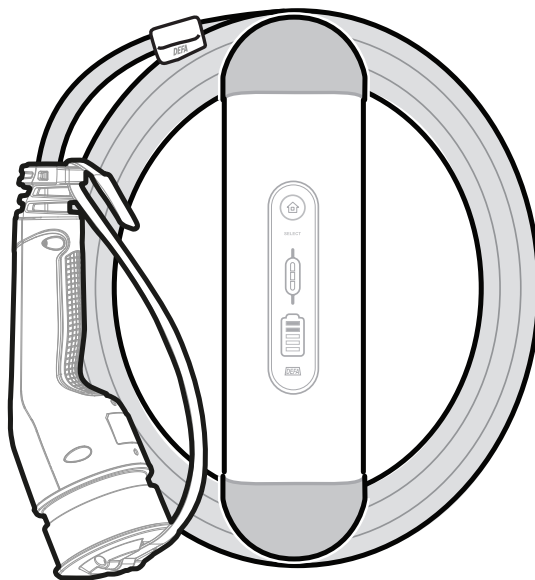


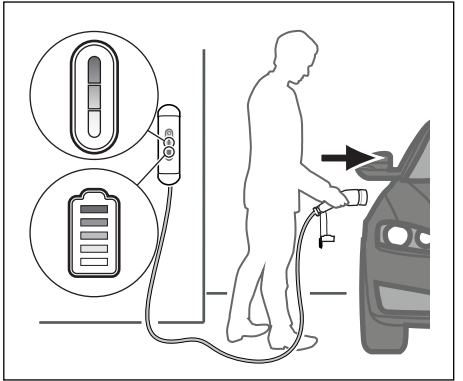
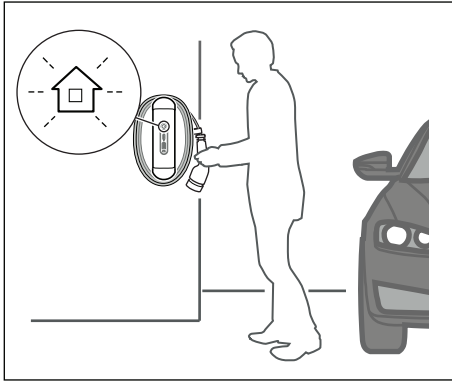
# DEFA Solid™



## EV Charging Station

(EN) User Manual





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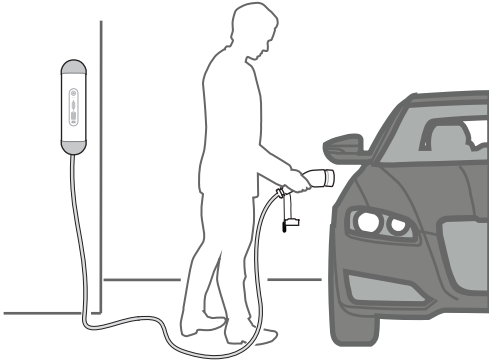
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# Description

The DEFA Solid EV Charger is a premium charging station for electric vehicles and plug-in hybrids.

The DEFA Solid EV Charger has been created with the user in mind. Unique features, unmatched user friendliness, and extreme durability characterizes the DEFA Solid EV Charger.

- Efficient cable management: Cable guides and clip keep the cable tidy.
- Robust and durable: Aluminum housing ensures a long product life, even in rough conditions.
- Easy to wind: The markets most flexible cable, even in temperatures down to  $-40^{\circ}\text{C}$ .
- User-friendly: One-button interface and intuitive display.
- Power Adjustment: Manually reduces current to protect main fuse when necessary.



# Safety information

**Important!** Read this document before using the device. Failure to follow any of the instructions or warnings can result in material damage or personal injury.

**Important!** If the device fails to behave according to instructions, immediately contact an electrician or support, see chapter **Contact information**.

**Important!** The charging station must be installed, uninstalled or repaired by a licensed electrician. These actions must be executed in accordance with national and local regulations.



**DANGER** Sections marked with this symbol draw attention to electrical voltages that represent a danger to life and limb. Actions contrary to these safety notices may lead to severe or fatal injury. Actions contrary to these safety notices must not be carried out under any circumstances.



**WARNING** Sections marked with this symbol draw attention to additional hazards that may lead to damage to the cable itself or to other electrical devices. Actions marked with this symbol must be carried out with special care.



**NOTICE** Sections marked with this symbol draw attention to additional important information and special features that are necessary for the reliable operation of the device. Actions marked with this symbol should be carried out as required.

## Danger



Do not use if the outer shell has been damaged.



Do not use the charging cable if it is defective or appears cracked, broken or otherwise damaged.



Do not use adapters or extension cords.

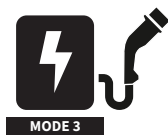


Physical repairs must be executed by a licensed electrician.



Changes to the settings or the power connections must be executed by a licensed electrician.

## Warning



The product is designed only for Mode 3-charging of vehicles. Do not use it for any other purpose.

Do not allow the cable to be under strain during charging.

Do not allow water to enter the charging port while charging.

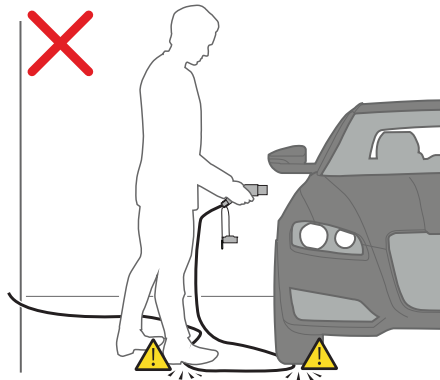
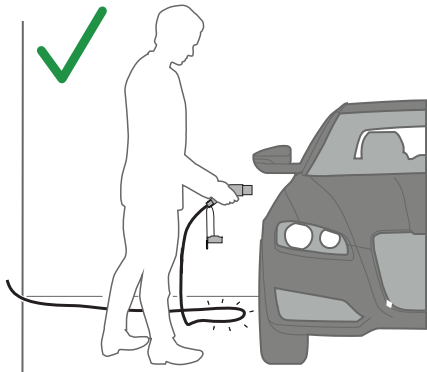
Keep the plug and charging station away from water. Do not expose to a direct jet, or splashes of water.

## Handling

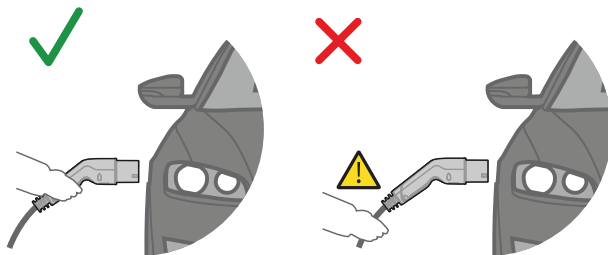


**DANGER** Ensure that the cable is never run over by a vehicle.

Handle the charger with care and do not subject it to strong force or impact. Do not pull, twist, tangle, drag, or step on the cable.



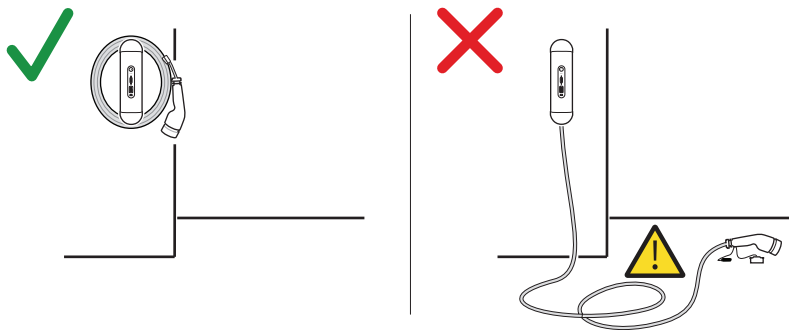
Always hold the cable by the handle when pulling it. Do not pull the cable itself.



## Storing

See chapter **Store and protect** for information about how to coil the cable correctly.

- Always store with the cable coiled. Do not leave the cable on the ground after usage.
- Attach the plug cap to protect the vehicle plug when the product is not in use.
- Use the cable clip to coil the cable for when the product is not in use.



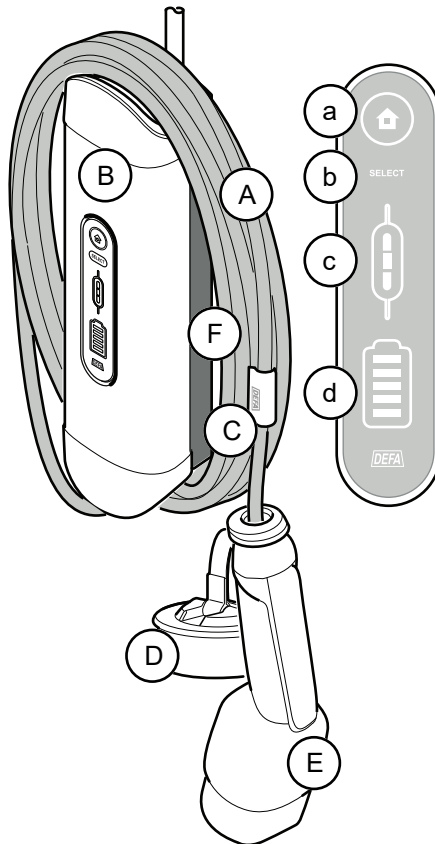
# Main parts

## Charging station

- A. Charging cable
- B. Charging unit
- C. Cable clip
- D. Plug cap
- E. Vehicle plug
- F. Wall bracket

## Display view

- a. Power Input Indication
  - b. Select Button
  - c. Charger Status Indication
  - d. Vehicle Connection Indication
- Torx bit TX15





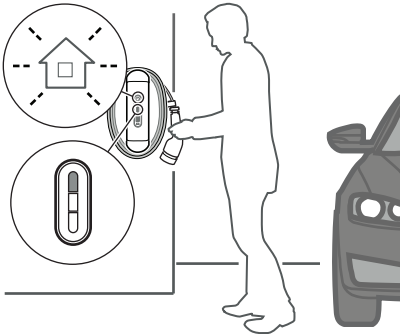
# Charge the vehicle



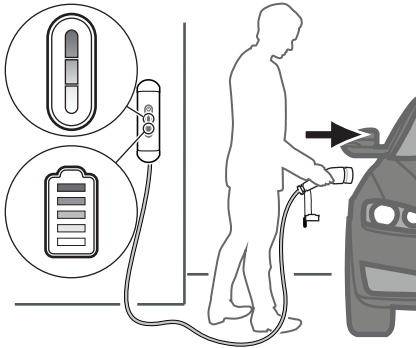
**NOTICE** Please read the charging instructions in the vehicle's manual before using the charging station.

## Plug in

1. Ensure that the charging station is turned on (**Power Input Indication** is lit).
  - In case the charging station is turned off, refer to the section **Turn the charger on/off**.
2. Ensure that the charging station is set to the desired level (displayed by **Charger Status Indication**).

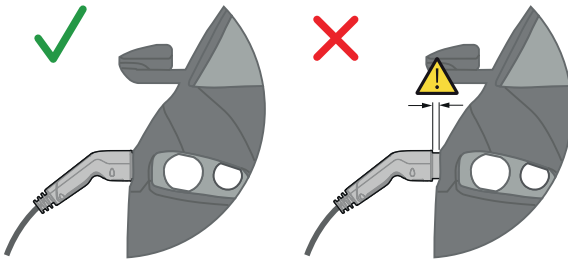


3. Check the condition of the vehicle inlet before inserting the plug.
4. Uncoil the cable and grab the handle.
5. Insert the plug into the vehicle inlet. The vehicle starts to charge which is indicated by the lights being lit in sequence on **Vehicle Connection Indication**. The speed in which the lights are lit indicates which level is used.



## Proper connection

The plug must be fully inserted into the inlet of the vehicle. Failure to do so will prevent the vehicle inlet from locking the plug in place and start charging.



## Unplug

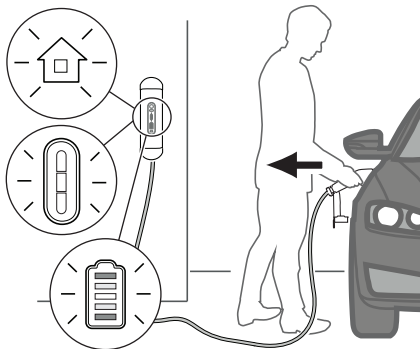


**WARNING** Do not unplug the charging cable while the vehicle is still charging. Always complete or end the charging before unplugging (refer to the vehicle's charging instruction for information about this).

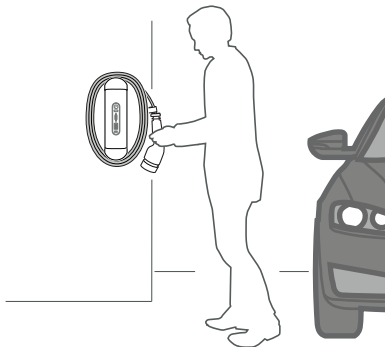
- If the charging is finished, all symbols on the display will blink. You can safely unplug the charging cable.

- If the charging isn't finished, you have to end the charging via the vehicle before unplugging the charging cable.

1. Remove the plug from the vehicle inlet.



2. Coil the charging cable around the charging unit.



## Turn the charging station on/off

Turn the charging station on/off by pressing and holding **Select** for 5 seconds. You can't turn off the charging station when it is connected to a vehicle.

# Display symbols on the charging unit



**NOTICE** To see animations that explains the different signals, go to [www.defa.com](http://www.defa.com).

## Power Input Indication

Indicates if the charging station is connected to power or not.



No light - Power off



Light on - Power on



Pulsing - Charging finished



Pulsing red - Error

## Select Button

Briefly press **Select** to toggle between **Normal/Low 1/Low 2**. The levels will appear in the following order: **Normal** (default starting level) → **Low 1** → **Low 2** → **Normal** → .

When **Select** is pressed:

- The light on the button will be lit for 5 seconds and then fade.
- **Charger Status Indication** will blink for 2 seconds, then stay lit.



No light - **Normal level** is activated



Light - **Low 1-level** or **Low 2-level** is activated

## Charger Status Indication



**NOTICE** This display does not display any information about the charging level of the vehicle's battery.

Indicates the charging station setting. The display will blink for a few seconds at start-up and then settle on the current charging level for the device.



No light -  
Charging  
station dis-  
connected or  
turned off



Flowing -  
Automatic  
self-test



Three bars -  
Normal level  
used



Two bars -  
Low 1-level  
used



One bar -  
Low 2-level  
used



Pulsing -  
Charging fin-  
ished \*



Pulsing red -  
Error

\* Pulsing with one, two or three bars depending on chosen level.

## Vehicle Connection Indication



**NOTICE** This display does not show any information about the charging level of the vehicle's battery.

Indicates that the charging station is connected to the vehicle and that charging is in progress.



No light - No con-  
nection to vehicle



Only end lights lit  
- Battery connec-  
ted (no charging  
yet)



Lights are lit in se-  
quence - Char-  
ging\*



Pulsing - Vehicle  
has communicated  
fully charged



Pulsing red - Error

\*The speed in which the lights are lit indicates which charging level is used.

# Set the required charging level

1. Press **Select** to toggle between **Normal** level/**Low 1**-level/**Low 2**-level. The levels appears in the following order: **Normal** (default starting level) → **Low 1** → **Low 2** → **Normal** → .



2. When setting the device to **Low 1**-level or **Low 2**-level **Select**lids for 5 seconds and then fade. The number of bars on **Charger Status Indication** show which of the modes is currently active.



3. **Charger Status Indication** blinks for 2 seconds until the change is effective, then stay lid.



**NOTICE** If charging ends on Low 1-level or Low 2-level, this setting will be stored until the next use.

- **Low level:** If **Low 1**-level or **Low 2**-level is set, the charging power will be lower than normal. This might be required if the fuse for the domestic outlet is rated lower than the normal level of the charging station, or if the domestic outlets electrical circuit used for the charging station is shared with other electrical products.

	Product rating configured by installer							
Normal	4,6 kW 20 A	4,1 kW 18 A	3,7 kW 16 A	3,5 kW 15 A	3,0 kW 13 A	2,3 kW 10 A	1,8 kW 8 A	1,4 kW 6 A
Low 1	16 A	15 A	13 A	12,5 A	11 A	9 A	7 A	N/A
Low 2	8 A	8 A	8 A	8 A	8 A	8 A	6 A	N/A
Chosen by installer (marked with "X"):								

The charging power also depends on the power that the connected vehicle is able to receive.

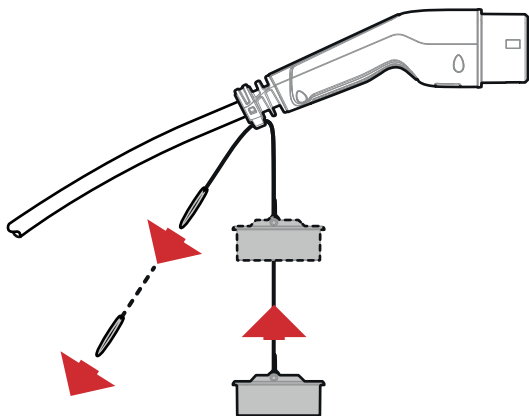
# Store and protect

## Coil the cable

Roll the cable around the charging unit. Make sure that the plug hangs with the plug cap facing the ground. Attach the clip to the charging cable.

## Use the plug cap

The plug strap can adjust the cap's position. This prevents the cap from collecting water and dirt, and keeps the cap clear of the vehicle.



# Maintenance and care



**WARNING** Do not flush water on the charging station. Do not use harsh chemicals when cleaning.

## Checking

- Keep the plug dry and check them regularly for dust, dirt, pebbles, etc..
- Check the cable regularly for cracks and other damage.
- Check the charging station regularly for cracks and other damage.

## Cleaning

- Switch off the charging station before cleaning. This is done by pressing **Select** for 5 seconds while the vehicle is not connected.
- Use a damp cloth to clean. Do not use water or harsh chemicals.



# Error detection and solutions

## Vehicle side error



This error state will display if there is a problem on the vehicle side. This could be caused by the vehicle's battery, a faulty or damaged vehicle connection or a communications fault with vehicle.

A vehicle-side error state can be triggered at any time when the charging station is connected to both a power supply and a vehicle inlet. This includes during an active charge sequence, in charge-ready state or during start-up.

### Try this

- Consult the vehicle's manual for information about possible issues.
- Contact the vehicle vendor.
- Unplug the charging station from the vehicle and then plug it in again.



This error state will display if there is a problem on the vehicle side. This could be caused by the cable not being connected correctly, a faulty or damaged vehicle connection or a damaged cable plug.

### Try this

- Consult the vehicle's manual for information about possible issues.
- Contact the vehicle vendor.
- Unplug the charging cable from the vehicle and then plug it in again.

## Charging unit error



This error state will display if there is a problem detected with the internal electronics of the charging unit.

### Try this

- Contact support, see chapter **Contact Information**.
- Unplug the charging cable from the vehicle and then plug it in again.



This error state will display if the charging cable is disconnected. This is considered an error only if the charging cable is in fact connected.

#### Try this

- Contact support, see chapter **Contact Information**.
- Unplug the charging cable from the vehicle and then plug it in again.

## Domestic side error



This error state will display if there is a problem detected with the domestic power supply to the charging station. This could include incorrect or fluctuating voltage, ground faults, or other errors.

#### Try this

- Check if the control box is hot to the touch.
- Unplug the charging cable from the vehicle and wait a few minutes, then plug it in again.
- Consult an electrician or contact support, see chapter **Contact information**.





This error state will display if there is a problem detected with the domestic power supply to the charging station

#### Try this

- Check that the power supply to the property is functioning as expected.
- Check that the domestic circuit breaker/fuse plug has not been triggered.
- Consult an electrician or the person responsible for installing the charging station.

# Technical specification

Item number	712800	
Rated voltage	230 VAC (1-phase, 50-60Hz)	
Rated current	6A - 20A	
Charger type	Mode 3	
Connection to vehicle	Type 2	
RCD	30 mA AC & 6mA DC	
GRID type	TN- and IT-power grid	
Overheat protection	Internal sensor	
Operating temperature	-40 °C to +50 °C	
Storage temperature	-50 °C to +85 °C	
Size (L x W x T)	312 x 85 x 70 mm	
Material charging unit	Aluminum	
IK rating	IK 10	
IP rating	IP 45	
Weight	2.3 kg	
Certification	CE, IEC61851, IEC62955	
Recycling	EE-waste	

# Contact information

If you have any questions, contact your local vendor, visit [defa.com](http://defa.com) or call DEFA support:

- Phone (Norway/International): +47 32 06 77 00
- Phone (Sweden/International): +46 10 498 38 00
- Phone (Finland): +358 (0)20 152 72 00

If you have any feedback on how the system or support can be improved, feel free to give us your input at [connect@defa.com](mailto:connect@defa.com)

Installed by:

Rating of product installed: \_\_\_A/\_\_\_kW

Date:

Signature:

