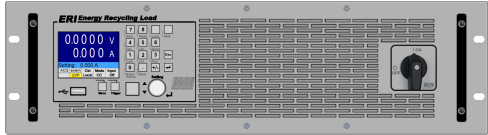


Datasheet Series ERI

Model	ERI7240	
Order no.	24-005-000-02	
Basic operating modes	CC, CV, CR, CP	
Standard interfaces	RS-232, USB, LAN, CAN	
Max. input voltage Vmax	400 V	
Min. input voltage Vmin ¹⁾	3 V	
Max. load current Imax	90 A	
Continuous power	7200 W	
Short-time power	7200 W	
Voltage setting	0 ... 400 V	
Current setting	0 ... 90 A	
Resistance setting	0.03333 Ohm ... 47.79 Ohm	
Power setting	0 ... 7200 W	
Rise and fall time fast / medium / slow ²⁾	1500 / 4500 / 15000 µs	
Input capacity ca.	300 µF	
Mains ³⁾	2/N/PE AC 400/230 V 50 Hz	
Power consumption ⁴⁾	400 VA	
Max. feed-in power	6580 VA	
Max. efficiency	90 %	
Mains-side circuit breaker	C16	
Noise max. ca. ⁵⁾	69 dB(A)	
Load terminals (rear) ⁶⁾	FKS20/5-SM8	
Weight ca.	29 kg	
Housing ⁷⁾	19" - 3 U	
Width x Height x Depth	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 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 U = 44.45 mm.

Operating modes		
Basic operating modes	CC, CP, CR, CV	
Extended 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 rate	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 rate	200 µs ... 1,000 s, resolution 200 µs	
Accuracy of trigger voltage and current measurement		
Trigger voltage	±1 % of voltage range	
Trigger current	±1 % of current range	
Sampling rate	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 times	see accuracy of measurement fast	
Delay at triggered start	max. 300 µs	

Data acquisition		
to external USB flash drive		
Sampling rate	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 rate	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): 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 ¹⁾	
VioPE (GND - PE)	max. 125 V ¹⁾	
I/O-Port (option ERI06): outputs and inputs		
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)	
Output level	selectable, 3.3 V, 5 V, 12 V, or externally programmable up to 30 V	
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)	
Input level	3 ... 30 V	

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 (continued)

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)
V _{in} -PE (neg. load input - PE)	max. 500 V ¹⁾
V _{in} +PE (pos. load input - PE)	max. 800 V ¹⁾
Power	
Continuous power	see model overview (at T _a = 21 °C)
Derating	-1,6 %/°C for T _a > 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 109
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 ² 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
Protection	IP20
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	GPIO Interface
Hardware extension ERI06	Galvanically isolated I/O port

Kalibrierung, Gewährleistung

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

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