AMETEK SI

SI-9300R

Battery cycler / analyzer

System for testing high-power batteries, fuel cells and electrolyzers that combines cycling with impedance measurements. Each module has up to five independent channels with built-in EIS on every channel.



Measurement channels per module
5 in a fully populated module [1]

Applied voltage per channel
+300 mV to +10 V [2]

Maximum output current
±200 A continuous; 300 A for a 60 s pulse [2]

Specifications

PERFORMANCE

Voltage measurement accuracy	±0.01% FSR ±0.3 mV	[2]

MEASURING RANGE

Applied voltage per channel	+300 mV to +10 V	[2]
EIS frequency range	10 mHz–10 kHz	[2]
Current measurement ranges	300 A, 20 A, 2 A	[2]

ELECTRONICS & SIGNAL

Measurement channels per module	5 in a fully populated module	[1]
Maximum output current	±200 A continuous; 300 A for a 60 s pulse	[2]
Current with parallel channels	±1,000 A	[1]
Voltage and current converters	24-bit ADCs	[1]
Channels per cabinet	42U: 40 channels; 24U: 20 channels (fully populated)	[1]

SOFTWARE & DATA

Software	Aspire Energy	[1]

POWER & BATTERY

Regenerative power supply	Yes	[1]

GENERAL

EIS capability	Built in on every channel, not multiplexed	[1]
Maximum data acquisition rate	1,000 S/s on all channels	[1]

Models

Model	Installed channels	Cell connections	Applied voltage per channel	Current per channel
SI-9300R	5 [2]	4-terminal [2]	+300 mV–+10 V [2]	±200 A continuous; 300 A pulse for 60 s [2]
SI-9300R-1CH	1 [2]	4-terminal [2]	+300 mV–+10 V [2]	±200 A continuous; 300 A pulse for 60 s [2]
SI-9300R-2CH	2 [2]	4-terminal [2]	+300 mV–+10 V [2]	±200 A continuous; 300 A pulse for 60 s [2]
SI-9300R-3CH	3 [2]	4-terminal [2]	+300 mV–+10 V [2]	±200 A continuous; 300 A pulse for 60 s [2]
SI-9300R-4CH	4 [2]	4-terminal [2]	+300 mV–+10 V [2]	±200 A continuous; 300 A pulse for 60 s [2]
SI-9300R-SA	–	–	–	–

Model	EIS frequency range	EIS	Converters	Maximum acquisition rate
SI-9300R	10 mHz–10 kHz [2]	Built in on every channel [1]	24-bit ADC [1]	1000 S/s, all channels [1]
SI-9300R-1CH	10 mHz–10 kHz [2]	Built in on every channel [1]	24-bit ADC [1]	1000 S/s, all channels [1]
SI-9300R-2CH	10 mHz–10 kHz [2]	Built in on every channel [1]	24-bit ADC [1]	1000 S/s, all channels [1]
SI-9300R-3CH	10 mHz–10 kHz [2]	Built in on every channel [1]	24-bit ADC [1]	1000 S/s, all channels [1]
SI-9300R-4CH	10 mHz–10 kHz [2]	Built in on every channel [1]	24-bit ADC [1]	1000 S/s, all channels [1]
SI-9300R-SA	–	Built in per channel [3]	–	–

Model	Channel upgrades	Format	Software	Data storage
SI-9300R	SI-9300R-DCDC_MODULE_UPGRADE, maximum 5 channels per module [2]		–	–
SI-9300R-1CH	SI-9300R-DCDC_MODULE_UPGRADE, maximum 5 channels per module [2]		–	–
SI-9300R-2CH	SI-9300R-DCDC_MODULE_UPGRADE, maximum 5 channels per module [2]		–	–
SI-9300R-3CH	SI-9300R-DCDC_MODULE_UPGRADE, maximum 5 channels per module [2]		–	–
SI-9300R-4CH	SI-9300R-DCDC_MODULE_UPGRADE, maximum 5 channels per module [2]		–	–
SI-9300R-SA	–	Battery test without centralized cabinet [3]	Aspire Energy [3]	Direct to disk; local NAS or Ethernet network [3]

Model	Placement
SI-9300R	–
SI-9300R-1CH	–

SI-9300R-2CH	–
SI-9300R-3CH	–
SI-9300R-4CH	–
SI-9300R-SA	Near climate chamber or test fixture [3]

Sources

[1] **SI-9300R Battery Cyclers / Analyzers**
AMETEK Scientific Instruments · product-page · product page · checked 2026-10-16
https://www.ameteksi.com/products/battery-cycler/si-9300r

[2] **SI-9300R Battery Analyzer**
AMETEK Scientific Instruments · brochure · p. 4; p. 4 – System Configuration · checked 2026-10-16
https://www.ameteksi.com/-/media/ameteksi/download_links/documentations/9300r-us/si-9300r_brochure_25_01.pdf...

[3] **Stand-alone Battery Cyclers / Analyzers**
AMETEK Scientific Instruments · product-page · product page · checked 2026-10-16
https://www.ameteksi.com/products/battery-cycler/stand-alone-battery-cyclers-or-analyzers

Every value is taken from the manufacturer's own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer's published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.