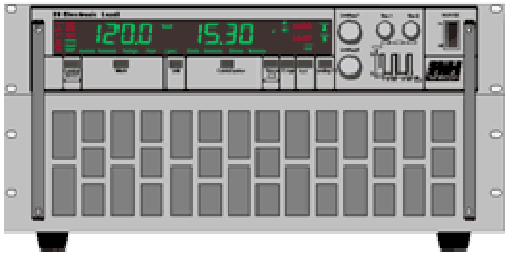
HEIDEN
COMPETENCE IN POWER

DATASHEET 1310-3212

Operating Modes Setting

Current:	Voltage:	Resistance:	Power:
0 ... 50 A	**0 ... 40 V**	**0.04 Ω ... 26.6 Ω**	**0 ... 2600 W**
0 ... 150 A	**0 ... 120 V**	**0.013 Ω ... 8.89 Ω**	**0 ... 7800 W**



Accuracy of the Manual Setting, without Presetting:

	of setting	of corresponding range
Voltage	**±0.2%**	**±0.05%**
Current	**±0.2%**	**±0.05%**

Accuracy of Manual Setting with Presetting:

	of setting	of corresponding range
Voltage	**±0.6%**	**±0.05%**
Current	**±0.6%**	**±0.05%**
Resistance	**±1.4%**	**±0.3%** of current range
Power	**±1.4%**	**±0.5%**
Current Limitation	**±1.4%**	**±0.3%**
Trigger Voltage	**±1.4%**	**±0.3%**
Time Setting	**±1.4%**	**±0.5%** of B1 or B2

Time ranges for internal modulator

B1	**100ms**
B2	**1000ms**

Accuracy of Display:

	of measured value (real value)	of corresponding range
Voltage	**±0.2%**	**±0.05%**
Current	**±0.2%**	**±0.05%**

Accuracy of Analog Programming:
0 ... 5V / 0 ... 10V for Current, Voltage, Power

	of setting	of corresponding range

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Voltage	**±0.2%**	**±0.1%**
Current	**±0.2%**	**±0.1%**
Power	**±2%**	**±0.5%**
Current Limitation *	**±1%**	**±0.4%**
Trigger Voltage *	**±1%**	**±0.4%**

** only when option ZS08 is installed*
Input impedance of the analog inputs: > 10kΩ
GND max. ±2V against negative load input [1)]

Accuracy of Analog Monitor Outputs:
0 ... 10V for Current, Voltage, Power [2)]

	of the analog signal of the real value	offset voltage
Voltage	**±0.2%**	**±15mV**
Current	**±0.2%**	**±15mV**
Power	**±2%**	**±30mV**

GND max. ±2V against negative load input [1)]
Loading capacity minimum 2kΩ

Accuracy of Setting
Programming via Data Interface:

	of setting	of corresponding range
Voltage	**±0.2%**	**±0.05%**
Current	**±0.2%**	**±0.05%**
Resistance	**±1%**	**±3%** of current range
Power	**±1%**	**±0.5%**
Current Limitation	**±1%**	**±0.3%**
Trigger Voltage	**±1%**	**±0.3%**
Resolution Setting	**16 bit**	

Accuracy of Measurement, Reading via Data Interface:

	of measured value (real value)	of corresponding range
Voltage	**±0.1%**	**±0.05%**
Current	**±0.2%**	**±0.05%**
Resolution Measurement	**18 bit**	
Reading Rate	**330ms** not triggerable	

Accuracy of Measurement, Reading via Data Interface:
Option ZS13

	of measured value (real value)	of corresponding range
Voltage	**±0.2%**	**±0.05%**
Current	**±0.2%**	**±0.05%**
Resolution Measurement	**13 bit**	
Reading Rate	**min. 200µs** (into memory) triggerable	

Power

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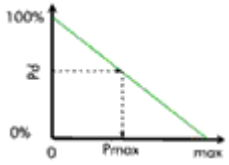
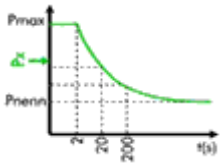
Nominal Power	**up to T_A = 21 °C**
Derating	**-1.2% / °C for T_A > 21 °C**
Overload	**7800 W**



The height of the possible overload Pmax depends on the temperature of the device and therefore on the dissipated power previously



The possible overload duration t depends on the height of the overload power Px

Input Impedance	> 50 kΩ at deactivated load input
Input Capacitance	approx. 2µF / 1000W
Operating Temperature	5°C ... 40°C

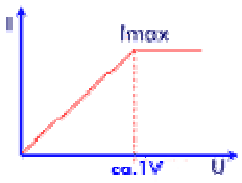
External Control

- Load Switching
- Trigger input and output
- Range switching
- Mode switching
- Emergency shutdown

Protection Equipment

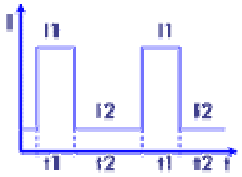
- Current and power limitation
- Over-voltage protection up to 110% of rated voltage [3)]
- Protection against reverse polarity up to rated current (diode) [4)]
- Over-temperature deactivation
- Transient protection

Minimum voltage



Full current up from approx. 1V.
Below 1V linear Derating.

Modulator



Puls t1: 100µs ... 1s
Puls t2: 100µs ... 1s

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	(in two ranges) Load level: each 0 ... 100%
Rise and Fall Time [6]	**40 µs**
Parallel Operation	up to 3 devices in master-slave operation (hardware-controlled)
Cooling	infinitely variable controlled fans
Noise max. [7]	**72 dB(A)**
Case [8], **Weight**	**19" / 5 HU, 34 kg**
Mains Supply	115/230V ± 10%, 50 ... 60Hz
Power Consumption	**160 VA**

Permissible Operating Voltages: Negative Load Input - Case

Standard	125V AC
with Option ZS06	500V AC [5]

Colour

Front Panel	RAL7032 (pebble grey)
Sides, Lid	RAL7037 (stone grey)
Electric Safety	DIN EN 61010-1
EMC, CE-Mark	DIN EN 61326-1 DIN EN 61000-3-2 DIN EN 61000-3-3

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1) *500 V with option ZS06 (except a Zero-Volt-Option is installed)*
2) *for units with 3 and 4 setting ranges the power monitoring signal is referred to the highest range*
3) *101% for 800V devices*
4) *no protection against reverse polarity at installed Zero-Volt-Option*
5) *except a Zero-Volt-Option is installed*
6) *Rise and fall times are defined as 10%...90% and 90%...10% of the maximum current (measured in constant current mode - FAST)*
7) *measured at the front panel at 1m distance*
8) *1HU = 44.45mm*

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