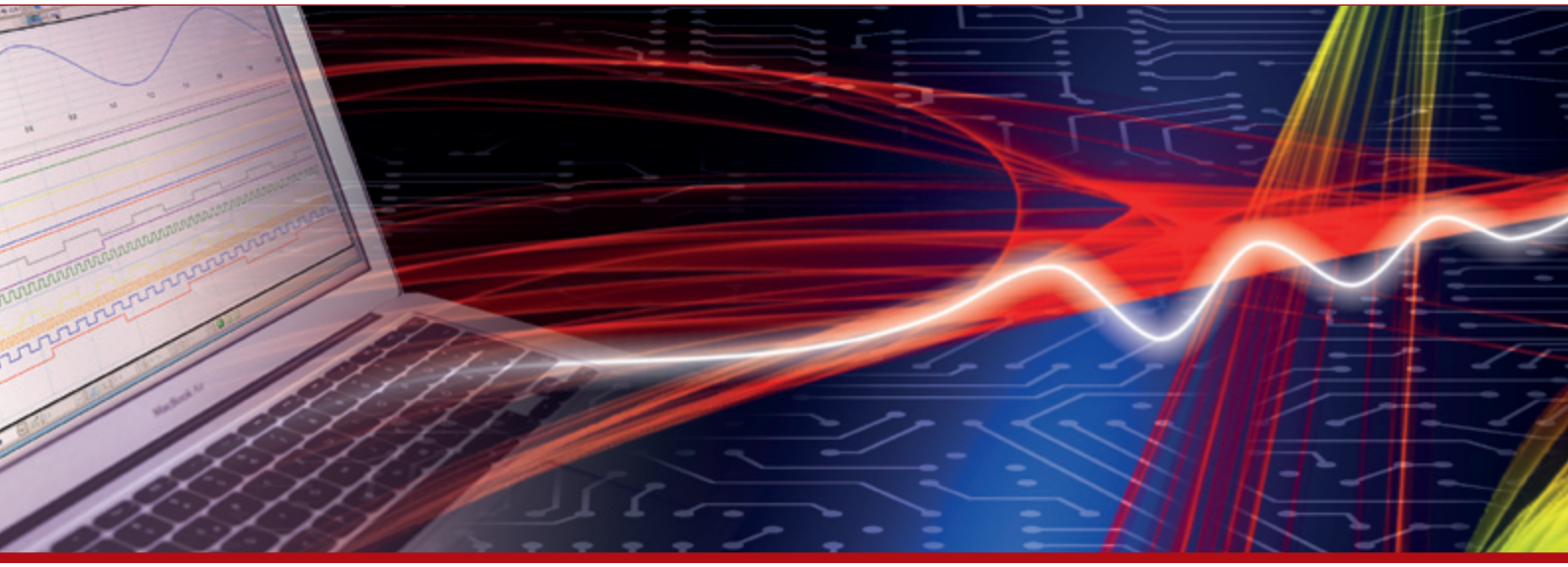
Product Datasheet - Technical Specifications



More information in our Web-Shop at ▸ **www.meilhaus.com**

Your contact

Technical and commercial sales, price information, quotations, demo/test equipment, consulting:

Tel.: **+49 - (0)81 41 - 52 71-0**

E-Mail: **sales@meilhaus.com**

Meilhaus Electronic GmbH
Am Sonnenlicht 2
82239 Alling/Germany
Tel. **+49 - (0)81 41 - 52 71-0** E-Mail **sales@meilhaus.com**

www.meilhaus.com

HIOKI

DATA LOGGER LR8101, LR8102

NEW Preview

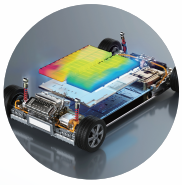
Engineered for High-Voltage Battery Charge/Discharge Testing

- ☑ **Maximum rated terminal-to-ground voltage 1500 V DC (CAT II)**
- ☑ **Synchronized sampling of 1500 ch at 10 ms**
- ☑ **Compatible with HILS, offering data output intervals as fast as 5 ms**

Applications

Multi-cell status visualization

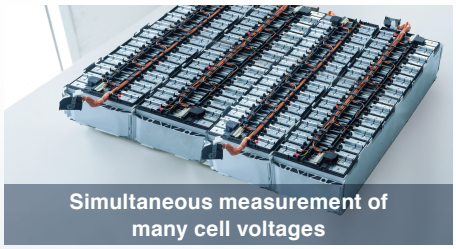
Cell-balancing verification



Thermal management evaluation

Ideal for development and evaluation of high-voltage battery packs

- Maximum rated voltage to ground of 1500 V DC (CAT II) and withstand voltage of 7.4 kV AC
- Simultaneous measurement of voltage and temperature of each cell of a 800 V battery pack—an increasingly common setup for EVs
- Flexible expandability from 15 to 3000 channels
- Expand one module at a time to accommodate future increases in the number of measurement channels



Simultaneous measurement of many cell voltages

Contributes to increased development speed and testing accuracy

- High-speed HILS output (5 ms refresh/update interval)
- Real-time cell characterization facilitates BMS development and evaluation
- High-speed data output as UDP or CAN output

For performance assessment with HILS

CE 3 year Warranty

*Some specifications apply only to the LR8102. For details, please refer to the specifications on the reverse side.

Main unit specifications

You now have the option of more channels than the predecessor model, as well as high-speed UDP and CAN output.

Product line-up	NEW 	NEW 	Predecessor model Discontinuation scheduled 
Product name	Data Logger LR8102	Data Logger LR8101	Memory HiLogger 8423
Connectable modules	10 modules		8 modules
Sampling-synchronizable main unit number	10 main units	Synchronization with another main unit is not possible	5 main units
Maximum number of channels	800 ch (5 ms sampling) 1500 ch (10 ms sampling) 3000 ch (20 ms sampling) With 10 sets of 1 main unit and 10 modules	80 ch (5 ms sampling) 150 ch (10 ms sampling) 300 ch (20 ms sampling) With 1 set of 1 main unit and 10 modules	600 ch (10 ms sampling) With 5 sets of 1 main unit and 8 modules
Communication interface	LAN 1, LAN 2, CAN	LAN 1	LAN, USB (mini B terminal)
LAN 1	For communication commands, Logger Utility software, FTP Server function, FTP Client function, HTTP function		For communication commands, Logger Utility software, FTP Server function, HTTP function
LAN 2	For real-time UDP output of data during measurement	n/a	n/a
CAN	For real-time CAN output of data during measurement	n/a	n/a
External media	USB drive or SD memory card		CF card
External control terminals	For external sampling sync, START/STOP, trigger input/output, alarms (4), pulse/logic input (1)		For external sampling sync, START/STOP, trigger input/output
Dimensions	Approx. 80W × 166H × 236D mm (3.15W × 6.54H × 9.29D in.)		Approx. 67W × 133H × 125D mm (2.64W × 5.24H × 4.92D in.)

Module Specifications

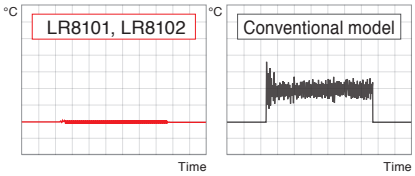
Depending on your application, you can choose from two types of modules.

Product line-up	NEW 	NEW 	Predecessor model Discontinuation scheduled 
Product name	Voltage/Temp Module M7100	Voltage/Temp Module M7102	Voltage/Temp Unit 8948
Recommended use	· Batteries below 1500 V · Voltage and temperature measurement of each cell · High-speed data acquisition	· Batteries below 600 V · Voltage and temperature measurement of each cell · Multichannel measurement	· Batteries below 600 V · Voltage and temperature measurement of each cell
Number of input channels	15 ch	30 ch	15 ch
Fastest data refresh intervals	5 ms (up to 8 ch)	10 ms (up to 15 ch)	10 ms
Input terminals	M3 screw terminal	Pushbutton terminal	M3 screw terminal
Measurement target	Voltage: 10 mV f.s. to 100 V f.s. (11 ranges) 2 V and 6 V ranges available for cell voltage measurements		100 mV f.s. to 100 V f.s. (5 ranges)
Voltage measurement accuracy	±3 mV (at 4 V measurement)		±10 mV (at 4 V measurement)
	Temperature: thermocouple		Temperature: thermocouple
Maximum input voltage	±100 V DC		±100 V DC
Maximum rated terminal-to-ground voltage	1500 V DC (CAT II)	600 V DC (CAT II)	600 V DC (CAT II)
Maximum voltage between channels	300 V DC		200 V DC
Dimensions	Approx. 53W x 166H x 263D mm (2.09W × 6.54H × 10.35D in.)		Approx. 38W x 133H x 141D mm (1.50W x 5.24H x 5.55D in.)

Note: The LR8101, LR8102, M7100, and M7102 cannot be used in combination with predecessor models.

Reduces the effect of noise

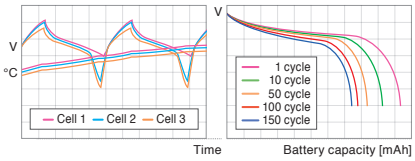
Image of the effect of inverter noise



The LR8101 and LR8102 can stably measure without value shifts or large fluctuations even in high-voltage or high-frequency noise environments.

Characterization with measurement data

Discharge characteristics **Cycle characteristics**



Data can be acquired and used for analysis by a variety of means, including communication commands, UDP output, CAN output, and XCP on Ethernet. Also included is the Logger Utility software that allows real-time observation of charge/discharge characteristics (waveforms).

HIOKI
HIOKI E.E. CORPORATION