

The California 2025 – electrical and air conditioning systems



Preface

This booklet focuses on the components of the electrical, heating and air conditioning systems of the California 2025 and their controls, which differ from the classic Multivan due to its use as a camping vehicle.



General information on the design and function of the Multivan can be found in the self-study programmes:

724 “The Multivan 2022”

721 “The Multivan 2022 – body and safety equipment”

725 “The Multivan 2022 – driver assist systems”

727 “The Multivan 2022 – heating and air conditioning”



Illustrations of screen contents of the In-Car App in the infotainment system, the display unit in the C-pillar and the “California Mobile App” are shown as examples with German or English system settings.



Important information



Preface

Notes on use

You will find a detailed explanation of how to use the new online Self-study Programmes via the menu option “Help”.

Notes on content

Self-study Programmes are used to teach users about the design and function of new developments. Please use the respective workshop information for up-to-date test, adjustment and repair instructions. The contents will not be updated.

Legal note

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What's new?

Many innovations and additions to the electrical, infotainment and air conditioning systems of the California 2025 are not immediately obvious, but are hidden in the details, such as:

- in the extended range of functions of the customer-specific functional control unit in relation to the camping equipment
- in the new “California Mobile App” for calling up specific camper information on up to two mobile devices (smartphone and/or tablet)
- in the new or extended functions in the California In-Car App (referred to in short as In-Car App) in the Infotainment system
- in the three different options for operating the additional air heater as an auxiliary heater



You will find further information on the California 2025 in the Self-Study Programmes 750 “The California 2025” and 752 “The California 2025 – roof system”.



Operating concept

The display and operating unit for camping equipment E153

General features

The display and operating unit for camping equipment E153 has a screen diagonal of 4.9 inches. The resolution is 800 x 480 pixels. The time is displayed in the top toolbar. The E153 obtains its time information from the vehicle via the CAN bus.

Additional symbols are displayed when the respective systems are active. These can be:

- 230 V supply
- Refrigerator box
- Bluetooth® connection
- Auxiliary air heater active or start time set
- Information and warning symbols

Examples

- + Home page
- + Status overview
- + Main menu



E153 in the C-pillar



Home button

Control Centre



Operating concept

The display and operating unit for camping equipment E153

General features



Home page



Operating concept

The display and operating unit for camping equipment E153

General features



Status overview



Operating concept

The display and operating unit for camping equipment E153

General features



Main menu



Operating concept

The display and operating unit for camping equipment E153

Notes on use

If the display and operating unit for camping equipment is switched off, it can be switched on via the Home button.

Pressing the Home button again takes you to the main menu.

The screen is switched off by touching and holding the Home button for approx. 3 seconds. Moreover, a switch-off time can also be set.

Tapping the tile with the picture of the vehicle on the home page takes you to the status overview.

The Control Centre can be accessed via the slider at the top of the screen. On the first page, the refrigerator box, camping mode, light and Bluetooth can be switched on or off. No configurations can be made here.

Touching a tile for a longer time on the home page or in the main menu opens an additional window. Up to three pages (in different designs) can be added or deleted here.

The individual tiles can be customised.





Operating concept

The In-Car App in the infotainment system

The In-Car App is available for the California; for an unlimited period, it can be downloaded free of charge from the “VW Connect” In-Car Shop and Webshop.

The In-Car App is only available in markets where “VW Connect” is available. To be able to obtain the California In-Car App via the In-Car Shop or “VW Connect” Webshop, the vehicle must have an active main user and the “VW Connect” mobile online service must be activated.

In addition to the vehicle-specific controls, the In-Car App includes a variety of camper-related functions.

For example, preference can be given to camping and parking spaces via the discovery mode in the In-Car App. They can be found in their entirety under the “Discover” and “Travel” menu items in the “Favourites” list.

The tours saved in the “California Mobile App” are synchronised with the In-Car App.

Further information can be found in the “Infobook California Mobile App & In-Car App”.



App overview in the infotainment system with the “California” tile after downloading the In-Car App

- + App overview
- + Home page
- + Status overview
- + Main menu
- + Discovering and travelling
- + “Home screen” configuration



Operating concept

The In-Car App in the infotainment system

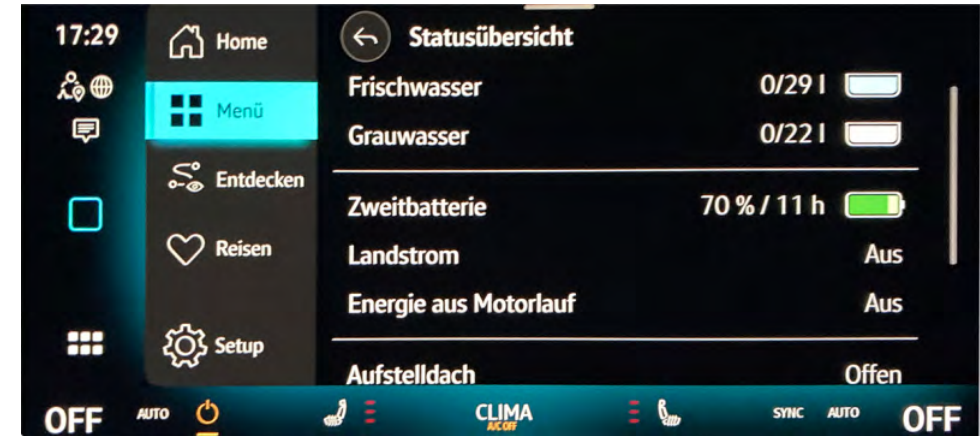


Home page



Operating concept

The In-Car App in the infotainment system

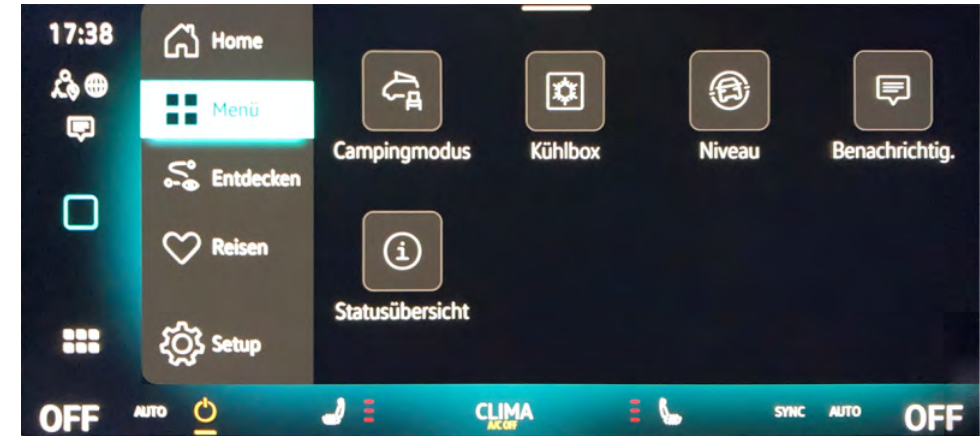


Status overview



Operating concept

The In-Car App in the infotainment system



Main menu

The In-Car App in the infotainment system



Discovering and travelling



Operating concept

The In-Car App in the infotainment system

“Home screen” configuration

The In-Car App can be configured on a favourites button on the home screen.



Further information about the personalisation of the home screen can be found in Self-Study Programme 717 “The Caddy 2021 – electrical system and infotainment system”.



Operating concept

Remote control with the “California Mobile App”

The California 2025 can be connected directly to the “California Mobile App” using the connection option in the vehicle.

In this way, a lot of camper-specific information about the living area can also be called up outside the vehicle.

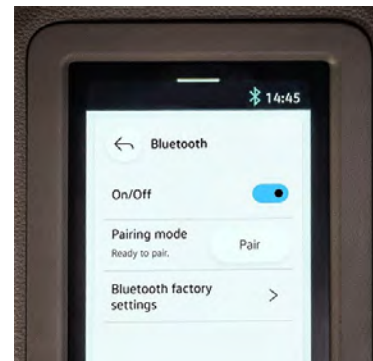
The vehicle remote control can be selected in the “Vehicle” menu item. Pairing takes place via Bluetooth®. The Bluetooth® connection exists between the mobile phone/tablet and the customer-specific functional control unit J608 (CFCU).

Pairing can also be done via the In-Car App.

The “California Mobile App” is available in the “Google Play Store” and “Apple App Store”. The name in the store is: “California: Vanlife”.



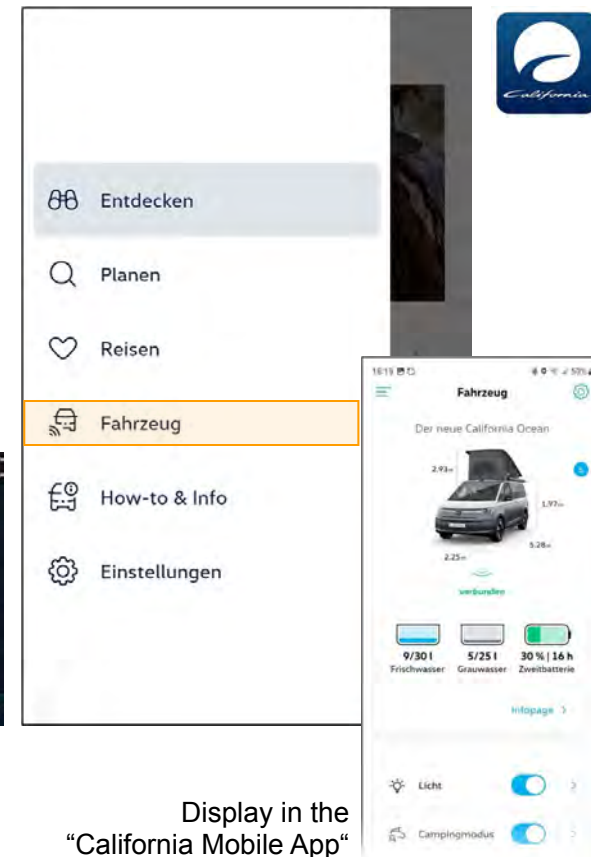
The pairing must be carried out via the “California Mobile App” and must not be carried out via a Bluetooth® search of the mobile phone or tablet.



Display in the E153



Display in the In-Car App



Display in the
“California Mobile App”



Operating concept

The inclination display

In the California 6.1, the vehicle inclination was displayed in the roof operating unit (display and operating unit for camping equipment E153). As the display and operating unit for camping equipment in the California 2025 is located on the C-pillar and an inclination display cannot be used optimally in this position, this function has been integrated into the In-Car App of the infotainment system.

The inclination can also be displayed in the “California Mobile App”.



Inclination display in the In-Car App of the infotainment system



Inclination display in the
“California Mobile App”

Electrical system

The customer-specific functional control unit J608

The customer-specific functional control unit J608 (hereinafter referred to as “CFCU”) is located below the dashboard in the area of the A-pillar. Depending on the function, the J608 processes the signals of the multifunction inputs or controls the multifunction outputs to the camper-specific electrical equipment. In addition to the many functions of the CFCU, it also includes control of the energy management (EM-P).

The second generation of the J608 is used as standard.

Depending on the vehicle’s equipment, the J608 controls the following vehicle components:

- Refrigerator box
- Lighting
- Roof hydraulics
- Fresh and waste water system
- 230 V electrical system and 12 V energy management (EM-P)
- USB charging ports

The control unit has an internal Bluetooth® module.

The connection for an optional Bluetooth® aerial remains unused.

The “CFCU-Max” of the 2nd generation is used as standard.



Not used:
connection of the Bluetooth® aerial

Electrical system

Overview of the electrical components in the Beach

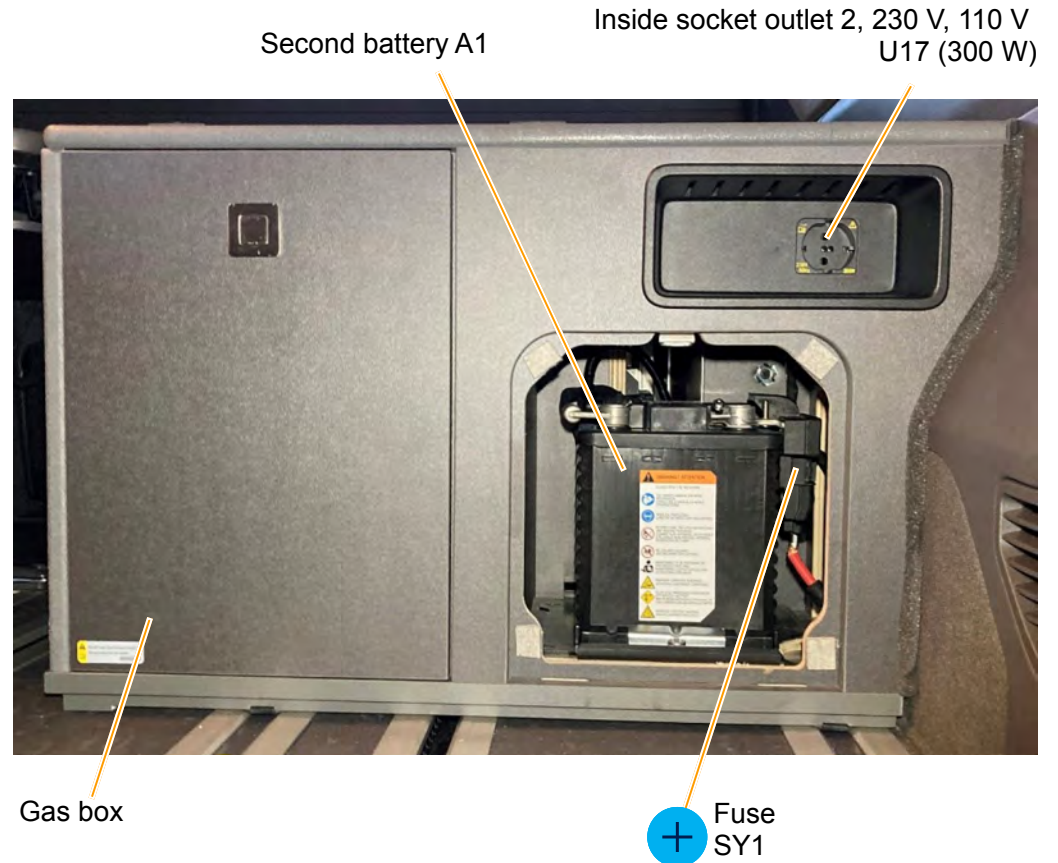
in the kitchen module

The gas box is located at the front of the kitchen module and the compartment for the second battery is located to the right of the gas box.

The technical features of the second battery are:

- Lithium iron phosphate battery (LiFePO₄)
- Capacity: 40 Ah
- Integrated control unit 2 for battery monitoring J934

The second battery is identical in construction to the LiFePO₄ battery in the T7 Multivan 2022.





Electrical system

Overview of the electrical components in the Beach

in the kitchen module



**The fuse 1 on
fuse holder Y
SY1**

Fuse SY1 is located on the
positive terminal of the
second battery.

Overview of the electrical components in the Beach

on the outside of the equipment box

The equipment box is installed on the left-hand side of the vehicle as seen from the tailgate.

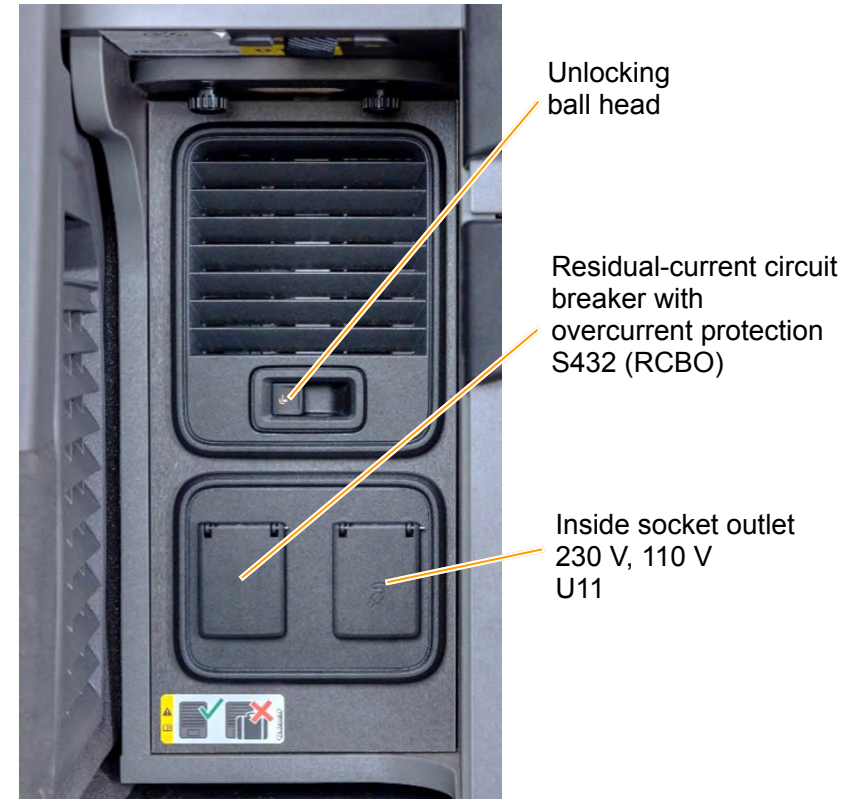
The following components of the equipment box can be accessed from the outside:

- the inside socket outlet 230 V, 110 V (U11)
- the residual-current circuit breaker with overcurrent protection S432 (RCBO)
- the unlocking mechanism for the ball head of the ball coupling

The unlocking mechanism for the ball head of the towing bracket has had to be relocated to the equipment box due to the installation position of the equipment box.



Equipment box on the left-hand side of the vehicle at the rear



Unlocking
ball head

Residual-current circuit
breaker with
overcurrent protection
S432 (RCBO)

Inside socket outlet
230 V, 110 V
U11

Overview of the electrical components in the Beach

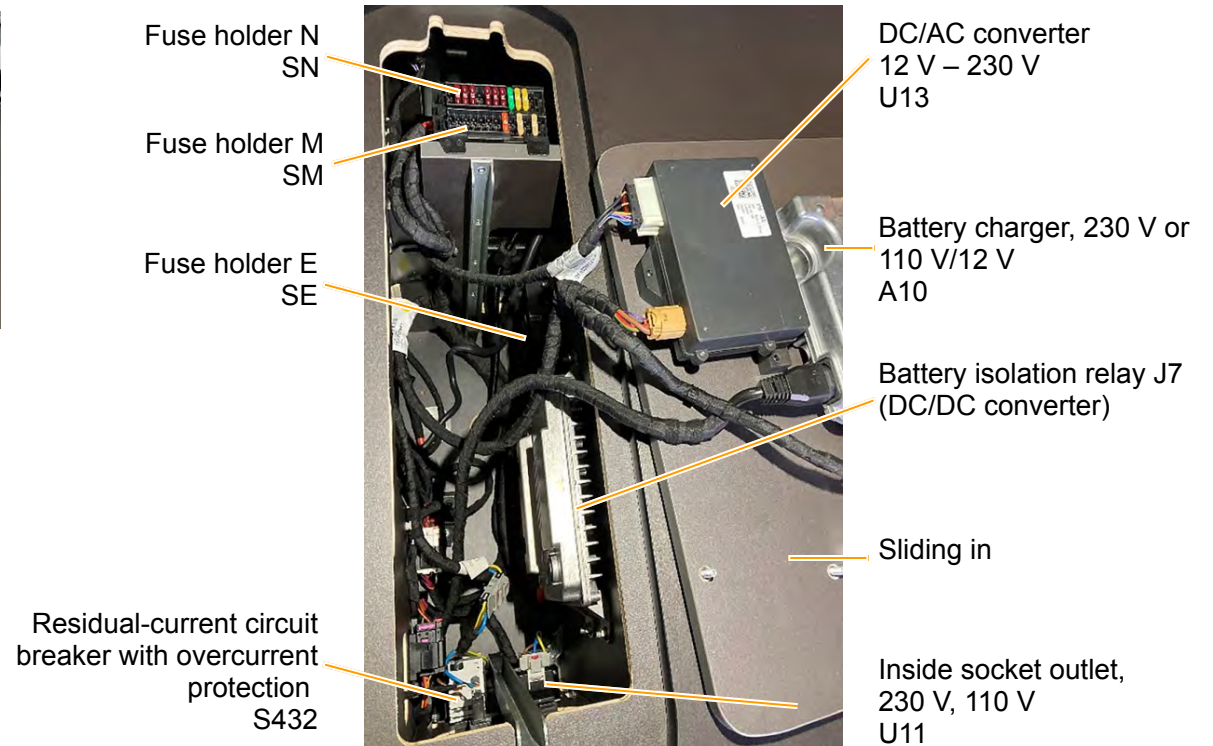
in the equipment box

After the cover of the equipment box has been removed, the components installed inside are accessible. A removable slide-in unit facilitates access to the components of the equipment box.

The DC/AC converter U13 has an output of 300 W. It is connected to the second battery.



Closing lid



Fuse holder N
SN

Fuse holder M
SM

Fuse holder E
SE

DC/AC converter
12 V – 230 V
U13

Battery charger, 230 V or
110 V/12 V
A10

Battery isolation relay J7
(DC/DC converter)

Sliding in

Residual-current circuit
breaker with overcurrent
protection
S432

Inside socket outlet,
230 V, 110 V
U11

Overview of the electrical components in the Beach

in the equipment box



The slide-in unit of the equipment box

To facilitate access to the electrical components, the slide-in unit can be pulled out by a handle and placed next to the opening.

Electrical system

Overview of the electrical components in the Ocean

in the battery compartment
of the kitchen module

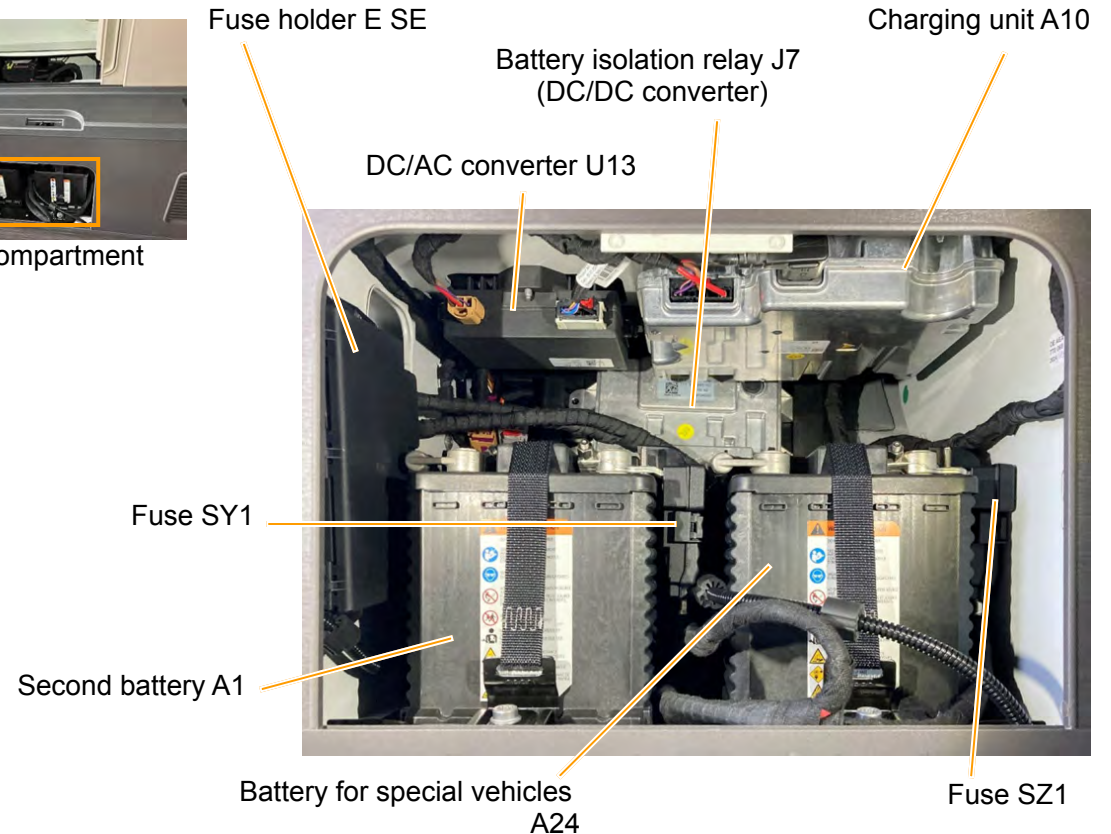
The base of the kitchen module of the California Ocean accommodates a battery compartment containing various electrical components of the electrical system:

- the second battery A1 and battery for special vehicle A24 as lithium iron phosphate batteries (LiFePo₄) with a capacity of 40 Ah
- the battery charger A10
- the DC/AC converter 12 V – 230 V U13 (300 W)
- the battery isolation relay J7
- the fuse holder E SE
- the fuse 1 on fuse holder Y SY1 and fuse 1 on fuse holder Z SZ1
- integrated control units 2 and 3 for battery monitoring J934 and J1116

The DC/AC converter is connected to the additional batteries.



Battery compartment



Electrical system

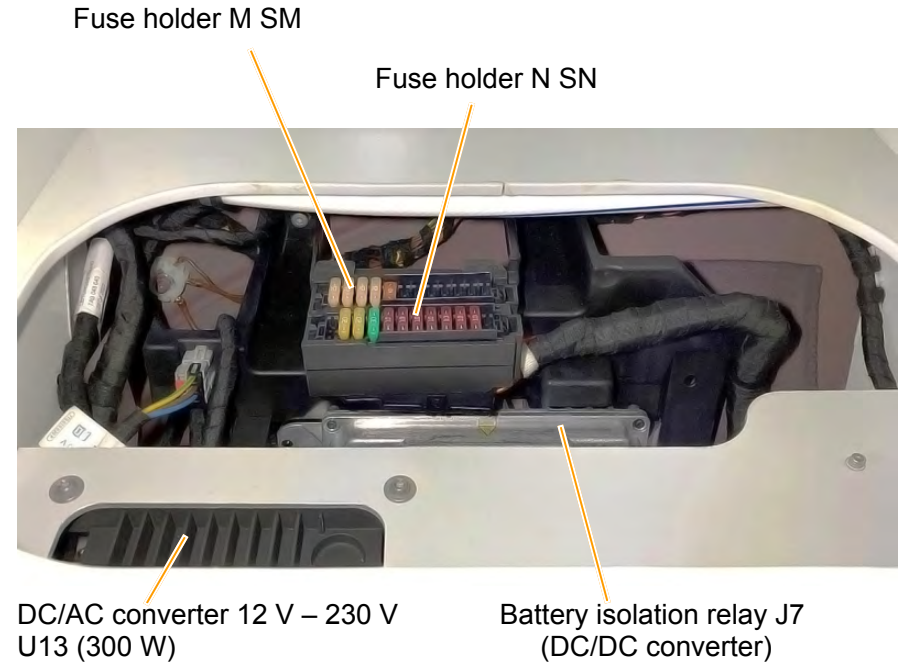
Overview of the electrical components in the Ocean

in the stowage area
of the kitchen module

Access to the electrical components installed in the upper area of the battery compartment is also possible via the stowage area in the cabinet above the battery compartment. This applies in particular to the fuse holder M SM and the fuse holder N SN.



Access via the stowage area



Electrical system

Overview of the electrical components in the Ocean

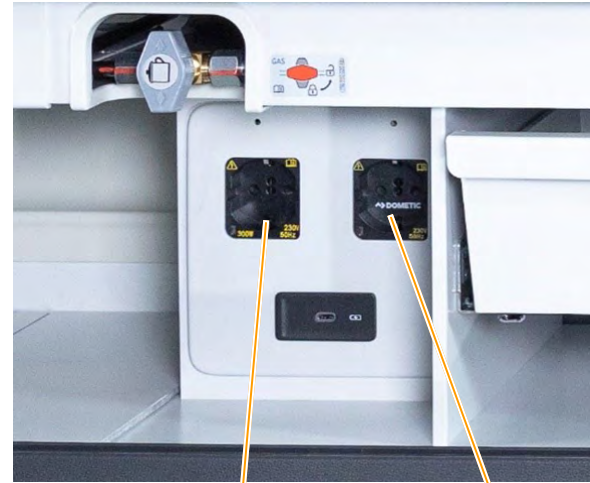
additional components
of the kitchen module

Other important components of the electrical system are:

- the residual-current circuit breaker with overcurrent protection S432 (RCBO)
- the inside socket outlet, 230 V, 110 V U11
- the inside socket outlet 2, 230 V, 110 V U17 (300 W)
- the inside socket outlet 3, 230 V, 110 V U30



Residual-current circuit breaker with overcurrent protection S432 (RCBO)



Inside socket outlet, 230 V, 110 V U11

Inside socket outlet 2, 230 V, 110 V U17 (300 W)



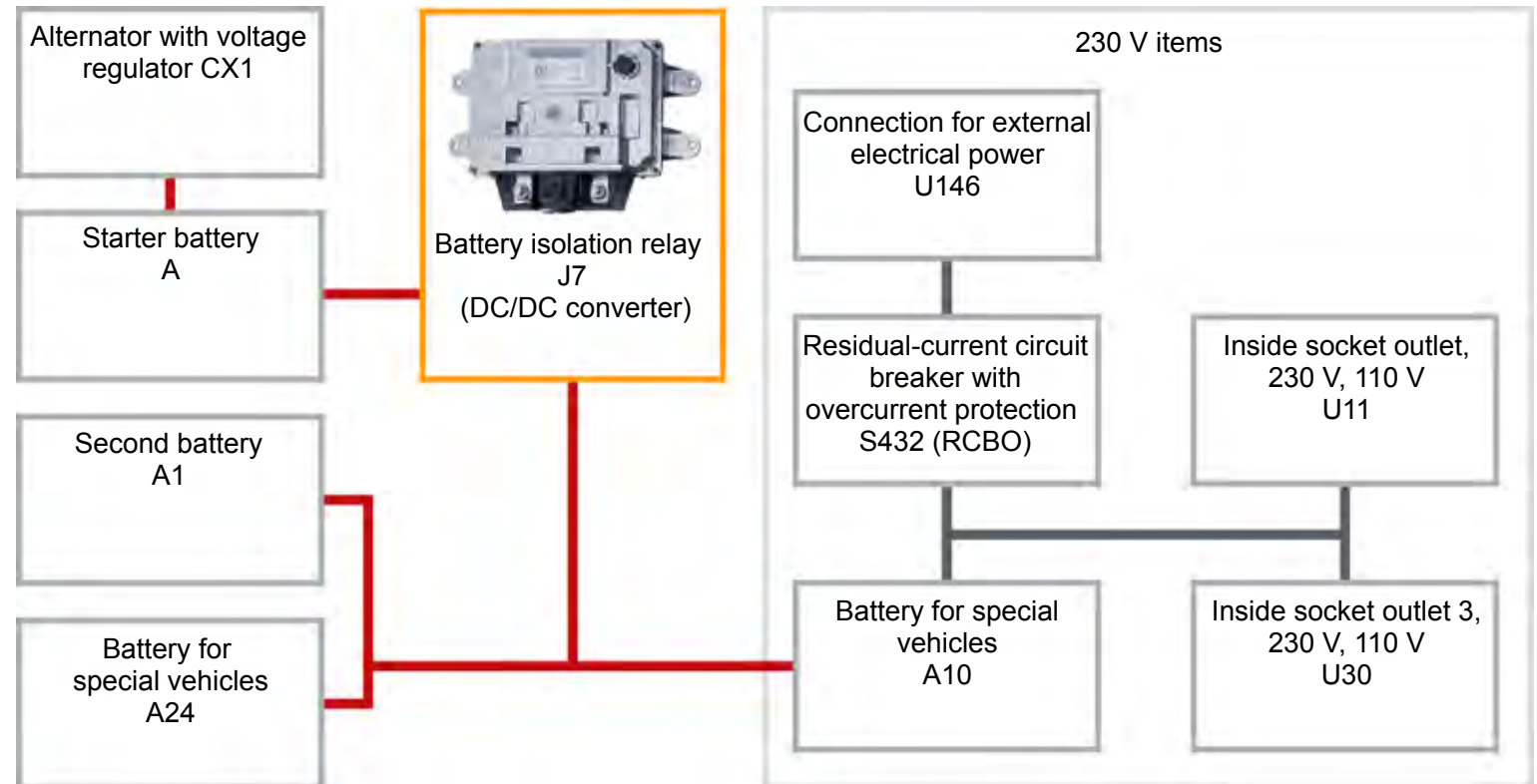
Inside socket outlet 3, 230 V, 110 V U30



The energy supply concept

Overview of the supply concept

With its function as a DC/DC converter, battery isolation relay J7 plays a central role in the 230 V vehicle electrical system. It is the interface between the three 12 V batteries and the battery charger A10.



The 230 V power supply must not be connected to the outside socket outlet during any repair work.

All repair work on the 230 V system is only allowed to be carried out by a qualified electrician or under the supervision of a qualified electrician.

The country-specific regulations and the workshop manual must be observed.



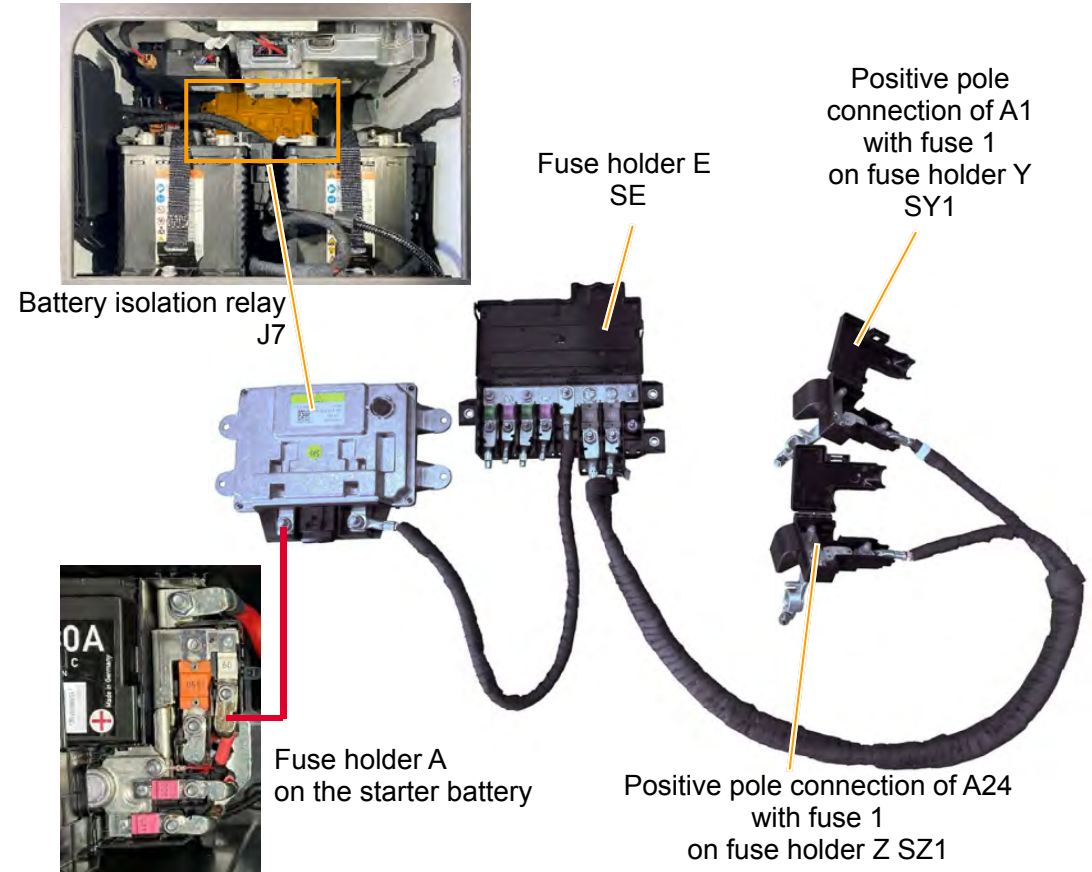
The energy supply concept

The battery isolation relay J7 (DC/DC converter)

General features

A voltage converter is used in the California 2025 to replace the previous battery isolation relay J7. It is a DC/DC converter that is still labelled “battery isolation relay J7” in the workshop information.

Communication between the DC/DC converter and the customer-specific functional control unit takes place via the second stage manufacturer CAN bus.





The energy supply concept

The battery isolation relay J7 (DC/DC converter)

Functional principle

Mainly due to the use of LiFePo₄ batteries, it has become necessary to regulate the states of charge between the starter and additional batteries and to be able to equalise the voltage levels. The previous battery isolation relay J7 was unable to do this.

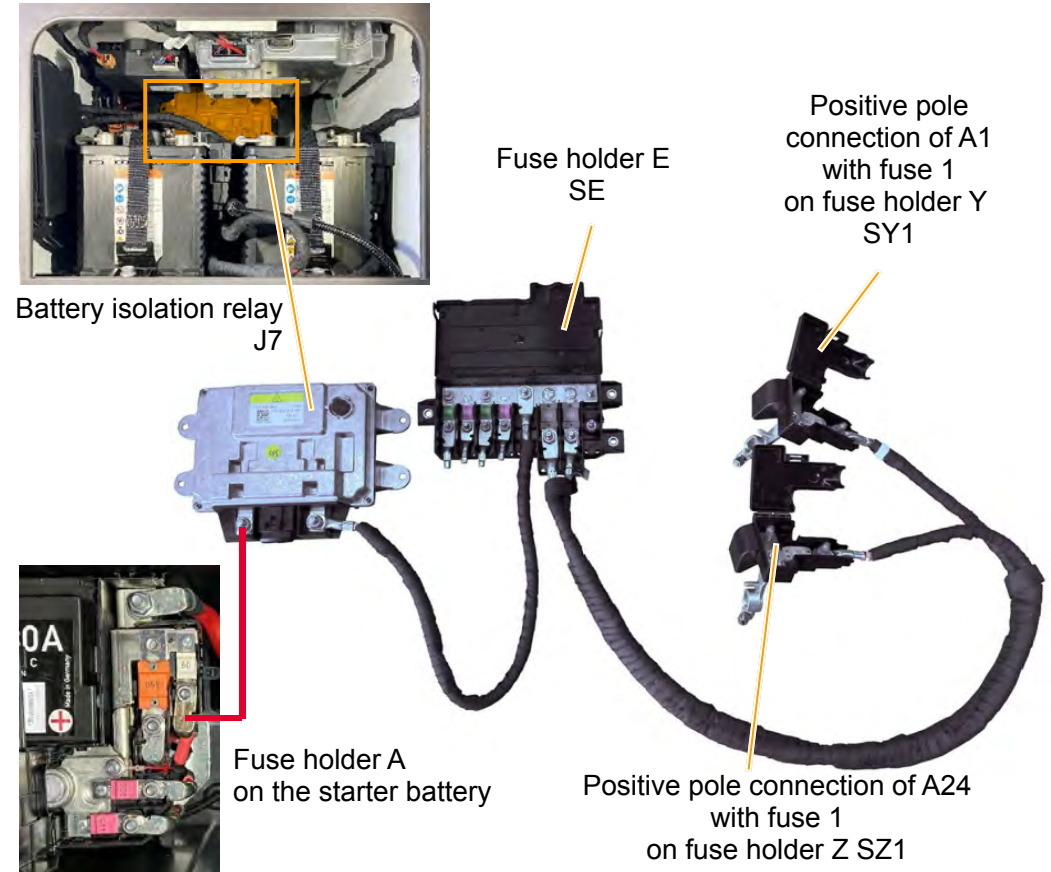
The DC/DC converter also takes over all the functions of the previous battery isolation relay. It is an adjustable voltage converter that can also limit the level of current between the starter and additional batteries.



You will find basic information on parallel energy management in the Self-Study Programmes 708 “The California 6.1” and 720 “Energy management”.
(The external charge detection function is not used.)



Control strategy





The energy supply concept

The battery isolation relay J7 (DC/DC converter)

Functional principle

Control strategy

Intelligent control between the starter and additional batteries is carried out by the customer-specific functional control unit J608 (CFCU) depending on the situation and in accordance with the energy management specifications.

These are, for example:

- Desired state of charge and voltage level of the additional batteries when the engine is running
- Recharging the starter battery from the additional batteries without the engine running
- Charging the additional batteries via battery charger A10 with external power supply
- Charging the additional batteries and starter battery via battery charger A10 with external power supply
- Charging mode maximum charging

The energy supply concept

The battery charger A10

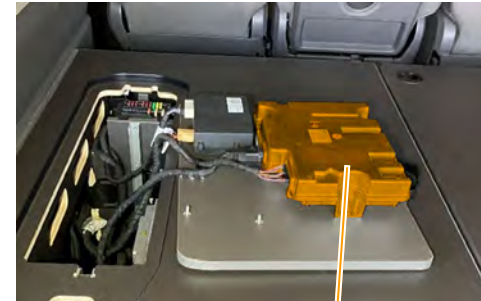
The battery charger A10 charges the batteries as required. This means that the energy management of the customer-specific functional control unit J608 decides when to charge, and with what current/voltage. The need to be able to start the vehicle is always taken into account.

The maximum charging current is 25 A. Communication between the J608 and the battery charger is via LIN bus.

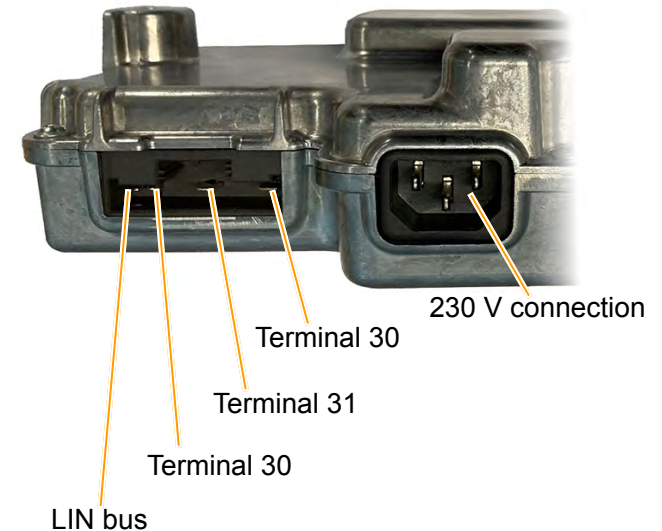
The level of the current charging current is displayed on the display and operating unit for camping equipment E153.

In the event of faults, such as communication failure between J608 and A10, charging is constant at 13.5 V. If all of the vehicle's batteries have become completely discharged, the A10 charges constantly at 13.5 V until the energy management is active again.

If the vehicle is being charged when the engine is started or its speed is greater than 0 km/h, acoustic warnings are issued and text messages are displayed in the dash panel insert. This is intended to prevent damage to the outside socket outlet, charging cable, charging station or the like.



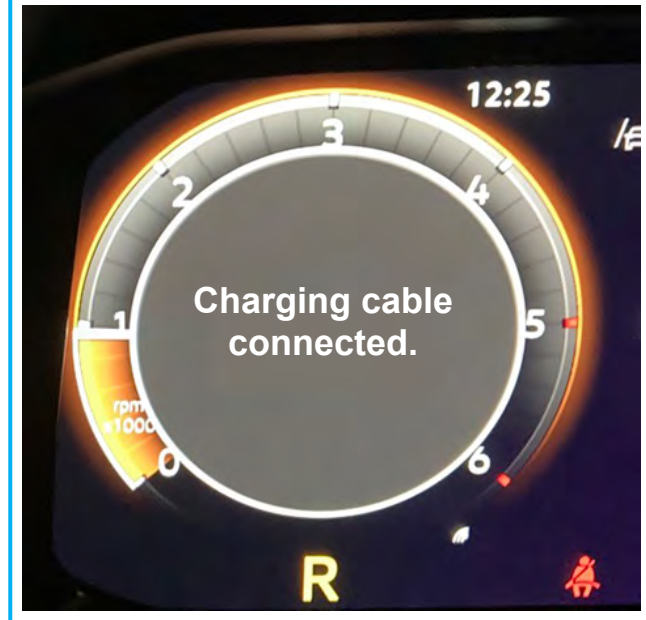
Battery charger A10 taking the example of the California Beach 2025



The battery charger A10



Display in dash panel insert





The energy supply concept

The residual-current circuit breaker with overcurrent protection S432

The residual-current circuit breaker with overcurrent protection S432 (RCBO switch) is used to protect people as well as the electrical cables.

It switches the electrical power supply off under the following conditions:

- For personal protection in the event of a residual current above 10 mA
- For line protection with a load of more than 13 A
- In the event of a short circuit

The residual-current circuit breaker with overcurrent protection S432 must be checked at least every six months. It has a test key for this purpose.

The vehicle must be supplied with external power to test the S432.



Test key



The energy supply concept

The connection for external electrical power U146

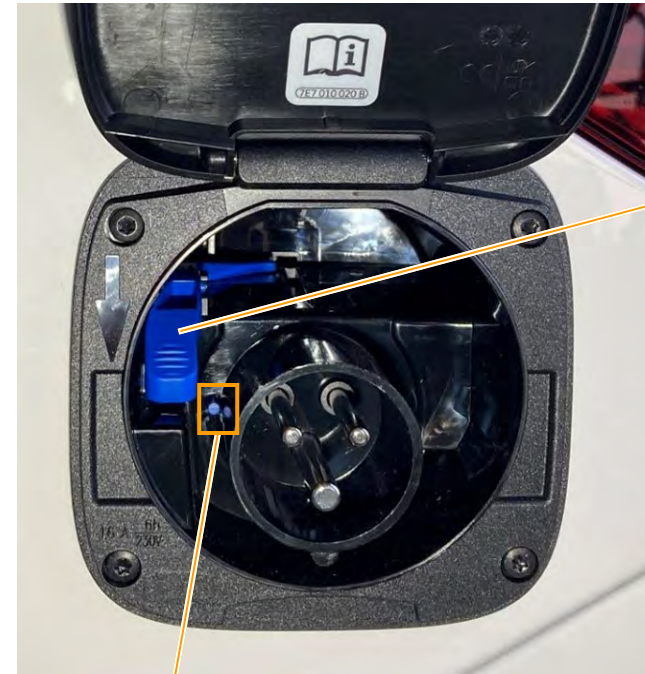
The external socket outlet (connection for external electrical power U146) is used to feed electrical energy into the vehicle.

There is a button on the side of the external socket outlet below the locking lever.

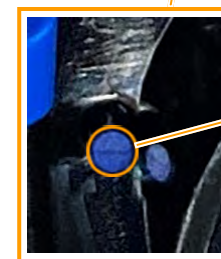
It can be used to recognise whether a plug is plugged into the external socket outlet even though no voltage is present.

This is the case, for example, if the charging station is not supplying any voltage, such as if a fuse in the charging station is defective or has blown.

A switched-off RCBO (residual-current circuit breaker with overcurrent protection S432) has the same effect.



Locking lever



Button



The energy supply concept

The connection for external electrical power U146

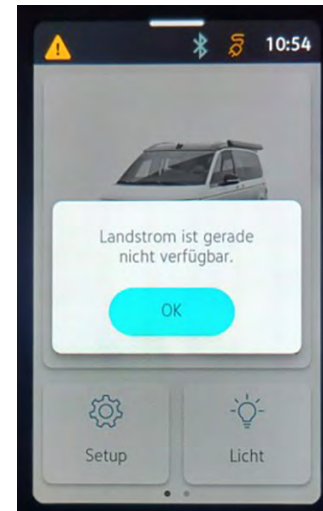
Messages

After approx. 120 seconds, an information message is displayed on the display and operating unit for camping equipment E153 and in the In-Car App.

When the engine is started or at a speed greater than 0 km/h, acoustic warnings are issued and text messages are displayed in the dash panel insert.



In the dash panel insert



In the E153



in the infotainment system



The energy supply concept

The 12 V LiFePO₄ batteries

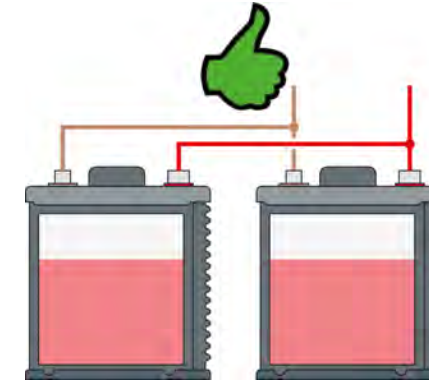
If two LiFePO₄ batteries are installed and connected in parallel, as in the California Ocean 2025, they would attempt to equalise the charges between one another in case of a difference in their states of charge.

The resulting current flow between the batteries might be too high, depending on the difference.

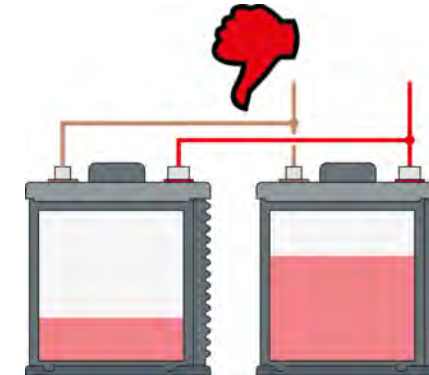
Therefore, if only one battery is exchanged, it is important to ensure that the remaining battery and the new battery have the same state of charge before they are electrically connected. This can be ensured by fully charging both batteries separately.

A different state of charge could result in the following damage:

- Blowing of the fuses at the positive terminals
- Blowing of the fuses in the fuse holder E (SE)
- Blowing of the internal fuses inside the LiFePO₄ battery
- A permanent opening of the internal rail in the LiFePO₄ battery



OK
same state of charge,
no risk of damage
when connected in
parallel



not OK
unequal state of
charge,
risk of damage when
connected in parallel



The energy supply concept

The charging mode maximum charging

In order to fully and optimally charge the additional batteries independently of the vehicle functions, “Max” charging mode can be both activated and deactivated on the display and operating unit for camping equipment E153 or using a button on the dashboard.

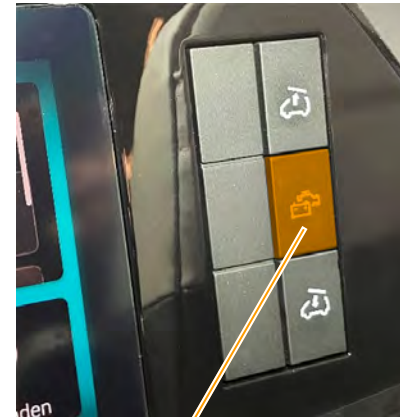
In “Max” charging mode, the maximum alternator voltage and the idling speed boost are requested. This function charges the additional batteries much faster than the built-in onboard charging unit when the engine is running.

When the journey has been completed, the “Max” charging mode switches off automatically and must be selected again for each journey after the engine is started, if this is desired.

If “Max” charging mode is switched off manually when the engine is running, the engine speed is not reduced again until the accelerator pedal has been pressed briefly.

The vehicle can have increased fuel consumption when “Max” charging mode is active.

Charging mode in the E153



Button for “Max” charging mode in the dash panel



The energy supply concept

The warning displays

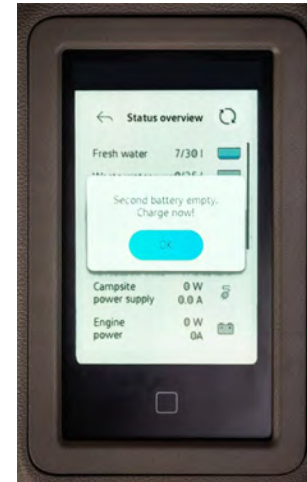
general features and displays

The energy management can display the state of charge graphically in ten stages.

If the state of charge of the additional batteries is low, the energy management system issues a message on the display and operating unit for camping equipment E153 and in the In-Car App in the infotainment system. The system has two warning levels and a shutdown stage.

Although the 12 V sockets in the California are also supplied by the additional batteries, they are not switched off when the shutdown stage is reached.

Displays
in the E153



Display
of the In-Car App in
the infotainment
system





The energy supply concept

The warning displays

Warning levels

The first warning level is triggered when the state of charge is less than 20%. In this case, a pop-up message appears on the display and operating unit for camping equipment when switching on as a warning.

The second warning level is triggered when the state of charge is less than 10%.

All camping electrical consumers are switched off if the state of charge continues to fall and reaches the threshold value for the shutdown stage.

If the additional batteries are charged again via an external power supply after a shutdown, the camping functions are only available again once the additional batteries have been sufficiently charged. The current drawn after the shutdown stage is also taken into account.

When the engine is running, all functions are immediately available again.

Charging displays



State of charge > 20%



State of charge < 20%



State of charge < 10%



Discharged state of charge

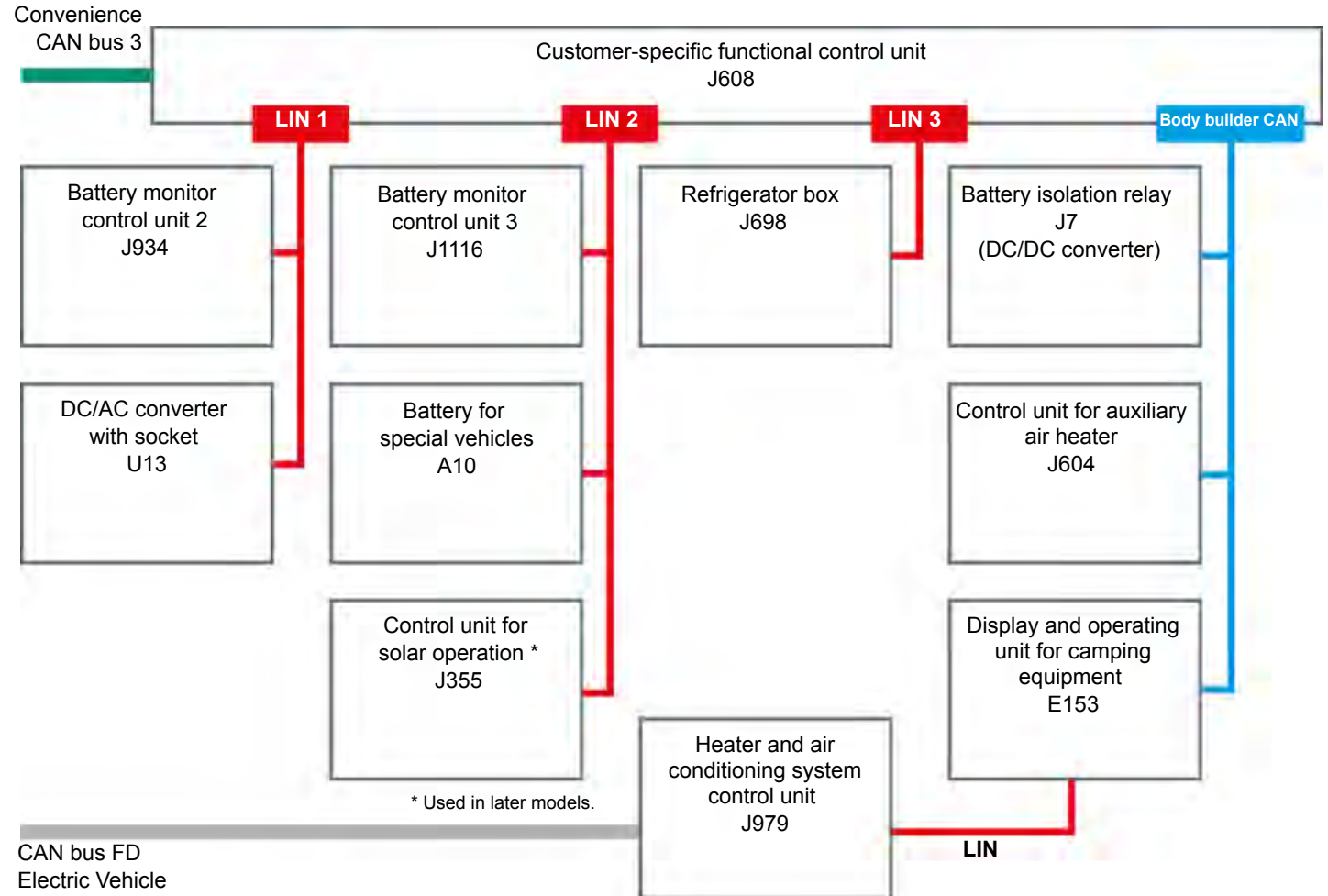


Networking

The data bus network at a glance

The customer-specific functional control unit J608 (CFCU) is connected to the convenience CAN bus 3. It has a sub-CAN bus for second stage manufacturers (ABH-CAN) and three LIN bus connections.

The display and operating unit for camping equipment E153 is also connected to the control unit for heating and air conditioning J979 via a LIN bus, which in turn is integrated into the CAN bus FD.



Convenience electronics

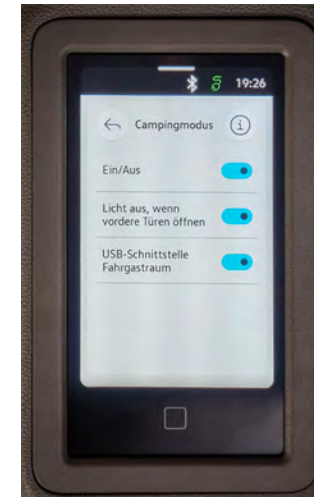
The camping mode

The camping mode can be switched on and off and configured via the display and operating unit for camping equipment E153, the In-Car App in the infotainment system and via the “California Mobile App”.

Camping mode corresponds to a change of state of the vehicle to “camping mode”. This is accompanied by the following changes:

- The automatic light switching when opening the tailgate is deactivated.
- The surround lighting of the exterior mirrors can be activated for 60 minutes in the Light menu via the “California Mobile App” and E153.
- The infotainment system can remain active for 24 hours before switching to sleep mode.
- The USB charging ports in the rear can be switched on or off.

When camping mode is active, the automatic light switch-on can be activated when the sliding door is opened.



E153



California Mobile
App



In-Car App in the infotainment system

 the activation of the “Light off/on when front doors open” sub-function



Convenience electronics

The camping mode

Activation of the “Light off/on when front doors open” sub-function

The following functions can be suppressed by activating the “Light off/on when front doors open” sub-function:

- the Coming Home and Leaving Home function
- the automatic, brief flashing when locking and unlocking
- the orientation light (for example, the lighting of the window regulator buttons and the outlining of touch lights in the dark)
- the activation of the front interior light, both when operated manually and when the driver and front passenger doors are opened

Convenience electronics

Camping lighting

The lighting is controlled by the customer-specific functional control unit J608.

The camping lights and the kitchen light can be switched on, off and dimmed by touch. The two camping lights on the left and right sides of the vehicle are coupled. This means that these lights are always switched on together and at the same light intensity.

The background lighting functions on the headliner and in the kitchen as well as the surround lighting in the tailgate can also be switched on, off and dimmed using a button.

All lights switch on with a fixed brightness value and can then be dimmed.

+ The camping lighting when the engine starts and when driving

- + Camping lights
- + Light for the kitchen
- + Surround lighting of the tailgate
- + Background lighting of the kitchen
- + Background lighting on the headliner





Convenience electronics

Camping lighting

The camping lighting when the engine starts and when driving

When the engine is started, the complete camping lighting switches off automatically.

During driving, the surround lighting in the tailgate and the LED ambient light strips are suppressed. When the vehicle is locked from the outside, the camping lighting is switched off. If the vehicle is locked from the inside, the activated camping lighting remains switched on.

Convenience electronics

Camping lighting



2 camping lights each on the right and left sides of the vehicle



+ Camping lights

Light for the kitchen

Surround lighting of the tailgate

Background lighting of the kitchen

Background lighting on the headliner

Convenience electronics

Camping lighting

Camping lights

+ Light for the kitchen

Surround lighting of the tailgate

Background lighting of the kitchen

Background lighting on the headliner



Convenience electronics

Camping lighting

- Camping lights
- Light for the kitchen
- + Surround lighting of the tailgate
- Background lighting of the kitchen
- Background lighting on the headliner



Button in the interior trim
of the tailgate

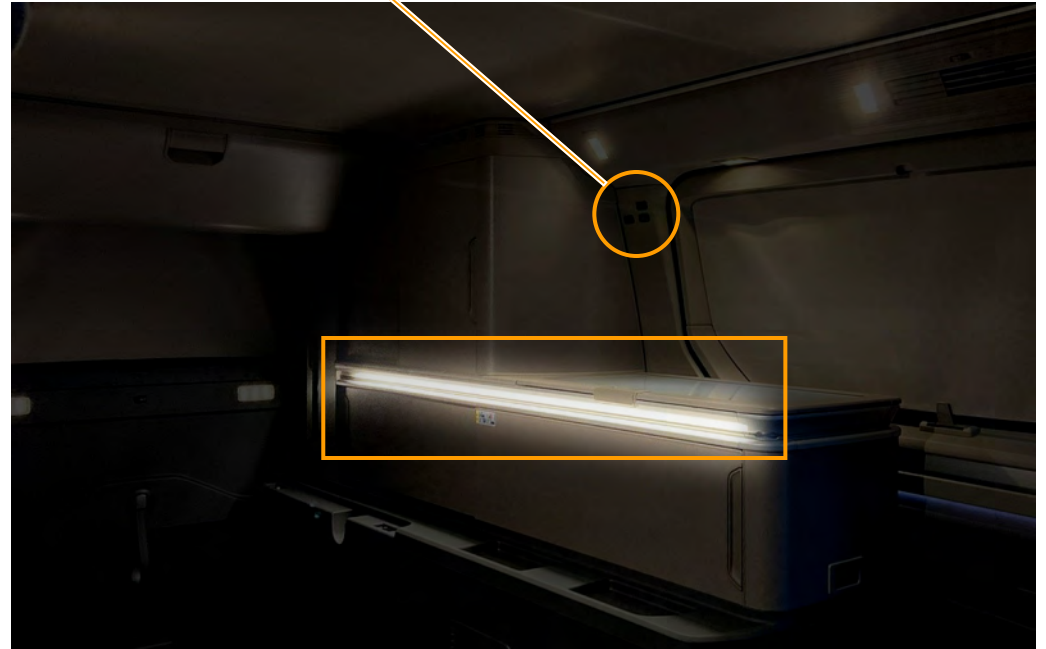


Convenience electronics

Camping lighting



Button for background lighting of the kitchen



Camping lights

Light for the kitchen

Surround lighting of the tailgate

+ Background lighting of the kitchen

Background lighting on the headliner

Convenience electronics

Camping lighting



Button for background lighting
on the headliner



Camping lights

Light for the kitchen

Surround lighting of the tailgate

Background lighting of the kitchen

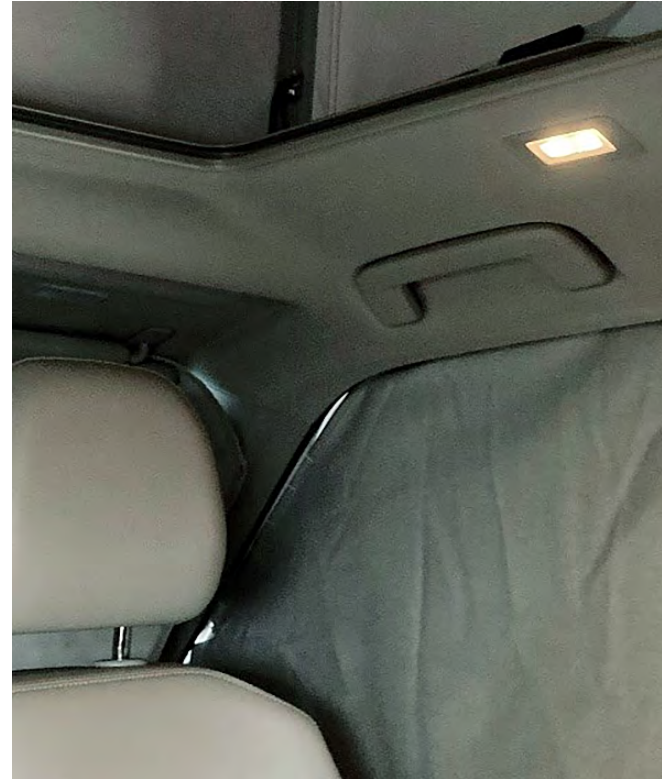
 Background lighting on the headliner

Convenience electronics

More lights

Reading light
for the front passenger

The reading light above the front passenger seat can be switched on, off and dimmed by touch.





Convenience electronics

More lights

Lighting
in the roof bed

One light is installed in the headliner of the roof bed and one in the rear area of the roof bed. Both are activated together and can be dimmed.

The lights are deactivated when the roof is closed.

Buttons are installed in the front area of the roof access on both sides for operation.



Button on the roof access

Convenience electronics

More lights

Interior light
in the roof console

If camping mode is not active, the configuration of the camping lights can be saved using the “California Mobile App”. This means that when the touch button is pressed, only the previously selected lights are switched on.



Touch button in the roof console



Convenience electronics

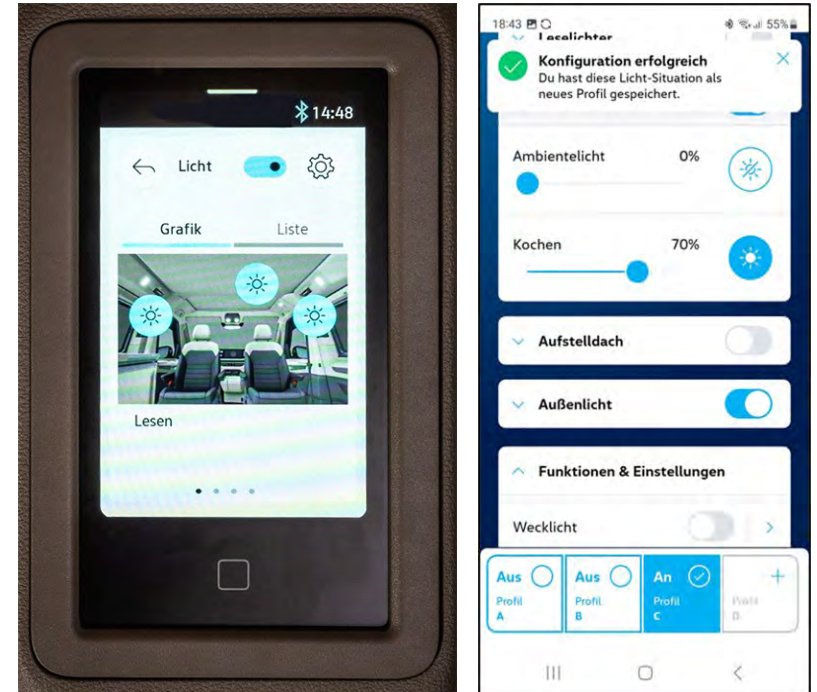
Control of the lighting

The lighting can be controlled via the display and operating unit for camping equipment E153. This enables various lights to be switched on and off and dimmed.

In addition, the “California Mobile App” offers extended functions:

- All settings made on the E153 can also be made conveniently via the app.
- A special function of the app is the ability to create up to four lighting profiles.
- The wake-up light function can be used to simulate a sunrise. It enables a configurable light simulation in which defined lights are gradually dimmed up to a preset brightness from a start time to the target time.

These functions not only offer convenience, but also quick and easy customisation of the lighting according to personal requirements.



+ Additional functions

+ Creating lighting profile



Convenience electronics

Control of the lighting

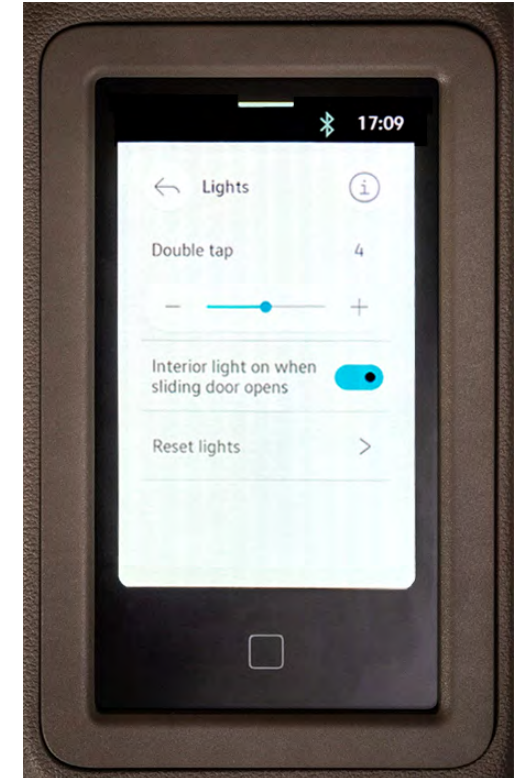
Setting the click speed

The entire interior lighting can be switched off by double-clicking one of the touch-operated lights. The double-click speed can be set in the display and operating unit for camping equipment E153.

Interior light on when the sliding door opens

When camping mode is active, the automatic interior light switch-on can be activated when the sliding door is opened.

In addition, the “California Mobile App” can be used to specify which of the interior lights are activated when the sliding doors are opened.





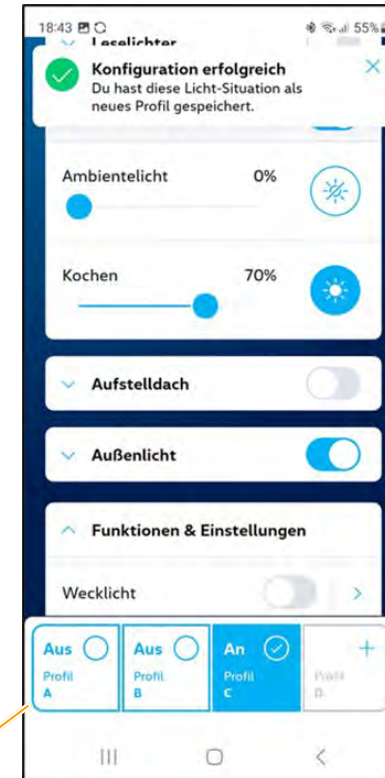
Convenience electronics

Control of the lighting

Creating lighting profile

To create a lighting profile, first activate the desired lighting and configure as required. The brightness and the selection of lights can be defined.

These settings can then be saved in one of the four available profiles. This means that an individual light setup can be saved for different situations – e.g. for relaxing and reading, cooking, or evening lighting – and called up again as required with a single command.



Display of the
four lighting profiles



Convenience electronics

The kitchen cabinet lighting

Three LED lights are installed as lighting for the cabinets of the summer kitchen. This interior cabinet lighting is switched on and off via a central button. All three lights are activated simultaneously.


The lights are arranged in such a way that they also illuminate the adjacent storage area. If the cabinet lighting is switched off and the door of the rear storage compartment is opened, only this area is illuminated.

A microswitch is installed on the door hinge to detect the door position.

The lights inside the summer kitchen are not dimmable.

Button for switching the cabinet lighting on and off



 Lighting situations for cabinet lighting

Convenience electronics

The kitchen cabinet lighting



Lighting in the rear cabinet of the kitchen unit



Convenience electronics

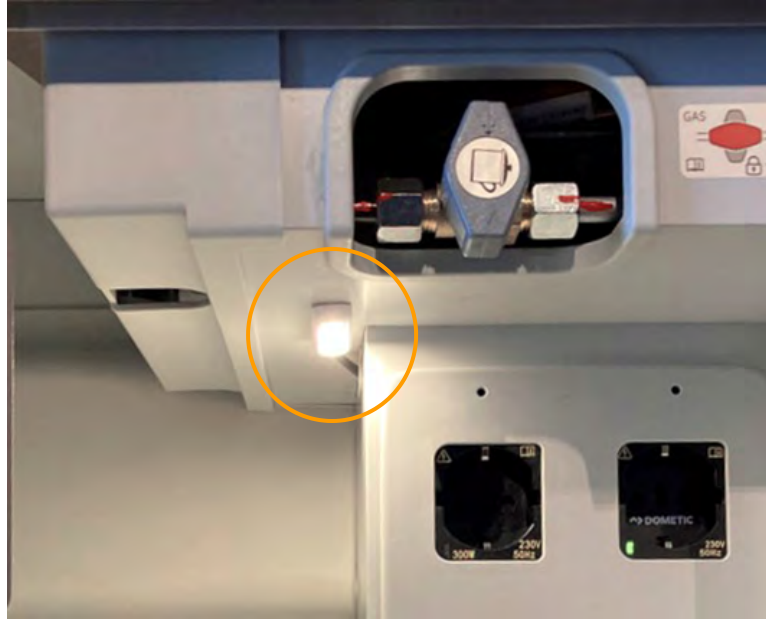
The kitchen cabinet lighting



Microswitch on the hinge of the rear cabinet door

Convenience electronics

The kitchen cabinet lighting



Lighting in the stowage area near the gas shut-off valve

Convenience electronics

The kitchen cabinet lighting



Lighting in the upper cabinet of the kitchen unit



Convenience electronics


The kitchen cabinet lighting

	Situation				
	1	2	3	4	5
Preconditions	Light: off Door B: closed	Light: on Door B: closed Timer: still running	Light: on Door B: closed	Light: off Door B: closed	Light: on Door B: open Timer: still running
Action	Press button A	Press button A	Timer counted down	Open door B	Close door B
Result	- Light on - Start timer	- Light off	- Light off	- Light on - Start timer	- Light off


	Situation			
	6	7	8	9
Preconditions	Light: on Door B: open Timer: still running	Light: on Door B: open Timer: still running	Light: on (button A has been pressed, timer running) Door B: closed	Light: on (button A has been pressed, timer running) Door B: open
Action	Timer counted down	Press button A	Open door B	Close door B
Result	- Light off	- Light off	- Light remains on - Timer continues to run (no reset)	- Light remains on - Timer continues to run (no reset)

Timer = 20 minutes

Button A



Door B



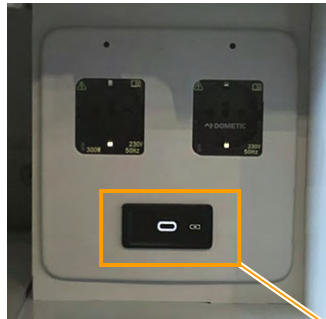


Convenience electronics

The USB charging ports

All USB charging ports are designed for fast DC charging.
They can be switched on and off in camping mode.

underneath the hob



Stowage area



Roof access



Sliding door
Beach: right and left
Ocean: right



Side trim
Beach: right and left
Ocean: right



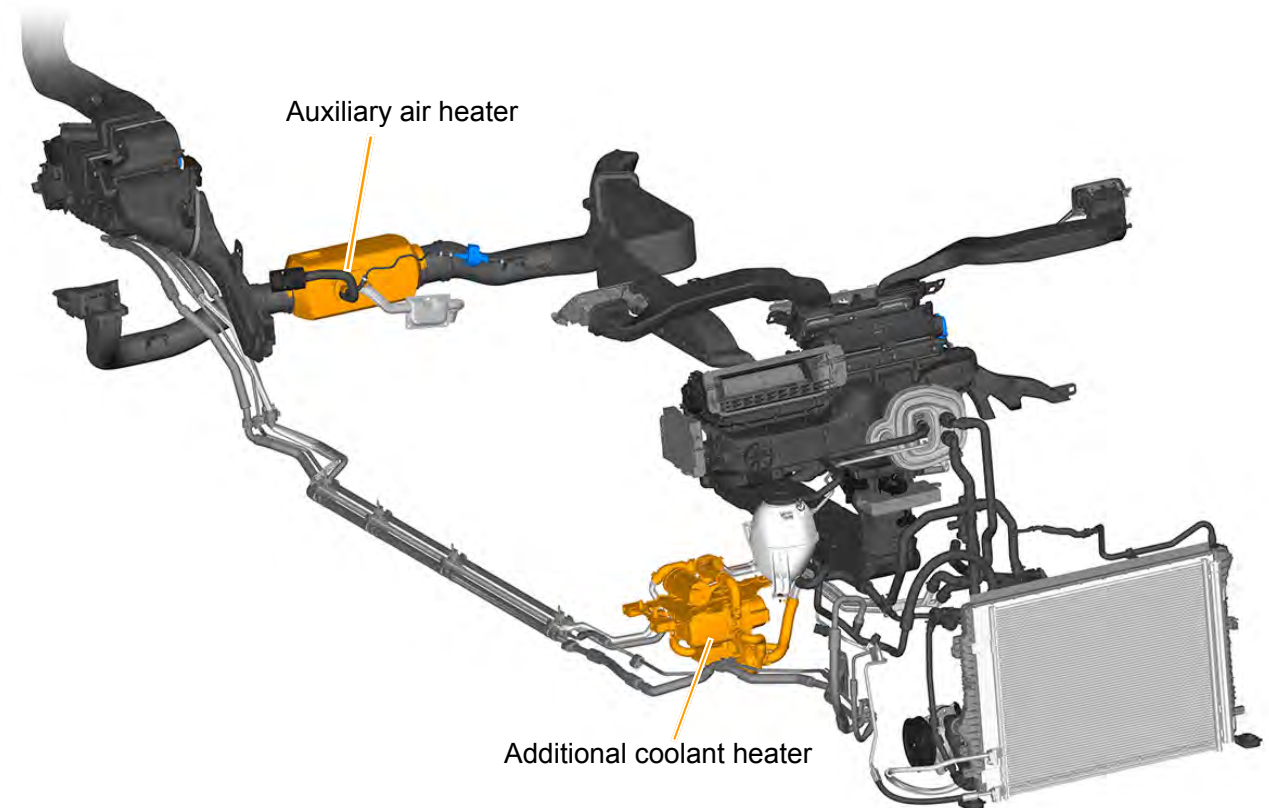
The additional air heater

The variants of the additional air heater

The California 2025 is offered with an auxiliary air heater and an additional coolant heater.

A distinction is made between three variants of the additional heater:

- the auxiliary air heater 7VB
- the auxiliary air heater and supplementary heater
- the auxiliary air heater and additional coolant heater 7VH





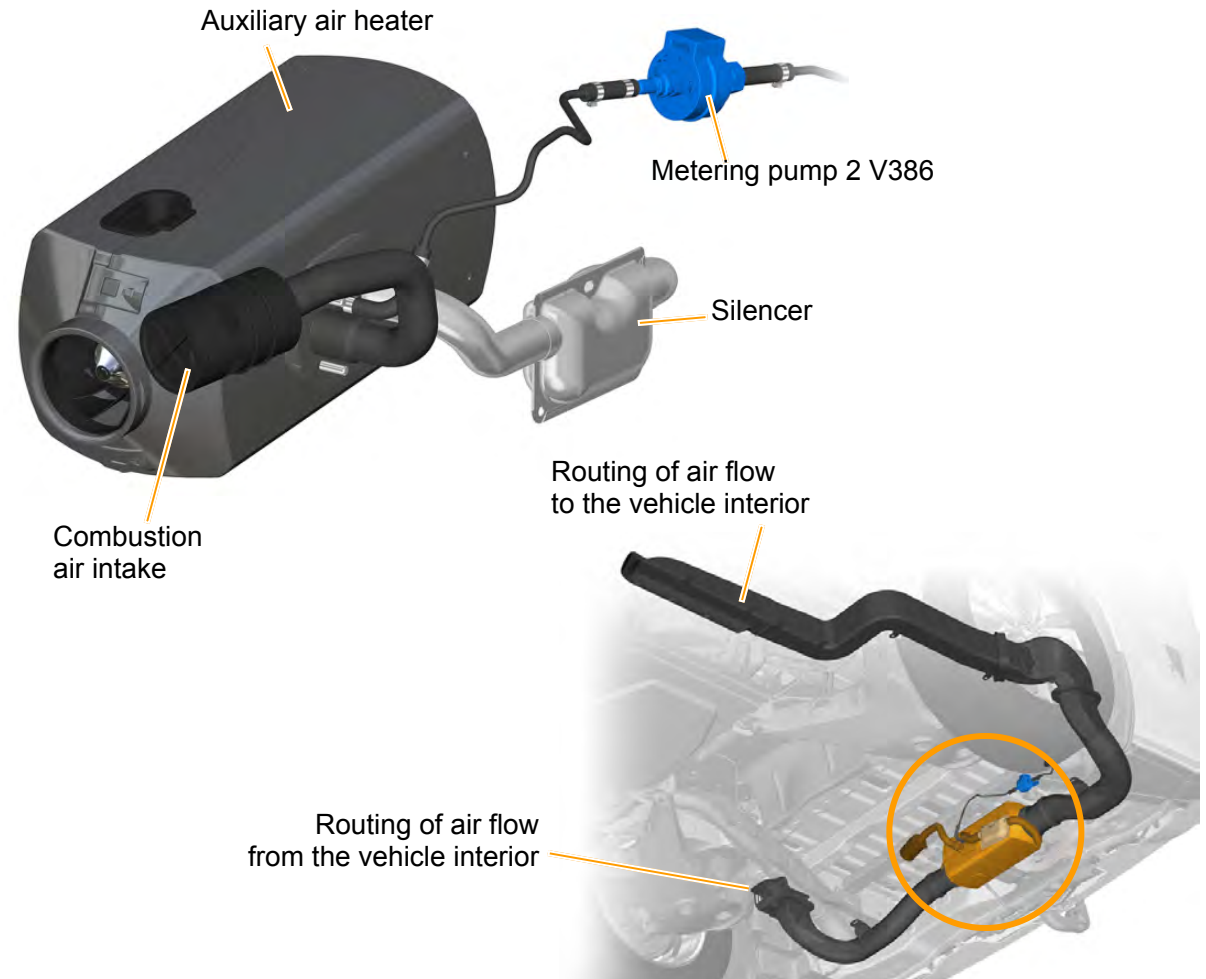
The additional air heater

The Airtronic additional air heater

The California 2025 has an optional additional air heater from Eberspächer. This additional air heater with the designation “Airtronic” is operated as an auxiliary heater.

The auxiliary heater has the task of heating the vehicle interior. When the internal combustion engine is at a standstill, cool room air is drawn in by the additional air heater, heated and then delivered to the vehicle interior.

The auxiliary air heater is located in the rear area of the vehicle near the spare wheel well.





The additional air heater

The Airtronic additional air heater

Technical data of the Airtronic

Designation:

Airtronic M2

Fuel:

Diesel or petrol

Heating output:

10 regulation stages
(power stage 3500 W, low stage 1000 W)

Operating voltage:

12 V

Electrical power consumption:

max. 42 W

Undervoltage deactivation:

10.5 V > 20 seconds

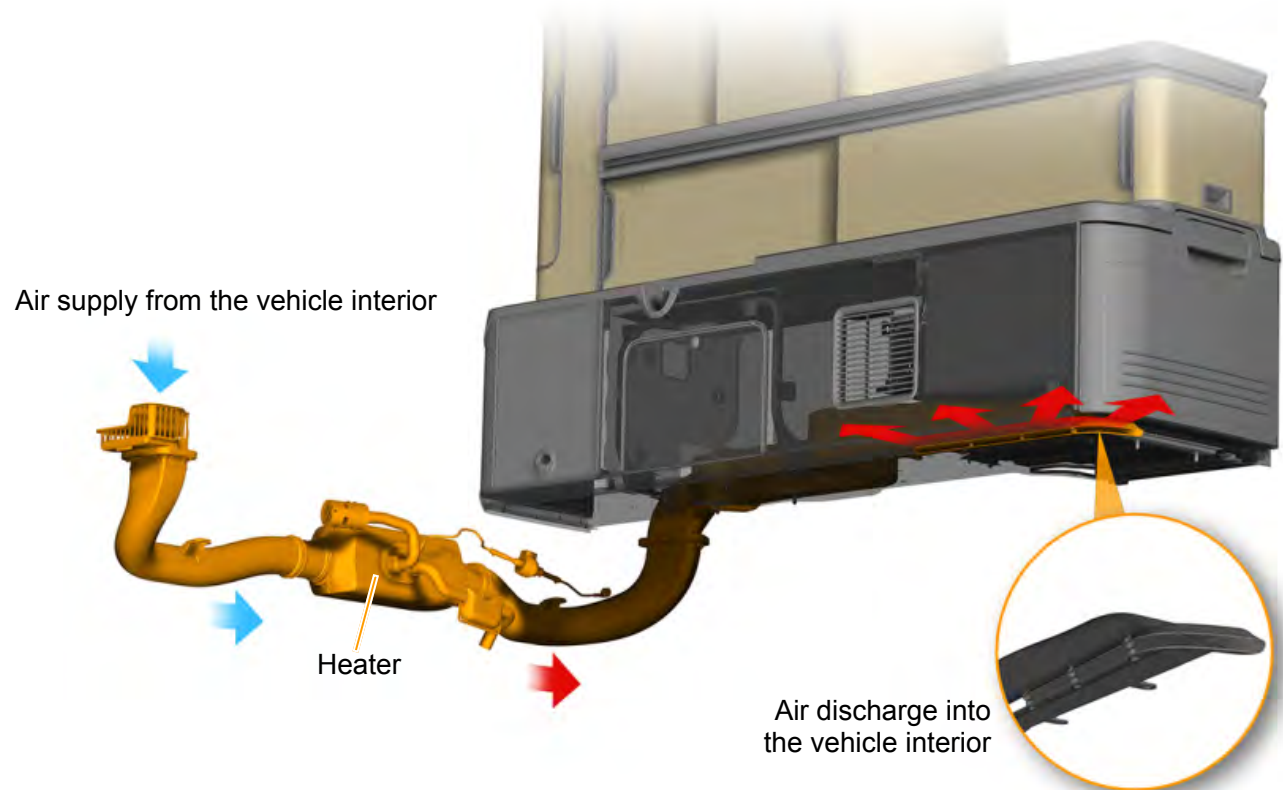


The additional air heater

Routing of the air flow of the additional air heater

The air is drawn in at the rear right via a grille in the lower side trim and fed to the heater.

The heated air is then channelled above the floor in the kitchen unit to a wide vent below the refrigerator compartment and discharged into the interior.





The additional air heater

The controls and operating modes

Controls

The additional air heater as an auxiliary heater can be operated using three different controls:

- via the display and operating unit for camping equipment E153
- via the menu in the infotainment system
- via the “California Mobile App”

All control units enable the deactivation or activation of heating.

The timer is only programmed via the “California Mobile App” and in the display and operating unit E153.

There is a priority ranking of operating units in case changes are made to the settings on several operating units at the same time. This means that the setting made on the infotainment system has the highest priority, followed by E153 and the “California Mobile App”.

The auxiliary air heater no longer has a remote control.

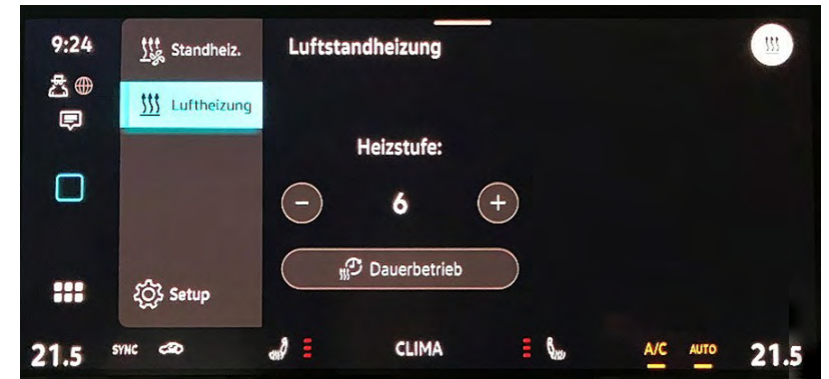


- + Menu in the E153
- + Menu in the Infotainment system
- + Menu in the “California Mobile App”

The additional air heater

The controls and operating modes

Controls



Menu in the Infotainment system



The additional air heater

The controls and operating modes

Controls



Menu in the “California Mobile App”



The additional air heater

The controls and operating modes

Operating modes

The auxiliary air heater has three different operating modes:

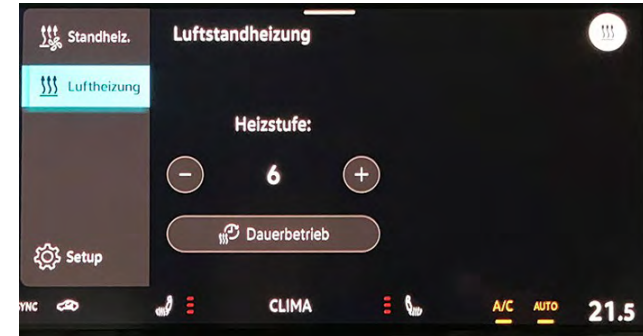
- instant mode
- continuous operation
- timer mode

If the auxiliary air heater is activated, e.g. with instant mode, it heats at the heating level and for the time that were set most recently.

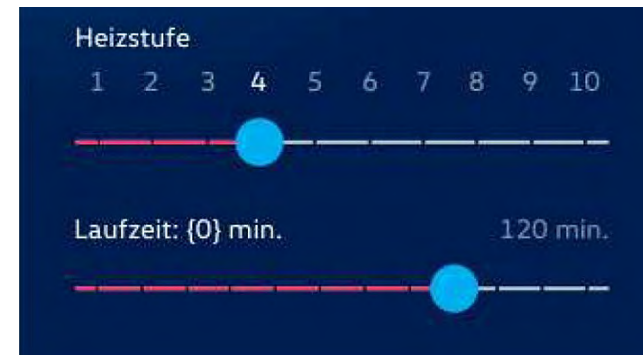
The heating level can be set from level 1 – 10 and the operating time can be set in steps of 10 up to 120 minutes. Each heating level corresponds to a predefined air temperature.

The air temperature of the intake air is measured via the intake air temperature sensor in the auxiliary air heater.

If the intake air temperature is above the set heating level temperature, the air is only circulated.



Example: start instant mode via the infotainment system



Setting the
heating level

Setting the
operating time

Example: setting the heating level via the “California Mobile App”



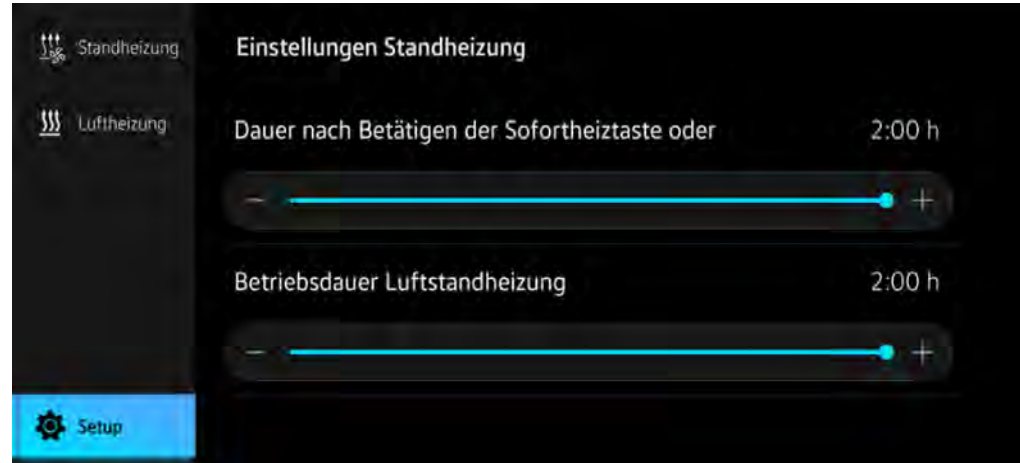
The additional air heater

Instant heating

Activation and setting

The Setup button can be used to set the duration for instant heating for the additional coolant heater and auxiliary air heater.

The setting is made in 10-minute steps.



Additional coolant heater
10 – 120 minutes running time

Auxiliary air heater
10 – 120 minutes running time



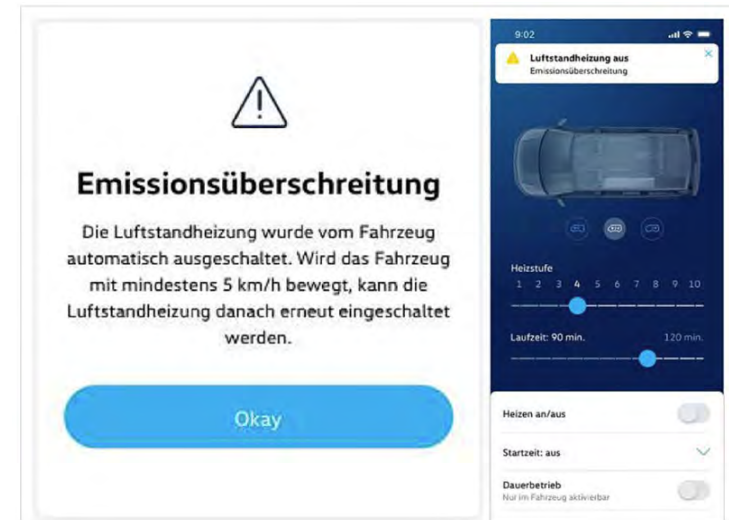
The additional air heater


Instant heating

Activation and deactivation conditions

The following conditions must be met for switching on or off:

Switch-on conditions	Switch-off conditions
Energy management not in operation	Energy management in operation
Fuel above reserve level in tank	Fuel at or below reserve level in tank
Engine not running	Engine started
Additional coolant heater off	Additional coolant heater switched on
Function activated/switched on	Function deactivated/switched off
	Heating time limit of 120 minutes reached
	Heating time limit of 180 minutes reached



 Emissions limit violation and heating time limit



Click the attention sign to show or hide an important note.



The additional air heater

Instant heating

Activation and deactivation conditions

The switch-on conditions are all AND conditions and the switch-off conditions are all OR conditions. This means that all conditions must be fulfilled simultaneously when switching on. When switching off, however, only one of the conditions must be met.



The additional air heater

Instant heating

Activation and deactivation conditions

Emissions limit violation and heating time limit

If instant operation is activated a second time without a driving cycle having taken place, the function is switched off after a total of 180 minutes.

If the vehicle is in a garage, it is assumed that the emissions could reach a level that is harmful to health after 180 minutes of operation. This is why instant operation is switched off after this period.

To cancel the emissions limit shut-off, the vehicle must be driven at a speed of more than 5 km/h once.



The additional air heater

Continuous operation

Activation and setting

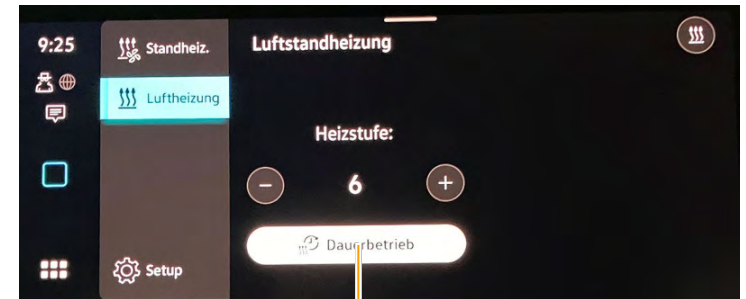
Continuous operation can only be activated in the vehicle via the infotainment system or the display and operating unit for camping equipment E153.

It remains active until the function is switched off manually using one of the three controls, or if the timer function is active.

An engine start interrupts the function once for up to 5 minutes so that the vehicle can be manoeuvred at a maximum speed of 20 km/h.

If the manoeuvring ends within the time and speed limits, continuous operation switches on again automatically when the engine is switched off.

Switching off due to emissions limit violation is deactivated in this operating mode.



Activation taking the example of the infotainment system

Activation/deactivation taking the example of the “California Mobile App”



The additional air heater

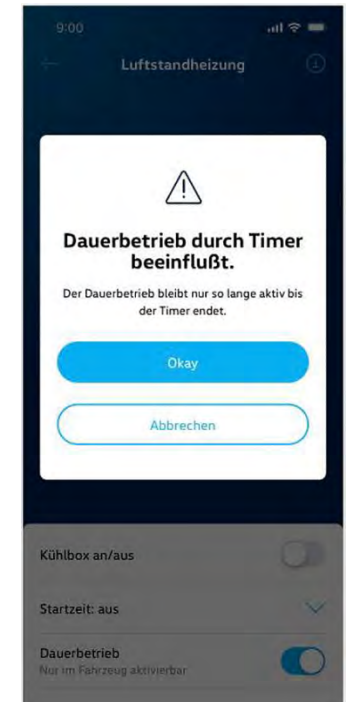
Continuous operation

Activation and deactivation conditions

The following conditions must be met for switching on or off:

Switch-on conditions	Switch-off conditions
Energy management not in operation	Energy management in operation
Fuel above reserve level in tank	Fuel at or below reserve level in tank
Engine not running	Engine started*
Additional coolant heater off	Additional coolant heater switched on
Function activated/switched on	Function deactivated/switched off
	Timer mode ended

* Exception: manoeuvring at max. 20 km/h



Click the attention sign to show or hide an important note.



The additional air heater

Continuous operation

Activation and deactivation conditions

The switch-on conditions are all AND conditions and the switch-off conditions are all OR conditions. This means that all conditions must be fulfilled simultaneously when switching on. When switching off, however, only one of the conditions must be met.



The additional air heater

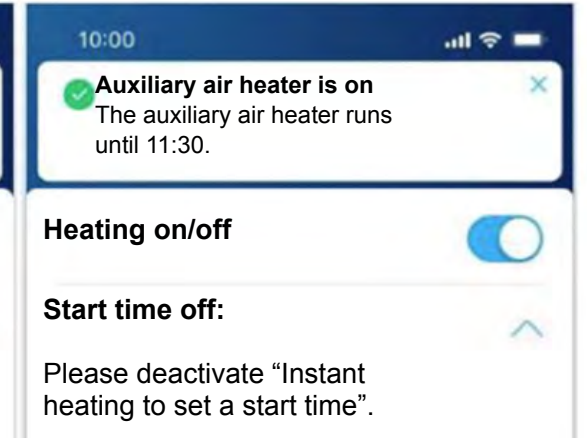
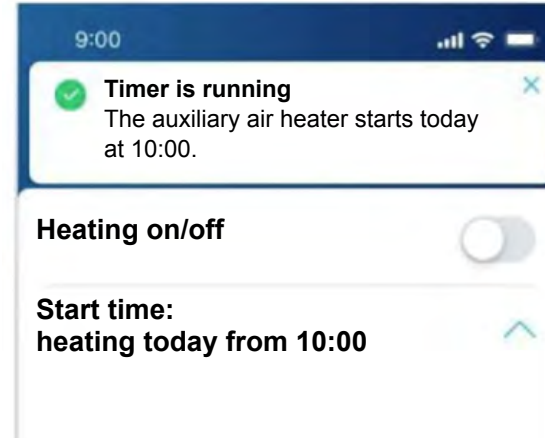
Timer mode

Activation and setting

Only one timer can be set.

It has a maximum preset time of 24 hours.

The time selected in the timer is the start of heating for the auxiliary air heater.





The additional air heater

Timer mode

Activation and setting

Example for setting the timer:

- The preset time of the timer is created today at 10:00 and will thus start tomorrow at 10:00 at the latest.
- The timer set in this way starts at 10:00 and heats at the heating level and for the time that were set most recently.

As soon as timer mode is switched on, continuous operation switches off.

Example:

- Continuous operation has already been in progress for 240 minutes, then the timer is activated for 120 minutes during continuous operation.
- The auxiliary air heater is switched off when the timer has expired.
- There is a corresponding note in the controls that continuous operation is ended when the timer starts.



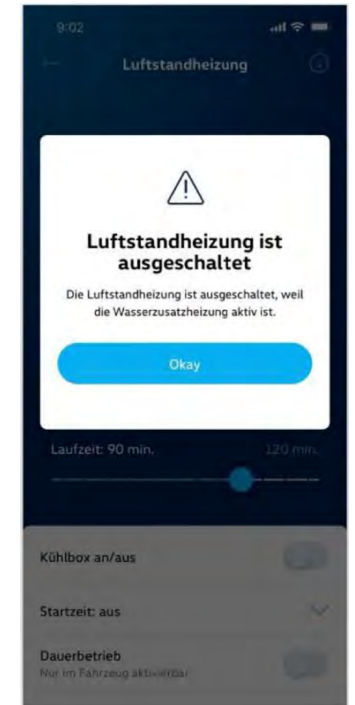
The additional air heater

Timer mode

Activation and deactivation conditions

The following conditions must be met for switching on or off:

Switch-on conditions	Switch-off conditions
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Function activated/switched on	Function deactivated/switched off
	Heating time limit of 120 minutes reached
	Heating time limit of 180 minutes reached



Click the attention sign to show or hide an important note.



The additional air heater

Timer mode

Activation and deactivation conditions

The switch-on conditions are all AND conditions and the switch-off conditions are all OR conditions. This means that all conditions must be fulfilled simultaneously when switching on. When switching off, however, only one of the conditions must be met.

Thank you
for your
interest.

