HIOKI

NEW

Power & Temperature
Measure Power & Temperature Together, in Real-Time

Scalability and versatility :	3000 CH for temperature (thermocouple), 120 CH for power
High-accuracy power measurement :	AC/DC ±(0.02% rdg. + 0.05% of range)
High voltage measurement :	guaranteed accuracy at DC 1500 V
High speed :	data update interval of 5 ms
Extensive high-accuracy current sensors :	clamp and pass-through type, up to 2000 A

Solution by Industry

Industrial Machinery

Reducing Power Consumption

Large industrial machines, such as CNC machining equipment with multiple motors and drive components, require accurate monitoring of each system's power consumption to reduce the overall energy use. The LR8101 and LR8102 data loggers can measure multiple power lines simultaneously and at high speed, providing valuable data for power reduction.

HVAC Equipment

Evaluating Heat-Exchanger Performance

In assessing the performance of HVAC (Heating, Ventilation, and Air Conditioning) equipment such as heat pumps and chillers, it is crucial to determine the heat conversion efficiency by simultaneously recording driving power and temperatures at various points within the device's piping. Hioki offers measurement modules that meet the need for simultaneous power and multi-point temperature measurements.

E-Mobility

Prototype Validation

Real-time analysis of battery pack charge/discharge tests and powertrain evaluations requires the ability to collect and output large amounts of data quickly. The LR8102 data logger provides real-time data output through UDP and CAN to meet these needs.

CE · 3 year Warranty

1.888.610.7664   www.calcert.com   sales@calcert.com

Key benefits   A Data Logger for Test Benches and HIL (Hardware In the Loop) system
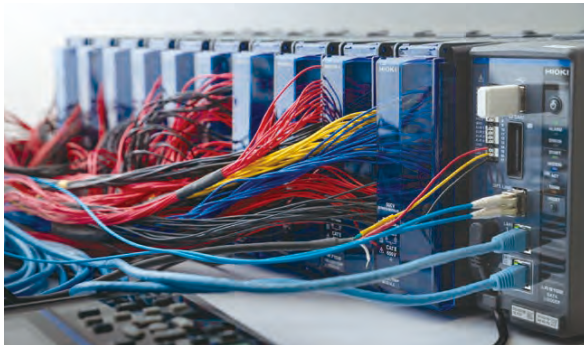
System Integration Made Easy

Measure Power and Temperature with an All-in-One Unit

The logger simultaneously records and outputs vast amounts of power/temperature data, eliminating the need for integration data by the test bench and HIL system.

Capturing Core-Performance Data

High-Speed Data Update

With a rapid data update interval of 5 ms, the data logger (M7100) captures sudden power fluctuations and abnormal temperature rises in real-time.

System Design   Flexible Combination of Measurement Modules

VOTAGE/TEMP MODULE
M7102

VOTAGE/TEMP MODULE
M7100

POWER MEASUREMENT MODULE
M7103

DATA LOGGER
LR8102

AC POWER MODULE
M1100

Data logger LR8101: standard-model data logger unit
Data logger LR8102: advanced-model data logger unit, supports synchronization and high-speed data transfer between multiple logger units

Connect up to 10 measurement modules (max. of four M7103 modules)
Overcome the channel count limitation of a single logger by synchronizing multiple LR8102 units using optical cables

Voltage/Temperature Module M7100: 15 channels
Voltage/Temperature Module M7102: 30 channels

Both modules (M7100 & M710) measurements voltage and temperature (thermocouple)
The data update interval for M7100 is 5 ms, and for M7102 is 10 ms

Power Measurement Module M7103*: 3 channels

This module features three inputs for current and voltage, enabling the measurement of AC three-phase power. It can directly accept inputs of up to 2000 V DC. Additionally, it utilizes Hioki's high-precision current sensors, which employ zero-flux sensing and automatic phase correction, to maintain stable power measurement accuracy over extended logging periods.   *AC power module M1100 is required when using M7103

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