CARLO GAVAZZI
Automation Components

CARLO GAVAZZI

Press Release

DCM1: THE DC ENERGY METER FOR MEASUREMENTS IN FAST CHARGERS

A very flexible, simple, compact, and easy-to-integrate energy metering solution.

Lainate, September 2024 - Carlo Gavazzi Automation, the international electronics group with activities in the design, manufacture, and marketing of electronic equipment, is pleased to present its new and innovative DC energy transducer, aimed at the emerging and growing DC metering requirements in fast chargers for Electric Vehicles.

EV charging applications today are mainly based on fast, ultra-fast, and hyper-fast chargers, and Carlo Gavazzi with its DCT1 energy transducer, has given the first and most suitable response to this need. A very flexible, simple, compact, and easy-to-integrate solution for energy measurement in DC fast chargers: with the DCT1 we are also able to provide a metering system that also contributes to the charger certification in the US (CTEP/NTEP) thanks to its resolution of 0.1 Wh and of course the cURus certification.

The natural process of evolution leads to the release of the DCM1, which includes a remote display, that can be shown from outside of the charger or in any case be installed far from the 1000 VDC segregated part of the charger, where easy access is not possible, to read variables or scroll display pages.

"The DCM1 is a meter which can also show information about the specific charging session, being able to receive and process start/stop session commands, the official time and date used by the controller and other options," Andrea Bernardi, International Product Manager states. "It is also equipped with an Ethernet port, so energy measurement information can be transmitted to the charger with Modbus RTU or Modbus TCP protocols. With the launch of the DCM1energy meter we aim to consolidate our presence and position ourselves at the forefront of energy measurement also in DC fast charger applications."

Developed in our Competence Center in Italy, the DCM1 is designed to provide an accurate monitoring system for certified fiscal billing in EV charging stations and battery energy storage systems, while providing power analysis capabilities to DC distribution systems in Energy efficiency applications.

Main technical features

- Remote display solution: high current transducer with dual temperature measurement and alarm, integrated DC voltage measurement, self-powered by the display unit to which it communicates via a supplied cable.
- Display with graphical visualization and quick setup
- Multi-protocols: RS485 Modubus RTU or Ethernet Modbus TCP available to adapt to different charger controllers
- Wide measurement range: 150 to 1000 VDC, 300 A or 600 A max current
- Compactness: 90x115x60 mm transducer housing + 3-DIN display housing
- Flexibility: Transducer is mountable, with both busbar and cable lug, in different orientations
- Fast serial data refresh time: 0.1 Wh resolution class B kWh EN50470-4, also suitable for load emergency disconnection, 200 ms communication refresh time
- Bi-directional kWh meter (imported/exported): Ready for vehicle to grid applications (distributed storage by car batteries)
- High accuracy: Calibration is also based on internal temperature sensors
- CE, cURus MID, LNE, Eichrecht certified Charging session management and OCMF file generation

ABOUT CARLO GAVAZZI AUTOMATION

Carlo Gavazzi Automation is an international electronics group with activities in the design, manufacture and marketing of electronic equipment targeted at the global markets of industrial and building automation.
Carlo Gavazzi Automation provides customers with technologically innovative, high quality and competitive solutions, in compliance with their requirements and expectations through its 23 National Sales Companies in Europe, the Americas and Asia & Pacific, operating with its production sites in Denmark, Italy, Malta, Lithuania and China.

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