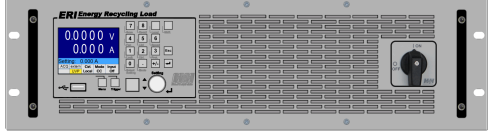


# Datasheet Series ERI

<b>Model</b>	ERI7212	
<b>Order no.</b>	24-004-000-01	
		
<b>Max. input voltage V<sub>max</sub></b>	120 V	
<b>Max. load current I<sub>max</sub></b>	220 A	
<b>Continuous power</b>	7200 W	
<b>Short-time power</b>	7200 W	
<b>Voltage setting</b>	0 ... 120 V	
<b>Current setting</b>	0 ... 220 A	
<b>Resistance setting</b>	0.01364 Ohm ... 5.865 Ohm	
<b>Power setting</b>	0 ... 7200 W	
<b>Rise and fall time fast / medium / slow <sup>1)</sup></b>	1500 / 4500 / 15000 µs	
<b>Input capacity ca.</b>	700.000 µF	
<b>Min. input voltage V<sub>min</sub> <sup>2)</sup></b>	3 V	
<b>Mains <sup>3)</sup></b>	2/N/PE AC 400/230 V 50 Hz	
<b>Power consumption <sup>4)</sup></b>	410 VA	
<b>Max. feed-in power</b>	6480 VA	
<b>Max. efficiency</b>	90 %	
<b>Mains-side circuit breaker</b>	C16	
<b>Max. noise <sup>5)</sup></b>	69 dB(A)	
<b>Load terminals (rear) <sup>6)</sup></b>	FKS20/5-SM8	
<b>Weight ca.</b>	29 kg	
<b>Housing <sup>7)</sup></b>	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 mm<sup>2</sup>
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 <sup>1)</sup>	
GND - PE	max. 125 V <sup>1)</sup>	
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 <sub>max</sub>	see model overview	
Min. input voltage V <sub>min</sub> 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.

<sup>1)</sup> 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 <sup>1)</sup>
pos. load input - PE	max. 800 V <sup>1)</sup>
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	GPIO Interface
Hardware extension ERI06	Galvanically isolated I/O port
Kalibrierung, Gewährleistung	
FCC-ERlxx	Factory Calibration Certificate, twice free of charge
Warranty	2 years

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