes should be grounded for EMI purposes.
2. FG is safety ground connection.
3. The power supply requires mounting on metal standoffs 0.2" (5 mm) in height, min.

ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

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