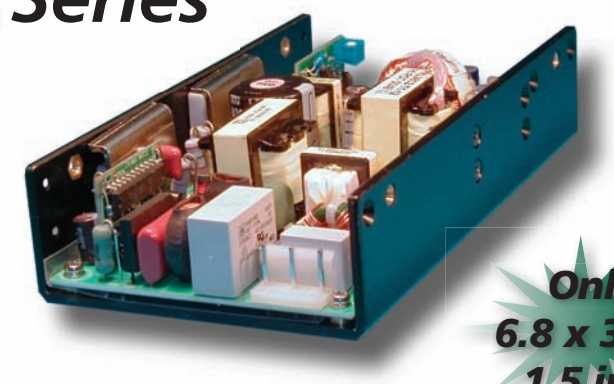
MPA200L Series

Low Profile 200W Single Output Power Factor Corrected AC/DC Power Supplies



Only 6.8 x 3.8 x 1.5 in!!

Key Features:

- 200W Output Power
- Universal 90-264V AC Input
- PFC to EN61000-3-2 "D"
- UL, cUL, TUV Approvals
- CE Certified
- FCC Class B Emissions
- 3.3, 5, 12, 24 & 48 V Outputs
- Peak Power to 600W

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Electrical Specifications

Specifications typical @ +25°C, nominal input voltage & rated output current, unless otherwise noted. Specifications subject to change without notice.

Input

Parameter	Conditions	Min.	Typ.	Max.	Units
Input Voltage Range	Universal	90		264	VAC
Input Frequency		47		63	Hz
Input Current, Full Load	100 VAC		4		A
Inrush Current, Cold Start	110 VAC			35	A
Leakage Current (Note 1)	240 VAC		1.5		mA
Power Factor Correction	Active, Meets EN61000-3-2 Class D				
Input Protection	T5A/250V Fuse				

Output

Parameter	Conditions	Min.	Typ.	Max.	Units
Output Voltage Adjustment	By Trim Pot		±5.0		%
Output Regulation (Note 2)			±1.0		%
Hold Time	80% Load		20		mSec
Ripple & Noise (20 MHz) (Note 3)	See Model Selection Guide				
Overload Protection	Hiccup Mode, Auto Recovery	110		140	%
Over Voltage Protection	>130% of Rated Output Voltage. Recycle AC Input.				
Over Temperature Protection	>+85°C Ambient with Autorecovery				
Temperature Coefficient			±0.04		%/°C
Transient Recovery Time (Note 4)	50% Load Change		500		μS
Transient Response Deviation			5		%
Overshoot/Undershoot	At Turn On/Off			5.0	%
Turn On Delay	120 VAC			1	S
Output Short Circuit	Continuous With Autorecovery				

General

Parameter	Conditions	Min.	Typ.	Max.	Units
Isolation Voltage	Input - Output	3,000			VAC
	Input - FG (Frame Ground)	1,500			
	Primary - Core	1,500			
Switching Frequency	Fixed		23		kHz

Interface Signals

Power Supply On	Green LED (LED1) on the PCB
Power Good Signal	PG on CN3. Goes TTL high 100 to 500 mS after regulation. Goes low at least 1 mS before the loss of regulation. Will sink 100 mA.
Remote Sense	RS + and RS- on CN3. Compensates for up to a 0.5V line drop.
Remote On/Off	REMO on CN3. A TTL low signal inhibits the output

Environmental

Parameter	Conditions	Min.	Typ.	Max.	Units
Operating Temperature Range	Ambient	0	+25	+50	°C
Output Derating	2.5%/ °C from +50 °C to + 70 °C				
Storage Temperature Range		-20		+85	°C
Cooling	See Model Selection Guide				
Operating Humidity	RH, Non-condensing			90	%

Reliability Specifications

Parameter	Conditions	Min.	Typ.	Max.	Units
MTBF	MIL HDBK 217F, 30°C, Gnd Benign	100			kHours
Safety Standards	UL 60950; CSA C22.2 No. 60950; TUV EN60950; CB Report (IEC 60950)				
EMI Compliance	Compliance to EN55022 (CISPR22) Class B; EN61000-3-2,3				
EMS Immunity Compliance	EN6100-4-2,3,4,5,6,8,11; EN55024,; CE Marked (LVD)				

Model Selection Guide

Model Number	Output Voltage		Output Current (Notes 6, 7, 8)			Ripple & Noise	Efficiency (Note 7)
	Factory PreSet	Range (Note 5)	("U" units) Max.	Min	With 17 CFM		
MPA200Lx-03z	3.3 VDC	3.0 - 4.0 VDC	22.00A	0.0A	30.00A	50 mV p-p	70%
MPA200Lx-05z	5 VDC	5.0 - 6.0 VDC	22.00A	0.0A	40.00A	50 mV p-p	75%
MPA200Lx-12z	12 VDC	12.0 - 18.0 VDC	12.50A	0.0A	16.66A	1% p-p	80%
MPA200Lx-24z	24 VDC	24.0 - 36.0 VDC	6.25A	0.0A	8.33A	1% p-p	83%
MPA200Lx-48z	48 VDC	36.0 - 56.0 VDC	3.12A	0.0A	4.16A	1% p-p	83%

Notes:
1. Models are available with leakage current specified as low as 750 µA. Contact the factory for details.
2. Output regulation includes line & load.
3. Ripple & noise is measured from 10 Hz to 20 MHz. Measurement connection to the unit is made with a 0.1 µF ceramic capacitor & a 22 µF electrolytic capacitor connected in parallel.
4. Transient recovery is measured to within a 1% error band for a load step change of 50% to 100%.
5. The full output range (see table above) is covered in the safety agency certification. Standard models are factory set to the "Preset" voltage. This may be set to other levels within the range without affecting the agency certification. Contact the factory for details.
6. A minimum 1% load is required to maintain load regulation and ripple specifications.
7. Output current is given for the factory preset voltage. For more information, contact the factory.
8. Units will provide peak power of 600W for 500 µS. For units capable of longer durations, contact the factory.

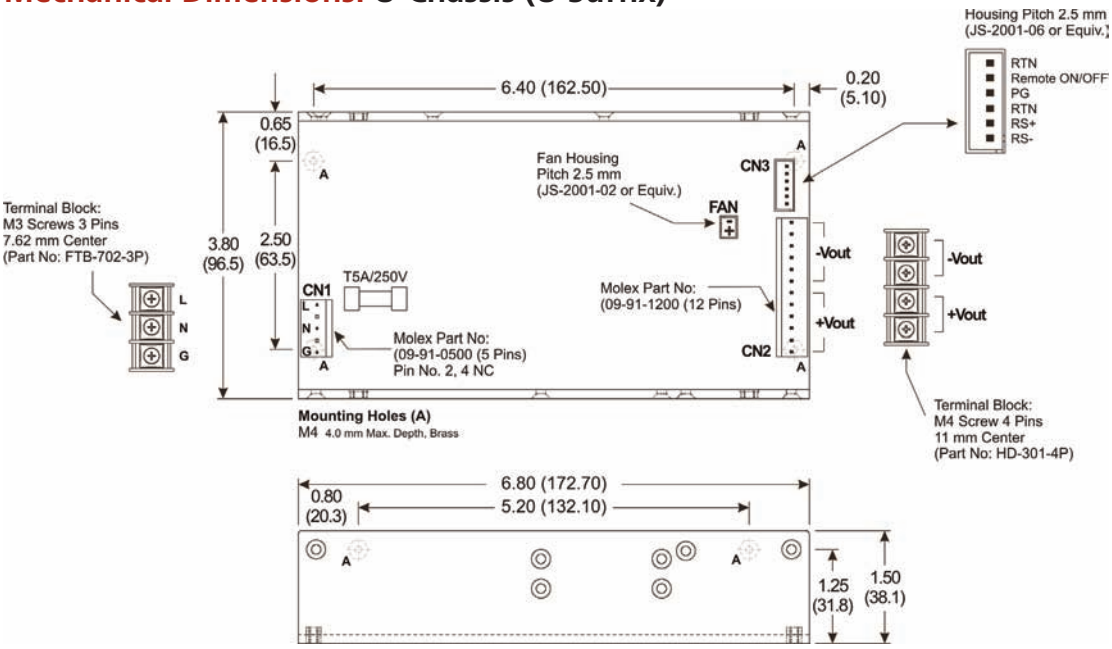
Input Connector CN1:
U-Chassis (U,C)
Mating Molex Part No. 09-91-0500 (5 pin, 3 used) or Howder Terminal Block No. FTB-702-3P (3-pin) or equivalent.
Output Connector CN2:
Mating Molex Part No. 09-91-1200 (12 pin) or Howder Terminal Block No. HD-301-4P (4-pin) or equivalent.
Output Pin Assignment:

Howder	Molex
Pins 1 ~ 2: V+	Pins 1 ~ 6: V+
Pins 3 ~ 4: V-	Pins 7 ~ 12: V-

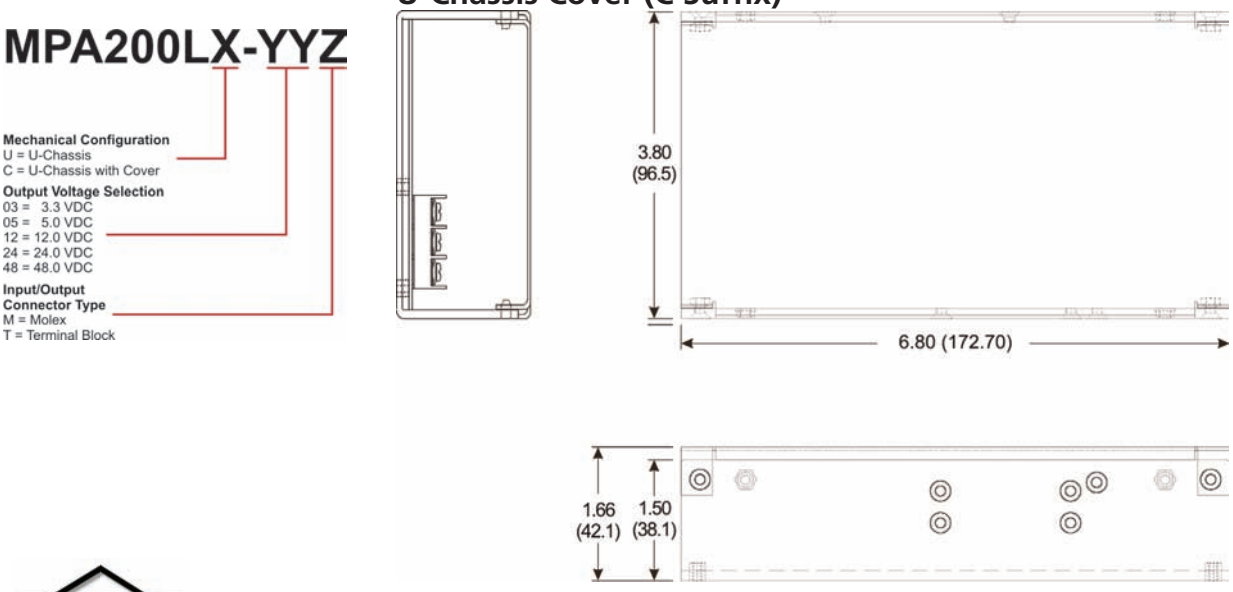
Logic Signal Connector CN3:
Mating JST XHP-6 or equivalent (CHYAO SHIUNN JS-2001-06).

Fan driver connector (FAN):
12 VDC / 500 mA is available to drive an external fan. Mating JST XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02).

Mechanical Dimensions: U-Chassis (U Suffix)



U-Chassis Cover (C Suffix)



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