

ABOUT US

POWER SUPPLIES

BATTERY DOC

PRESS RELEASES

SALES

Modular Power Systems

- Redundant Operation
- Hot Pluggable
- Unlimited Output Combinations
- Safety Approval for All Combinations
- Instant Custom-Made Power Supply
- Short Cycle Delivery
- No NRE Charges

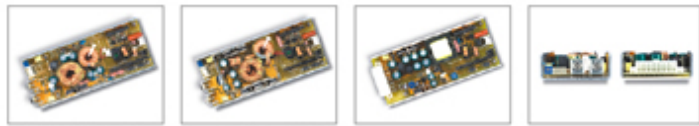


Advanced Features

- Modular Design
- Fully Configured
- Universal AC Input 85~264 Vac
- High Efficiency >75% at Full Load
- High Power Density 7.3W/Cu.inch
- Active PFC .0.99
- OR-ing Diode
- Active Current Sharing
- Front Panel LED Indicator
- Remote Sense
- Remote On/Off
- Multiple Options
- No Minimum Load Requirement
- One Year Warranty

[Download the Modular Power Systems Brochure](#)

The MPS series is a cost effective modular power system with an universal input active PFC front end. It utilizes innovative technical and mechanical designs to offer 26 variations of off the shelf DC-to-DC power modules, which can be configured with both single and multiple outputs ranging form 1.5 Volts to 60 volts. You select only what you need. The flexible configuration of the MPS series saves your time, cost and size, while still providing a highly efficient and reliable product.



DC-to-DC modules with Screw Terminal (Industrial Version)



DC-to-DC modules with Postronic Connector (Hot Pluggable Version)

SPECIFICATIONS

ENVIRONMENTAL

ESD	IEC 1000-4-2 Level 4 stand-alone
Operating temp.	-20~50°C (start @0°C) derating each output linearly to 50% at 70°C
Operating humidity	0~95% non-condensing
Storage temp.	-40~85°C
Storage humidity	5~95%RH non-condensing
Vibration/Shock	Per Mil-Hdbk 810E
Temp. Coefficient	±0.02% per °C
Cooling	Internal DC fan
Acoustics	<45dBA @1 meter from surface
Altitude	10,000ft. max. Elevation
MTBF per mil std 217E	>250,000 hours at full load and 30°C ambient conditions

SAFETY CERTIFICATIONS

- UI1950
- UL60101-1 (UL2601)
- CSA22.2 No.950
- EN 60950
- CB Certificated
- CE Mark

ELECTRICAL

AC Input	
Input range	85~264 VAC, 120~350VDC
Frequency	47~440Hz
Inrush current	40A peak max.
Efficiency	>75%typ. @ Full load with Oring
Power factor	0.99typ. Meets EN61000-3-2
Turn-on time	AC on 1.5sec. Typ., Inhibit/Enable 150 ms typ.
Leskage current standard	3.5mA max. @ 240VAC
Leakage current UI2601	300qA max. @240VAC
Holdup time	20mS minmum@120VAC nominal
Global inhibit/enable	TTL, Logic "1" and Logic "0"

SYSTEM CONFIGURATION

System	Model	Description
700/1000W	MPS10	<ul style="list-style-type: none"> • 5 slots to configure DC-to-DC modules • 700W capacity of Main PFC/EMI PCB at 110Vac • 1000W capacity of Main PFC/EMI PCB at 230Vac • Dimensions: <ul style="list-style-type: none"> ◦ 11(L)x5(W)x2.5(H)inches Weight:4.96 lb ◦ 279.4(L)x127(W)x63.5(H)mm; Weight:2250g
1000/1600W	MPS16	<ul style="list-style-type: none"> • 8 slots to configure DC-to-DC modules • 1000W capacity of Main PFC/EMI PCB at 110Vac • 1600W capacity of Main PFC/EMI PCB at 230Vac • Dimensions: <ul style="list-style-type: none"> ◦ 11(L)x5(W)x2.5(H)inches; Weight:6.28 lb ◦ 279.4(L)x203.2(W)x63.5(H)mm; Weight:2850g
MPS Series		High power density up to 7.3W/Cu.inch 2 types of connectors selection in DC-to-DC modules Screw terminals for industrial use and positronic connector for hot plug Redundant operation between the same voltage modules, despite of modules in the same or different system
Note: Specifications are subject to change without prior notice.		

OUTPUT MODULE SELECTIONS

Single Output Module Selection			
Volts(Nom)	Amps(Nom)	Total Power	Module Code
1.5V	50A	75W	A
2.0V	50A	100W	B
2.2V	50A	110W	C
3.0V	50A	150W	D
3.3V	50A	165W	E

Input fuse (internal)	MPS10: 12A MPS16: 20A
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LED Indicators & Status Signals

DC OK (Green Light)	-10% of nominal for any monitored output (for single output modules only)
AC OK (Green Light)	>5mS early warning min. Before outputs lose regulation, Full cycle ride thru (50Hz)
Fan fail (Yellow Light)	
Over temp. alert (Orange Light)	

EMC

- CISPR22 Class B
- CISPR22 Class A (Medical)
- FCC 20780 pt 15J, Class B
- Harmonic distortion EN61000-3-2

DC Input

Margining	±4-6% nom. (For single output modules only)
Adjustment range	±10%min. All outputs
Total regulation	0.4% (100W module 5% max)
Ripple & Noise	RMS:0.1% or 10mv, whichever is greater Pk-pk: 1% or 50mV, whichever is greater Bandwidth limited to 20MHz
Recovery time	To within 1% in <300 s ec
Dynamic response	<4% with 25% load step
Over current protection	Single output module 105-150% or rated output current Triple output modules internally protected
Short circuit protection	Protected for continuous short circuit Recovery is automatic upon removal of short circuit

5.0V	40A	200W	F
5.2V	40A	208W	G
6.0V	34A	204W	H
9.0V	21A	189W	I
10.0V	20A	200W	J
11.0V	18A	198W	K
12.0V	17A	204W	L
14.0V	15A	210W	M
15.0V	14A	210W	N
18.0V	12A	216W	O
20.0V	10A	200W	P
24.0V	9A	216W	Q
28.0V	7.5A	210W	R
30.0V	7A	210W	S
33.0V	6.4A	211W	T
36.0V	6A	216W	U
42.0V	5A	210W	V
48.0V	4.5A	216W	W
54.0V	4A	216W	X
56.0V	3.8A	213W	Y
60.0V	3.5A	210W	Z

DC MODULES

- Choice of 26 Modules
- From 1.5V to 60V
- Power Rating 75~216Watts
- Screw Terminal or Positronic Connectors
- Individual Grounding
- Individual Regulation
- Low Ripple & Noise
- OR-ing Diode Standard
- Active Current Sharing
- Over Current Protection
- Short Circuit Protection
- Over Voltage Protection
- Reverse Voltage Protection
- Thermal Protection
- Remote Sense
- No Minimum Load Requirement
- Switching Frequency:200KHz

Triple Output Module Selection

100W Total Output Power	Input
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Over voltage protection (Measured at sense connection)	<p>Single output modules:</p> <ul style="list-style-type: none"> 1.5-5.5V 122-134% 6-60V 110-134% <p>Triple output module:</p> <ul style="list-style-type: none"> Protection of main output+5V provided Recycle the AC input voltage to reset OVP circuit
Reverse voltage protect	100% of rated output current
Thermal protection	All outputs disabled when internal temp exceeds safe operating range >5ms warning (AC OK Signal) before shutdown
Remote sense	Up to 0.5V total drop(Single output only)
Single wire current sha	Current share to within 5% of other Paralleled like modules
Minimum load	Not required
Housekeeping/ Bias voltage	5VDC @ 300mA max Present whenever AC input is applied
Module inhibit	Available on single output modules
Switching frequency	PFC Board : 100KHz (fixed) DC/DC single output module 200kHz (fixed) DC/DC triple output module 100kHz(fixed)
Output/Output isolatio	>1 Megohm
Note: Specifications are subject to change without prior notice.	

Output 1(V1)	Output 2(V2)	Output 3(V3)	Module Designation
5V@15A(20Apk)	24V@ 4A (6Apk)	+5V@ 1A	1
5V@15A(20Apk)	24V@ 4A (6Apk)	-5V@ 1A	2
5V@15A(20Apk)	24V@ 4A (6Apk)	+5V@ 1A	3
5V@15A(20Apk)	24V@ 4A (6Apk)	+12V@ 1A	4
5V@15A(20Apk)	12V@ 9A (14Apk)	-12V@ 1A	5
5V@15A(20Apk)	12V@ 9A (14Apk)	-5V@ 1A	6
5V@15A(20Apk)	12V@ 9A (14Apk)	+12V@ 1A	7
5V@15A(20Apk)	12V@ 9A (14Apk)	-12V@ 1A	8
<p>Note: Consult factory for other available options BP1-The rear cover of systems. Used when customers don't select DC-DC Module.</p>			

MECHANICAL DRAWINGS

MODEL CONFIGURATION

MPS10 Series Dimension & Weight				
Model	Depth	Width	Height	Weight
MPS 10 700W/1000W	11 inches 279.4 mm	5 inches 127 mm	2.5 inches 63.5 mm	4.96 lb 2250g

Pin Assignment Information

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