CINT1200



ITE Power Supply

•3" x 5" x 1.3" Package

- •Up to 200 W of AC-DC Power
- 180Watts Convection Cooled
- •200Watts with 100LFM Air Flow
- •Universal Input 90-264 Vac
- •Meets Class B EMI, Conducted (Consult factory for EN55024 version)
- •Fits 1U Applications
- •Approved to EN/CSA/UL/IEC60950-1, 2nd Edition
- •Efficiency up to 90%
- .€ Compliant (LVD, RoHS)
- Optional Chassis/Cover



3 Year Warranty





Specifications

All Specifications are typical at nominal input, full load at 25°C unless otherwise stated.

AC Input 100-240Vac +/- 10%, 47-63 Hz single phase 120-370 Vdc Turn On Time Less than 3 sec. @115Vac & Full Load Input Current 115Vac: 1.8A, 230Vac: 0.9A Hold-up Time >16 mSec at 200W, 120Vac/60 Hz Inrush Current 264Vac, cold start: will not exceed 55A Overload Protection 120 to 150% of rating, cycling type Input Fuses F1, F2: 3.15A, 250VAC fuses provided on all models Short Circuit Protection No damage to supply, auto recovery Earth Leakage Current <500µA@264V, 60Hz, NC; <1mA SFC Overvoltage Protection OVP latch at 110 to 130% of output voltage Efficiency 88% typical for 12Vdc and 115Vac Input-Ground: 1800Vac, Output-Ground: 1500Vac Input-Output: 4000Vac Output Power 180W convection cooled 200W with 100 LFM Over Temperature -10° to +70°C convection, -40°C startup Derate output power linearly to 50% between 50 and 70°C Over Temperature Protection Sensing transformer temperature, 165°C at full load, latching type, requires power cycling Ripple and Noise 1% pk-pk, measured directly across output terminals, load terminated with 0.1µF ceramic and 10µF low ESR capacitors Over Temperature -500 to 10,000 ft Minimum Load Not required Non-operating Altitude -500 to 10,000 ft Vibration Operating: 0.003g ² /Hz, 1.5g _{mm} overall, 3 axes, 10 min/axis Non-Operating:				
Inrush Current264Vac, cold start: will not exceed 55AOverload Protection120 to 150% of rating, cycling typeInput FusesF1, F2: 3.15A, 250VAC fuses provided on all modelsShort Circuit ProtectionNo damage to supply, auto recoveryEarth Leakage Current<500µA@264V, 60Hz, NC; <1mA SFCOvervoltage ProtectionOVP latch at 110 to 130% of output voltageEfficiency88% typical for 12Vdc and 115VacIsolationInput-Output: 4000Vac Input-Ground: 1800Vac, Output-Ground: 1500VacOutput Power180W convection cooled 200W with 100 LFMOperating Temperature-10° to +70°C convection, -40°C startup Derate output power linearly to 50% between 50 and 70°CTransient Response500µs typ. for return to within 0.5% of nominal, 50% load step. Δi/Δt <0.2A/µS. Max Volt Deviation = 3%Over Temperature-10° to +70°C convection, -40°C startup Derate output power linearly to 50% between 50 and 70°CRipple and Noise 1% pk-pk, measured directly across output terminals, load terminated with 0.1µF ceramic and 10µF low ESR capacitorsStorage Temperature-40 to +85°COutput VoltageSee chartOperating Altitude-500 to 10,000 ftTotal Regulation+/- 3% combined line, load, and initial settingRelative Humidity5% to 95%, non-condensingNon-Operating: 0.003 g²/Hz, 1.5gms overall, 3 axes, 1 0 min/axis Non-Operating: 0.003 g²/Hz, 5.0gms overall, 3 axes, 1 1 min/axis Non-Operating: Half-sine, 20 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating:	AC Input		Turn On Time	Less than 3 sec. @115Vac & Full Load
Input FusesF1, F2: 3.15A, 250VAC fuses provided on all modelsEarth Leakage Current<500µA@264V, 60Hz, NC; <1mA SFC	Input Current	115Vac: 1.8A, 230Vac: 0.9A	Hold-up Time	>16 mSec at 200W, 120Vac/60 Hz
Earth Leakage Current<500µA@264V, 60Hz, NC; <1mA SFC	Inrush Current	264Vac, cold start: will not exceed 55A	Overload Protection	120 to 150% of rating, cycling type
Efficiency88% typical for 12Vdc and 115VacIsolationInput-Output: 4000Vac Input-Ground: 1800Vac, Output-Ground: 1500VacOutput Power180W convection cooled 200W with 100 LFMOperating Temperature Derate output power linearly to 50% between 50 and 70°CTransient Response 50% load step.500µs typ. for return to within 0.5% of nominal, 50% load step.Over Temperature Protection Sensing transformer temperature, 165°C at full load, latching type, requires power cyclingRipple and Noise 1% pk-pk, measured directly across output terminals, load terminated with 0.1µF ceramic and 10µF low ESR capacitorsOver Temperature 165°C at full load, latching type, requires power cyclingOutput VoltageSee chartOperating Altitude-500 to 10,000 ftMinimum LoadNot requiredNon-operating Altitude-500 to 40,000 ftTotal Regulation Non-Operating: 0.003g²/Hz, 1.5gms overall, 3 axes, 10 min/axis Non-Operating: 0.026 g²/Hz, 5.0gms overall, 3 axes, 1 hr/axisShock Shock Operating: Half-sine, 20 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6	Input Fuses F1, F2:3	3.15A, 250VAC fuses provided on all models	Short Circuit Protection	No damage to supply, auto recovery
Input-Ground: 1800Vac, Output-Ground: 1500VacOutput Power180W convection cooled 200W with 100 LFMTransient Response500µs typ. for return to within 0.5% of nominal, 50% load step. Δi/Δt <0.2A/µS. Max Volt Deviation = 3%	Earth Leakage Current	<500µA@264V, 60Hz, NC; <1mA SFC	Overvoltage Protection	OVP latch at 110 to 130% of output voltage
200W with 100 LFMDerate output power linearly to 50% between 50 and 70°CTransient Response500µs typ. for return to within 0.5% of nominal, 50% load step. Δi/Δt <0.2A/µS. Max Volt Deviation = 3%	Efficiency	88% typical for 12Vdc and 115Vac		
50% load step.Al/At <0.2A/µS. Max Volt Deviation = 3%	Output Power			
Ioad terminated with 0.1µF ceramic and 10µF low ESR capacitors Output Voltage See chart Minimum Load Not required Minimum Load Not required Vibration +/- 3% combined line, load, and initial setting Vibration Operating: 0.003g²/Hz, 1.5g _{ms} overall, 3 axes, 10 min/axis Non-Operating: 0.026 g²/Hz, 5.0g _{ms} overall, 3 axes, 1 hr/axis Switching Frequency PFC: Fixed at 65kHz, Main converter: 50–120kHz, typical 70kHz at full load				5 1 <i>i</i>
Minimum Load Not required Non-operating Altitude -500 to 40,000 ft Total Regulation +/- 3% combined line, load, and initial setting Relative Humidity 5% to 95%, non-condensing Vibration Operating: 0.003g²/Hz, 1.5g _{ms} overall, 3 axes, 10 min/axis Non-Operating: 0.026 g²/Hz, 5.0g _{ms} overall, 3 axes, 1 hr/axis Shock Operating: Half-sine, 20 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 40 g _{pk}			Storage Temperature	-40 to +85°C
Total Regulation +/- 3% combined line, load, and initial setting Relative Humidity 5% to 95%, non-condensing Vibration Operating: 0.003g²/Hz, 1.5g _{ms} overall, 3 axes, 10 min/axis Non-Operating: 0.026 g²/Hz, 5.0g _{ms} overall, 3 axes, 1 hr/axis Shock Operating: Half-sine, 20 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g _{pk} , 10 ms, 40 g _{pk} , 10 ms, 40 g _{pk}	Output Voltage	See chart	Operating Altitude	-500 to 10,000 ft
VibrationOperating: $0.003g^2$ /Hz, $1.5g_{ms}$ overall, 3 axes, 10 min/axis Non-Operating: $0.026 g^2$ /Hz, $5.0g_{ms}$ overall, 3 axes, 1 hr/axisShockOperating: Half-sine, 20 g_{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g_{pk} , 10 ms, 3 axes, 6 shocks total Non-Operating: Half-sine, 40 g_{pk} , 10 ms, 3 axes, 6 shocks total Air Flow DirectionSwitching FrequencyPFC: Fixed at 65kHz, Main converter: 50–120kHz, typical 70kHz at full loadFrom AC input end towards to DC output end	Minimum Load	Not required	Non-operating Altitude	-500 to 40,000 ft
Non-Operating: 0.026 g²/Hz, 5.0gms overall, 3 axes, 1 hr/axisNon-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks totalSwitching FrequencyPFC: Fixed at 65kHz, Main converter: 50–120kHz, typical 70kHz at full loadNon-Operating: Half-sine, 40 gpk, 10 ms, 3 axes, 6 shocks total	Total Regulation	+/- 3% combined line, load, and initial setting	Relative Humidity	5% to 95%, non-condensing
Main converter: 50–120kHz, typical 70kHz at full load				
Dimensions W: 2.0" x I : 5.0" x H: 1.2" Weight: 225g ITE Safety Standards EN/CSA/III //EC 60050.1.2nd Edition	• • • •		Air Flow Direction	From AC input end towards to DC output end
	Dimensions	W: 3.0" x L: 5.0" x H: 1.3", Weight: 325g	ITE Safety Standards	EN/CSA/UL/IEC 60950-1, 2nd Edition

Model Number Key

CINI	1 20	<u>uu x</u>	12	<u>75 K 01</u>		
	Γ		Т		Model:	"01" = Standard Model, 02 and higher indicates a modified model.
					Input Connector:	"K" = 3 pin Header, Class I input; "C" = 2 pin header, Class II input.
					-Output Connector:	"75" = Output Connector - 6 pin Header.
					-Output Voltage:	"12" = 12Vdc, "24" = 24Vdc, etc.
		L			-Configuration:	"A" = First Generation, "C" = Optional Chassis/Cover
					-Output Power:	"200" = 200W
					# of Outputs:	"1" = Single Output
					Product Family:	"C" = ITE/Industrial, "I" = Internal, "NT" = New Technology
				· · · · · · · · · · · · · · · · · · ·	- <u>Output Voltage:</u> - <u>Configuration:</u> - <u>Output Power:</u> - # of Outputs:	"12" = 12Vdc, "24" = 24Vdc, etc. "A" = First Generation, "C" = Optional Chassis/Cover "200" = 200W "1" = Single Output

1 of 2

CINT1200



200W Single Output Series

3 Year Warranty

ITE Power Supply	
------------------	--

	Output Parameters				
Model Number	Volts (V)	Minimum Load	Output Current Convection/with 100 LFM	Total Regulation	OVP Threshold
CINT1200A1275K01	12 V	0 A	15.00A/16.66A	±3%	14.0 ± 1.1V
CINT1200A1575K01	15 V	0 A	12.00A/13.33A	±3%	18.5 ± 1.2V
CINT1200A1875K01	18 V	0 A	10.00A/11.11A	±3%	21.5 ± 2.0V
CINT1200A2475K01	24 V	0 A	7.50A/8.33A	±3%	29.0 ± 2.5V
CINT1200A2875K01	28 V	0 A	6.40A/7.14A	±3%	33.5 ± 2.5V
CINT1200A3275K01	32V	0 A	5.62A/6.25A	±3%	36.0 ± 3.0V
CINT1200A3675K01	36 V	0 A	5.00A/5.55A	±3%	41.0±3.0V
CINT1200A4875K01	48 V	0 A	3.75A/4.17A	±3%	56.0 ± 3.0V

EMI/EMC Compliance

Conducted Emissions	EN55011 Class B, FCC Part 15, Subpart B, Class B. Consult factory for EN55024 version.
Radiated Emissions	EN55011 Class B, FCC Part 15, Subpart B, Class A with over 6dB Margin
Static Discharge Immunity	EN61000-4-2, Criteria A, 6kV Contact Discharge, 8kV air discharge
Radiated RF Immunity	EN61000-4-3, 3V/m. Criteria A
EFT/Burst Immunity	EN61000-4-4, 2kV/5kHz, Criteria A
Line Surge Immunity	EN61000-4-5, 1kV differential, 2kV common-mode, Criteria A
Conducted RF Immunity	EN61000-4-6, 3Vrms, Criteria A
Power Frequency Magnetic Field Immunity	EN61000-4-8, 3A/m, Criteria A
Voltage Dip Immunity	EN61000-4-11, 5% Vnom: 0.5cycle; 40% Vnom: 5 cycles, 70% Vnom: 25 cycles, Criteria A
Line Harmonic Emissions	EN61000-3-2, Class A, B, C & D
Flicker Test	EN61000-3-3, Complies (dmax<6%)

Mechanical Drawings and Connector Information



Input Connector – J100 (AMP 641937-1) Mating Connector AMP 640250-3 Pins: 640252-2			
Pin 1	AC Line		
Pin 2	N.C.		
Pin 3	AC Neutral		

Output Connector – J300 (AMP 640445) Mating Connector: Molex 640250-6 Pins: 640252-2		
Pin	Connection	
1	RTN	
2	RTN	
3	RTN	
4	+V1	
5	+V1	
6	+V1	

Notes:

• Dimensions are in mm (inches with +/- 0.000 tolerance)

• Metal standoffs with 0.2" (5mm) height are required for mounting

• FG is around connection-J101 P/N 1285 AMP

Data Sheet © 2012 SL Power Electronics Corp. The information and specifications contained herein are believed to be correct at the time of publication. Rev. 9/11/12 However, SL Power accepts no responsibility for consequences arising from reproduction errors or inaccuracies. Specifications are subject to change without notice.

SL Power Electronics Corp • 6050 King Drive Ventura, CA 93003 • Phone 805.486.4565 • Fax 858.712.2040 • Email: info@slpower.com • www.slpower.com