

Automotive, Transport Vehicles | R&D, Testing/Services, Maintenance

Development and Evaluation of Electric Vehicle (EV) Quick Chargers

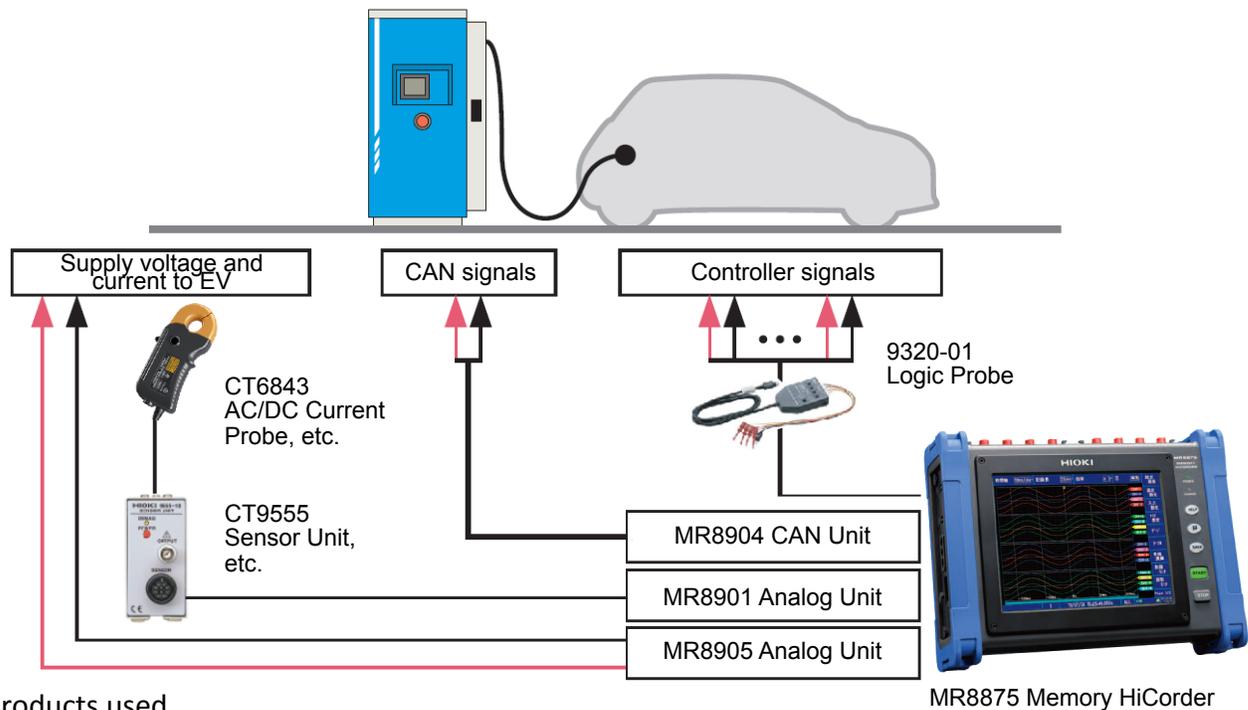
Record the output voltage, current, and control signal of an EV quick charger simultaneously and conduct operational evaluation tests.

With increasing focus on electric vehicles from the perspective of environmental protection and the optimization of energy sources, the energy consumption efficiency of quick chargers is an important measurement and evaluation criteria that is indispensable for the advancement of electric vehicles in society. In an electric vehicle (EV), the electronic control unit (ECU) specifies the optimal charging current depending on the battery conditions and provides commands to the quick charger to deliver the correct amount of DC power. Because various signals come into play when determining the right amount of supply, the ability to measure all signals at the same time to determine proper operation and signal integrity is critical for the development and evaluation of quick chargers.

Highlights

- Simultaneously record the output voltage, current, and various signals of a charger and monitor their timing during the development of EV quick chargers.
- Directly input up to 1000 V DC (700 V AC) to the MR8905 Analog Unit. All channels are isolated from one another, ensuring safe testing.
- The MR8904 CAN Unit lets you freely select the signals that flows to the CAN Bus and convert them to analog and logic signals.
- Record waveforms over a long period of time.

When recording to the MR8875's internal memory using all 16 channels, 1 second of signals can be sampled at the 2 μ s sampling rate. When saving in real-time to the Z4003 8GB SD Card using all 16 channels, 11 minutes and 11 seconds of signals can be sampled at a 10 μ s sampling rate.



Products used

- MEMORY HiCORDER MR8875

*Measurement requires input unit and other dedicated options. Select the input units appropriate for the number of data channels and signal type.

- ANALOG UNIT MR8901 (4-channel, voltage input)
- CAN UNIT MR8904 (2 ports)
- ANALOG UNIT MR8905 (2-channel, high voltage input)
- AC/DC Current Sensor CT6843-05 (200 A AC/DC)
- SENSOR UNIT CT9555
- LOGIC PROBE 9320-01

• Information valid as of May 2017.
• Specifications are subject to change and revision without notice.