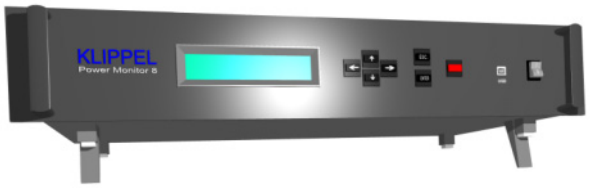
Power Monitor 8 **H2**

Digital Processor Unit of the KLIPPEL ANALYZER SYSTEM for enhanced power testing

FEATURES

- Special hardware for power testing
- Eight channel speaker monitoring
- Voltage and current measurement
- Sampling rate up to 96 kHz
- Stand-alone operation
- Computer-controlled operation
- Automatic firmware update
- Fast, hot plug USB interface
- Large internal memory for long term tests
- 19” / 2U rack mountable



Power Monitor 8 is a special hardware platform for the long term testing of up to 8 speakers simultaneously. The hardware hosts a high performance digital signal processor for demanding calculations and accurate 24 Bit AD/DA converters with a sampling frequency up to 96 kHz. The Power Monitor 8 can be operated as a stand-alone unit by using the key pad and the display. Connecting a computer via USB-interface the computer software dB-Lab and several measurement modules can be used to control the unit and visualize the results. In addition to the 8 channel speaker monitoring the hardware provides a two channel line (XLR) in- and output.

A low current version with higher sensitivity is available on request.

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Front

Display	Alphanumeric LCD display (Back-lighted)
←, →, ↑, ↓	Arrow keys for cursor navigation (left, right, up and down)
ENTER	Key for starting an operation, confirming data, or going to a sub menu
ESC	Key for quitting a sub menu and loading the upper menu level
RED KEY	Key to stop the current measurement
USB	Connector to USB port of Windows compatible PC or hub. If a computer is connected to the USB port at the front side, the USB port at the rear side is disabled.
Power Switch	Main power switch (switch off/on, hardware reset)

Rear

Power	Input from Switching Mode Power Supply
USB	USB connector for an upstream connection to the PC. If both USB ports are connected to a PC, the front side USB connection has a higher priority and disables the rear USB port.
IN 1, 2	External analog input IN1 or IN2 can receive signals by using pin 2 and 3 for symmetric signals and pin 1 for ground. For supplying an asymmetric input signal to one of the signal pins the other input pin should be connected to ground.
OUT 1,2	The XLR output connector OUT 1 or OUT2 provides a symmetric analog output signal at pin 2 and 3 and ground at pin 1. If asymmetric output is required use one of pin 2 or 3 and let the other signal pin open. Do not short to ground.
Speaker 1..8	The SPEAKON® output connector SPEAKER 1..8 is to be connected to the terminals of the loudspeaker under test by using pins 1+ and 1- of the loudspeaker cable. The pins 2- and 2+ of the connector are used to sense the voltage at the loudspeaker terminals.
Amplifier 1,2 ... 7,8	The SPEAKON® input connector AMP is to be connected with a 2 channel output signal of the power amplifier. The signals supplied to pins 1- and 1+ will be provided to the Speaker 1, 3, 5 or 7. The signal at the pins 2- and 2+ provide the signal to the Speaker 2, 4, 6 or 8.

Recommended Operating Conditions

Parameter	Symbol	Min	Typ.	Max	Unit
Power Supply Voltage	V_{AC}	100		240	V
Power AC-Frequency	f_{AC}	47		63	Hz
Operating Ambient Temperature	T_A	0	25	50	°C
Input Power	P		10	50	W

Electrical Characteristics

Parameter	Symbol	Min	Typ.	Max	Unit
Analog Line Inputs					
Input Voltage (peak, symm.) in PWT software attenuated to (symm.)	U_{in}	-10 -3.5		10 3.5	V V
Input Impedance	R_{in}		10		kΩ
Input Frequency Range	f_{in}	DC		48	kHz
THD+Noise (Sine) @ 1 kHz		96	100		dB
Input Crosstalk Attenuation		110			dB

Parameter	Symbol	Min	Typ.	Max	Unit
Analog Line Outputs					
Output Voltage (peak, symm.)	U_{out}	-9		9	V
Output Impedance	R_{out}	560	600		Ω
Output Frequency Range	f_{out}	DC		48	kHz
THD+Noise (Sine) @ 1 kHz		100	105		dB
Output Crosstalk Attenuation		110			dB
Speaker 1 – 8					
Current[1]					
Current, peak (default, high, low)[1]	I_{peak}			50 / 50 / 15	A
Current, rms 10s max. (default, high, low)[1]	$I_{rms,10s}$			20 / 32 / 10	A
Current, rms (default, high, low)[1]	I_{rms}			8 / 20 / 8	A
Linearity				±0.1	%
Frequency Response Range DC … 10 kHz				0.2	dB
Frequency Response Range DC … 40 kHz				1	dB
Serial Resistance (default, high, low)[1]				0.5 / 0.5 / 12	mΩ
Signal to Noise Ratio (full scale)		75			dB
Voltage					
Voltage, peak	U_{peak}			300	V
Frequency Response Range DC … 10 kHz				0.2	dB
Frequency Response Range DC … 40 kHz				1	dB
Signal to Noise Ratio (full scale)		75			dB
Note:[1] special low / high current versions available on request					

General Specifications

Dimensions	483 mm x 300 mm x 88 mm (103 mm with feet) 19” / 2 Units
Weight	5 kg
EMC	IEC 61326:1997 + A1:1998 + A2:2000 (EN 61326:1997 + A1:1998 + A2:2001)
Safety	IEC 61010-1:2001 (EN 61010-1:2001)

Find explanations for symbols at http://www.docs.klippel.de/symbols.pdf

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