

## DATASHEET 1310-0580-3

### Operating Modes Setting

Current:	Voltage:	Resistance:	Power:
0 ... 0 A	0 ... 800 V	44.4 Ω ... 197 kΩ Ω	0 ... 5 W
0 ... 0 A	0 ... 800 V	4.44 Ω ... 19.7 kΩ Ω	0 ... 50 W
0 ... 4 A	0 ... 800 V	0.44 Ω ... 1.97 kΩ Ω	0 ... 500 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
Voltage	±0.2%	±0.1%
Current	±0.2%	±0.1%
Power	±2%	±0.5%
Current Limitation *	±1%	±0.4%

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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 <sup>1)</sup>

**Accuracy of Analog Monitor Outputs:  
 0 ... 10V for Current, Voltage, Power <sup>2)</sup>**

	of the analog signal of the real value	offset voltage
Voltage	<b>±0.2%</b>	<b>±15mV</b>
Current	<b>±0.2%</b>	<b>±15mV</b>
Power	<b>±2%</b>	<b>±30mV</b>

GND max. ±2V against negative load input <sup>1)</sup>  
 Loading capacity minimum 2kΩ

**Accuracy of Setting  
 Programming via Data Interface:**

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

**Accuracy of Measurement, Reading via Data Interface:**

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

**Accuracy of Measurement, Reading via Data Interface:  
 Option ZS13**

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

**Power**

Nominal Power	<b>up to T<sub>A</sub> = 21 °C</b>
Derating	<b>-1.2% / °C for T<sub>A</sub> &gt; 21 °C</b>
Overload	<b>W</b>

The height of the possible overload  $P_{max}$  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  $P_x$

**Input Impedance**

> 50 k $\Omega$  at deactivated load input

**Input Capacitance**

approx. 2 $\mu$ F / 1000W

**Operating Temperature**

5°C ... 40°C

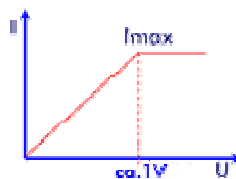
**External Control**

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

**Protection Equipment**

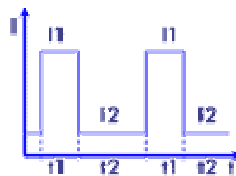
- Current and power limitation
- Over-voltage protection up to 110% of rated voltage <sup>3)</sup>
- Protection against reverse polarity up to rated current (diode) <sup>4)</sup>
- Over-temperature deactivation
- Transient protection

**Minimum voltage**



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

**Modulator**



Puls t1: 100 $\mu$ s ... 1s  
Puls t2: 100 $\mu$ s ... 1s  
(in two ranges)  
Load level: each 0 ... 100%

**Rise and Fall Time <sup>6)</sup>**

**40  $\mu$ s**

<b>Parallel Operation</b>	up to 3 devices in master-slave operation (hardware-controlled)
<b>Cooling</b>	infinitely variable controlled fans
<b>Noise max. <sup>7)</sup></b>	<b>53 dB(A)</b>
<b>Case <sup>8)</sup>, Weight</b>	<b>19" / 2 HU, 13 kg</b>
<b>Mains Supply</b>	115/230V ± 10%, 50 ... 60Hz
<b>Power Consumption</b>	<b>50 VA</b>

#### Permissible Operating Voltages: Negative Load Input - Case

Standard	125V AC
with Option ZS06	500V AC <sup>5)</sup>

#### 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