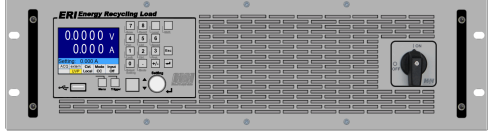


Datasheet Series ERI

| | | |
|--|-----------------------------|--|
| Model | ERI7280 | |
| Order no. | 24-006-000-01 | |
|  | | |
| Max. input voltage V_{max} | 800 V | |
| Max. load current I_{max} | 45 A | |
| Continuous power | 7200 W | |
| Short-time power | 7200 W | |
| Voltage setting | 0 ... 800 V | |
| Current setting | 0 ... 45 A | |
| Resistance setting | 0.06667 Ohm ... 191.172 Ohm | |
| Power setting | 0 ... 7200 W | |
| Rise and fall time fast / medium / slow ¹⁾ | 1500 / 4500 / 15000 µs | |
| Input capacity ca. | 150.000 µF | |
| Min. input voltage V_{min} ²⁾ | 3 V | |
| Mains ³⁾ | 2/N/PE AC 400/230 V 50 Hz | |
| Power consumption ⁴⁾ | 400 VA | |
| Max. feed-in power | 6480 VA | |
| Max. efficiency | 90 % | |
| Mains-side circuit breaker | C16 | |
| Max. noise ⁵⁾ | 57 dB(A) | |
| Load terminals (rear) ⁶⁾ | FKS20/5-SM8 | |
| Weight ca. | 29 kg | |
| Housing ⁷⁾ | 19" - 3 HU | |

1. Rise and fall times are defined of 10 ... 90 % and 90 ... 10 % of the maximum current at 10 % of the maximum input voltage (current mode, tolerance ±20 %). Times will vary at different settings.
2. Minimum input voltage for maximum current
3. 1-phase at 3.6 kW, 2-phase at 7.2 kW, 3-phase at 10.8 kW Mains tolerance: -15 ... 10 % Cross-section of mains wires: 2.5 ... 4 mm²
4. Power consumption in idle operation (without load current)
5. Measured at the front in distance of 1 m
6. Flat copper bar 20 x 5 mm vertically installed with screw M8
7. Largest width and depth without wiring 1 HU = 44.45 mm

| Accuracy of setting | | |
|---|---|-------------------------|
| | of setting | of corresponding range |
| Voltage | ±0.2 % | ±0.05 % |
| Current | ±0.2 % | ±0.05 % |
| Resistance (at 5 % to 100 % of voltage range) | ±1.4 % | ±0.3 % of current range |
| Power (at V and I > 30 % of range) (at V or I < 30 % of range) | ±0.35 % | ±0.1 % |
| | ±0.7 % | ±0.25 % |
| Resolution | 14 bits | |
| Accuracy of adjustable protections | | |
| | of setting | of corresponding range |
| Overcurrent protection | ±1.4 % | ±0.3 % |
| Undervoltage protection | ±1.4 % | ±0.3 % |
| Resolution | 12 bits | |
| Accuracy of measurement/display in the static operating modes CC, CR, CV | | |
| | of measured value (real value) | of corresponding range |
| Voltage | ±0.03 % | ±0.02 % |
| Current | ±0.2 % | ±0.05 % |
| Resistance | is calculated from current and voltage | |
| Power | is calculated from current and voltage | |
| Resolution | 18 bits | |
| Sampling rate | 330 ms, not triggerable | |
| Accuracy of measurement/display in the static CP mode and all dynamic modes | | |
| | of measured value (real value) | of corresponding range |
| Voltage | ±0.2 % | ±0.1 % |
| Current | ±0.2 % | ±0.1 % |
| Resistance | is calculated from current and voltage | |
| Power | is calculated from current and voltage | |
| Resolution | 12 bits | |
| Sampling rate | 200 µs ... 800,000 s | |
| Accuracy of trigger voltage measurement | | |
| Voltage | ±1 % of range | |
| Sampling rate | 200 µs | |
| Dynamic function (LIST) | | |
| No. of load levels | max. 300, with corresponding ramp and dwell times | |
| | min. | max. |
| Dwell time | 200 µs | 800,000 s |
| Ramp time | 0 s | 800,000 s |
| Resolution | 200 µs | |
| Accuracy of setting times | ±0.02 % | |
| Delay at triggered start | max. 300 µs | |

| Data acquisition | | |
|--|---|------------------------|
| to external USB flash drive | | |
| Sampling rate | 0.5 s, 1 s, 5 s, 10 s | |
| Measurement data | timestamp, voltage, current | |
| No. of measurement points | limited by flash drive memory capacity | |
| File format | .csv | |
| to internal memory | | |
| Sampling rate | 200 µs ... 800,000 s, resolution 200 µs, synchronized with dynamic function | |
| Measurement data | timestamp, voltage, current | |
| No. of measurement points | max. 8,000 | |
| Settings memory | | |
| No. of user settings | 2, selectable (incl. programmed list) 1 for last device settings at power-off or power failure | |
| I/O port (option ERI06): accuracy of analog control 0 ... 10 V | | |
| | of setting | of corresponding range |
| Voltage | ±0.2 % | ±0.1 % |
| Current | ±0.2 % | ±0.1 % |
| Overcurrent protection | ±1 % | ±0.4 % |
| Undervoltage protection | ±1 % | ±0.4 % |
| | Input resistance of analog inputs >10 kΩ | |
| I/O port: accuracy of analog monitor outputs 0 ... 10 V | | |
| | of analog signal of actual value | offset voltage |
| Voltage | ±0.2 % | ±15 mV |
| Current | ±0.2 % | ±15 mV |
| | Permissible load > 2 kΩ | |
| I/O port: permissible potentials | | |
| isolated I/O port (Option ERI06) | | |
| GND - neg. load input | max. 625 V ¹⁾ | |
| GND - PE | max. 125 V ¹⁾ | |
| I/O-Port: outputs and inputs | | |
| Outputs | input state (on/off) overload (OV, OCP, OPP, OTP) trigger output programmable output (by SCPI command) | |
| Output level | selectable, 3.3 V, 5 V, 12 V, or externally programmable up to 30 V | |
| Inputs | input state (on/off) mode selection trigger input readable input (by SCPI command) control input (activates the I/O port) remote shut-down | |
| Input level | 3 ... 30 V diode function at reverse polarity up to nominal current | |
| Input | | |
| Input capacity | see model overview | |
| Parallel operation | up to 5 devices in Master-Slave operation (hardware-controlled) | |
| Max. input voltage V _{max} | see model overview | |
| Min. input voltage V _{min} for max. current | see model overview | |

The specified accuracies refer to an ambient temperature of 23 ±5 °C. The specified accuracies are valid when the unit is connected to undisturbed voltages (ripple and noise < 0.1 %). At voltages with higher disturbance values the accuracy can change for the worse.

¹⁾ positive/negative DC voltage or RMS value of a sinusoidal AC voltage

Technical Data (continued)

| Input: permissible potentials | |
|--|---|
| | isolated I/O port (option ERI06) |
| neg. load input - PE | max. 500 V ¹⁾ |
| pos. load input - PE | max. 800 V ¹⁾ |
| Power | |
| Continuous power | see model overview (at Ta = 21 °C) |
| Derating | -1,6 %/°C for Ta > 21 °C |
| Efficiency | see model overview |
| Protection and monitoring | |
| Protective devices | overcurrent overpower overtemperature |
| Monitoring signals | overvoltage indication undervoltage indication (if the input voltage is too low for the set current) reverse voltage indication |
| Terminals | |
| Load input | see model overview |
| Sense | PH2/7.62-BU16, see starting at page 101 |
| Operating conditions | |
| Operating temperature | 5 ... 40 °C |
| Stock temperature | -25 ... 65 °C |
| Operating height max. | 2.000 m above sea level |
| Pollution degree | 2 |
| Max. humidity | 80 % at 31 °C, linear decreasing to 50 % at 40 °C |
| Min. distance rear panel - wall or other objects | 70 cm |
| Cooling | temperature-controlled air cooling |
| Noise | see model overview |
| Mains voltage | see model overview |
| Power consumption | see model overview |

| Mechanics | |
|------------------------------|--|
| Dimensions | see model overview |
| Weight | see model overview |
| Color | |
| Front | RAL7035 (light grey) |
| Rear | Stainless steel |
| Top, side panels | RAL7037 (dusty grey) |
| Safety and EMC | |
| Protection class | 1 |
| Protection | IP20 |
| Measuring category | O (CAT I according to EN 61010:2004) |
| Electrical safety | DIN EN 61010-1 DIN EN 61010-2-030 |
| EMC | DIN EN 61326-1 DIN EN 55011 DIN EN 61000-3-2 DIN EN 61000-3-3 |
| Available options | |
| Data interface ERI02 | GPIB Interface |
| Hardware extension ERI06 | Galvanically isolated I/O port |
| Kalibrierung, Gewährleistung | |
| FCC-ERlxx | Factory Calibration Certificate, twice free of charge |
| Warranty | 2 years |

¹⁾ positive/negative DC voltage or RMS value of a sinusoidal AC voltage