

Press Release

DCT1: THE DC ENERGY TRANSDUCER FOR MEASUREMENTS IN FAST CHARGERS

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

Lainate, September 2023 - 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, targeted at the emerging and growing DC metering requirements in fast chargers for Electric Vehicles.

The near future for EV charging applications is mainly based on fast, ultra-fast, and hyper-fast chargers. Therefore, there is an increasing need for reliable and accurate metering systems to avoid the outdated "charge-by-time method" or the upstream AC meters which can make the end user also pay for the system power losses.

The DCT1 is Carlo Gavazzi's first and most suitable response to this need. A very flexible, simple, compact, and easy-to-integrate solution for energy measurement in fast chargers.

With the DCT1 we are able to provide a metering system that can be certified according to the requirement of the US and German calibration laws. In this way, the DCT1 can be applied for legal use in several European Countries while waiting for a harmonized and common EU regulation.

"Besides satisfying EV fast charging applications, the DCT1 can also be used to monitor the DC energy exchange in DC microgrids and to provide cost allocation information in DC industries," Andrea Bernardi, International Product Manager states. "Strengthened by the experience gained with our AC fiscal meters, with the release of the DCT1 energy transducer we aim to consolidate our presence and place ourselves at the forefront energy metering also in DC fast charger applications."

Developed in our Competence Centre in Italy, the DCT1 is specifically designed for accurate measurements in new emerging DC current applications such as EV charging stations, PV energy storage, DC industry, and DC microgrids, in full compliance with the latest international standards for DC energy. As a result of the fast growth of this segment, a number of different solutions are being developed, to meet the upcoming needs.

Main technical features

- **All-in-one solution:** Integrated voltage measurement, power supply and RS485 port (with signature)
- **Multi-protocols:** RS485 Modbus RTU or SML to adapt to different charger controllers
- **Wide measurement range:** 150 to 1000 VDC, 300 A or 600 A max current
- **Compactness:** 90x115x60 mm housing
- **Easy installation and sealing:** DIN mounting with additional screw terminals for robust back panel installation
- **Flexibility:** Mountable, with both busbar and cable lug, in different orientations
- **Fast serial data refresh time:** 200 ms, also suitable for load emergency disconnection
- **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 to meet accuracy requirements under any condition
- **Approvals and certifications:** cURus; NMI evaluation certificate for Eichrecht approval according to IEC 62052-11, IEC 62052-31, IEC 62053-41, VDE-AR-E 2418-3-100 Annex A, WELMEC 7.2. V2G compliance

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 22 National Sales Companies in Europe, the Americas and Asia & Pacific, operating with its production sites in Denmark, Italy, Malta, Lithuania and China.

For further information:

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