



**Power Up
Charging unit
Ideal For
System
Installations**



DEFA Power Up Charging unit Ideal For System Installations Installation Guide

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DEFA Power Up Charging unit Ideal For System Installations



Specifications

- **Product Name:** DEFA Power Up
- **Installation:** DEFA Power Ready S required
- **Charging Mode:** Mode 3
- **Designed for:** Vehicles

Product Information

Important Warnings

Danger: Do not use if the outer shell has been damaged. Do not use the cable or extension cords if it is defective or appears cracked, broken, or otherwise damaged.

Warning: The product is designed only for Mode 3-charging of vehicles. Do not allow the cable to be under strain during charging. Keep the plug and charging station away from water. Do not expose to a direct jet or splashes of water.

Installation Instructions

1. Ensure that the DEFA Power Ready S is installed and ready for use.
2. Do not attempt any physical repairs yourself; always consult a licensed electrician.
3. For any changes to settings or power connections, contact a licensed electrician.

Product Usage Instructions

1. Read the user manual thoroughly before using the device.

2. If the device malfunctions, contact an electrician or DEFA immediately.
3. Avoid using the product for any purposes other than Mode 3-charging of vehicles.

FAQ

Q: Can I use this product for charging purposes other than vehicles?

A: No, this product is specifically designed for Mode 3-charging of vehicles only.

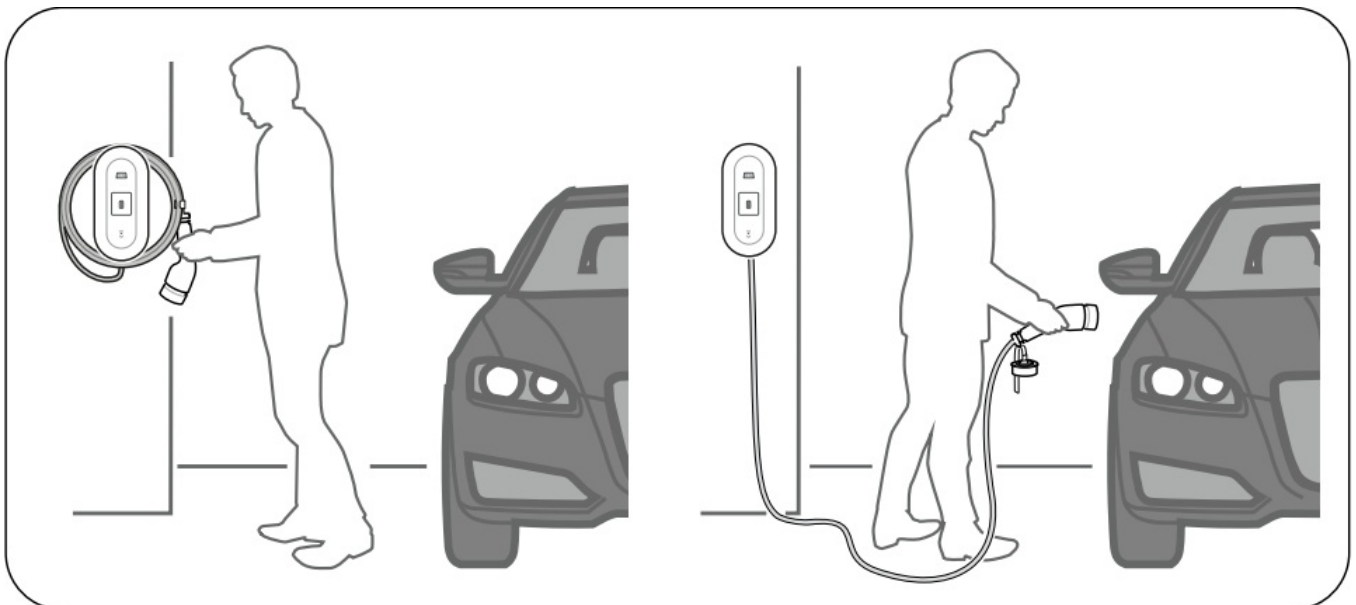
Q: What should I do if the cable appears damaged?

A: Do not use the cable if it is defective or damaged. Contact a licensed electrician for repairs or replacement.

Description

Charging unit with display and integrated cable to complete a DEFA Power S charge station – wall bracket not included. The ideal solution for system installations, with the new generation EV charger. DEFA Power S offers the optimal user experience with an integrated charging cable and an intuitive display. The intuitive display is improving the user experience as well as giving the facility owner and operator (CPO) the opportunity for secure payment. To complete your DEFA Power S charging station, you need to click and connect the DEFA Power Up charging unit to the prepared wall bracket at your location.

A self-test of the built-in RDC-DD (DC-earth protection) will be performed in every charging start-up cycle and every 24h. If the built-in RDC-DD is tripped, a clear error message will be displayed on the screen. To reset the built-in RDC-DD, unplug the charging cable from the vehicle and then plug it in again.



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.
- If the device fails to behave according to instructions, immediately contact an electrician, responsible vendor or DEFA, see chapter Contact information.
- This product (DEFA Power Up) must only be installed on a DEFA Power Ready S.

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

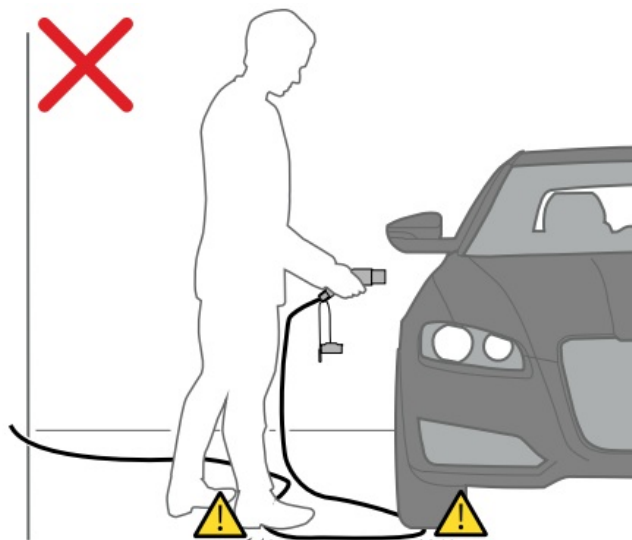
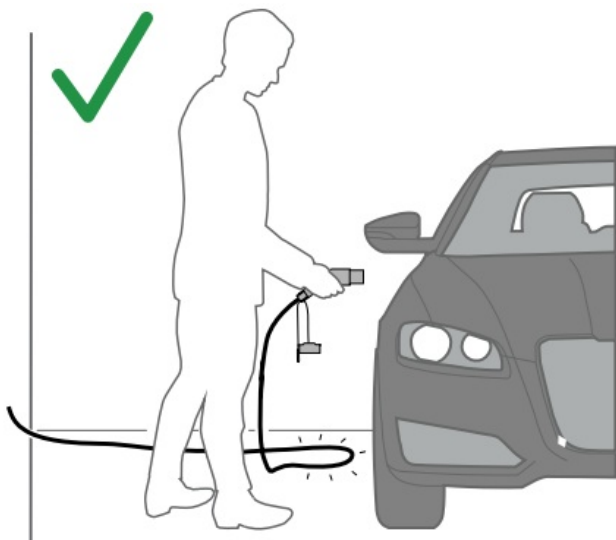
				
Do not use if the outer shell has been damaged.	Do not use the cable if it is defective or appears cracked, broken or otherwise damaged.	Do not use adapters or extension cords.	Physical repairs must be executed by a licensed electrician.	Changes to the settings or the power connections must be executed by a licensed electrician.

Warning

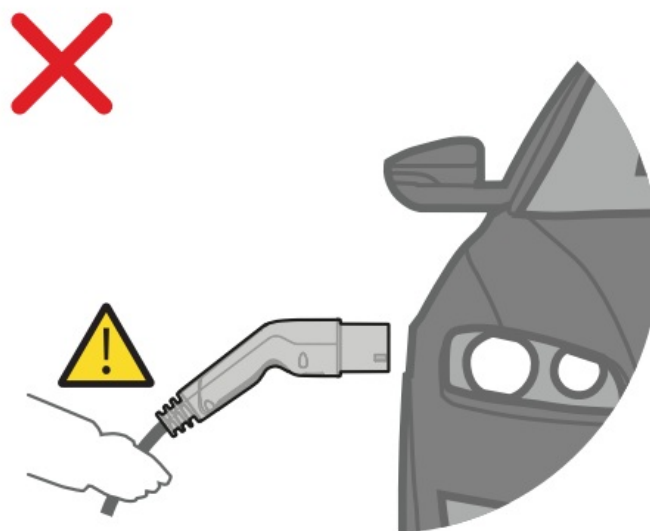
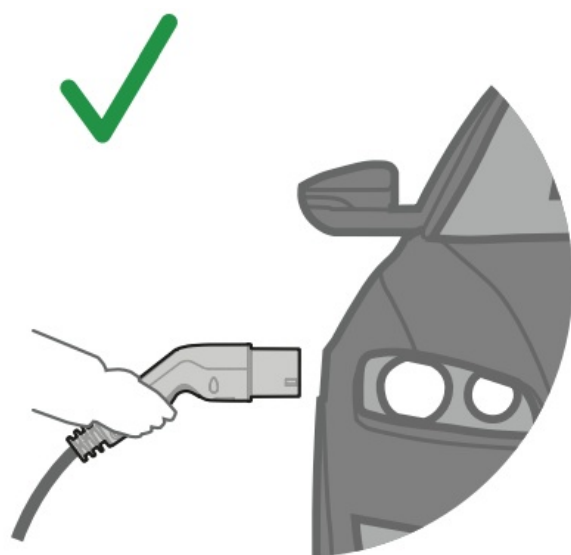
			
The product is designed only for Mode 3-charging of vehicles. Do not use it for any other purpose.	Do not allow the cable to be under strain during charging.	Do not allow water to enter the charging port while charging.	Keep the plug and charging station away from water. Do not expose to a direct jet, or splashes of water.

Handling

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



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



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

Storing

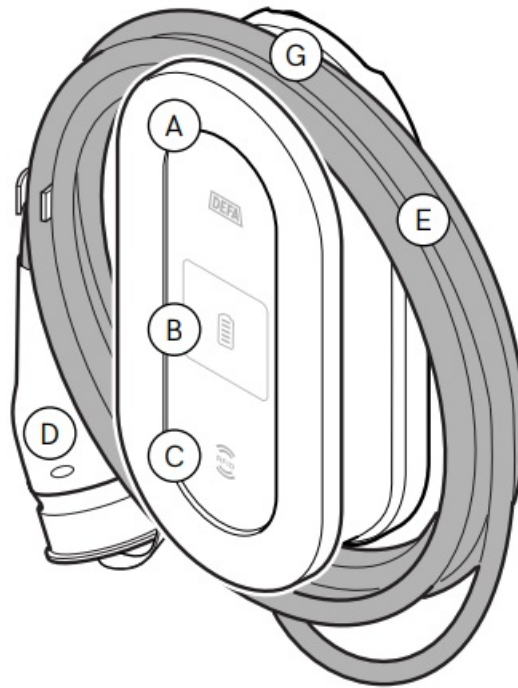
See chapter Store and protect for information about how to coil the cable correctly.

1. Always store the product with the cable coiled. Do not leave the cable on the ground after usage.
2. Attach the plug cap to protect the vehicle plug or set it into a docking when the product is not in use.
3. Use the cable clip to coil the cable for when the product is not in use.

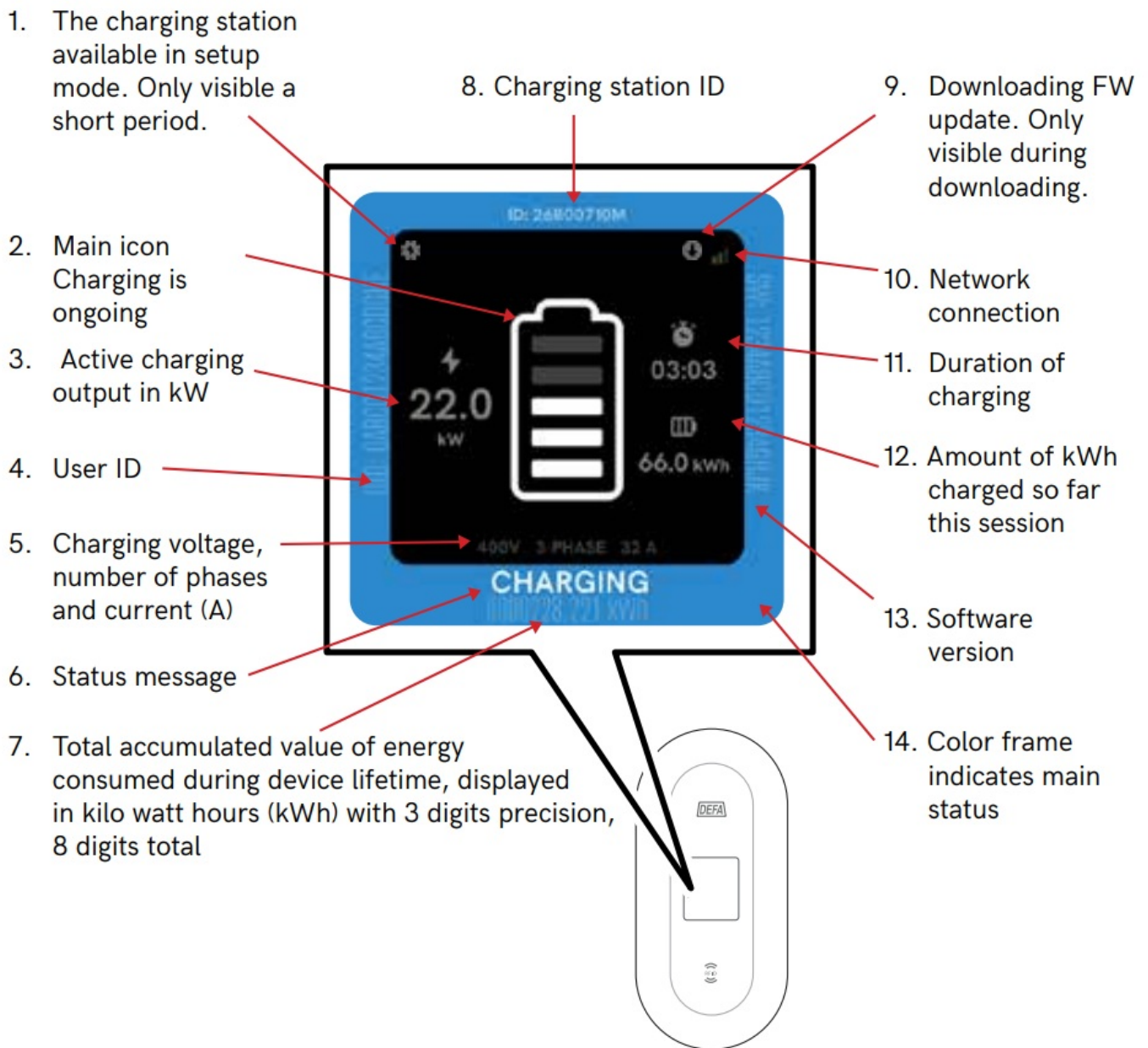
Main parts

- **A.** Charging unit
- **B.** Display
- **C.** RFID-reader
- **D.** Plug

- **E.** Cable
- **F.** Locking tool
- **G.** Rating label (public key)



Symbols on the display



Initialization

Open: Charger Ready. The charger is unlocked and ready to use.



Locked: Charger Ready. Scan the QR-code and follow the instructions to start charging. This can



Vehicle connected (access control enabled): Scan the QR-code or the RFID-card to start authorization



Authorizing: Authorization is in progress.



Access denied: The authorization was denied.



Charging

Preparing charging: The charging process is initialized.



Charging: The vehicle is charging.



Done or paused: The charging process is done or paused



Done. Once the cable is disconnected, a summary of the charging session is shown.



Errors and Configuration

Error: Scan QR. Scan QR-code on the display and follow the instructions to troubleshoot the issue.



Error: Contact CPO. Contact your charge point operator to support you.



Configuration: Application Running. The configuration application is running.



Configuration: Scan QR to setup. Scan the QR code on the display to initialize the setup.



Software update: This screen will be shown when a software update is starting.

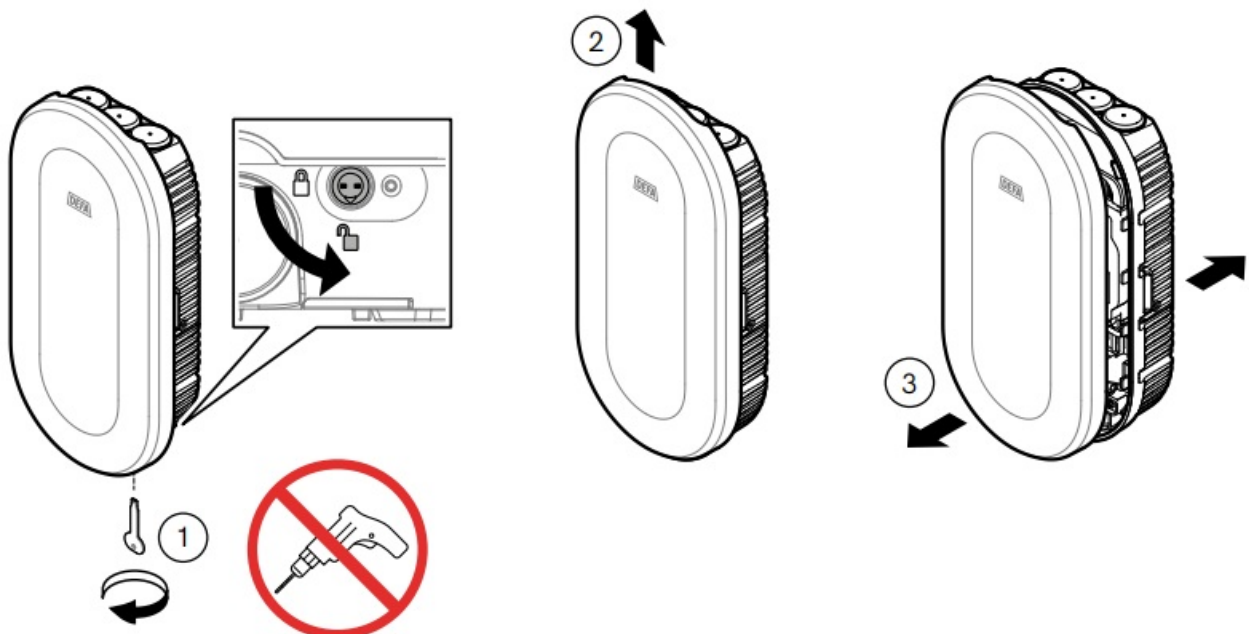


Installation of the charging unit

Before installation

DANGER Disconnect the power supply before installing the charging unit by turning off the fuse. This product (DEFA Power Up) must only be installed on a DEFA Power Ready S.

Remove the front cover



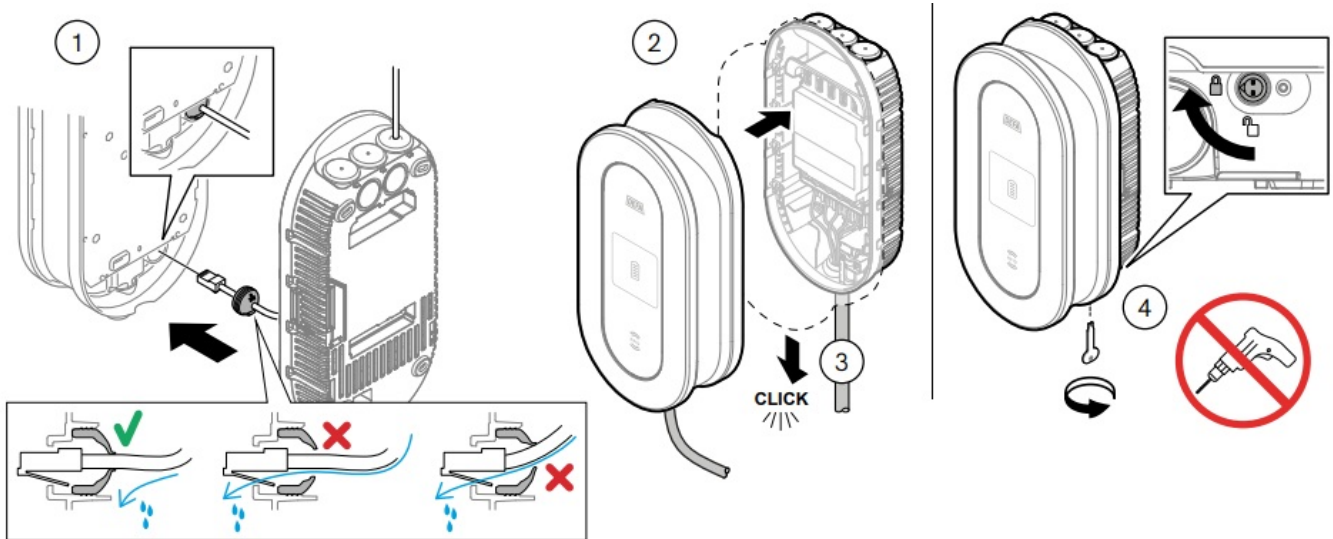
The front cover protects the inside of the wall bracket when there is no charging unit in place.

1. Turn the security lock from "locked" to "unlocked" with the locking tool included.
2. Slide the front cover upward and pull (3) it off the wall bracket.

NOTICE Store the front cover in a secure place in case of future use.

Install the charging unit

1. If LAN connection is used, the LAN cable must be inserted into the LAN port on the back of the charging unit before it is installed.
2. Insert the terminal pins on the back of the unit into the wall bracket.
3. Slide the charging unit down until you hear a click. See the image below.
4. Turn the security lock from "unlocked" to "locked" on the charging unit with the locking tool included.

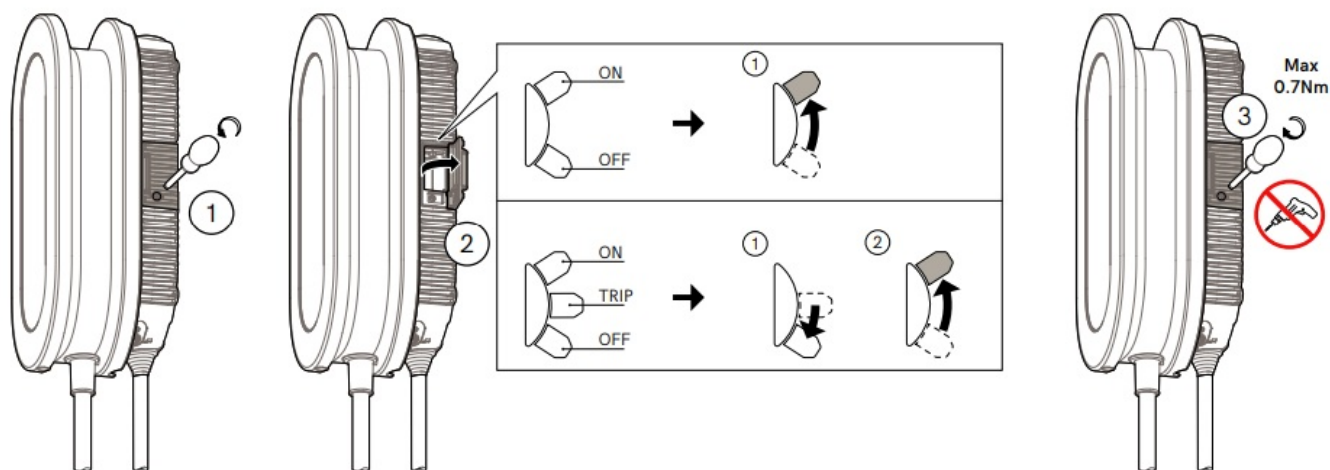


After installation

Access the circuit breaker from the lid on the side of the wall bracket.

1. Use a screw driver and remove the safety screw on the lid.
2. Open the lid and turn on the circuit breaker.
3. Close the lid and set the safety screw back in position. (Max 0.7Nm torque)

The charging station should now be powered on.



Contact your charge point operator to ensure everything is working as it should

Charging procedure

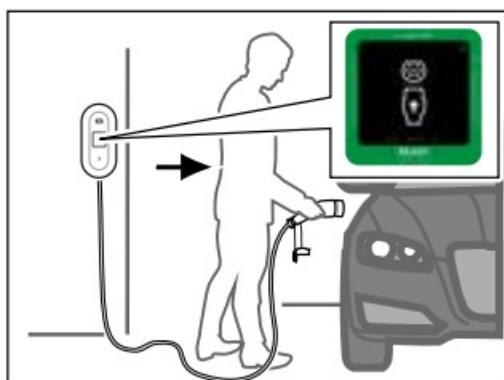
NOTICE Please read the charging instructions in the vehicle's manual before using the charging station.

WARNING The plug locks to the vehicle inlet when charging starts. The plug stays locked until the charging procedure is finished. Always complete or end charging in the vehicle before unplugging (refer to the vehicle's charging instruction for information about this).

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

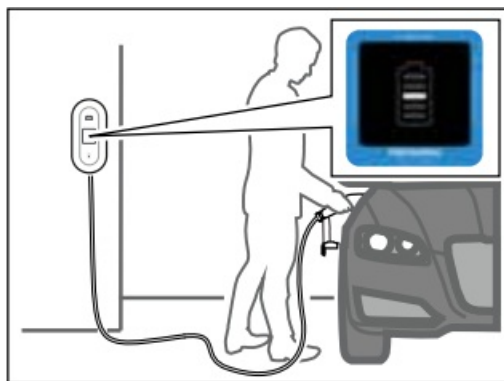
Plug In

1. Make sure that the charger is ready to be used. The Charger Ready icon should be visible on the display.

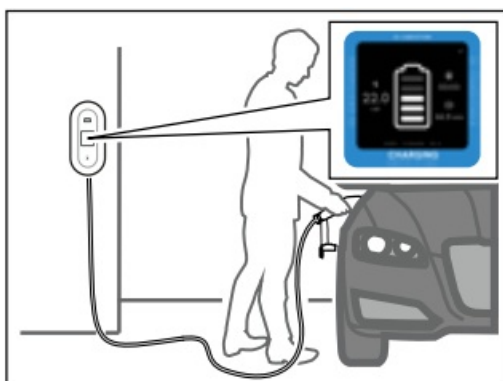


2. Insert the plug into the vehicle inlet. The following symbol should now be visible on the display to indicate that charging is initialized.

- If authorization is enabled, that process has to finish before charging can begin. See the chapter Authorization for more information.



3. Make sure that charging has started. The following symbol should now be visible on the display.



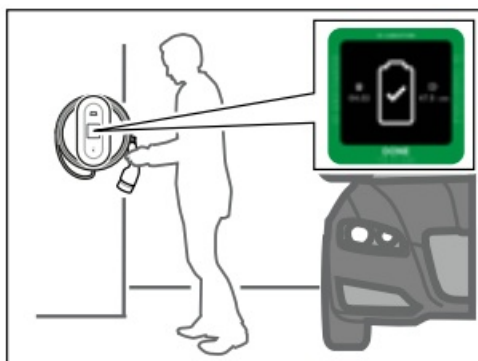
Unplug

WARNING Complete or stop the charging process before unplugging. To stop charging before the vehicle is fully charged, see the vehicle's manual.

Unlock the plug from the vehicle, refer to the vehicle's manual for more information.

1. Remove the plug from the vehicle inlet.
2. Put on the plug cap onto the plug or insert into the docking.
3. Use the cable clip or the docking to store the cable properly.

Once the charger is disconnected, the display will show a summary of the charging session.



Authorization

If authorization is needed this icon will be shown on the display:



(fig.1)

The authorization process can be completed by either:

1. Scanning your RFID-tag on the RFID-scanner, if the charger is registered to your account in the user application.
2. Open the user application on your phone or scanning the QR code shown on the display. Follow the instructions shown on the screen.

If the authorization fails this icon will be shown on the display:



(fig.2)

Check your user application or contact customer support of the facility.

Troubleshooting

The following symbols indicate that there has been an issue. In order to fix the issue, scan the QR-code on the screen and follow the instructions on the web page, or contact support.



Error: Contact electrician



Error: Contact CPO - Charge Point Operator



Authorization: No access

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 cable.

Use the plug cap (only for units with plug cap)

For unit with 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

1. Keep the plug dry and check regularly for dust, dirt, pebbles, etc.
2. Check the cable regularly for cracks and other damage.

Cleaning

Use a damp cloth to clean. Do not use water or harsh chemicals.

Contact information

If you have any questions, contact your local vendor or visit defa.com.

If you have any feedback on how the system or support can be improved, feel free to give us your input at defa.com

Transaction verification

(for MESS EV requiring markets)

You can verify the charging transaction by using the transparency software “DEFA Transparenzsoftware” DEFA Transparenzsoftware is a transparency software for secure and transparent e-mobility charging processes, as defined by the German “Eichrecht”. The software allows you to verify the cryptographic signatures of energy measurements within charge detail records.

Follow these steps to verify transaction/energy measurements.

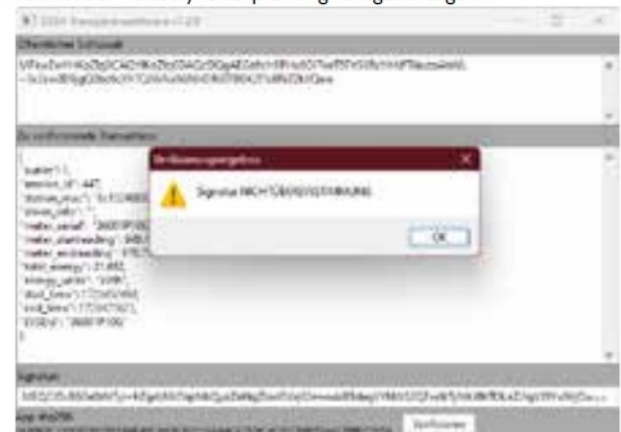
1. Download the “DEFA Transparenzsoftware” program by going to the following link:
<https://www.defa.com/support/defa-power/transaction-verification>
2. When the program is downloaded, you need the signed measurement data and the signature key for the charging session. This shall be provided by the charge point operator along with your invoice. Contact them to get the information.
3. Find the charging station by searching the public register (for example www.bundesnetzagentur.de/DE/Fachthemen/ElektrizitaetundGas/E-Mobilitaet/Ladesaeulenkarte/Karte/start.html) using the unique identification of the charging station in the signed meter data, or the publicly registered address of the charging station. The public key is required to be registered alongside charging station metadata.
4. Copy the public key from the register and paste underneath “Offentlicher Schlüssel” in the DEFA Transparenzsoftware program.
5. Paste the meter data, excluding the signature, provided by the CPO into the “Zu verifizierende Transaktion” field.
6. Paste the data signature, excluded in the above step into the “Signatur” field.
7. Push the “Verifizieren” button at the bottom of the page and you will be provided with information on if the transaction is verified and valid or if it is invalid.
8. You will now be presented with and result with verified transaction using the transparency software.



Verification ok / Überprüfung in Ordnung:



Verification failed / Überprüfung fehlgeschlagen:



Obligations for charge point operator (CPO) and emobility service providers (EMSP)

Measurement Accuracy Notes According to the Type Examination Certificate

1. Obligations for the Operator of the Charging Station, which must be fulfilled as a necessary prerequisite for the proper operation of the charging station.

The operator of the charging station is considered the user of the measuring device within the meaning of § 31 of the Measurement and Calibration Act (Mess- und Eichgesetz).

- The charging station is only considered to be used in accordance with the calibration law if it is not exposed to environmental conditions other than those for which its type examination certificate was issued. These conditions are described in the technical documentation accompanying the charging station.
- The user of this product must include the PK (Public Key) indicated at the charging station for the charging points when registering the charging points with the Federal Network Agency. Without this registration, operation of the charging station in compliance with calibration law is not possible. Weblink:

- The user of this product must ensure that the calibration validity period for the charging station itself is not exceeded. The user must store the data packets signed and read from the charging station, corresponding to the pagination, permanently (also) on hardware dedicated to this purpose in his possession ("dedicated storage").

These data must be made available to authorized third parties (obligation to operate the storage).

Furthermore, the user must permanently retain metering and additional modules removed from the charging station and enable the reading of the stored calibration logbooks when required by an authorized authority. "Permanently" means that the data must be stored not only until the conclusion of the business transaction but at least until the expiration of possible statutory appeal periods for the business transaction. Substitute values may not be formed for billing purposes for data that is not available.

- The user of this product must provide measuring value users who receive and use measured values from this product in business transactions with an electronic version of the operating instructions approved by the conformity assessment body. In doing so, the user of this product must particularly draw attention to section II "Obligations for the User of the Measured Values from the Charging Station".
- The user of this product is subject to the notification requirement according to § 32 MessEG (excerpt): § 32

Notification Requirement (1) Anyone who uses new or renewed measuring devices must notify the authority responsible under state law no later than six weeks after commissioning.

If required by authorized authorities, the user of the measuring device must provide the complete content of the dedicated local storage or the storage at the CPO with all data packets for the billing period.

2. Obligations for the User of the Measured Values from the Charging Station (EMSP)

The user of the measured values must comply with § 33 of the MessEG:

§ 33 MessEG (quote)

§ 33 Requirements for the Use of Measured Values

- Values for measured quantities may only be specified or used in commercial or official transactions or in measurements in the public interest if a measuring device was used properly for their determination and the values can be traced back to the respective measurement result, unless otherwise specified in the legal ordinance pursuant to § 41 number 2. Other federal legal regulations serving comparable protective purposes continue to apply.
- Anyone who uses measured values must, within their capabilities, ensure that the measuring device meets legal requirements and must obtain confirmation from the person using the measuring device that they have fulfilled their obligations.
- Anyone who uses measured values must:
 1. Ensure that invoices, insofar as they are based on measured values, can be easily verified by the person to whom the invoices are intended to check the specified measured values.
 2. Provide appropriate tools for the purposes mentioned in number 1, if necessary.

The following specific obligations arise from this regulation for the user of the measured values to ensure calibration-compliant use of measured values:

1. The contract between the EMSP and the customer must clearly stipulate that only the supply of electrical

energy, and not the duration of the charging service, is the subject of the contract.

2. The timestamps on the measured values originate from a clock in the charging station that is not certified according to the Measurement and Calibration Act. Therefore, they may not be used for tariffing the measured values.
3. The EMSP must ensure that the sale of the e-mobility service is carried out using charging stations that allow the ongoing charging process to be monitored, provided there is no corresponding local display on the charging station. At the very least, the measured values must be made available to the customer in a calibration-compliant and trustworthy manner at the start and end of a charging session.
4. The EMSP must provide the customer with the billing-relevant data packets, including signatures, as a data file at the time of invoicing so that they can be verified for integrity using transparency and display software. The provision can be made via non-calibrated channels.
5. The EMSP must make the transparency and display software associated with the charging station available to the customer to verify the integrity of the data packets.
6. The EMSP must be able to provide verifiable evidence of which identification method was used to initiate the charging process associated with a specific measured value. This means that for each business transaction and invoiced measured value, the EMSP must be able to prove that they have correctly assigned the personal identification data.
7. The EMSP must inform its customers of this obligation in an appropriate manner.
8. The EMSP may only use values for billing purposes that are available in a potentially existing dedicated storage in the charging station and/or the storage at the operator of the charging station. Substitute values may not be formed for billing purposes.
9. The EMSP must ensure through appropriate agreements with the operator of the charging station that the data packets used for billing purposes are stored long enough to fully complete the associated business transactions.
10. The EMSP must, if necessary, provide suitable identification tools to enable authentication at the product units used by him, which are related to this operating manual, for the purpose of performing calibration, inspection, and monitoring measures.

All of the aforementioned obligations apply to the EMSP as a user of measured values within the meaning of § 33 MessEG, even if he obtains the measured values from the charging stations through a roaming service provider.

Conformity

The following provisions apply when the DEFA Power Up product is installed together with DEFA Power Ready S: We 'DEFA AS' hereby confirm that this product (Product Name: DEFA Power S™, Model Name: DEEVC/CT2/22&DEEVC/WBM/3P/IT and DEEVC/CT2/22&DEEVC/WBM/3P/TN*) is compliant with the essential requirements and other related provisions of Directive 2014/53/EU. Declaration of conformity in full text is available in the internet address / QR code below.

The complete Type reference consist of marking on DEFA Power Up + DEFA Power Ready S.



https://www.defa.com/content/uploads/Documentation/EV-Charging/DEFA-Power/doc_defa_power_s.pdf

Radio information Conformity

We 'DEFA AS' hereby confirm that this product (Product Name: DEFA Power S™, Model Name: DEEVC/CT2/22&DEEVC/WBM/3P/IT and DEEVC/CT2/22&DEEVC/WBM/3P/TN*) is compliant with the essential requirements and other related provisions of Directive 2014/53/EU.

The complete Type reference consist of marking on DEFA Power Up + DEFA Power Ready S.

The following tables show radio information related to where used, output power, frequencies,modulations, and antenna types.

Intended Use / Category	BLE [Bluetooth Low Energy]
RF output power (type)	9.42 dBm (EIRP)
Frequency range (MHz)	2402~2480
Modulation	GFSK
Antenna type	Ceramic chip

Intended Use / Category	BLE(1M/2M)
RF output power (type)	9.86 dBm (EIRP)
Frequency range (MHz)	2402~2480
Modulation	GFSK
Antenna type	PCB Antenna

Intended Use / Category	2.4G WLAN (802.11b/g/n) [Wireless Local Area network]
RF output power	18.60 dBm (EIRP)
Frequency range (MHz)	2412~2472
Modulation	DSSS, OFDM, OFDMA
Antenna type	Ceramic chip

Intended Use / Category	5 GHz RLAN (802.11 a/n/ac) [Radio Local Area Network]
RF output power	17.85 dBm (EIRP)
Frequency range (MHz)	5470-5725
Modulation	OFDM, OFDMA
Antenna type	Ceramic chip



Intended Use / Category	5.8 GHz SRD (802.11a/n/ac) [Short Range Devices]
RF output power	13.95 dBm (EIRP)
Frequency range (MHz)	5725~5850
Modulation	OFDM, OFDMA
Antenna type	Ceramic chip

Intended Use / Category	GSM900/DCS1800 [Global System for Mobile communication]
RF output power	33dBm Rated for GSM 900/30dBm Rated for DCS 1800
Frequency range (MHz)	Uplink: GSM 900: 880~915 MHz; DCS 1800: 1710~1785 MHz Downlink: GSM 900: 925~960 MHz; DCS 1800: 1805~1880 MHz
Modulation	GMSK for GPRS; GMSK/8PSK for EDGE
Antenna type	PCB, SMD Antenna

Intended Use / Category	LTE Band 1/3/8/20/28 [Long-Term Evolution band]
RF output power	23dBm Rated for LTE bands
Frequency range (MHz)	Uplink: B1: 1920 ~ 1980 MHz; B3: 1710 ~ 1785 MHz; B8: 880 ~ 915 MHz; B20: 832 ~ 862 MHz; B28: 703 ~ 748 MHz Downlink: B1: 2110 ~ 2170 MHz; B3: 1805 ~ 1880 MHz; B8: 925 ~ 960 MHz; B20: 791 ~ 821 MHz; B28: 758 ~ 803 MHz
Modulation	QPSK, 16QAM for LTE
Antenna type	PCB, SMD Antenna

Intended Use / Category	NFC [Near Field Communication]
RF output power	-3.247dBuA/m@3m
Frequency range (MHz)	13.56MHz
Modulation	ASK
Antenna type	PCB Antenna


Product specification

Item number	715002	
Rated voltage	380-420Vac (Three phase, 50-60Hz) 220-240Vac (Single phase, 50-60Hz)	
Charger type	Mode 3	
Connection to vehicle	Type 2 	
RDC-DD	6mA DC in acc. IEC 62955	
GRID type	TN/IT/TT	
Overheat protection	Internal sensor	
Operating temperature	-40 °C to +50 °C	
Storage temperature	-50 °C to +85 °C	
Dimensions (L x W x T)	113 x 167 x 350 mm	
Material control unit	Polycarbonate	
IK rating	IK 10 (with wall bracket)	
IP rating	IP 55 (Wall bracket IP44)	
Weight	5.0 kg	
Certification	CE, IEC61851, IEC62955, IEC61439-7, IEC60947-2 ACSEV	
Rated impulse withstand voltage U_{imp}	4 kV	
Rated short-time withstand current I_{cw}	1520 A @ 1.2 ms	
Rated conditional short-circuit current I_{cc}	10 kA	
Rated current of a circuit I_{nc}	32 A	
Rated peak withstand current I_{pk}	2280 A (IEC 61439-1 Table 7 n x I_{cw} , n = 1.5)	
AEVCS	AEVCS	
Pollution degree	III	
EMC compatibility	Environment A and B	
Recycling	EE-waste 	

To download a full manual in your local language and see user instructions or video/animations, scan the QR code or visit defa.com



Documents / Resources

	<p>DEFA Power Up Charging unit Ideal For System Installations [pdf] Installation Guide Power Up Charging unit Ideal For System Installations, Power Up, Charging unit Ideal For System Installations, Ideal For System Installations, System Installations, Installations</p>
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References

- [Bundesnetzagentur - Ladesäulenkarte](#)
- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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