





Solutions

Electric Vehicle (EV) Charging

Solutions for EV Charging



Designed to meet market requirements

The Electrical Vehicle (EV) charging landscape is undergoing significant and impactful change.

As electric vehicles transition from the "novelty phase" towards becoming a positive, yet disruptive technology, it is predicted that several million electric vehicles will be on U.S. roads by 2025.

Whether it is Level 1, 2, or 3 charging, consumption metering will continue to be extremely important, especially to support bi-directional energy demands and billing.

As we transition to more Smart Cities, and we embrace the Internet of Things (IoT), it will also be necessary to treat electric vehicles as "grid assets", where the batteries in electric vehicles can be used to power other loads.

Carlo Gavazzi has a rich history providing innovative, high-quality components and solutions to OEMs and Systems Integrators.

Today, we have many installations of energy metering products successfully operating in EV charging equipment around the globe. As future needs emerge, ready with integrated are an platform, **UWP** our 3.0, that can perform control functions like active control as well as data logging and gateway functions.

This provides the means for communications over traditional Wi-Fi, Cellular, and LoRaWAN®.

Our platform is also a powerful Edge device that bridges the Field, Automation, and Management levels of EV charging automation.

Video

About Carlo Gavazzi

Carlo Gavazzi Automation is a multinational electronics group active in the design, manufacture and marketing of electronic equipment targeted at the global markets of industrial and building automation.

Our history is full of firsts and our products are installed in a huge number of applications all over the world. With more than 80 years of successful operation, our experience is unparalleled.

We have our headquarters in Europe and numerous offices around the world.

Our R&D competence centres and production sites are located in Denmark, Italy, Lithuania, Malta and China.

We operate worldwide through 22 of our own sales companies and also selected representatives in more than 65 countries, from the United States in the West to the Pacific Rim in the East.

Our core competence in automation spans three product lines: Sensors, Switches and Controls.

Our extensive product portfolio includes sensors, monitoring relays, timers, energy management system, solid state relays, safety devices and fieldbus systems. We focus our expertise on offering state-of-the-art product solutions in selected market segments.

Our customers include original equipment manufacturers machines, packaging plasticinjection moulding machines, food and beverage production machines, conveying and material handling equipment, door and entrance control systems, lifts and escalators, as well as heating, ventilation and airconditioning devices.

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Solutions for EV Charging





1-phase energy analyzers



EM111

The EM111 is an energy analyzer with LCD, touchscreen display and optional RS485 Modbus communication. It can measure up to 45 AAC, with a 6 \mbox{mm}^2 cross section terminals, at 276 VAC without the need for any external current transformer.

- Datasheet EM111
- Overview by product

Controller, gateway and data logger



UWP 3.0

The UWP 3.0, Universal Web Platform is a micro Linux-based PC with a built-in Web server and Web service capability. It includes event and data logging from Modbus, Modbus/TCP, and Dupline®. The UWP 3.0 functions as a local gateway for Modbus/TCP and includes remote gateway functions (FTP, SFTP, FTPS, Rest-API). Microsoft Azure and Amazon AWS certified. It also performs control functions.

- Datasheet UWP 3.0
- Overview by product

analyzers/transducers



EM330 / EM340 / ET330

The EM330 and the EM340 energy analyzers (respectively by 5 AAC CTs and 65 AAC direct) and the ET330 energy transducer are designed for active energy metering and for cost allocation. Housing for DIN-rail mounting. The transducer is provided with RS485 Modbus port, while the analyzers come with either communication or pulse output.

- Datasheet EM330
- Datasheet EM340

- Video

1-, 2- or 3-phase energy



- Datasheet ET330
- Overview by product

Endpoint adapter for LoRaWAN®



UWP A / UWP M

The UWP A is the key to convert any Carlo Gavazzi energy meter or analyzer into an IIoT device, for joining a LoRaWAN® network and sending data to Energy Management Systems, Energy Billing Portals or Facility/ Asset Management Solutions. The UWP M is the long range wireless concentrator to connect multiple UWP A endpoints to the UWP 3.0 controller

- Datasheet UWP A / UWP M
- Overview by product

2- or 3-phase energy analyzers



EM540

The EM540 is a "direct connect" energy analyzer that will handle up to 65 A of current directly connected without a Current Transformer. It is ideal for EV Chargers as it measures 415 VAC 3-phase and 230 VAC single phase. The EM540 features an accuracy class 1 and has a crisp, bright, backlit LCD display.

- Datasheet EM540
- Video

1-, 2- or 3-phase energy analyzers



EM24

Three-phase energy analyzer for DIN-rail mounting with configuration joystick, frontal selector and LCD display. Available with Modbus TCP port, it can manage voltage inputs up to 480 VAC, managing either "direct connected" currents up to 65 A or 5 A current transformer and potential transformers.

- Datasheet EM24
- Overview by product

Low-profile ower supplies



SPMA

SPMA series of "low profile" power supplies offer high efficiency (up to 89%) in a small space-saving package. The SPMA has short-circuit and overload protection with an LED indicator for "low-voltage.

PS21M



Miniature

limit switch

Carlo Gavazzi offers many solutions for deenergizing the power circuit when the EV charger panel or door is opened. One such product is the PS21M series, which assures the EV charging enclosure/door is closed. Designed for rugged environments, the PS21M switches are compact and provide an integrated connection cable.

- Datasheet PS21M
- Datasheet SPMA
- Overview by product
- Application note

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