

MTCA 4.0 1000W PS

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The WIENER MTCA.4 is a low noise and ripple / high power density power supply in a double height / double width form factor. Designed according to the PICMIC MTCA-4 standard it provides 1000W for 12V payload power as well as 3.3V management power.

The W-IE-NE-R MTCA.4 includes the AC mains filter, the low noise AC-to-DC converter in switching technology as well as the digital power controller for up to 16 slots.

Being designed with applying the classical rules for common mode suppression and ground loop reduction the W-IE-NE-R MTCA.4 power supply is essential for enhanced DAQ performance in noise sensitive applications in science and industry. The integrated MTCA.4 Digital Power Controller together with the Hub protects the whole MTCA.4 crate and its modules. It also monitors the complete chain from mains input, PFC and DC/DC-converter stages to the outputs to prevent the

unit from any uncontrolled operation.

Main Features

- 1000W low noise power supply according to MTCA-4 standard
- Wide range AC input 90 - 264 VAC / 50 - 60 Hz
- Integrated MTCA.4 Digital Power Controller
- 16 channels 12V DC, up to 8.4A each (payload power), max 1000W total and 16 channels 3.3V DC, up to 0.2A (management power)
- Double height - double width MTCA size

MTCA-4 Power Supply Features

- 1000W power supply according to MTCA-4 standard
- Lowest noise and ripple, < 10mV peak to peak (0 - 20 MHz)
- Wide range AC input 90 - 264 VAC / 50 - 60 Hz
- Integrated MTCA.4 Digital Power Controller
- DC Outputs: 16 channels 12V/8.4A (payload power) max 1000W total and 16 channels 3.3V/0.2A (management power)
- USB interface
- Double height - double width size
- Dimensions: 187.3 mm x 170.0 mm x 59.4 mm (7.37" x 6.69" x 2.89")

Item	Description
MTCA-4	1000W MTCA-4 double height / double width power supply, wide range AC input

1000W MTCA.4 Power Supply

Ultra high density power supply in WIENER zero-switching low-noise-cavity technology including PFC unit, DCDC unit and Current Controller for all 16 MTCA.4 channels. Wide range mains input 92-265VDC, 47-63Hz.

Power supply	+3.3V	+5V SMP	+12V	max. power (*: 92-265VAC)	regulation	application
1000W MTCA.4 PS	4A	>0,2A	67A	1000W*	switched	MTCA.4 or double width MTCA.0 (doubled height must fit)

Specs:

1000W MTCA.4 Power Supply	12V Payload Power
Input voltage, 47-63Hz	92V-265V, <16A sinusoidal
Output Ripple and Noise: Full load / 80% rated output (0-20Mhz Bandwidth)	<10mVpp / <6mVpp, <1mVRMS

Line Regulation Accuracy of 12V versus line change 100V - 253V (230V) at full Load (80A)	<3mV
Load Regulation Accuracy of 12V versus load change 25% (4/6A)	static <43mV, dynamic <55mV
Recovery time of 12V versus load change 25%	<0.2ms at 4/6A, <0.15ms at 6/4A
Output impedance: Static / Dynamic(at 100kHz, 6V output)	0.5mOhm / 250mOhm
Temperature Error	<0.02%/K
Thermal Protection (No. of thermal switches)	(5x)
Derating, max. operating temperature	no derating up to 40°C, 800W at 50°C max.
3V3 Management Power	
Output Ripple and Noise: Full load / 80% rated output (0-20Mhz Bandwidth)	<12mVpp / <10mVpp, <5mVRMS
Output Ripple Frequency	1.25 MHz
Line Regulation Accuracy of 3V3 versus line change 100V - 253 (230V) at full Load (0,2A)	<1mV
Load Regulation Accuracy of 3V3 versus load change 25% (0,1/0,15A)	static < 25mV
Short Time / Long Time Output Current Limit	8A / 4A

EMC compatibility

EN 61 000-6-3:2001	[RF emission]
EN 55 022:1998 + Corr:2001 + A1:2000 Class B	conducted noise
EN 55 022:1998 + Corr:2001 + A1:2000 Class B	radiated noise
EN 61 000-3-2:2001	harmonics
EN 61 000-3-3:1995 +Corr:1997 +A1:2001	flicker
EN 61 000-6-2:2001	[immunity]
EN 61 000-4-6:1996 + A1:2001	injected HF currents
EN 61 000-4-3:1996 + A1:1998 + A2:2001	radiated HF fields, "900MHz"
EN 61 000-4-4:1995 + A1:2001	burst
EN 61 000-4-5:1995 + A1:2001	surge
EN 61 000-4-11:1994 + A1:2000	voltage variations
EN 61 000-4-2:1995 + A1:1998 + A2:2001	ESD

Product Data Sheet

Documentation

Manual/Tech-Notes :

[MTCA.4 PS manual](#)

Introduction:

[WIENER Power Supplies intro](#)

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