

## INNOVATIVE PRODUCTS

## Charge Controller CC613



## Safe home charging with the CC613 charge controller home variants

Using permanently installed charging points or wallboxes to charge electric vehicles in domestic settings will be of increasing importance in the future. Because of this, it is not enough for wallboxes to be easy to use, they also need to be as compact as possible and affordable for end users.

**The growing popularity of Home Energy Management Systems (HEMS) and the growing number of energy loads connected within homes means that charge controllers are also subject to higher requirements.** End users want to be able to distribute available energy intelligently to all their loads. This means that it must also be possible to connect the charge controller to a HEMS. That's why Bender has designed the home variants of the new CC613 charge controller.

### Expanded charge controller portfolio – New field of application

Following the successful launch of the CC613 series, the next generation of charge controllers, Bender has now gone a step further. The early versions of the CC613 already offered all the functionalities needed to successfully and intelligently create a connected charging infrastructure in public and semi-public areas. With the new portfolio expansion, Bender is positioning itself in the private and domestic sphere.

What are the requirements for a wallbox in the private sphere? Three factors play an important role/: In addition to having a compact design, a private wallbox also needs



to be user-friendly and ensure electrical safety. This means that, in addition to electrical safety, an easy charging process is of prime importance to the end user.

### Electrical safety for home users

The first safety feature boasted by the CC613 home variants is the integrated DC fault detection that is compliant with the IEC 62955 standard. In the event of a DC fault, this feature not only protects type A RCDs in home installations from blinding, but also stops the charging process of the electric vehicle. The integrated DC fault detection means that no type B RCD is required, thus significantly lowering installation costs. A type A RCD in the charging station or sub-distribution is sufficient.

A further safety feature is the standard built-in 'weld check' that can reliably identify a 'welded' power contactor; in this event, it issues a fault message. This safety feature warns the end user of the hazard and prevents the start of any new charging process. In addition, continuous PE monitoring ensures the correct connection of the protective earth conductor in the charging station, which further reduces the risk of an electric shock.

The integrated emergency opener also brings more safety. In the event of a power supply failure, the charging cable is safely released, and the home user can safely remove the cable from the wallbox. This feature is not only reassuring: it also saves additional space in the wallbox as no further component is needed.

### Connected controller as part of the HEMS

In the current Smart Home era, the interconnection of domestic loads plays a major role. Thanks to the integrated Ethernet interface, it is now very easy to connect the charge controller or wallbox to a HEMS via an EEBUS, for example. This allows the user, for instance, to plan and control the charging process of an electric vehicle intelligently in connection with the battery storage device of a PV system. This enables smart usage and distribution of the available energy.

The Powerline Communication (PLC) according to ISO 15118 facilitates a smart connection between the electric vehicle and the CC613 charge controller or wallbox. This provides the home user with the simple option of plug & charge or autocharge. Where the electric vehicle supports the ISO 15118 standard, this can be seen in the State of Charge (SoC) of the HEMS. This makes it possible to control the charging process in order to be able to cover a given distance at a specific departure time.

### Compact wallboxes thanks to space-saving enclosure designs

Domestic environments, especially private garages, often have limited space. The space-saving design of the CC613 underpins the compact charging boxes. This is complemented by the new, integrated 230 V control relay, which can control the power contactor directly, thus avoiding the additional use of an intermediate relay and saving further space.



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### Two variants

#### – Perfect for private use

The CC613 home variant is available in two different versions. With the first version, the Home Basic (HB), users have a controller designed to control the charging process of an electric vehicle through an attached charging cable, whilst still providing all the security features, the 230 V control relay and the 'weld check'. This version is not compliant with ISO 15118.

With the second home variant, the CC613-Home Energy Management System (CC613-HEM), private users also have the option of integrating the controller into a HEMS by using an Ethernet interface. A Modbus meter can

also be connected to the charge controller if required. The CC613-HEM can be used with a charging socket or an attached cable.

Both variants are suitable for all standard electric vehicles that can be charged with a type 2 or type 1 charging cable.

### Conclusion:

Bender is expanding its charge controller portfolio and, in doing so, is actively entering the market for wallboxes and charging points for private use. The CC613 home variants are ideal for use in private spaces, not least thanks to their compact design and compelling features. ■

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### INFO

More information: <https://www.bender.de/en/products/charge-controller/cc613-charge-controller-home-variants>

**NEW**

## The new RFID module for user authorisation using debit and credit cards

**With the RFID117 module, Bender is taking a further step towards sustainable charging technology.**

Customers can now use a charge controller extension that enables user authorisation using a debit or credit card<sup>1)</sup>. As well as classic RFID cards, this module can read the type of cards that users always have on them.

The new RFID module also includes integrated LEDs to display the charging status and offers improved antenna performance. It is, of course, compatible with Bender's charge controllers, such as the new CC613; communication is via an RJ45 interface.



<sup>1)</sup> Charging process not billed directly

### INFO

More information: <https://www.bender.de/en/products/charge-controller/rfid117-1>

