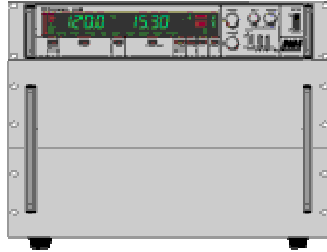


DATASHEET 1312-16030

Operating Modes Setting

| | | | |
|-------------|-------------|--------------|---------------|
| Current: | Voltage: | Resistance: | Power: |
| 0 ... 133 A | 0 ... 100 | 15 Ω ... 25 | 0 ... 5333 W |
| 0 ... 400 A | 0 ... 300 V | 5 Ω ... 8.33 | 0 ... 16000 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% |
| 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

| | 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 | |

Cooling

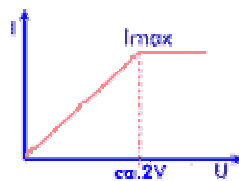
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| | |
|---|---|
| cooling medium | water or water-glycol-mixture |
| Materials in the cooling circuit | cooper, brass, plastic |
| Max. Cooling Medium Temperature | 12°C for nominal power |
| Min. Cooling Medium Temperature | 5°C |
| Derating at higher Cooling Medium Temperature | -5% / °C |
| Pressure for Nominal Power | min. 3 bar |
| Max. Pressure | 5 bar |
| Cooling Medium Connection | 1/2 inch per 8000W |
| Minimum Input Voltage | approx. 2V for full current |
| Input Impedance | > 50 kΩ at deactivated load input |
| Input Capacitance | approx. 2μF / 1000W |
| Operating Temperature | 5°C ... 40°C |
| External Control | <ul style="list-style-type: none"> • Load switching • Trigger input and output • Range switching • Mode switching • Emergency shutdown |

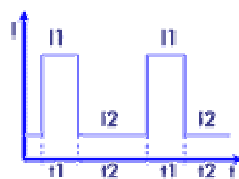
| | |
|-----------------------------|--|
| Protection Equipment | <ul style="list-style-type: none"> • Current and power limitation • Over-voltage protection up to 110% of rated voltage • Protection against reverse polarity up to rated current (diode)³⁾ • Over-temperature deactivation • Transient protection |
|-----------------------------|--|

Minimum voltage



Full current up from approx. 2V.
Below 2V linear Derating.

Modulator



Puls t1: 100μs ... 1s
Puls t2: 100μs ... 1s
(in two ranges)

| | |
|---|--|
| | Load level: each 0 ... 100% |
| Rise and Fall Time ⁵⁾ | 400 µs |
| Parallel Operation | up to 3 devices in master- slave operation (hardware-controlled) |
| Cooling | liquid cooled |
| Case ⁴⁾ , Weight | 19" / 8 HU, 92 kg |
| Mains Supply | 115/230V ± 10%, 50 ... 60Hz |
| Power Consumption | 105 VA |
| Electric Safety | DIN EN 61010-1 |
| EMC, CE-Mark | DIN EN 61326-1 DIN EN 61000-3-2 DIN EN 61000-3-3 |
| Permissible Operating Voltages: Negative Load Input - Case | |
| Standard | 125V AC |
| with Option ZS06 | 500V AC ³⁾ |
| Colour | |
| Front Panel | RAL7032 (pebble grey) |
| Sides, Lid | RAL7037 (stone grey) |

1) 500 V with option ZS06 (except a Zero-Volt-Option is installed)

2) no protection against reverse polarity at installed Zero-Volt-Option

3) except a Zero-Volt-Option is installed

4) 1HU = 44.45mm

5) Rise and fall times are defined as 10%...90% and 90%...10% of the maximum current (measured in constant current mode - FAST)