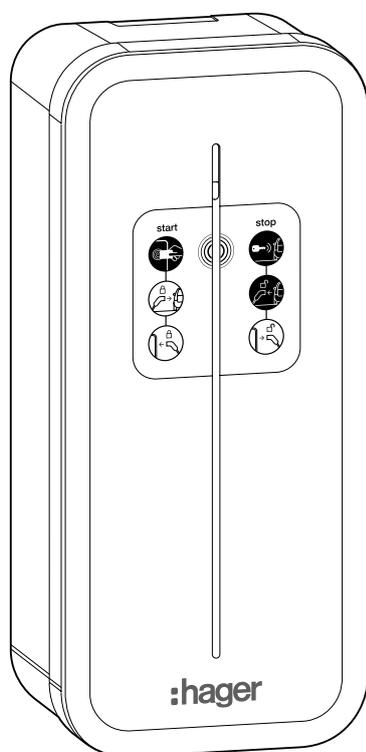


Operating instructions

Energy management witty charging station



Hager witty charging stations for electric vehicles
**XEV1R22T2x, XEV1K22T2x,
XEV1K07T2x**

CE

:hager

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01 The charging station

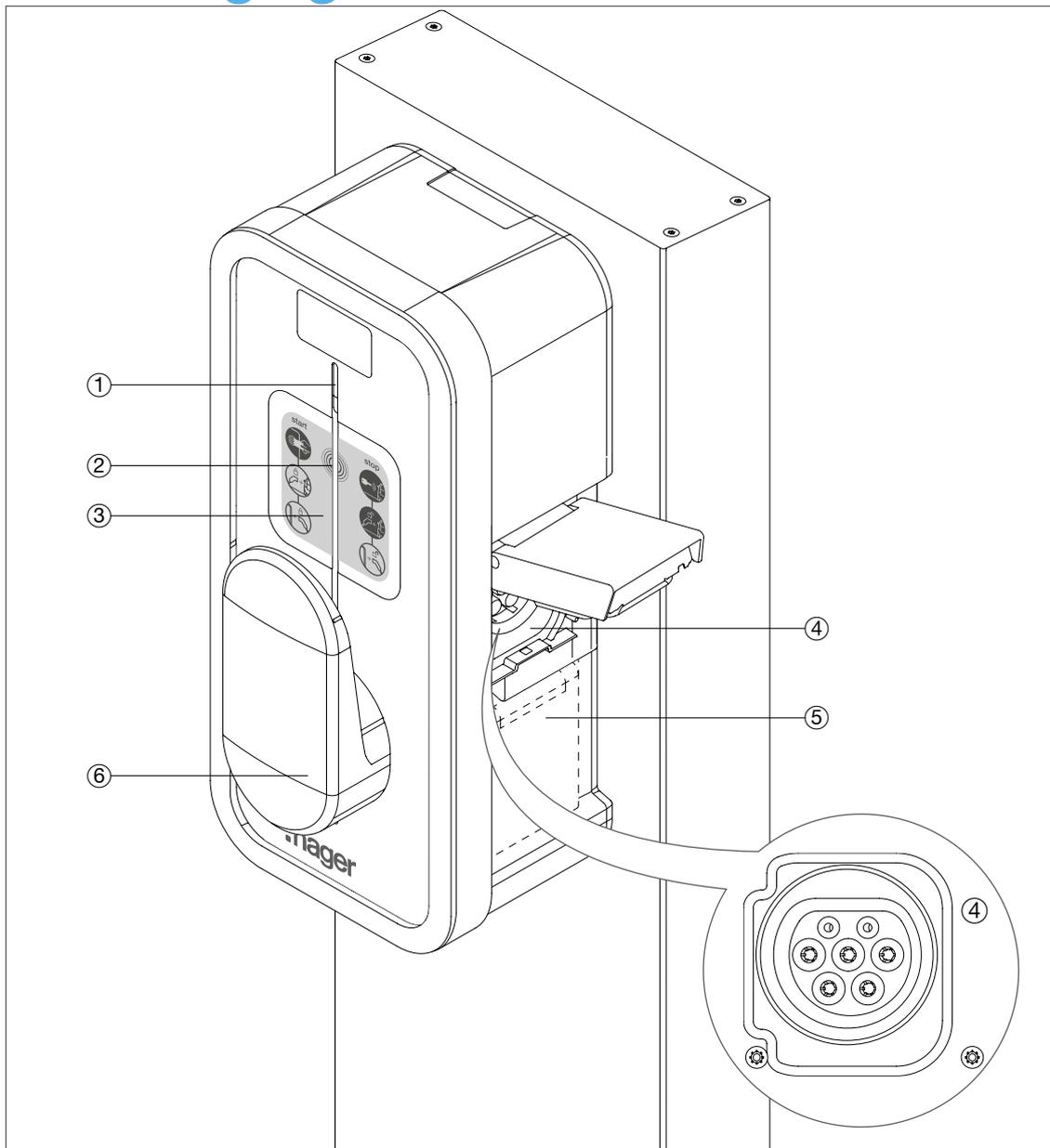


Fig. 1: Exterior view of the witty solar charging station

- ① LED display (strip light)
- ② RFID reader
- ③ Charging operation instructions sticker
- ④ Type T2/T2S charging socket, Mode 3^[1]
- ⑤ Type TE/TF charging socket, Mode 2^[2]
- ⑥ Cable holder (optional accessory)

^[1] The Mode 3 T2/T2S socket outlet/plug is a standardised connecting device for charging stations and electric vehicles.

^[2] Mode 2 TE/TF socket outlet, version-dependent and not available in all markets. The additional socket outlet must only be used to charge batteries for bicycles or scooters, for example.

02 LED displays in normal operation

LED display	Signal	Cause	LED display	Signal	Cause
	Off	– The charging station is not switched on/not receiving power		2 x	– The RFID card has not been recognised, repeat the procedure
	On	– The RFID card is being checked, and confirmed during teach-in process, or – There is a communication problem with a connected server			– The charging operation is in progress (max. power)
		– There is a local communication problem with the Ethernet/WiFi			– The charging station is reserved ^[3]
		– The charging station is ready or the charging operation is complete			– The charging operation is not complete, the electric vehicle is waiting ^[3] , or – The WiFi hotspot/coupling mode is enabled ^[3]
	2 x	– The RFID card has been accepted, the charging station is waiting for the electric vehicle to be connected/disconnected – The charging operation has been interrupted by the charging station or – The charging station is waiting for RFID authentication			– The charging operation is in progress and is being monitored and optimised to protect against overload (Solar Mode) ^[3]

Table 1: LED displays in normal operation

^[3] Not applicable to all charging stations (version-dependent)!

03 Operation

03.01 Important safety information



Danger

Touching live parts can result in an electric shock.

An electric shock can lead to death.

- Never touch the inside of the charging station's socket outlet(s).
- Keep children away from the charging station and connected charging cables.



Liability is excluded for electric vehicles with no galvanic separation!

HagerEnergy will not accept any liability for damage or failures caused by the charging of electric vehicles that do not possess galvanic separation between the direct current side (storage battery in the vehicle) and the alternating current side (building power network).

03.02 Safety information for charging



Caution

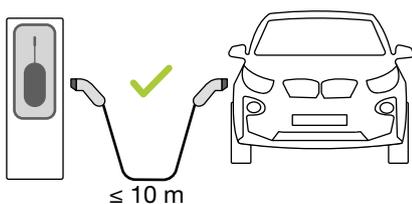
Moisture or humidity can damage the charging station!

Prohibited environmental conditions may damage the device.

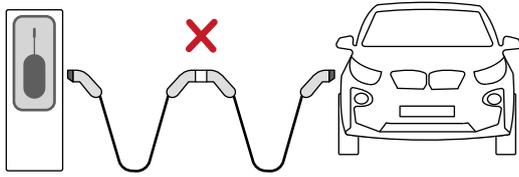
- The permitted temperature and humidity parameters must always be complied with, and sufficient ventilation and cooling must be provided (see **Technical data**).
- Protect the device and charging plug from snow, rain and dirt.
- Never expose the device to a high level of air humidity over a long period of time.
- Cover the charging cable plugs with the protective cap after use.
- Check the charging plug regularly for corrosion damage.

Before each charging operation, always check for:

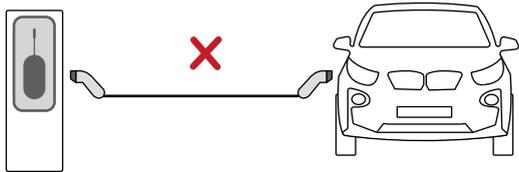
- any damage to the charging cable or charging plug contacts. **Do not use any charging cable that is damaged. There is the risk of an electric shock!**
- any damage to the vehicle's socket outlet. **Never connect the charging cable to any vehicle socket outlet that is damaged.**



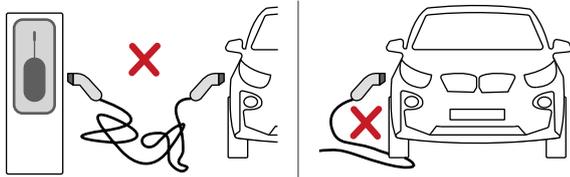
- Only use accessories and charging cables that are specified by the manufacturer and comply with EN 62196-1, EN 62196-2 and EN 50620.
- Always unwind the charging cable fully to avoid overheating.
- Only use a charging cable up to a maximum of 10 m in length.



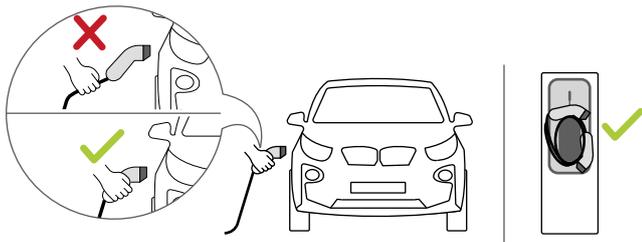
- Do not extend the charging cable using couplings or adapter cables or in any other way.



- Never allow the charging cable to become stretched whilst a charging operation is in progress.



- Always make sure that the charging cable does not get kinked or twisted and that there is no risk of anyone tripping over it.
- Do not drive over the charging cable or otherwise put any weight on it.



When the charging operation is complete:

- Always remove the charging cable from the vehicle first. When doing so, never pull the plug out of the socket outlet by the cable and only pull gently.
- Carefully wind the charging cable back up for the next charging operation.

03.03 Charging the electric vehicle

Starting the charging operation using an RFID card

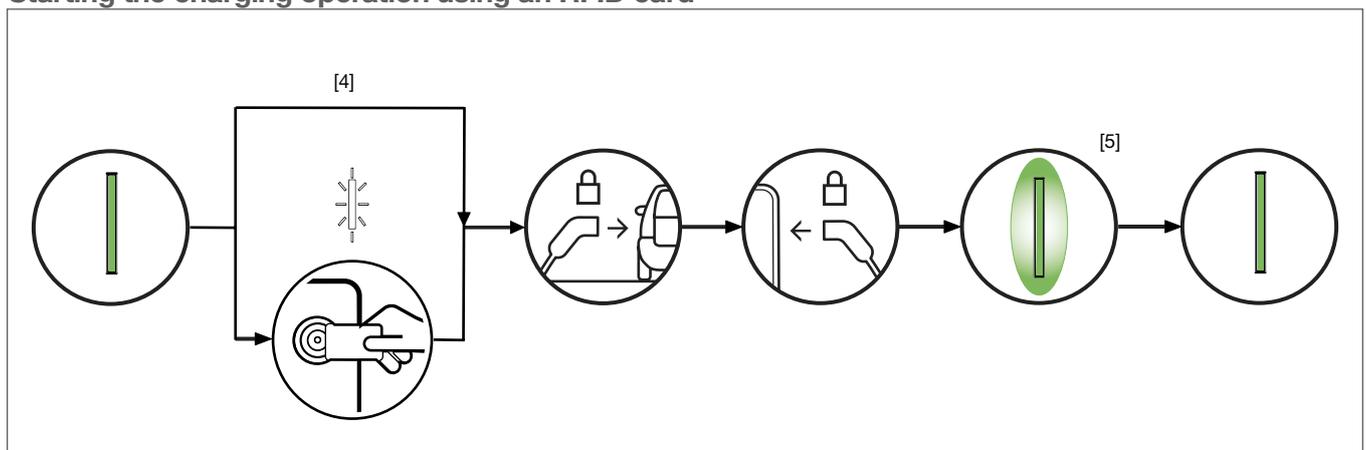


Fig. 2: Starting the charging operation

- ☑ The LED display ① is lit up green. The charging station is ready for operation.
- ☑ The vehicle is unlocked using the central locking.
 - ① Hold the RFID card in front of the reader ②.^[4]
The LED display ① flashes white a few times.
 - ② Plug the charging plug into the electric vehicle's socket outlet.
 - ③ Plug the charging plug into the charging station's socket outlet.

The charging station and electric vehicle plugs lock automatically.
The charging operation starts. The LED display pulses green^[5]. The electric vehicle is being charged.
The LED display turns green when the charging operation has been completed.

Ending the charging operation

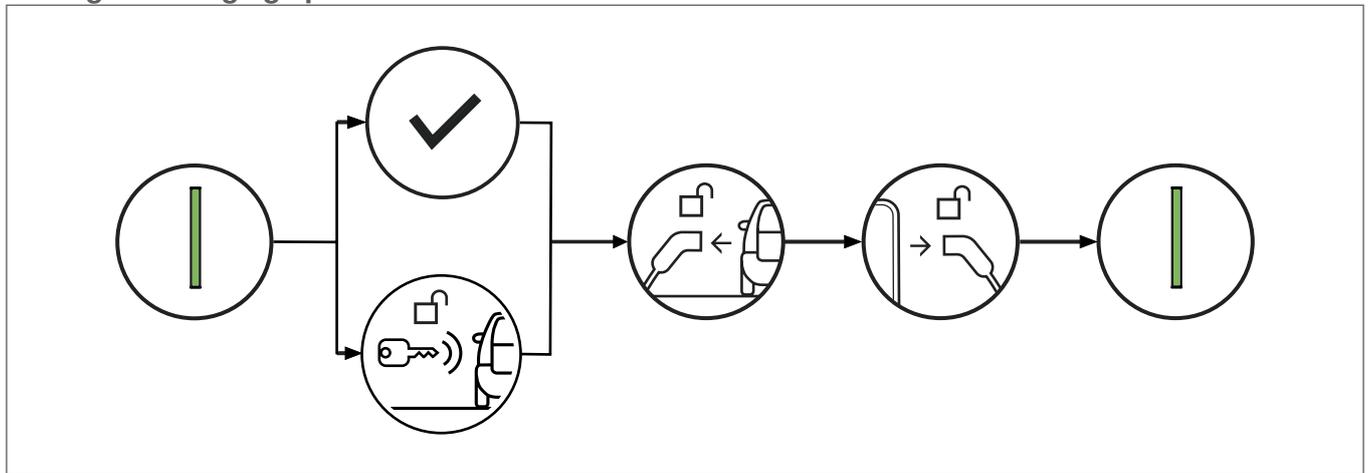


Fig. 3: Ending the charging operation

- ☑ The LED display is green. The charging operation has been completed.
 - ① Unlock the electric vehicle using the central locking.
The charging socket on the vehicle is unlocked.
 - ② Pull the charging plug out of the electric vehicle's socket outlet.
 - ③ Pull the charging plug out of the charging station's socket outlet and stow it away.



Information

In the event of a mains breakdown or a loss of voltage to the charging station, the mechanical interlock of the charging plug in the charging station is automatically unlocked. The plug can be pulled out of the charging socket.

^[4] In some variants of the charging station, the charging operation can also be started freely (without an RFID card).

^[5] In some product variants or charging modes, the LED flashes blue.

04 Appendix

04.01 LED displays for faults



Caution

Critical errors can damage the charging station.

- In the event of a critical error, which is indicated by a permanent red light, turn the charging station off for 2 minutes to reset the error.

LED display Signal	Causes	Solutions
1 x	<ul style="list-style-type: none"> – The charging cable connected to the Mode 3 socket outlet is defective or not compatible, or – There has been a failure due to a short circuit, the exchange of control signals between the charging station and the electric vehicle has been interrupted 	<ul style="list-style-type: none"> ● Replace the charging cable.
2 x	<ul style="list-style-type: none"> – The RFID card has not been recognised – The vehicle has not been recognised 	<ul style="list-style-type: none"> ● Repeat the procedure. ● Have the RFID card enabled. ● Replace the charging cable. <p>If the problem persists:</p> <ul style="list-style-type: none"> ● Check the vehicle and charging station connections. ● Contact the vehicle dealer.
3 x	<ul style="list-style-type: none"> – The vehicle's power consumption is too high, or – The temperature in the device is too high (ventilation), or – There is a communication error between the electric vehicle and charging station 	<ul style="list-style-type: none"> ● Disconnect the charging station from the electric vehicle, ventilate if necessary, and ● Repeat the charging operation. <p>If the problem persists:</p> <ul style="list-style-type: none"> ● Contact the vehicle dealer.
3 x / 8 x ^[6]	– A rated fault current of 6 mA DC has been detected	● Contact the vehicle dealer.
4 x	<ul style="list-style-type: none"> – There is a local communication problem with the Ethernet/WiFi^[6] – There is a communication error with the internal energy meter, the charging station is not compatible with the vehicle 	<ul style="list-style-type: none"> ● Check the network connections. ● Ensure that a DHCP router is available in the network. ● Use a compatible charging station.
5 x	<ul style="list-style-type: none"> – The charging operation has been interrupted due to the temperature being too high – Shorten the charging operation, as the power supply via the house connection is insufficient – The protection switch for the Mode 2 socket outlet current circuit has been triggered^[2] 	● Correct the fault.
6 x	<ul style="list-style-type: none"> – The charging station cannot connect to the vehicle correctly. The charging operation cannot be started. – The RFID reader has failed – The hardware is defective or incorrectly connected/ configured 	<ul style="list-style-type: none"> ● Replace the charging cable. <p>If the problem persists:</p> <ul style="list-style-type: none"> ● Contact Hager Technical Support if necessary. ● Contact the charging station installer. ● Contact Hager Technical Support if necessary.
	<p>There is a critical error, such as:</p> <ul style="list-style-type: none"> – The RFID reader has failed, or – The hardware is defective or incorrectly connected/ configured 	<ul style="list-style-type: none"> ● Arrange for a qualified electrician to identify and remedy the fault. ● Contact Hager Technical Support if necessary.

LED display Signal	Causes	Solutions
	<ul style="list-style-type: none"> – The electric vehicle is being charged in emergency operation.^[3] 	<ul style="list-style-type: none"> ● Find the cause of the fault and remedy it. ● Contact the vehicle dealer if necessary.
	2 x ^[6] <ul style="list-style-type: none"> – There is a local communication problem with the Ethernet/WiFi – There is no connection to the energy management controller (EMC) flow^[3] 	<ul style="list-style-type: none"> ● Check the network connections. ● Ensure that a DHCP router is available in the network. ● Reconnect the charging station to the EMC flow (see the XEM470 guide or flow.hager.com).^[3]

Table 2: LED displays for faults

^[2] Mode 2 TE/TF socket outlet, version-dependent and not available in all markets. The additional socket outlet must only be used to charge batteries for bicycles or scooters, for example.

^[3] Not applicable to all charging stations (version-dependent)!

^[6] LED signalling varies, version-dependent!

04.02 Maintenance and care instructions



Qualified electrician

Electrical devices may only be installed, assembled, repaired and dismantled by a trained and certified qualified electrician in accordance with the relevant installation standards, guidelines, regulations, directives, safety and accident prevention regulations of the country.

The charging station is maintenance-free.

However, we recommend the following approximately once a year:

- Check the housing of the charging station for defects and external damage.
If you find any damage, stop using the device for charging and contact a qualified electrician.
- Clean the housing with a dry or slightly damp cloth.
- With the charging cable disconnected, clean the charging cable and dirty contacts with a dry cloth.



Maintenance instructions

Never use harsh cleaning agents, water or steam jet cleaners, and never submerge the charging cable in liquids.

- Check that the residual current circuit breaker is functioning correctly (see device instructions).
- Check the electrical switching and safety equipment in the house distribution board for visual defects.

04.03 Technical data



Note

Subject to changes
The current PDF document at hager.com is always binding!

Permitted environmental conditions

Operating temperature	-25°C – +50°C
Relative humidity	5 % ... 95 %
Protection	IP 55, IK 10

Electrical properties

Voltage	230 V~ (single-phase version) -15 % / +10 % 400 V (three-phase version) -15 % / +10 %
Frequency	50/60 Hz +/- 1%
Current consumption in standby mode	1.7 W
Max. charging current/charging capacity of Mode 3 T2/T2S connection (version-dependent) ^[1]	32 A - 7 kW (1-phase)/ 32 A - 22 kW (3-phase)
Max. charging current/charging capacity of Mode 2 TE/TF connection (version-dependent) ^[2]	10 A – 2300 W

Mechanical properties

Maximum carrying capacity of cable holder (accessories)	7 kg
Dimensions: Height x width x depth	549 x 250.5 x 173 mm

WiFi^[3]

Frequency range	2.4 ... 2.4835 GHz
Transmitting power	100 mW

RFID

Frequency range	13.553 ... 13.567 MHz
Transmitting power	42 dBµA/m (at 13.56 MHz)

Vehicle compatibility identifier



04.04 Accessories

Accessory product	Order number
Cable holder for charging station	XEVA100
RFID cards for standard users (set of 20)	XEVA400
RFID cards for administrators (set of 3)	XEVA410
RFID cards for witty flow charging stations with WiFi hotspot (set of 20) ^[3]	XEVA420
1-phase charging cable for Mode 3 T2/T2 20 A, 5 m/ 7.5 m ^[7]	XEVA711/ XEVA712
1-phase charging cable for Mode 3 T2/T2 32 A, 5 m/ 7.5 m ^[7]	XEVA713/ XEVA714

Accessory product	Order number
3-phase charging cable for Mode 3 T2/T2 20 A, 5 m/ 7.5 m	XEVA731/ XEVA732
3-phase charging cable for Mode 3 T2/T2 32 A, 5 m/ 7.5 m	XEVA733/ XEVA734

^[1] The Mode 3 T2/T2S socket outlet/plug is a standardised connecting device for charging stations and electric vehicles.

^[2] Mode 2 TE/TF socket outlet, version-dependent and not available in all markets. The additional socket outlet must only be used to charge batteries for bicycles or scooters, for example.

^[3] Not applicable to all charging stations (version-dependent)!

^[7] Not available in all countries!

04.05 Technical Support



Support

The employees are happy to answer to any questions that arise and can offer solutions. Please provide the following information:

- Name of the installation engineer
- Serial number/order number of the charging station
- Problem description

Support can be found at:

Hager distribution company
Zum Gunterstal
66440 Blieskastel, Germany
T +49 6842 945 0
F +49 6842 945 4625
info@hager.de

04.06 Disposal



Correct disposal of this product

(Waste Electrical & Electronic Equipment).

(Applicable in the European Union and other European countries with separate collection systems).

The identification shown on the product or its documentation indicates that it should not be disposed of with other household waste at the end of its working life. To prevent possible harm to the environment or human health, please dispose of this device separately from other types of waste. This helps you to promote sustainable reuse of material resources.

Private consumers are asked to contact the dealer from whom they purchased the product, or their local administration, to obtain information on how to dispose the product in an environmentally-friendly manner. Commercial consumers are asked to contact their suppliers and to check the general terms and conditions of business of the purchasing agreement. This product should not be mixed with other commercial waste for disposal.



HagerEnergy GmbH

Ursula-Flick-Straße 8

49076 Osnabrück

Germany

T +49 541 760 268-0

F +49 541 760 268-199

info@hager.com

hager.com