HIOKI

Selection Guide
Data Loggers

LR8450, LR8450-01, LR8410-20, LR8431-20, 8423

Find the Logger You've Been Looking for

Fully insulated channels and noise resistance for solid reliability

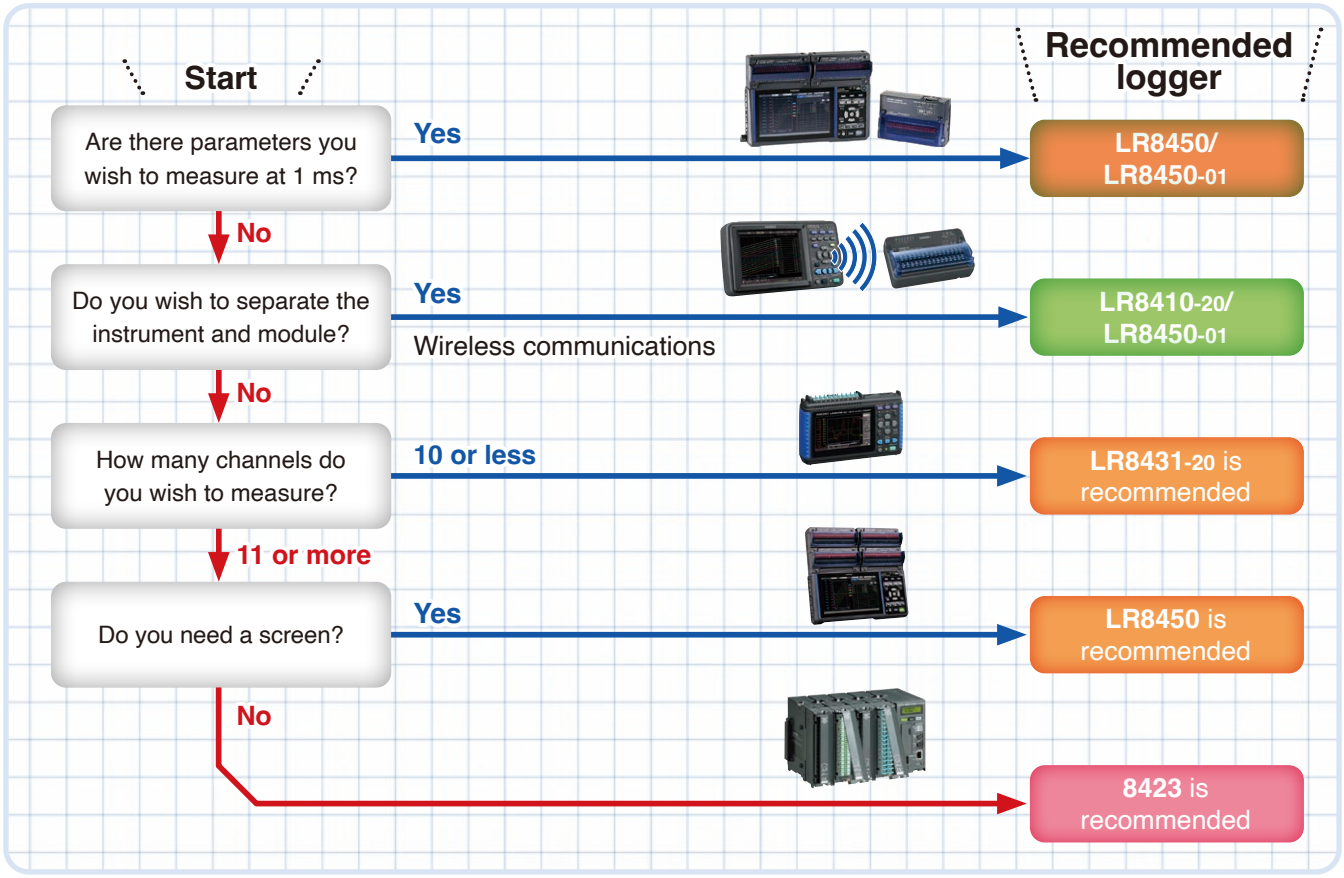
PC application with convenient analysis capabilities

Instrument and sensor combinations to meet various needs

CE 3year Warranty

Extensive Lineup of Data Loggers

Selection Guide



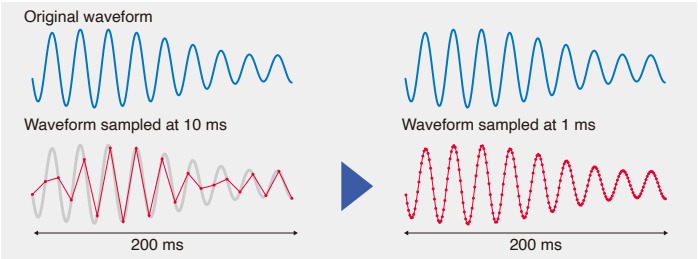
Comparison

Model spec Items	LR8450 standard	LR8450-01 standard/wireless LAN	LR8410-20 wireless Bluetooth® communication	LR8431-20 small and versatile	8423 for systems
		Wireless LAN 	Bluetooth 		
Channels	5 ch to 120 ch	5 ch to 330 ch	15 ch to 105 ch	10 ch	15 ch to 600 ch *
Maximum sampling interval	1 ms	1 ms	100 ms	10 ms	10 ms
Wireless	-	Wireless LAN	Bluetooth® communication	-	-
Input	voltage thermocouple RTD humidity resistance strain pulse/logic CAN	voltage thermocouple RTD humidity resistance strain pulse/logic CAN	voltage thermocouple RTD humidity resistance - pulse/logic -	voltage thermocouple - - - - pulse -	voltage thermocouple RTD humidity - - pulse/logic -
Module	U8550 to U8555	U8550 to U8555 LR8530 to LR8535	LR8510, LR8511 LR8512 to LR8515, LR8520	no module needed	8948, 8949, 8996
Interface	LAN, USB flash drive	LAN, USB flash drive	LAN, USB flash drive	USB flash drive	LAN, USB flash drive
External memory	USB Drive SD Memory Card	USB Drive SD Memory Card	USB Drive SD Memory Card	USB Drive CF Card	USB Drive CF Card
Battery power	✔	✔	✔	✔	-

*When 5 units are measured synchronously

Features

Fully isolated channels & sampling in 1 ms LR8450/LR8450-01

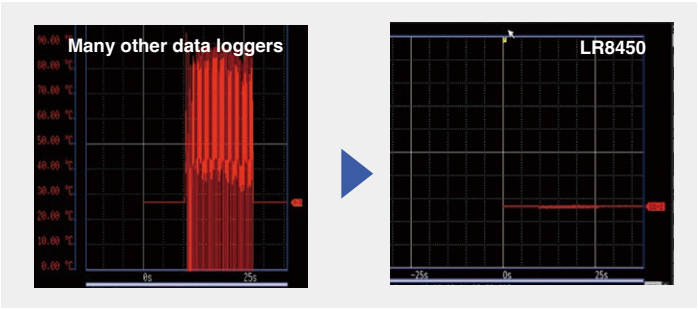


Observe high-speed waveforms, for example for vibrations, with sampling in as short as 1 ms.

For voltage measurement and temperature measurement using thermocouples, all models feature isolated input for all channels. This design lets you make connections without worrying about shorts, and it lets you make measurements without concern about interference or electric shock.

Users need measurement solutions that are capable of accommodating abrupt changes in load as well as chassis vibrations in the development of electric vehicles such as EVs, HVs, and PHVs. The LR8450 offers high-speed sampling in as short as 1 ms, allowing it to track waveforms that could not be captured using 10 ms sampling.

Noise resistance for solid reliability



Temperature measurement while an inverter is operating:
LR8450 is almost entirely free of the effects of noise.

The LR8450/LR8450-01 makes possible temperature measurement while limiting the effects of noise. In some cases, many loggers were unable to measure temperature normally in noisy environments due to the effects of high frequencies. Thanks to the newly revamped design of the LR8450, the effects of high-frequency noise have been significantly reduced, even for temperature measurement in the presence of operating equipment such as a switching power supply or inverter.

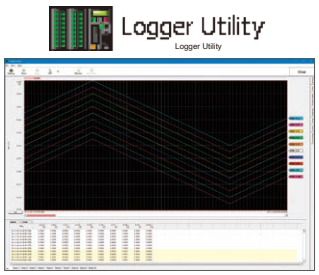
The LR8450 also introduces a new moving average function. This capability lets you display a moving-average waveform in real time of a different channel with the original waveform.

Network connectivity for predicitive maintenance

Communication commands & LabVIEW® driver

Preventive maintenance, an approach that requires replacing parts in manufacturing equipment regularly, increases maintenance costs. You can reduce these costs by implementing a monitoring and predictive maintenance approach that uses data loggers to forecast when parts will need to be replaced. This allows you to replace only the minimum necessary number of parts.
By using communication commands and the instrument's LabVIEW® driver*, you can capture data such as vibration and temperature for manufacturing equipment, send the data to an upstream server via LAN, and replace parts when you find vibration or temperature increasing.*Supported models: LR8450, LR8410-20, 8423

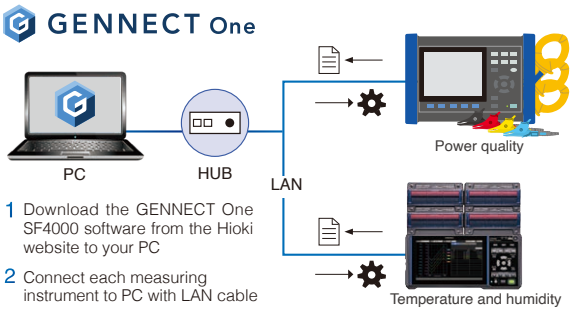
Included software



The LR8450/LR8450-01 comes with a standard PC software for collecting data in real time. The application can control up to five instruments via USB or LAN connections. You can also review past data while the measurement is in progress.

*U8555 and LR8535 are not supported.

Simultaneous measurement using multiple devices: GENNECT One



1 Download the GENNECT One SF4000 software from the Hioki website to your PC
2 Connect each measuring instrument to PC with LAN cable

Aggregate measurement data from not only loggers, but also waveform recorders, power meters, and other instruments onto a single PC.Display this measurement data on a single graph in real time. Summarize it in daily and monthly reports. Manage in a centralized manner. GENNECT One is a Windows application that specializes in aggregating measurement data.

Data including CAN data from the U8555 and LR8535 can be viewed and measured in real time (logging function, dashboard function). Real time measurement and viewing of CAN data will be available from the LR8450's next firmware update around mid or late 2022.

Supported models
- LR8410-20
- LR8450
- LR8450-01

GENNEC One is a free application.
Access this 2D Code for details and downloads.

Related products: Compact, easy-to-install loggers

WIRELESS MINI LOGGER LR8512 series

This compact logger can collect data wirelessly. You can configure settings and collect data from a smartphone, tablet, PC, or LR8410. The instrument can record a variety of parameters, including temperature, current, and pulse input, with the capability of collecting 500,000 data points per channel. *Not compatible with the LR8450-01.

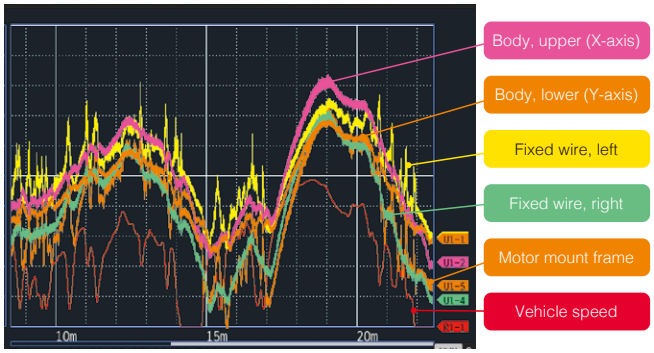
Compact Data Logger LR5000 series

This compact data logger can record up to 50,000 data points per channel, making it ideal for capturing data over an extended period of time. The series includes models for measuring temperature, humidity, instrumentation signals, load current, pulses, and other parameters. The accessory Communications Adapter LR5091 is required in order to collect data.

A New Proposal from Hioki

Make measurements as quickly as 1 ms, even with wireless module! Data Logger LR8450-01

This data logger can measure up to 330 channels when connected to four plug-in modules and seven wireless modules. Its isolated,high-speed voltage recording capability with high-speed modules that sample inputs in as short as 1 ms.



Measurement with strain gages affixed to an automobile body (measured while driving)

point!

Wireless modules save wiring!

Ideal for multi-point measurement and measurement in remote locations. Using wireless modules, you can reduce the time and cost of connecting and routing large numbers of wires.

point!

Sampling in as short as 1 ms!

The instrument delivers 1 ms sampling despite its portable design. It can also record sensor output such as pressure and vibration data.

point!

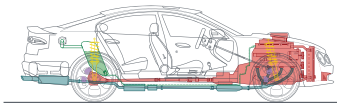
Strain modules with built-in bridge boxes!

Simply connect gages to the strain module and you're ready to go. You can also use strain gage-type converters.

Applications

If you need to measure dynamic strain

Stress or load of moving parts



Brake or pipe strain measurement

High-speed data logger + strain modules + strain gages

Strain modules have a built-in bridge box. This design lets you connect strain gages directly and measure vibration or pressure at up to 1 ms sampling.

MEMORY HiLOGGER LR8450 + STRAIN UNIT U8554

If you need to measure current and voltage RMS values

Display unit (current) + differential probe (voltage) + data logger

Combine a current probe and a differential probe to measure either AC or DC current and voltage.

CURRENT SENSOR CT7600/CT7700 series
DISPLAY UNIT CM7290 (RMS output)
DIFFERENTIAL PROBE P9000-02 (RMS output)

If you need to measure power

Interfaces varies with digits after the model number hyphen (e.g. 02 of PW3337-02)

PW3337

Power meter with D/A output and data logger

Measure power by combining the logger with a power meter that provides D/A output, for example the PW3337-02.

POWER METER

PW3335-02, -04 (AC/DC Sigle-phase2-wire)
PW3336-02, -03 (AC/DC Sigle-phase2-wire to Three-phase3-wire, 2ch)
PW3337-02, -03 (AC/DC Sigle-phase2-wire to Three-phase4-wire, 3ch)

If you need to measure resistance variations

RM3545

Resistance meter and Battery HiTester + data logger

Measure resistance variations by combining the logger with a resistance meter that provides output functionality, for example the RM3545.
Simultaneously measure the temperature and resistance variations of parts or battery internal resistance, for example in a constant-temperature oven.

RESISTANCE METER RM3545
BATTERY HiTESTER BT3562A

DISTRIBUTED BY

HIOKI E.E. CORPORATION

HEADQUARTERS
81 Koizumi,
Ueda, Nagano 386-1192 Japan
https://www.hioki.com/

Scan for all regional contact information

All information correct as of Mar. 31, 2022. Contents are subject to change without notice.

select_Logger_E3-23E Printed in Japan