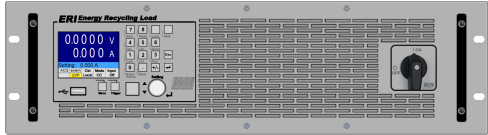


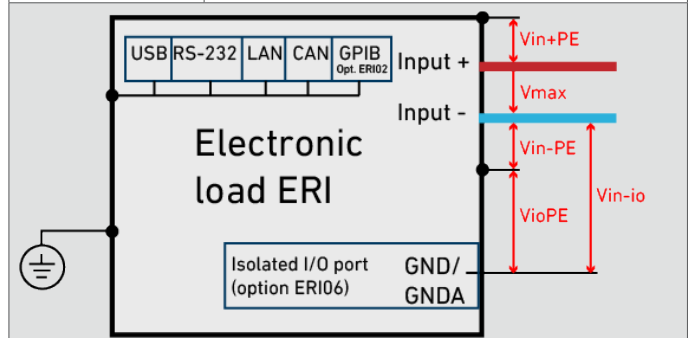
# Datasheet Series ERI

<b>Model</b>	<b>ERI7240</b>	
<b>Order no.</b>	<b>24-005-000-02</b>	
<b>Basic operating modes</b>	CC, CV, CR, CP	
<b>Standard interfaces</b>	RS-232, USB, LAN, CAN	
<b>Max. input voltage Vmax</b>	400 V	
<b>Min. input voltage Vmin <sup>1)</sup></b>	3 V	
<b>Max. load current Imax</b>	90 A	
<b>Continuous power</b>	7200 W	
<b>Short-time power</b>	7200 W	
<b>Voltage setting</b>	0 ... 400 V	
<b>Current setting</b>	0 ... 90 A	
<b>Resistance setting</b>	0.03333 Ohm ... 47.79 Ohm	
<b>Power setting</b>	0 ... 7200 W	
<b>Rise and fall time fast / medium / slow <sup>2)</sup></b>	1500 / 4500 / 15000 µs	
<b>Input capacity ca.</b>	300 µF	
<b>Mains <sup>3)</sup></b>	2/N/PE AC 400/230 V 50 Hz	
<b>Power consumption <sup>4)</sup></b>	400 VA	
<b>Max. feed-in power</b>	6580 VA	
<b>Max. efficiency</b>	90 %	
<b>Mains-side circuit breaker</b>	C16	
<b>Noise max. ca. <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 U	
<b>Width x Height x Depth</b>	482 x 133 x 696 mm	

1. Minimum input voltage for maximum static load current.
2. Rise and fall times are defined of 10 ... 90 % and 90 ... 10 % of the maximum current at 10 % of the maximum input voltage (CC mode, tolerance ±20 %). Times will vary at different settings.
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 U = 44.45 mm.

Operating modes		
Basic operating modes	CC, CP, CR, CV	
Combined operating modes	CC+CV, CR+CC+CV, CP+CC+CV, CV+CC	
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 slow		
	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	23 bits	
Sampling time	250 ms, not triggerable	
Accuracy of display		
Number of decimal places	5	
Accuracy	Accuracy of measurement slow ±1 digit of the display value	
Accuracy of measurement fast		
	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	16 bits	
Sampling time	200 µs ... 1,000 s, resolution 200 µs	
Accuracy of trigger voltage and current		
Trigger voltage	±1 % of voltage range	
Trigger current	±1 % of current range	
Sampling time	200 µs	
Dynamic function (LIST)		
No. of load levels	max. 300, with corresponding ramp and dwell times	
Accuracy of load levels	see accuracy of setting	
	min.	max.
Dwell time	200 µs	1,000 s
Ramp time	0 s	1,000 s
Resolution	200 µs	
Accuracy of setting times	±0.02 %	
Sampling time	see accuracy of measurement fast	
Delay at triggered start	max. 300 µs	

Data acquisition		
to external USB flash drive		
Sampling time	0.5 ... 30.0 s, resolution 0.1 s	
Measurement data	timestamp, voltage, current	
No. of measurement points	limited by flash drive memory capacity	
File format	.csv	
to internal memory		
Sampling time	200 µs ... 1,000 s, resolution 200 µs, synchronized with dynamic function	
Measurement data	timestamp, voltage, current	
No. of measurement points	max. 40,000	
Settings memory		
No. of user settings	9, selectable (incl. programmed list) 1 for last device settings at power-off or power failure	
I/O-Port (option ERI06): inputs and outputs		
Inputs	activation state input (on/off, low active) mode selection trigger input (high active) readable logic input (by SCPI command) control input (activates the analog signals, low active) remote shut-down (low active)	
Dig. input levels	logical low: 0 ... 0.8 V, logical high: 3 ... 30 V internal pull-up resistors of 22 kΩ to the set logic level voltage	
Outputs	activation state input (on/off, low active) overload status (OV, OCP, OPP, OTP, low active) trigger output (low active) programmable logic output (by SCPI command)	
Dig. output levels	logical low: 0 ... 0.8 V, logical high: 3.3 V/5 V/12 V selectable or by external voltage up to 30 V max. 10 mA (push-pull)	
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 (option ERI06): 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 (option ERI06): permissible voltages		
	isolated I/O port (Option ERI06)	
Vin-io (GND - neg. load input)	max. 625 V <sup>1)</sup>	
VioPE (GND - PE)	max. 125 V <sup>1)</sup>	



The specified accuracies refer to an ambient temperature of 23 ±5 °C. The specified accuracies are valid when the sense lines are connected and 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

Input	
Reverse polarity	diode function at reverse polarity up to nominal current
Input capacity	see model overview
Parallel operation	up to 5 devices in Master-Slave operation
Max. input voltage $V_{max}$	see model overview
Min. input voltage $V_{min}$ for max. current	see model overview
Input: permissible voltages	
	isolated I/O port (option ERI06)
Vin-PE (neg. load input - PE)	max. 500 V <sup>1)</sup>
Vin+PE (pos. load input - PE)	max. 800 V <sup>1)</sup>
Power	
Continuous power	see model overview (at $T_a = 21\text{ °C}$ )
Derating	-1,6 %/°C for $T_a > 21\text{ °C}$
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
Operating conditions	
Operating temperature	5 ... 40 °C
Stock temperature	-25 ... 65 °C
Operating height max.	2.000 m above sea level
Pollution degree	2
Overvoltage category of mains	II
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	see model overview
Mains voltage tolerance	±10 %
Cross section of mains wires	2.5 ... 4 mm <sup>2</sup> depending on design of the local low-voltage network and the length of the mains cable
Mains-side circuit breaker	see model overview
Power consumption in idle mode	see model overview
Maximum feed-in power	see model overview

### Housing

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
Measuring category	0 (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

### Standard interfaces

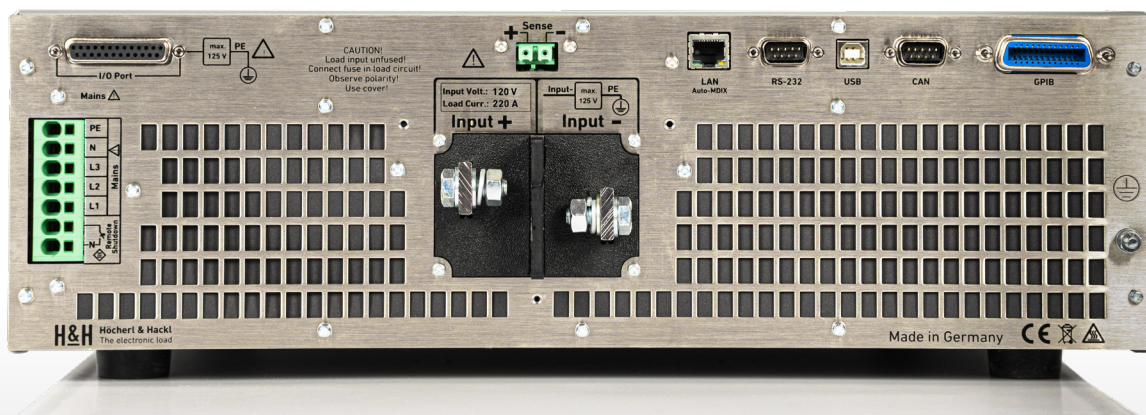
Data interfaces	RS-232, USB, LAN, CAN
I/O port	-

### Available options

Data interface ERI02	GPIB Interface
Hardware extension ERI06	Galvanically isolated I/O port

### Kalibrierung, Gewährleistung

FCC-ER1xx	Factory Calibration Certificate, twice for free after registration
Warranty	2 years



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

Technical data of production series C, rev. 2. Subject to technical changes without notice.