

Volume

1

CHARGESTORM AB

Charge station



modell CSR100



# User Guide CSR100

CHARGESTORM AB

# User Guide **CSR100**

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© Chargestorm AB  
Laxholmstorget 3  
SE-602 21 Norrköping, Sweden  
Phone +46 11 333 0002 • Fax +46 11 333 0003  
Email [info@chargestorm.se](mailto:info@chargestorm.se)

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## CSR 100 - introduction

*CSR 100, a flexible EV charging station.*

**C**ongratulations! Your CSR100 sets a new standard in the EV charge station industry. It is modern designed, easy to use and support many useful online functions, and is infused with the quality and attention to detail that are the hallmark of Chargestorm.

### Models

The Charge Station CSR100 can be equipped with different hardware components. The model number reveals much information about the internal hardware.

The product model structure syntax follows:

*<Model>-<connectors><type of connector ><Mounting type>-<fuse><phase>-<options>*

<b>S</b>	Schucko
<b>1</b>	EV connector, type 1 (US Market)
<b>2</b>	EV connector, type 2 (Europe Market)
<b>3</b>	EV connector, type 3 (Italy Market)

TABLE 1 Available *connector types* for CSR100

<b>P</b>	Pole mount
<b>W</b>	Wall mount

TABLE 2 Available *mounting type* for CSR100

<b>1</b>	16 Ampere Fuse
<b>3</b>	32 Ampere Fuse

TABLE 3 Available *fuse values* for CSR100

<b>1</b>	1 phase
<b>3</b>	3 phase

TABLE 4 Available *phase values* for CSR100

<b>E</b>	Energy meter (MID)
<b>G</b>	GPRS modem for standalone use (3G modem on request)
<b>S</b>	Ethernet Switch
<b>Z</b>	3G+ZigBee
<b>U</b>	Upgrade of CCU to GCU in Charge Station (standalone use)
<b>W</b>	Wireless LAN
<b>P</b>	Motordriven fuse and ground fault circuit with external reset button
<b>C</b>	External charging cable
<b>R</b>	RFID authentication

TABLE 5 Available *options* for CSR100

<b>CSR100-22P-13-</b>	Charge Station with Outlet controller, 2 x Type 2 outlets, Pole mounting, 3Phase, 16 Amp.
<b>CSR100-12W-13-</b>	Charge Station with Outlet controller, 1 x type 2 outlets, Wall mounting, 3Phase, 16 Amp.
<b>CSR100-2SP-13-</b>	Charge Station with Outlet controller, 2 x Schucko outlets, Pole mounting, 3Phase, 16 Amp.
<b>CSR100-1SW-13-</b>	Charge Station with Outlet controller, 1 x Schucko outlets, Wall mounting, 3Phase, 16 Amp.
<b>CSR100-22SP-13-</b>	Charge Station with Outlet controller, 1 x Type 2 and 1 x Schucko outlets, Pole mounting, 3Phase, 16 Amp.
<b>CSR100-22SW-33-</b>	Charge Station with Outlet controller, 1 x Type 2 and 1 x Schucko outlets, Pole mounting, 3Phase, 32 Amp.

TABLE 6 Example of CSR100 variants

## Inventory

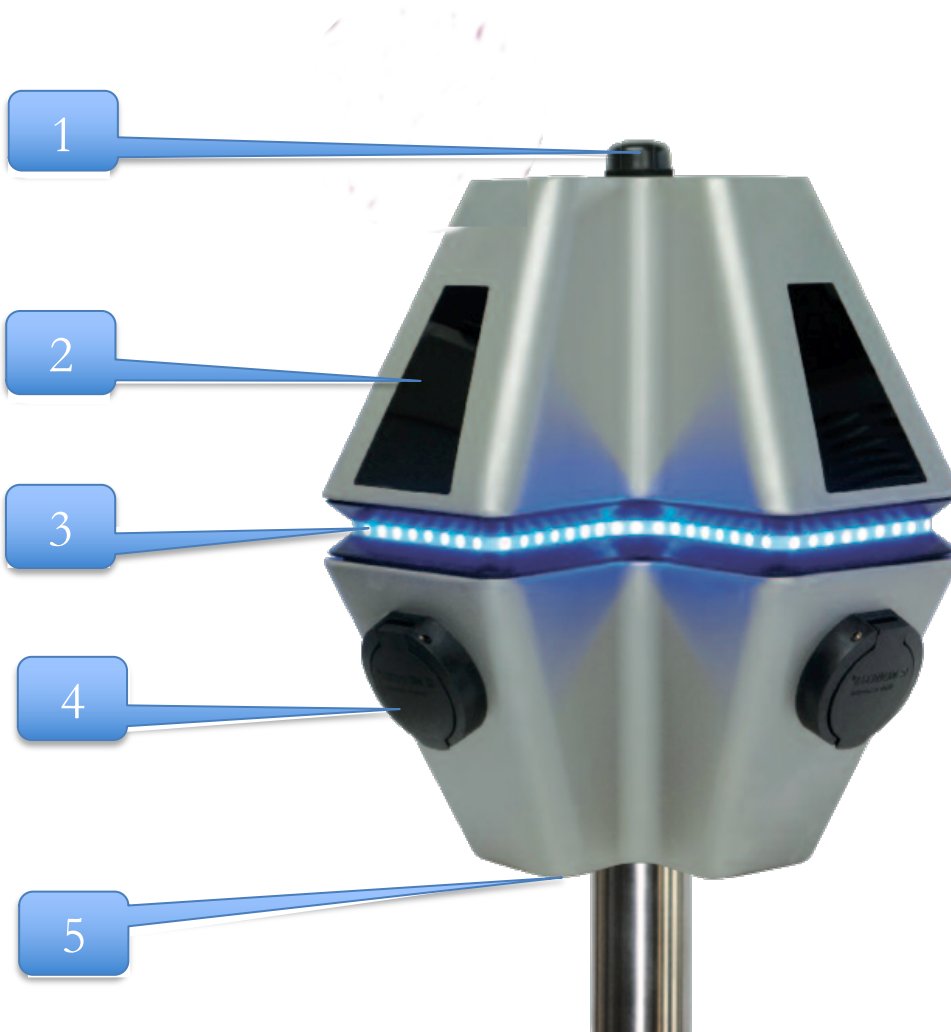
The Charge Station CSR100 is shipped with:

1. The CSR100 product
2. The User Guide
3. Power Connector for external power wires

### To find more information

1. The *CSR100 Installation Instruction* shows how to mount the station connect power and get the station online. The User Guide is also possible to download from the web portal.
2. The *CSR100 Datasheet* can be downloaded from the web site: <http://www.chargestorm.com>

Identifying the parts of CSR100



1. **Antenna** of type WLAN, Zigbee, 3G, combo depending on model.
2. **RFID**. The location where the RFID tag shall be put in order to authenticate a user.
3. **LED strip**. The LED strip visualizes different operating modes of the charge station.
4. **Outlet**. The outlet type depends on the model.
5. **Fuse and Groundfault reset**. An external reset button for fuse and ground fault. The button is only present if part of the model.

## Using the CSR100

*CSR 100, an easy to use EV charging station.*

Charging your electrical vehicle with CSR100 is fun and easy. The charge station can operate in two modes. In the first mode **”free charging”**, is the charging started as soon as you connect the plug to the charging station. In the second mode, **”RFID mode”**, is the charging not started until the user has been authenticated via RFID.

### Free charging

In the free charging mode is the charging started immediately when the charging plug is connected. The LED strip turns blue when charging starts. See chapter **LED strip** for explanation of the LED strip behaviour.

### RFID mode

In the RFID mode is EV driver required to authenticate him/herself to the charging station before the charging session starts. The use case for RFID is as follows:

1. EV Driver connects cable to charge station (**before** RFID tag identification takes place).
2. Charge station blinks twice in green to indicate that it has detected cable connected.
3. EV Driver puts RFID tag above RFID window on charge station
4. Depending on authentication result:
  - a. Charge station blinks blue when RFID tag detected and accepted. Charging starts immediately
  - b. Charge station blinks red when RFID is detected and rejected. Charging does not start.
5. For successful RFID authentication is the LED ring blue until the cable is unplugged.
6. END

### Note

There are many different standards for RFID tags. Unless Chargestorm has provided the RFID tags, please contact Chargestorm to confirm that your RFID tags are compatible with *CSR100*



**LED strip**

The following table explains the LED strip behaviour.

LED strip color	Mode	Explanation
<b>Solid GREEN</b>	RFID/Free charging	Outlet is available and ready for use
<b>Blinking GREEN</b>	RFID/Free charging	Cable connected to charge station
<b>Blinking GREEN</b>	RFID	RFID tag detected
<b>Solid RED</b>	RFID/Free charging	Alarm active. Typically fuse or ground fault protection tripper. Call for Support personal.
<b>Blinking RED</b>	RFID	RFID tag authentication failed (User not allowed to use Charge station).
<b>Solid BLUE</b>	RFID/Free charging	Charging
<b>Blinking BLUE</b>	RFID	RFID tag authentication succeeded (Charging just about to start).
<b>Solid WHITE</b>	RFID/Free charging	No contact with charge portal. Always happen during reboot.

**Note**

If power is not available for the charge station is the LED strip inactivated. Call for support.

## Chargestorm warranty statement

### *Warranty conditions for CSR 100.*

1. Chargestorm warrants to you, the end-user customer, that the product *CSR100*, accessories, and supplies will be free from defects in materials and workmanship after the date of purchase, for one year. If Chargestorm receives notice of such defects during the warranty period, Chargestorm will, at its option, either repair or replace products which prove to be defective. Replacement products may be either new or equivalent in performance to new.
2. Chargestorm warrants to you that Chargestorm software will not fail to execute its programming instructions after the date of purchase, for the period specified in *1*, due to defects in material and workmanship when properly installed and used. If Chargestorm receives notice of such defects during the warranty period, Chargestorm will replace software which does not execute its programming instructions due to such defects.
3. Chargestorm does not warrant that the operation of Chargestorm products will be uninterrupted or error free. If Chargestorm is unable, within a reasonable time, to repair or replace any product to a condition as warranted, you will be entitled to a refund of the purchase price upon prompt return of the product.
4. Chargestorm warranty is valid in any country or locality where Chargestorm has a support presence for this product and where Chargestorm has marketed this product. The level of warranty service you receive may vary according to local standards. Chargestorm will not alter form, fit or function of the product to make it operate in a country for which it was never intended to function for legal or regulatory reasons.
5. Warranty does not apply to defects resulting from (a) improper or inadequate maintenance or calibration, (b) software, interfacing, parts, or supplies not supplied by Chargestorm, (c) unauthorized modification or misuse, (d) operation outside of the published environmental specifications for the product, or (e) improper site preparation or maintenance.
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## Getting support for CSR100

*CSR100 from a support perspective.*

**C**hargestorm offers a number of ways that you can get technical support for your product. If you have questions or problems, here are the resources available for you:

1. Look up information in this *User Guide*.
2. Visit Chargestorm's web site: <http://www.chargestorm.com>
3. Email Chargestorm support address: [support@chargestorm.com](mailto:support@chargestorm.com)
4. Call Chargestorm support.

## Obtaining service and repair

*CSR 100 service and repair conditions.*

To receive warranty repair service, contact your local Chargestorm contact. Alternatively call Chargestorm's service number. The service technician will help you qualify your product for warranty repair based on the warranty applicable to your product and original purchase date, and will provide you with repair processes. The product must in some cases be returned to Chargestorm's support center in Sweden.

Warranty service may include the cost of shipping, handling, duties, taxes, freight, or fees to or from the service location.

### **To repair CSR100 outside the warranty period**

If your product is no longer in the warranty period, contact Chargestorm's support. The support person will let you know about repair charges and processes.

### **To prepare your product for shipment**

1. **Important.** It must be a certified electrician that dismounts *CSR100* from the power grid.
2. When sending your *CSR100* to Chargestorm, please use the original product packaging or other substantial packaging in order to avoid damage to the unit in transit.
3. The destination address for your shipping can always be found on our web site:  
<http://www.chargestorm.com>

## Troubleshooting techniques

*Troubleshooting CSR 100.*

**T**his chapter explains how to address problems that can occur with *CSR100* in the field.

### Power problems

*The LED strip is not active*

- Check mains (fuses) in local power grid, it could be a power outage problem.
- Check that the incoming power connector is correct and attached to the charge station. This step requires the unit to be disassembled.

#### Note

Only certified electricians are allowed to dismount the *CSR100*

### Fuse and ground fault problems

*The LED strip is RED*

- On *CSR100* models with option **P**, just push the reset button on the bottom of *CSR100*.
- For other *CSR100* models must the bottom part of the enclosure be dismounted since the fuses and ground fault detector are located inside the unit.

#### Note

Only certified electricians are allowed to dismount the *CSR100*

### Charging problems

*Charging is not starting when plug is connected*

## CHARGE STATION CS100

- Check in web portal if charge station is configured in **RFID mode**. In that case must the RFID tag be used before the charging starts.
- Check that the electrical vehicle is not fully charged already.
- Reboot the charge station from the web portal in order to eliminate software problems.
- Test the other outlet. If the second outlet works is the problem likely related to a hardware problem on the failing outlet.

### Internet access problems

*The LED strip is white*

- Check the WAN network status.
  - Is the 3G network running?
  - Is the Ethernet okay?
  - Is the WLAN up?
- Check from the Web portal if it is possible to access eventual charge stations next to the failing charge station. If that is the case double check ethernet cables or antennas
- Try power cycling the failing charge station. This step requires the unit to be disassembled (unless it is possible to turn off power on the mains).
- Check the configuration file WAN settings from the CLI. The unit must be dismantled

#### **Note**

Only certified electricians are allowed to dismount the *CSR100*