

Press Release

EM580: THE AC ENERGY METERING SOLUTION FOR EICHRECHT CERTIFIED EV CHARGERS

Flexible, easy to use, accurate and fiscal billing ready.

Lainate, December 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 AC energy meter, aimed at the emerging and growing metering requirements for EV chargers.

Today's EV charging applications focus on fast, ultra-fast and hyper-fast chargers and Carlo Gavazzi, with its DCT1 and DCM1 energy meters, has provided the first and most suitable response to this need for DC systems. Now it is time to further consolidate our strong presence in the e-mobility market also in AC systems applications.

The EM580 is the result of our in-depth knowledge of AC metering and EV charging, including the relevant certifications. This meter is equipped with an LCD display, a Modbus RTU port and is MID and Eichrecht compliant, which is often required in Europe. Bottom-up and top-down connections in all possible charger layouts make the EM580 easy to install.

"The EM580 is an accurate and certified meter that also displays all specific charging session information, is able to receive and process start/stop session commands, the official time and date used by the controller and other options. It is also equipped with an RS485 communication port so that the energy measurement information can be transmitted to the charger in the most secure way by creating a specific signed file: the OCMF file according to the S.A.F.E standard and compliant with the Transparency software," says Andrea Bernardi, International Product Manager. "With this launch, we intend to further expand our AC energy metering offer for EV charging stations and energy monitoring, consolidating our strong and successful tradition as a reliable partner for AC certified metering."

Developed in our Competence Centre in Italy, the EM580 is designed to provide a certified metering system for EV charging stations, while also providing data for fiscal metering in any AC distribution system or in energy efficiency applications.

Main technical features

- **Matrix LCD display:** Self-powered unit with graphical display, easy to install thanks to the DIN-rail housing and compact dimensions. RS485 Modbus RTU protocol communicates with charger controllers (S2 with 256-bit signature, S3 with 384-bit signature)
- **Compactness:** 3-DIN 54x90x50 mm meter housing
- **Easy installation and sealing:** DIN mounting and sealable terminal caps, suitable for single-phase and three-phase systems
- **Fast serial data refresh time:** 1 Wh resolution, 100 ms communication refresh time
- **Bi-directional kWh meter (imported/exported):** Ready for vehicle to grid applications (VG2)
- **High accuracy:** certified up to 70 °C, 0.001 kWh resolution via display and Modbus communication
- **Approvals and certifications:** CE; MID and Eichrecht compliance, suited for charging or V2G applications
- **Class B** according to EN50470-3
- **Accuracy:** $\pm 0.5\%$ RDG (current/voltage)
- **Voltage inputs:** 120 to 230 V L-N, 208 to 400 V L-L dc
- **Current inputs:** direct connection up to 65 A
- **Real time variables:** V, A, W, var, VA, PF, Hz, internal temperature

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:

Carlo Gavazzi Automation SpA - Via Milano 13 - 20045 Lainate (MI) - Italy
Marketing and Communication - info@gavazziautomation.com - www.gavazziautomation.com