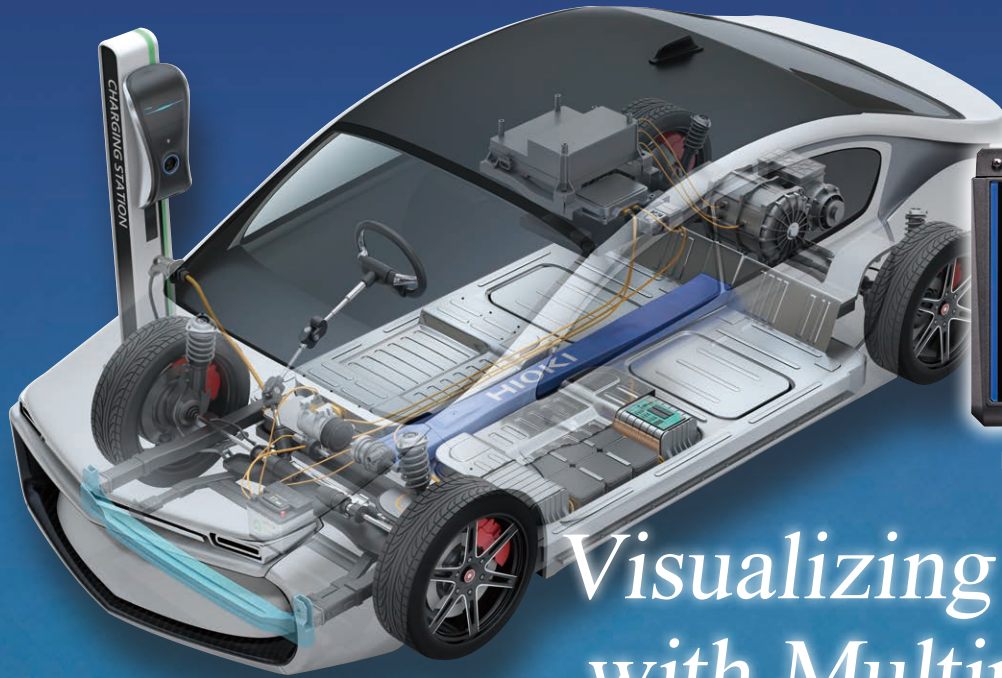


# HIOKI

## MEMORY HILOGGER LR8450, LR8450-01 Current Measurement Solutions for EV Development



MEMORY HILOGGER LR8450, LR8450-01

# Visualizing Energy Loss with Multipoint Current Consumption Measurement

To reduce EV energy loss and extend driving range, it's necessary to make high-accuracy measurements. This ensures that non-drivetrain energy is also used efficiently.

By combining the Hioki Memory HiLogger LR8450 with a current module and AC/DC current sensor, you can measure and record current at multiple points. Analyzing data accurately is key to reducing energy consumption.

### Compact contactless clamp-on sensor: just 77 mm long

**NEW**

AC/DC CURRENT SENSOR CT7812 (2A AC/DC)  
CT7822 (20A AC/DC)



Measurable conductor diameter:  $\phi 5\text{mm}$



Compact, contactless, and high-accuracy

Multiple sensors can be easily installed, even in confined spaces and locations with complex wiring.



Broad operating temperature range

Thanks to the operating temperature range of  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$ , low-level DC current can be measured with a high degree of accuracy, even in environments where the ambient temperature varies.

### Two current module types: Wireless and plug-in

**NEW**

WIRELESS CURRENT MODULE  
LR8536

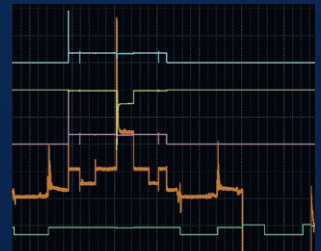


Extended measurement on battery power

Up to five sensors can be connected to a single current module. Wireless modules can operate on battery power for 5 hours or more.

**NEW**

CURRENT MODULE  
U8556



High-speed sampling

Five channels can be measured simultaneously with a sampling speed of up to 1 ms. As a result, you can capture even momentary changes in current value.

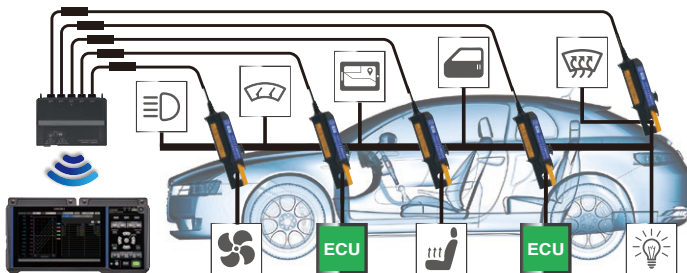


# Current sensing solutions

## 1 Extended, simultaneous recording of multipoint current data

### Reduce energy consumption

- Simultaneously record up to 55 channels of multipoint AC/DC current measurement data (when using the LR8450-01)
- By ascertaining how much current is used at a particular location, you can make improvements to use energy efficiently and reduce energy use
- Measure a broad range of current magnitudes, from large, high-current-consumption pumps and air-conditioning compressors to low-current-consumption interior accessories and ECUs



## 2 Slide-action clamp/release sensors

### Dramatically reduce man-hours

- Compact, contactless clamp-on sensors can be easily connected to cables in confined locations
- Use a wireless module to dramatically reduce wiring man-hours



## 3 Simultaneous recording of various phenomena


### Comprehensively analyze entire vehicles

- Simultaneously verify minuscule current of ECUs in sleep-mode
- Combine with an extensive range of available LR8450 measurement modules to simultaneously record variations in driving conditions and current consumption
- Entire vehicle analysis by combining CAN signal data with measured current consumption and other phenomena such as vibrations and temperature

## Principal Specifications


**NEW**  
AC/DC  
Current  
Sensors



	AC/DC CURRENT SENSOR CT7812	AC/DC CURRENT SENSOR CT7822
Rated current	2 A AC/DC	20 A AC/DC
Measurable conductor diameter	φ5 mm or less	
Output rate	0.1 V/A	0.01 V/A
Operating temperature range	-40°C to 85°C (-40°F to 185°F)	
Cord length	4 m	
Connector type	Hioki PL14 	

**NEW**  
Current  
Modules



	WIRELESS CURRENT MODULE LR8536	CURRENT MODULE U8556
Type	Wireless (Battery operation: 5 h or more)	Plug-in
Number of channels	5 (simultaneous sampling of all channels)	
Data refresh period	1 ms	
Measurement targets	DC current, AC current (RMS) Varies with current sensor used	
Input terminal	Hioki PL14 	

Data Loggers



	MEMORY HiLOGGER LR8450-01	MEMORY HiLOGGER LR8450
Type	Model with wireless LAN	Standard model
Maximum number of connectable modules	4 plug-in modules + 7 wireless modules	4 plug-in modules
	Modules are sold separately	
Maximum number of current channels	Up to 55 With U8556(plug-in) × 4 + LR8536(wireless) × 4	Up to 20 With U8556(plug-in) × 4
Pulse input	8 channels	
Alarm output	8 channels	

### Combined accuracy

#### ■ AC/DC CURRENT SENSOR CT7812

Range	Resolution	Instantaneous value (DC)
2.0000 A	0.0002 A	±0.38% rdg. ±0.0037 A
200.0 mA	0.1 mA	±0.38% rdg. ±2.4 mA

#### ■ AC/DC CURRENT SENSOR CT7822

Range	Resolution	Instantaneous value (DC)
20.000 A	0.002 A	±0.38% rdg. ±0.037 A
2.000 A	0.001 A	±0.38% rdg. ±0.024 A

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