Astrodyne TDI
Now you have power.

365W High Density PFC Switcher with 12V aux & 5V Stand By — ASL365 series

3" x 5" x 1.28"

- Single Outputs with 12V Auxillary and 5 Volt Stand By
- Universal 90 to 264VAC Input
- 18W/in3 Power Density
- 12VDC to 48VDC Outputs
- 3,000VAC Input to Output Isolation
- Short Circuit Protection

This specification describes an open frame 365W forced air / 200W convection cooled power supply that provides three independent direct constant voltage outputs, one of which may be configured as a stand by power supply (5V) powered from an external main AC source or UPS and utilizes an active PFC (Power Factor Correction) topology in an industry standard 3" x 5" x 1.28" package. Also included is a 12V auxilary output suitable for driving a fan. The supply shall meet the requirements (80-Plus) of the Energy Star 4.0 document and the anticipated 90+ requirement for 2010. The supply is also RoHS/WEEE compliant.

Model Number	O/P VDC	Iout (Convection / 200LFM)	12V aux.	5VSB (5 Volt Stand By)	OVP
ASL365-12	12VDC	16.6 / 30.4A	0.5 / 1A	1 / 2A	13.2-15V
ASL365-24	24VDC	8.3 / 15.2A	0.5 / 1A	1 / 2A	26.4-30V
ASL365-48	48VDC	4.16 / 7.6A	0.5 / 1A	1 / 2A	52-60V

All specifications are typical at nominal input, full load, and 25DegC unless otherwise noted

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INPUT SPECIFICATIONS

Input Voltage Range	90-264VAC
Harmonic Input Current	EN61000-3-2
	(230V/50Hz; 100V/50 or 60Hz)
Input Current FL	<5A @ 90VAC; <2.5A @ 180VAC
Input Power Rating	<430 Watts
Inrush Current	53A @ 110V; 116A @ 220V, typ.
Efficiency	90%, typ.
Input Frequency	47-63Hz
Power Factor (90VAC)	0.98% min.
Under Voltage Lockout	No Damage
Transients	IEC61000-4-4 Level 3
	IEC61000-4-5 Level 3
Leakage Current (115/230 I/P)	110/275uA

OUTPUT SPECIFICATIONS

Voltage Adjust	±5% Main Output typ.
Load Regulation	Main O/P: ±1% max.; all others ±5%
Line Regulation	±1% High Line to Low Line
Tolerance	Main O/P: ±3%; 5VSB: ±5%
	12V aux.: ±15%
Transient Response	
(50% Load Change)	10% Recover within 1mS
Start Up	5VSB: 700mS, typ.
	All other outputs: 500mS, typ.
Hold Up	Main O/P: 20mS. typ.
	5VSB: 2S, typ.
Rise Time	5VSB: 0.7S
	All Other Outputs: 20mS max.
Overshoot (Power On/Off)	Vout x 1.1; 50mS max.
Ripple/Noise (Note 1)	12V aux: 2% of Output
	All other outputs: ±1%
Short Circuit	Auto Recovery; No Damage *
Over Current Protection	150%, Auto Recovery
Over Voltage Protection (OVP)	5VSB: 5.5-6.8V
Main O/P:	See Model Selection Chart
Remote Sense	<250mV drop compensation
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 (5VSB)	2A current always on when AC input
	is present
12V Auxilary	1A current to power cooling fan(s)

GENERAL SPECIFICATIONS

Isolation I/P-O/P	3000VAC 1 Minute
Safety Standards	UL 60950-1, 2nd Edition, 03-27-2007
	covering European Market
Size	3" x 5" x 1.28"

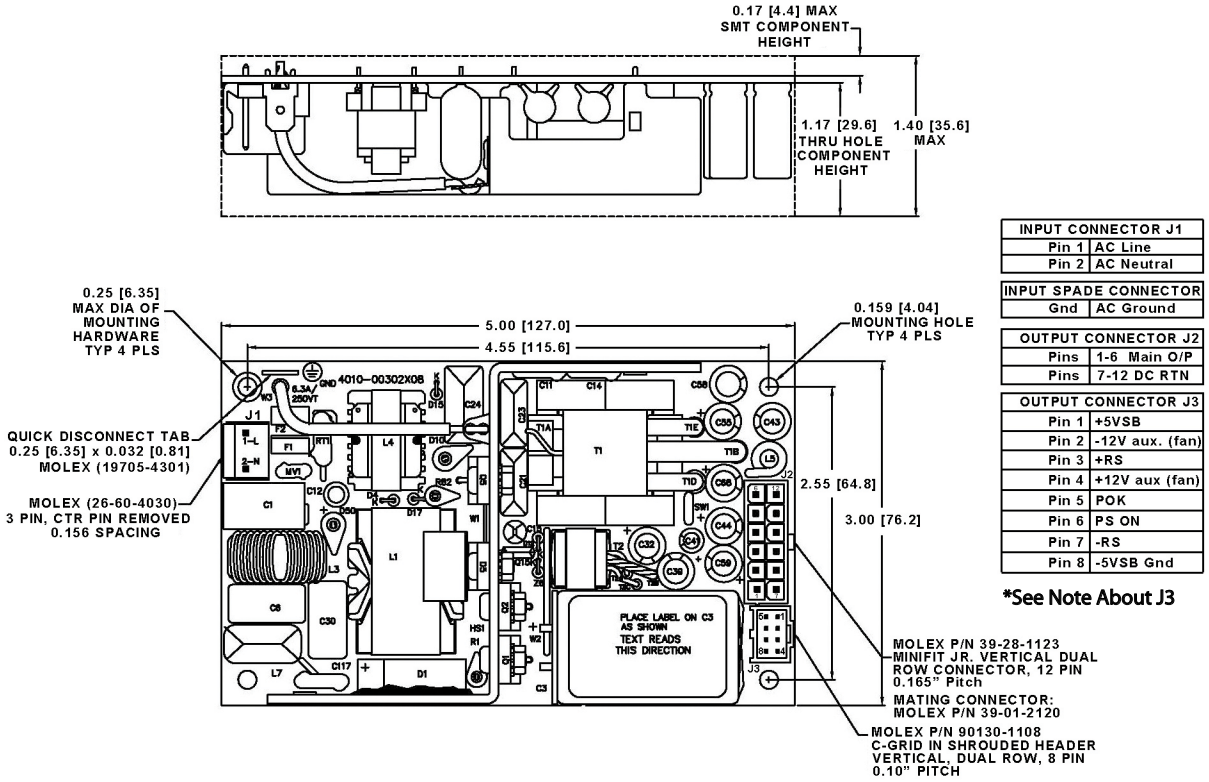
ENVIRONMENTAL SPECIFICATIONS

Oper. Temperature	-20 to +50°C (See Derate Curve)*
Max. Heatsink Temperature	110°C @ 50°C ambient
Cooling	200LFM >200W O/P Power
Relative Humidity	95% Non Condensing
Storage Temperature	-40 to +80°C *
Operating Altitude	5KFT ASL, derated to 40°C @ 10KFT
Shock	10G, 11mS Half Sine, 3 Axis
Vibration	0.5G, 10-300Hz, 3 Axis
MTBF	>250,000 Hrs, 75% Load, 35°C
EMI/EMC	EN55022:1998 (CISPR22 Class B Conducted)
Voltage Fluctuation	EN61000-3-3
ESD	EN61000-4-2, 15KV Air, 8KV Contact
Radiated Field	EN61000-4-3, 3V/m, 80-1000MHz
	80% Modulated; 3M distance
EFT	EN61000-4-4, 2kV on AC port for
	1 minute ±1kV on signal/ctrl lines
Surge	EN61000-4-5, ±1kV line to line;
	±2kV line to earth
Conducted RF	EN61000-4-6, 3Vrms, 0.15-80MHz
	80% Modulated
Voltage Variations	EN61000-4-11: >95% dip, 0.5 period
	30% dip. 0.25 period
	>95% reduction, 250 periods
Harmonic Current Emissions	IEC61000-3-2 Class D

Note 1: O/P Noise measured directly at the pins/terminals at nominal load with a 0.1uF bypass and 47uF electrolytic capacitor; pk-pk @ 20MHz bandwidth.

* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranteed nor implied.

MECHANICAL SPECIFICATION



INPUT CONNECTOR J1	
Pin 1	AC Line
Pin 2	AC Neutral

INPUT SPADE CONNECTOR	
Gnd	AC Ground

OUTPUT CONNECTOR J2	
Pins	1-6 Main O/P
Pins	7-12 DC RTN

OUTPUT CONNECTOR J3	
Pin 1	+5VSB
Pin 2	-12V aux. (fan)
Pin 3	+RS
Pin 4	+12V aux (fan)
Pin 5	POK
Pin 6	PS ON
Pin 7	-RS
Pin 8	-5VSB Gnd

*See Note About J3

***Note:** For proper ON operation please provide a connection (short) between Pins 6 (PS ON) and 8 (-5 AUX GND) on Connector J3

DERATE CURVE