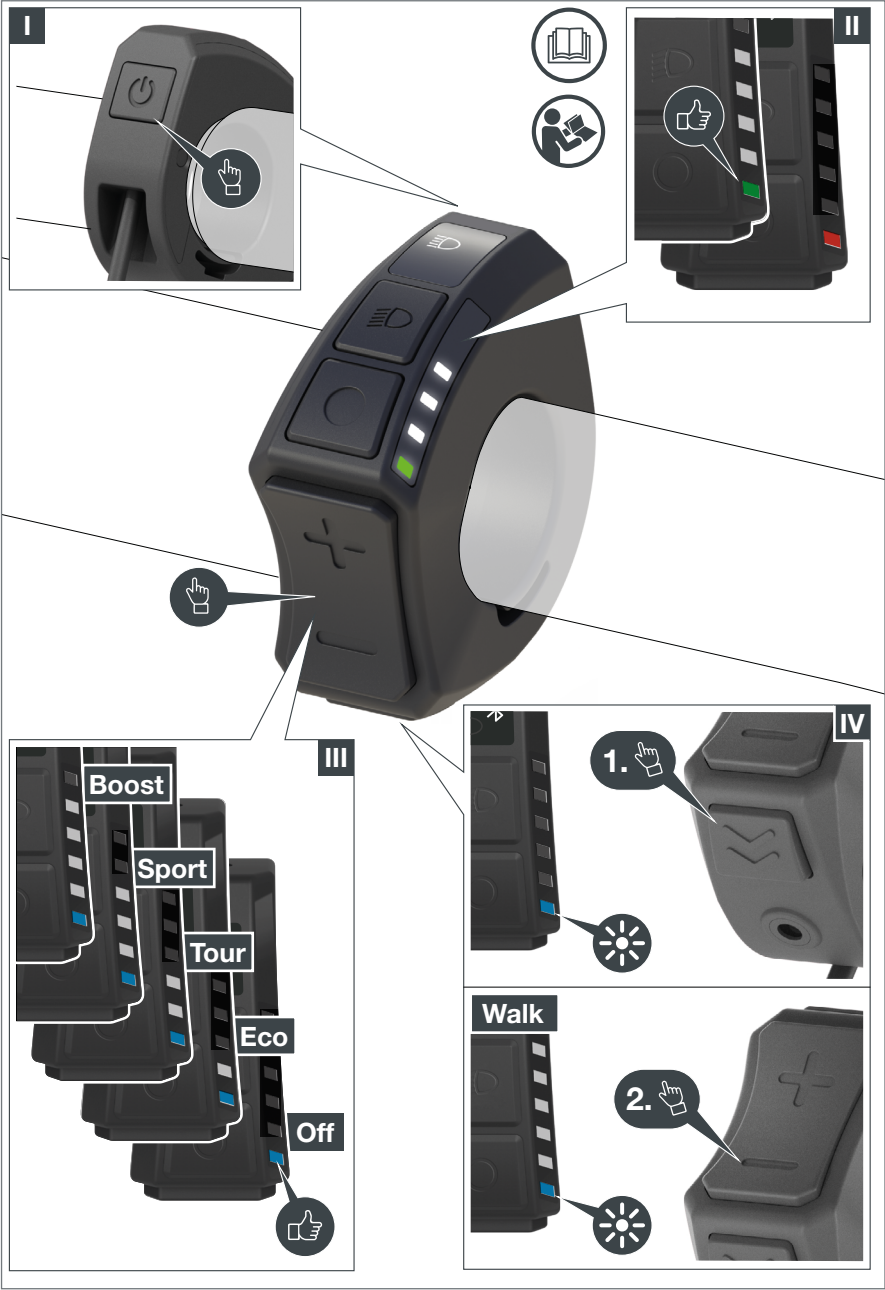


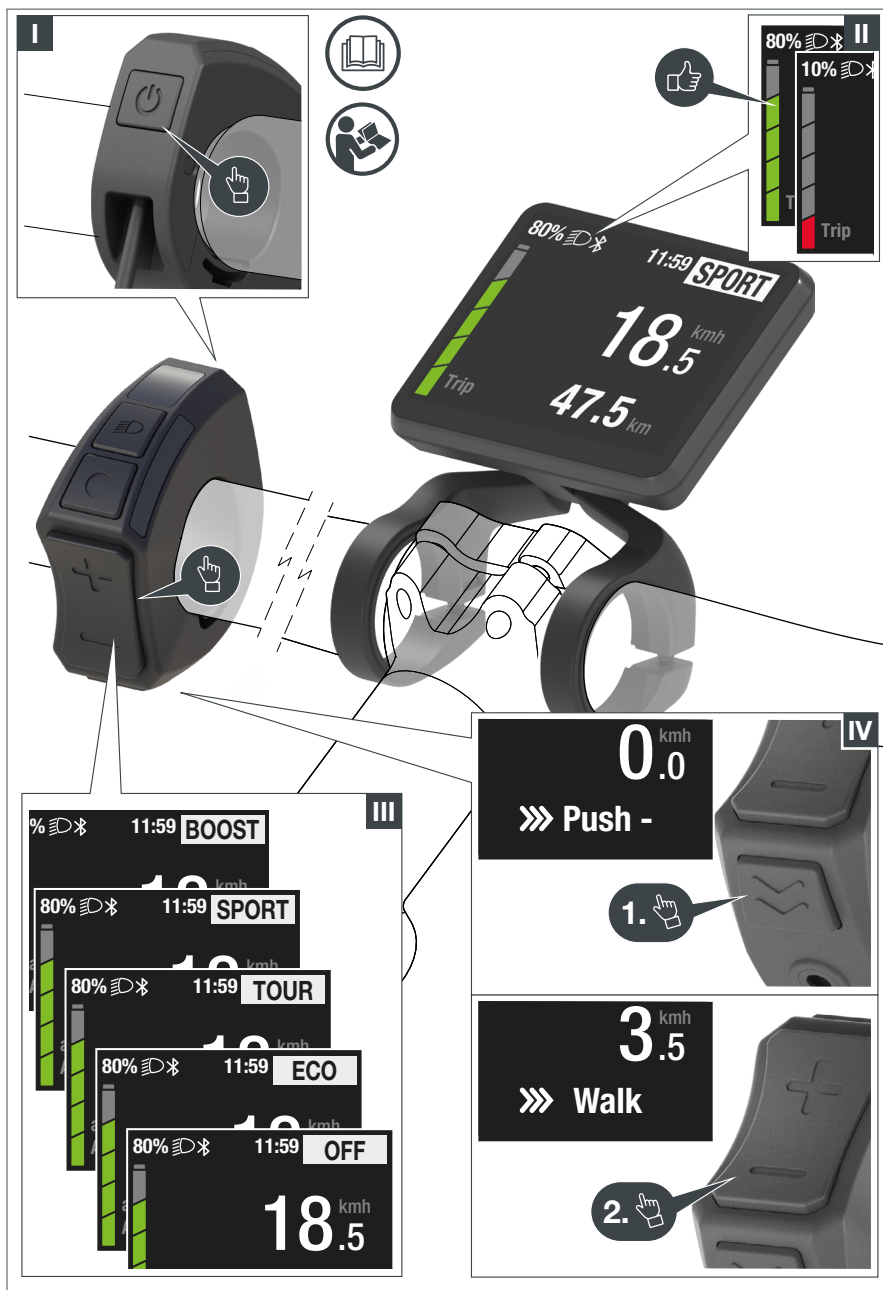
# Display Remote // Display Central

E41227 // E41229

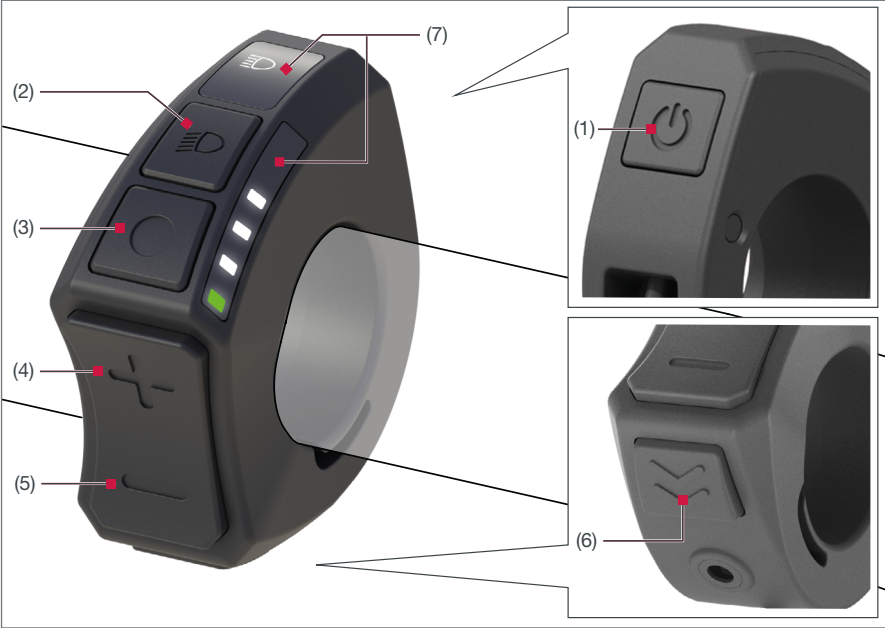




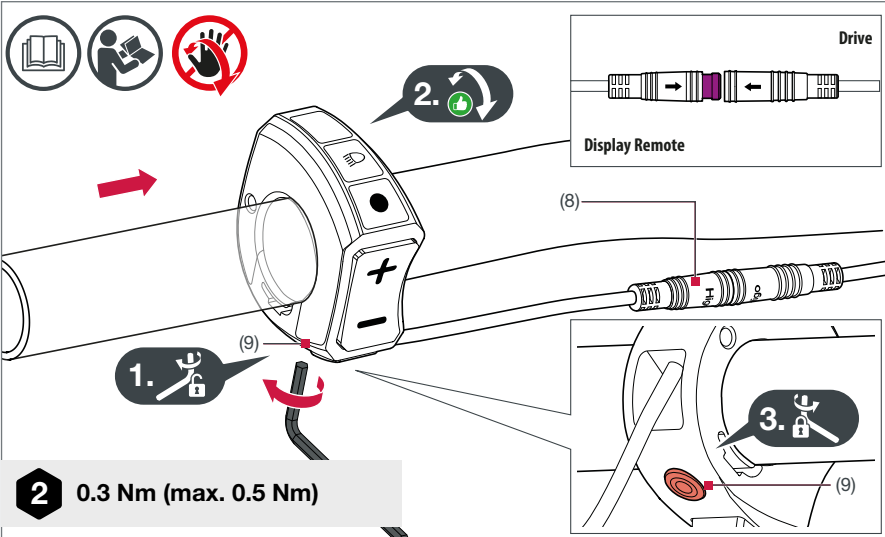
A. Quick start overview of the Display Remote E41227 control unit



B. Quick start overview of the Display Remote E41227 control unit with the Display Central E41229 display unit



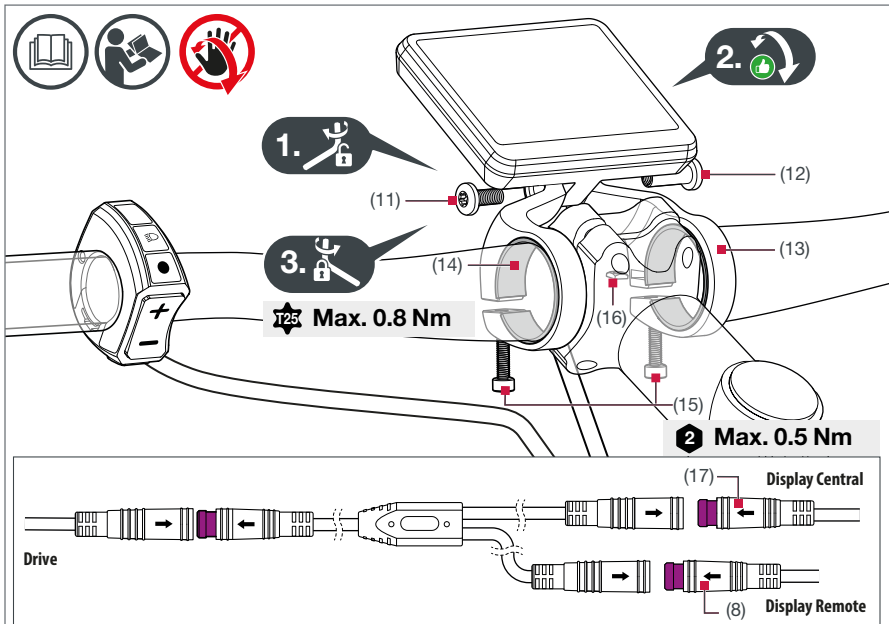
C. Overview of key assignment for the Display Remote E41227 control unit



D. Assembly and adjustment of the Display Remote E41227 control unit



E. Overview of the Display Central E41229 display unit



F. Assembly and adjustment of the Display Central E41229 display unit

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## About these original operating instructions

These original operating instructions – hereinafter referred to as the operating instructions – are based on the standards and regulations applicable in the European Union and contain important information on the use of the manufacturers components.

### 1 Supplied documents

These operating instructions are part of the original operating instructions for the Drive System.

The complete original operating instructions consist of all documents relating to the individual components of the Drive System installed in your e-bike.

The component composition for the Drive System installed in your e-bike can be found in the enclosed data sheet from the e-bike manufacturer.

**It is imperative that you read and observe:**

- The e-bike manufacturer's operating instructions,
- The operating instructions of the supplementary components of the Drive System,
- The operating instructions for additional equipment and optional extras.

### 2 Read and keep the operating instructions

Read the operating instructions in the following chapters carefully, especially the safety instructions, before using components of the Drive System.

This user manual contains information for the safe and error-free use of the Display Remote E41227 and the Display Central E41229 for the Drive System.

They do not contain any instructions for the operation of the complete Drive System (information on this topic can be found in the applicable documents).

- ~ Keep the operating instructions within easy reach of all users for further use.
- ~ If you pass your e-bike or individual components of the Drive System on to third parties, always include the relevant operating instructions and all applicable documents.

### 3 Intended use

The Drive System is designed as a drive system for e-bikes and consists of several components.

The components of the Drive System installed on your e-bike are especially adapted to your e-bike and may only be used for their intended purpose in their original configuration.

The Display Remote E41227 and Display Central E41229 components described in these operating instructions are two such components.

In addition, the manufacturer's instructions for the intended use of the e-bike (e.g. use on certain terrain, etc.) absolutely must be observed (see the manufacturer's instructions for the e-bike).

#### **Display Remote E41227**

The Display Remote E41227 control unit is intended for displaying information relevant to cycling and for controlling the drive unit of the Drive System.

- The Display Remote E41227 control unit is designed and intended exclusively for use with a Drive System.
- The Display Remote E41227 control unit can be mounted on the right or left side of the e-bike handlebars.
- Any other use is considered not to be intended use.

#### **Display Central E41229**

The Display Central E41229 display unit is intended to be used exclusively in combination with the Display Remote E41227 control unit to display information relevant to cycling and to control the drive unit of the Drive System.

- The Display Central E41229 display unit is designed and intended for use with a Drive System only in combination with the Display Remote E41227 control unit.
- The Display Central E41229 display unit can only be mounted centrally on the handlebars of the e-bike.
- Any other use is considered not to be intended use.



## 4 Foreseeable misuse

Foreseeable misuse, especially tuning, invalidates the CE marking of your e-bike – with all legal consequences.

Tuning includes all non-approved changes to the Drive System or the e-bike that manipulate performance. In the event of accidents attributable to technical manipulation, high personal liability costs and criminal prosecution are imminent.

Furthermore, any kind of tampering with the Drive System will void the warranty and guarantee claims on your e-bike.

Prevent the following misuse of the Display Remote E41227 control unit and the Display Central E41230 display unit or the e-bike equipped with them in order to avoid hazards:

- ~ Improperly performed repairs and/or maintenance work;
- ~ Improperly performed cleaning and maintenance work;
- ~ Structural modifications to the delivery condition of the Drive System or the e-bike equipped with it, especially tuning, and any other manipulation of the Drive System and its components;
- ~ Opening and modification of all components of the Drive System.

## 5 Residual risks

Certain residual risks are unavoidable when using the e-bike despite a well-calculated design by the manufacturer and user compliance with the specifications for intended use.

You can reduce these residual risks yourself by observing all safety and warning instructions, but not completely exclude them. It is therefore vital that you are aware of the existence of residual risks when using the e-bike.

Unforeseeable residual risks when using the e-bike described here include the following:

### **Risk of injury**

- Unpredictable cycling manoeuvres and/or misconduct on the part of other road users;
- Surprising or sudden changes in the characteristics of the road surface, e.g. icy conditions due to freezing rain or "black ice";
- Unpredictable material defects or signs of wear and tear that may cause components of the e-bike to break or impair their function.

### **Risk of fire**

- Internal, invisible damage can cause the battery to catch on fire and ignite surrounding objects.

### **Risk of damage**

- When the battery burns, hydrofluoric acid escapes with the flue gas. Hydrofluoric acid is highly corrosive and permanently damages surfaces.

## 6 Explanation of the illustrations

Illustrations in these operating instructions show functions by way of example and may differ from the actual appearance of your Drive System.








All illustrations are schematic and exemplary. The details of your e-bike may vary depending on the e-bike manufacturer. Detailed information on your entire e-bike is available from your specialist dealer and e-bike manufacturer.

The numbering in the following tables refers to the illustrations at the beginning of this manual.

### Overview illustrations









- A. Quick start overview of the Display Remote E41227 control unit
- B. Quick start overview of the Display Remote E41227 control unit with the Display Central E41229 display unit
- C. Overview of key assignment for the Display Remote E41227 control unit
- D. Assembly and adjustment of the Display Remote E41227 control unit
- E. Overview of the Display Central E41229 display unit
- F. Assembly and adjustment of the Display Central E41229 display unit

### Components shown

- (1) Button  (On/Off)
  - › System on/off
- (2) Button  (Light)
  - › Jump one level back in the menu
- (3) Button  (Menu)
  - › Confirm selection
  - › In case of operation **without the** Display Central E41229 display unit, the  button is deactivated
- (4) Button  (Plus)
  - › Increasing the support level
  - › Scroll up in the menu
- (5) Button  (Minus)
  - › Reduce support level /
  - › Scroll down in the menu
- (6) Button  (push assist)
  - › Enable push assist
- (7) View
  - › In case of operation **with the** Display Central E41229 display unit, the displays are deactivated
- (8) Display Remote connector
  - › Connection to the motor unit
- (9) Grub screw
  - › Fastening of the control unit
- (10) Display Central E41229 display unit
- (11) Screw (1x)
- (12) Sleeve nut (1x)
- (13) Retaining bracket (2x)
- (14) Silicone adapter (2x)
- (15) Screw (2x)
- (16) Lock nut (2x)
- (17) Display Central connector
  - › Connection to the motor unit

## 7 Explanation of symbols and signs

The following symbols can be found on the components of the Drive System and in these operating instructions.

	For safe use, read and follow the operating instructions.		Electrical appliances with this marking must not be disposed of with household or residual waste. Consumers are legally obliged to dispose of electrical appliances with this marking at suitable collection points for environmentally sound recycling.*
			
	For your own protection and for the protection of the components, observe all notices marked with this symbol!		
	Never twist the fixed control unit or display unit. Always loosen the fastening screw before turning the operating or display unit to adjust it.		Dispose of the packaging according to type. Put cardboard in the waste paper and foil in the recyclables collection.*
	Products marked with this symbol comply with all applicable Community regulations of the European Economic Area.		
	Marking of rechargeable batteries and batteries that must not be disposed of with household or residual waste. Dispose of the marked rechargeable batteries and batteries at suitable collection points.*		

**Bluetooth®**

The Bluetooth® word mark and logos are registered trademarks and are the property of Bluetooth SIG, Inc.

Any use of this word mark/figurative mark by the manufacturer is under licence.

\*Also observe the notices regarding disposal on page 43.

## For your safety

### 8 Safety notices and warnings

These operating instructions contain instructions and notices for your safety and for the safe and proper operation of the Drive System.

For your safety, read all safety notices and information in this chapter carefully before using the Drive System or the components.

#### 8.1 Explanation of safety notices and warnings

Basic safety notices are summarised in this chapter and include instructions that basically apply to safe use or to maintaining a safe condition.

Action-related warnings warn of residual dangers and precede the respective action step.

#### 8.2 Presentation and structure of safety notices and warnings

##### **SIGNAL WORD**

##### **Nature and source of the danger!**

Explanation of the nature and source of the danger.

» Measures to avert the danger.

#### 8.3 Danger grading of safety notices and warnings

The safety notices and warnings are graded according to their danger.

The hazard levels with the corresponding signal words and warning symbols are explained below.

##### **DANGER**

Hazard that will result in death or serious injury if not avoided.

##### **WARNING**

Hazard that can result in death or serious injury if not avoided.

##### **CAUTION**

Hazard that may result in moderate or minor injury if not avoided.

##### **NOTE**

Hazard that can result in property damage if not avoided.

## 9 Safety notices

### WARNING

#### Dangers for e-bike users!

Basically, there are specific dangers when using e-bikes. Depending on the e-bike model in which the drive system is installed, there may be additional dangers not mentioned here.

- » Read and follow the manufacturer's instructions for your e-bike.
- » Find out about any applicable national regulations concerning e-bikes and observe them.

### WARNING

#### Risk of accident and injury!

If you are distracted by the operation or displays on the control unit while cycling, there is a risk of accidents and injuries.

- » Familiarise yourself with the handling of the control unit and the various indications and views on the display before starting your ride (away from road traffic).
- » Do not be distracted by the controls or displays while cycling.
- » Ride with foresight and do not make any settings on the control unit (e.g. change the support level) during delicate cycling manoeuvres and in unclear cycling situations.

### WARNING

#### Risk of accident and injury!

If the Drive System is activated accidentally, accidents and injuries can result.

- » Always remove the battery from the e-bike:
  - Before transporting the e-bike,
  - Before carrying out any work on the e-bike,
  - When storing the e-bike.

### WARNING

#### Risk of accident and injury!

There is a risk of injury if the push assist is used improperly.

- » Only use the push assist as an aid when pushing your e-bike:
  - When push assist is activated, the e-bike must be held securely with both hands and the wheels must be in contact with the ground.
  - Do not use the push assist to propel yourself while sitting on the e-bike.

## NOTE

### **Risk of damage!**

Improper handling can damage the Drive System or individual components.

- » Only have individual components of the Drive System and the e-bike replaced with identical components or other components expressly approved by the manufacturer or the bike manufacturer. In this way, you protect the other components or your e-bike from possible damage.
- » Never open any components of the Drive System. The components may be destroyed by opening, thereby voiding any warranty claims.
- » Do not place the e-bike upside down on the handlebars and saddle.
- » Do not use the control unit or the display unit as a handle.
- » Do not lift the e-bike by the control unit or the display unit.
- » Never twist the fixed control unit or display unit. Always loosen the respective fastening screw before turning the operating unit or display unit to adjust it.

## Assembly and adjustment

### WARNING

#### **Risk of accident and injury!**

Incorrect or improper assembly and maintenance work can damage your e-bike or the components and increase the risk of accidents.

- » Do not overestimate your technical abilities.
- » Have assembly and maintenance work, especially the replacement of components and spare parts, carried out only by an authorised special ist dealer.
- » Never work on or modify your e-bike or its components if you do not have the necessary expertise and tools.
- » Always switch off the Drive System and remove the battery before starting work.
- » Make sure that you can safely operate the controls on the handlebars at all times.

### INFORMATION

- ~ The control unit can be mounted on either the left or right side of the handlebars.
- ~ The manufacturer recommends positioning on the left side of the handlebars.

### INFORMATION

- The display unit can only be mounted centrally on the handlebar.

## NOTE

#### **Risk of damage!**

Improper handling can cause damage to the control unit or the display unit.

- » Never twist the fixed control unit or display unit. Always loosen the respective fastening screw before turning the operating unit or display unit to adjust it.



## 10 Display Remote E41227 control unit

### 10.1 Installing and adjusting the Display Remote E41227 control unit

› Fig. D, page 4

1. Carefully remove the handle and open the attachment of the brake, gears and all other components mounted on the selected handlebar side.
  - › Please observe the respective manufacturer's instructions for the components and the e-bike.
2. Carefully loosen the grub screw **(9)** with a hexagon socket (WAF 2) on the control unit.
  - › **HINT:** The grub screw cannot be removed from the control unit.
3. Slide the control unit onto the handlebars from the side.
  - › Position the control unit close to the handle so that all buttons can be easily pressed with the thumb.
  - › Make sure that the connection cable is not crushed or kinked.
4. Lightly tighten the grub screw with a hexagon socket (WAF 2).
  - › Do not tighten the grub screw yet.
5. Check the position of the control unit.
  - › Are all buttons accessible with the thumb?
  - › Is the display clearly visible?
6. Tighten the grub screw with the hexagon socket.
  - › Torque 0.3 Nm (max. 0.5 Nm).
7. Connect the plug **(8)** of the control unit to the plug of the motor cable.
  - › This can vary depending on the equipment of your e-bike.

### 10.2 Adjusting the Display Remote E41227 control unit

› Fig. D, page 4

1. Carefully loosen the grub screw **(9)** with a hexagon socket (WAF 2) on the control unit.
  - › **HINT:** The grub screw cannot be removed from the control unit.
2. Adjust the position of the control unit.
  - › Are all buttons accessible with the thumb?
  - › Is the display clearly visible?
3. Tighten the grub screw with the hexagon socket.
  - › Torque 0.3 Nm (max. 0.5 Nm).

## 11 Display Central E41229 display unit

### 11.1 Mounting and adjusting the Display Central E41229 display unit

› Fig. F, page 5

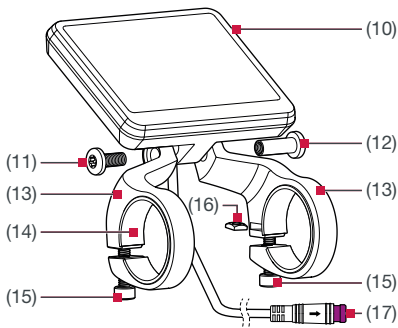


Fig. 1: Mounting Display Central E41229

- (10) Display Central E41229 display unit
- (11) Screw (1x)
- (12) Sleeve nut (1x)
- (13) Retaining bracket (2x)
- (14) Silicone adapter (2x)
- (15) Screw (2x)
- (16) Lock nut (2x)
- (17) Display Central connector
  - › Connection to the motor unit

#### **i** INFORMATION

To combine the display unit with the control unit, you need an additional Y-cable **E96506**.

1. Fit the retaining brackets **(13)** to the display unit **(10)**.
  - › Make sure that the lock nuts **(16)** do not fall out of the retaining brackets.
  - › Do not tighten the screw **(11)** and sleeve nut **(12)** yet.
2. Position the display unit centrally above the stem.
  - › The power cable must point forwards/downwards in the direction of travel.
3. Carefully bend the retaining brackets open and slide them carefully over the handlebars.
  - › Make sure that the silicone adapters **(14)** do not slip.
4. Insert the screws **(15)** and tighten them lightly.
  - › Do not tighten the screws yet.
5. Check the position of the display unit and align it if necessary.
  - › Is the display clearly visible?
6. Tighten the fastening screws.
  - › Torque 0.3 Nm (max. 0.5 Nm).
7. Tighten the fastening screw and sleeve nut.
  - › Torque 0.8 Nm.
8. Connect the plug **(17)** of the display unit to the plug of the motor cable.
  - › This can vary depending on the equipment of your e-bike.

## 11.2 Adjusting the Display Central E41229 display unit

› Fig. F, page 5

1. Loosen the screw **(11)** and sleeve nut **(12)** on the display unit with a hexagonal spanner (T25).
2. Adjust the position of the control unit.
  - › Is the display clearly visible?
3. Tighten the bolt and sleeve nut with the hexagon spanner (T25).
  - › Torque 0.8 Nm.

## Before the first commissioning

### WARNING

#### **Risk of accident and injury!**

If you are distracted by the operation or displays on the control or display unit while cycling, this distraction can result in accidents and serious injuries.

- » Familiarise yourself with the functions and handling of the control and display unit away from road traffic before using your e-bike for the first time.

### NOTE

#### **Risk of damage!**

Improper handling can cause damage to the control unit or the display unit.

- » Never twist the fixed control or display unit. Always loosen the respective fastening screw before turning the operating or display unit to adjust it.

The commissioning of the control or display unit does not require any further steps after installation.

The control and display units are ready for operation as soon as they have been connected correctly and the battery is sufficiently charged.

- ~ You can control the functions of your Drive System with the operating elements (buttons) on the control unit.

- ~ The control unit display informs you of the selected support level, as well as other information about your Drive System.

### INFORMATION

- The control and display units do not have their own battery and can therefore not be used or operated outside the e-bike.
- If the e-bike is switched on, the control and display unit always remain switched on during cycling; even if the motor support is deactivated.

### INFORMATION

Full function is provided only if the speed sensor and all cables have been connected correctly and the battery is charged (at least one white charging bar visible).








### INFORMATION

- The menu and settings cannot be accessed during cycling.
- All interface representations and interface texts on the following pages correspond to the release status of the software.
- An update may change the display slightly; you can obtain any updates from your authorised dealer.


## 12 Basics of the operating elements (buttons)




Fig. 2: Operating elements (buttons) of the control unit


- (1) Button  (On/Off)
- (2) Button  (Light)
- (3) Button  (Menu)  
In case of the operation of the control unit **without** the display unit, the  button is deactivated
- (4) Buttons  /  (Plus/Minus)
- (5) Button  (push assist)

### Button (On/Off)



- › Press the  button to switch the Drive System on or off.

### Button (Menu)



In case of the operation of the control unit **without** the display unit, the  button is deactivated.

- › You can use the  button to call various information items while cycling.
- › If you are in a menu (e.g. Settings), confirm any settings made with this button.

### Buttons / (Plus/Minus)

- › Use the  /  buttons to increase or decrease the support level.
- › If you are in a menu (e.g. Settings), you can scroll up or down in the menu with these two buttons.

### Button (Light)

- › Use the  button to switch the lighting of your e-bike on or off again. This function depends on the model.
- › If you are in a menu (e.g. Settings), press the  button to go back one level. Changed settings are saved.

### Button (push assist)

- › Press the  button to enable the push assist function.

## 13 Basics of the displays

### Display Remote control unit

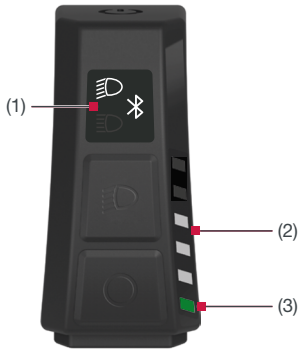


Fig. 3: Displays of the Display Remote control unit

- (1) Lighting/Bluetooth display
- (2) LED band (support level/charge level)
- (3) Status LED (e.g. error)

#### INFORMATION

During the operation of the Display Central display unit, the displays on the Display Remote control unit are deactivated.



Support level



Charge level



Warning



Error

The colour of the status LED **(3)** indicates the type of information currently displayed on the LED band **(2)**.

In normal operation, the battery charge level is displayed in the LED band.

Press the **+** or **-** button to display the currently selected support level on the LED band.

## Display Central display unit

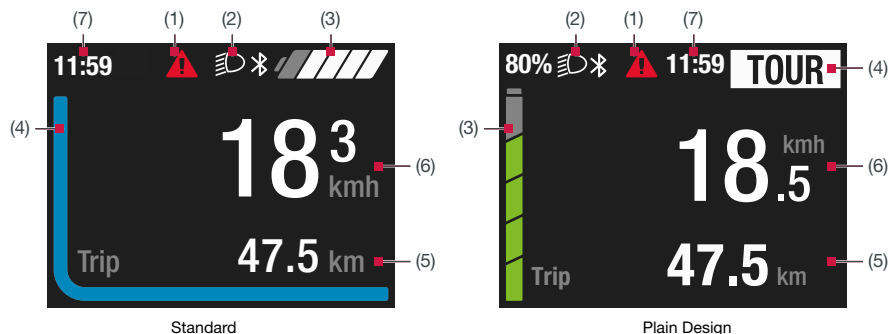



Fig. 4: User interface of Display Central display unit

- (1) System status information (e.g. error)
- (2) Illumination display
- (3) Battery charge level indicator

- (4) Current support level
- (5) Trip information (including unit)
- (6) Speed (including unit)
- (7) Time

The display unit offers two different user interfaces to choose from.

- Change the user interface (see chap. 24 on page 33).
- The upper display area forms the status bar and is permanently displayed during cycling.
- In the central display area, the current speed and the charging status or the support level are displayed as a coloured line.
- In the lower display area, you can use the  button to call various trip information (trip data).

## 14 Menu structure/navigation of Display Central display unit

The menu structure of the display unit is as follows:

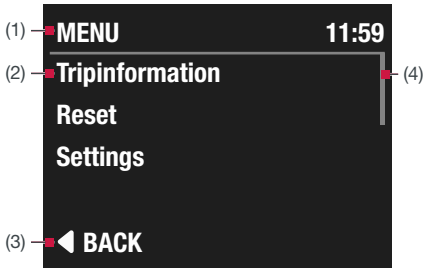








Fig. 5: Menu structure

- (1) Headline (permanently visible)
- (2) Menu subitem
- (3) Back (last list item)
- (4) Navigation bar

To access the menu, stop or start the e-bike and proceed as follows with the e-bike stationary:

- Press the  button for two seconds.
  - › **Menu** is shown on the display.
- Navigate to the desired list item with the  /  buttons to the desired list item and call it with the  button.

To go back one level:

- Select **Back** and confirm with the  button.
- **Or:** Press the  button.




## Operation and handling

### 15 Switching the Drive System on and off

#### INFORMATION

- ~ The Drive System can only be operated with a sufficiently charged battery (at least one white charging bar visible).
- ~ Depending on the battery installed in your e-bike, it may take a few moments for the control unit display to switch on.

#### Switching on


- With the E-Bike battery inserted, press the Start button  for approx. 3 seconds until the start screen appears.
  - › The Drive System is now ready for operation.

The drive is activated as soon as you start pedalling. The motor power depends on the support level set on the control unit.

As soon as you stop pedalling in normal mode or as soon as you have reached a speed of 25 km/h, the support from the e-bike drive is switched off.

The drive is automatically re-engaged as soon as you start pedalling and the speed is below 25 km/h.

#### Switching off

- Press the  button on the control unit for at least 1.5 seconds.
  - › The Drive System takes about three seconds to switch off completely. You can only switch it on again after it has completely shut down.

The control unit, display unit, drive unit and battery are switched off completely.

#### Automatic switch-off

If no power is called from the e-bike drive for approx. 15 minutes (e.g. because the e-bike is stationary) and no button is pressed on the e-bike control unit, the Drive System switches off automatically to save energy.

The time after which the display unit switches off automatically can be adjusted in the settings (*see chap. 25 on page 34*).

The control unit is always switched on even if the motor support is deactivated.

Always switch off the Drive System when you park the e-bike.

## 16 Selecting the support level

Your Drive System has four levels of support.

You can adjust how much the e-bike drive supports you during pedalling on the control unit. The support level can be changed at any time, even while riding.

To increase the support level, press the **+** button on the control unit repeatedly until the desired support level appears in the display. To decrease, press the **-** button.

The characteristics of the respective support mode can be seen in the “Overview of the support levels” on page 27 table.

### INFORMATION

During the operation of the Display Central display unit, the displays on the Display Remote control unit are deactivated.

### 16.1 Display Remote control unit

During the ride, the current charge status of the battery is displayed in the LED band.









- Press the **+** or **-** button to switch to the support level display.
  - › The current support level is displayed in the LED band for 5 seconds.
- Press the **+** or **-** button again to change the support level.

### 16.2 Display Central display unit

Depending on the selected user interface, the support level is displayed as a coloured band or text in the status bar (Fig. 4, p. 23) during the ride.

- Press the **+** or **-** button to change the support level.
  - › The selected support level is displayed as text for two seconds in the trip information area.

### 16.3 Overview of the support levels

Mode	Display of Display Remote	Display of Display Central	Description
ECO		 / ECO	Tangible support from the engine for maximum efficiency and range.
TOUR		 / TOUR	Clearly noticeable support from the motor, ideal for long trips.
SPORT		 / SPORT	Powerful support for sporty cycling.
BOOST		 / BOOST	Full support for sporty cycling, on hilly routes and in city traffic with normal battery range.

## 17 E-Bike App (Bluetooth® connection)

Depending on the model, a mobile device can be connected to the Display Remote via the E-Bike App.

- To establish a Bluetooth® connection, follow the instructions in the E-Bike App

In order to reset existing Bluetooth® connections (paired devices) and to pair or connect a mobile terminal again:

Display Remote

- Hold down the  and  buttons for 10 seconds.

Mobile terminal

- Delete the Bluetooth® connection to the Display Remote in the system settings.

## 18 Using the push assist

### WARNING

#### Risk of accident and injury!

There is a risk of injury if the push assist is used improperly.

- » Only use the push assist as an aid when pushing your e-bike:
  - When the push assist is activated, the e-bike must be held securely with both hands and the wheels must be in contact with the ground.
  - Do not use the push assist to propel yourself while sitting on the e-bike.

### INFORMATION

Familiarise yourself with the function and acceleration of the push assist away from road traffic.

### INFORMATION

During the operation of the Display Central display unit, the displays on the Display Remote control unit are deactivated.

The push assist is used to support you when pushing your e-bike.

The push assist accelerates the e-bike without pedal support to a speed specified by the e-bike manufacturer (3 to 6 km/h).

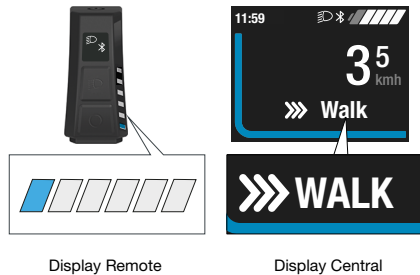






Fig. 6: Push assist (active)

### Activate push assist


1. Press the  button.
  - › The function is activated.
  - › **PUSH-** appears on the Display Central display.
2. Within 5 seconds, press and hold the  button for as long as you need the push assist function.
  - › In Display Remote, all LEDs in the LED band light up.
  - › **WALK** appears on the Display Central display.
  - › Release the  button to deactivate the push assist.

### Deactivating the push assist



The push assist is deactivated as soon as one of the following events occurs:

- You release the  button,
- The speed specified by the e-bike manufacturer is exceeded (3 to 6 km/h).

## 19 Switching the lighting on and off

In the version where the cycling light is powered by the Drive System, the  button on the control unit can be used to switch the front and rear lights on and off simultaneously.

When the light is on, a symbol is shown in the display.



	<b>Display Remote/Display Central:</b> No lighting activated
	<b>Display Remote/Display Central:</b> Lighting switched on manually or <b>Display Remote:</b> Automatic control activated
	<b>Display Central:</b> Automatic control activated

Switching the backlight on and off has no effect on the backlight of the display.

### INFORMATION



If the battery has been removed from the e-bike or if the battery is completely discharged, the light will not illuminate. If the e-bike does not have a separate lighting system, it is possible that it will no longer comply with your local road traffic regulations (StVZO in Germany) and must therefore not be used on public paths/roads.

### 19.1 Switching the lighting on / off manually

- Press the  button on the control unit to switch on the lighting.
- Press the  button on the control unit again to switch off the lighting.

### 19.2 Activating/deactivating automatic headlight control

#### Display Remote

- Press and hold the  button on the control unit to activate the automatic headlight control.
  - › The top LED in the LED band lights up for two seconds.
  - The automatic cycling light control is activated.
- Press and hold the  button on the control unit again to deactivate the automatic headlight control.
  - › The top LED in the LED band flashes twice briefly.
  - The automatic cycling light control is deactivated.

#### Display Central

Activating or deactivating the automatic headlight control is carried out in the System Settings menu (*see chap. 25 on page 34*).

## View

### 20 Changing the trip information view

The following information can be shown in the display unit display:

- Range
- Time
- Cycling distance
- Travel time
- Average speed
- Maximum speed
- Total cycling distance

To switch between trip information items:

- Press the  button.

#### INFORMATION

Individual functions may be deactivated depending on the e-bike model. Detailed information is available from your e-bike manufacturer and your authorised specialist dealer.

### 21 System information

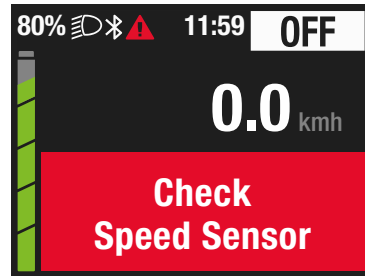


Fig. 7: Example of error message

The following is displayed in the status bar:



The battery reserve is reached or the battery is completely discharged and the system is switched off




An error has occurred  
(see chap. 27 on page 36).


22 Battery charge level indicator

The charge status of the battery is displayed in the operating unit or the display unit.

Depending on the equipment of your e-bike, the charge level of the battery can also be read from the battery.






 **INFORMATION**

When operating with the Display Central display unit, the displays on the Display Remote control unit are deactivated.





 **INFORMATION**

If the charge level is < 5%, the motor support is switched off to ensure the use of the lighting for a further 2 hours in an emergency.

22.1 Display on the Display Remote control unit

Display	Charge level/Info
 	100% to 20%
	< 10%
	< 5%
	Loading error! (see chap. 27.1 on page 37)

22.2 Display on the Display Central display unit

Display	Charge level/Info
 	100% to 30%
	< 20%
	< 10%

The charge level of the battery can be shown on the display of the display unit as segments and/or as a percentage (see chap. 25 on page 34).

If the battery charge level is <10%, the charge level display starts flashing.

If the battery is being charged on the bike, a corresponding message is displayed.

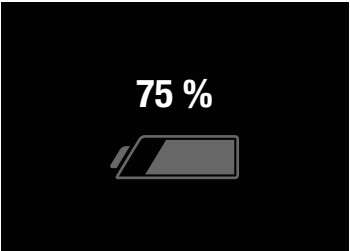


Fig. 8: Charging the battery

## Menu and settings

### INFORMATION

Please note that not every Drive System has all setting options. It is possible that some menu items are not activated or are not available.

### INFORMATION

The menu and settings **cannot** be accessed during cycling.

To access the menu and the settings, the following requirements must be met:

- The Display Central display unit is mounted and connected;
- The battery is inserted and sufficiently charged;
- The Drive System is switched on;
- The e-bike is at a standstill.

## 23 Menu

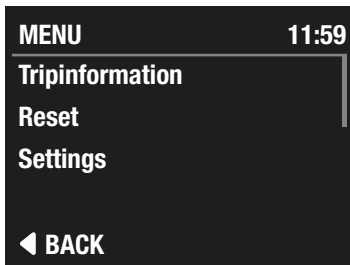



Fig. 9: MENU Settings

### Calling the MENU

- Press the  button for two seconds.  
→ **MENU** is shown on the display.

The following settings and information are available for selection on the **MENU**:

#### **Tripinformation**

- Overview of all trip information (trip data).

#### **Reset**

- Reset trip information (all trip data).  
› After reconfirmation, all trip information (trip data) can be deleted.

The total kilometres cannot be deleted.

#### **Settings**

- (see chap. 24 on page 33)



## 24 Settings

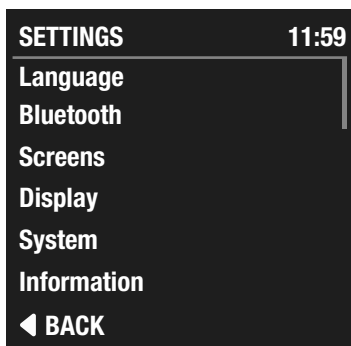






Fig. 10: SETTINGS Menu

### Calling the SETTINGS

- Press the  button for two seconds.
- Use the  /  buttons to select **Settings** and confirm the selection with the  button.
- **SETTINGS** is shown on the display.

The following settings and information are available for selection on the **SETTINGS** menu:

#### Language

Selecting a language immediately changes the language display.

#### Bluetooth

Mobile devices can be connected via the Bluetooth® interface to use the E-bike app.

- (see chap. 17 on page 27)

#### Screens

- Personalise the display of trip information (trip data). Select which data can be displayed while cycling.

#### Display

- Adjust the display.

##### Automatic

- › The display brightness and the day and night cycling display (white/black) are controlled automatically via the light sensor.

##### Brightness

- › Control of the display brightness: This can only be changed if automatic control is deactivated.

##### White/Black

- › Switch between white and black background.

##### Stealth Mode

- › The backlight of the display is switched off after 5 seconds of inactivity. All e-bike and display functions remain active. Press any key to switch the backlight back on.

##### Plain Design

- › Change the user interface (Fig. 4, p. 23).

#### System

- (see chap. 25 on page 34)

#### Information

- Information about your Drive System (e.g. product name and software version).

## 25 System settings

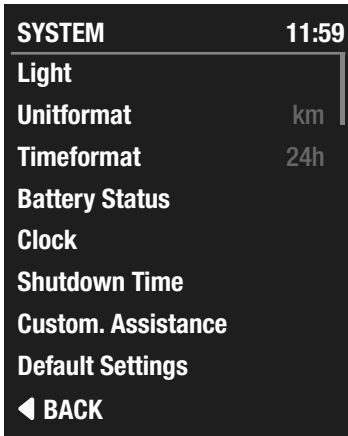









Fig. 11: SYSTEM Menu

### Call SYSTEM.

- Press the  button for two seconds.
  - Use the  /  buttons to select **Settings** and confirm the selection with the  button.
  - With the  /  button, select **System** and confirm the selection with the  button.
- **SYSTEM** is shown on the display.

On the **SYSTEM** menu, the following settings and information are available for selection:

#### Light

- Settings for the lighting (only if the lighting is powered by the Drive System).
  - › The lighting is switched on and off automatically.
  - › Switch on the lighting permanently.

#### Unitformat

- Unit selection:  
(km/mi) / (km/h/mph).








#### Timeformat

- Select the time format(12h/24h).

#### Battery Status

- Battery display as segments.
- Battery display in percent (%).
- Plain Design:  
Display in percentage (%) and segments.

#### Clock

- Setting the time
  - › Press the  button. The hour indicator flashes.
  - › Set the desired hour with the  /  buttons.
  - › Confirm your entry with the  button. The minute display flashes.
  - › Set the desired minute with the  /  buttons.
  - › Confirm your entry with the  button.

#### Shutdown Time

- Define the automatic switch-off time (1-20 minutes) of your Drive System.

#### Custom.Assistance

- Adjust the support levels individually to your needs.

#### Default Settings

- After confirming again, all settings are reset to the delivery state.

## Troubleshooting

If problems occur when using your Drive System, first check the listed points in *Chapter 26 Troubleshooting*. In many cases, you can already remedy the situation yourself.

If an error is indicated in the LED band of the control unit or in the display of the display unit, first check the listed items in *Chapter 27 Error displays*.

### 26 Troubleshooting

Problem	Possible cause	Solution approach
The control unit or display unit and/or Drive System cannot be activated.	Battery not correctly engaged in holder.	Remove the battery and reinsert it. Make sure that it fits correctly.
	Battery not charged.	Fully charge the battery.
	Contacts of the battery and/or the holder dirty.	Check that all contacts are clean. If necessary, clean them with a soft, dry cloth.
	Control unit not connected correctly.	Check the plug connection of the control unit. Make sure that it fits correctly.
	Contacts of the operating unit are dirty.	Check that all contacts are clean. If necessary, clean them with a soft, dry cloth.
The control unit or display unit does not provide any trip data even though the e-bike is in motion.	Magnet not mounted correctly (distance from speed sensor).	Check the mounting of the magnet, especially its distance from the speed sensor on the chainstay. This distance must be between 5 and 17 mm. Correct the distance if necessary.
The lighting cannot be activated.	Cable for lighting incorrectly connected.	Check the wiring and plug connections and connect them correctly if necessary.
The LED band of the control unit or the display of the display unit shows an error.	There is an active error in the system.	See <i>Chapter 27 Error displays</i>

## 27 Error displays

The control unit and the display unit show error messages of the entire Drive System.

- If the control unit is operated **without** the display unit, the display is implemented via the LED band of the control unit:

*Chapter 27.1 Error indications on the Display Remote control unit*

- In case of operation of the control unit **with** the display unit, the display is implemented exclusively via the display unit:

*Chapter 27.2 Error indications of the Display Central display unit*

Depending on the type of fault, the drive may be switched off automatically. Continuing to cycle without support from the drive is possible at any time.

The error display can indicate serious faults in your Drive System.

- Stop cycling. Find out the meaning of the error display and follow the solution approach.
- If the meaning of the notice is unclear, switch off the e-bike and contact the e-bike manufacturer or an authorised specialist dealer for information on the next steps.

## 27.1 Error indications on the Display Remote control unit

### Display of LED band    Remedy



Extreme temperatures cause an error.

Disconnect the battery and charger from the power source and wait until the temperature of the battery and charger has normalised.

The temperature must be between 0° and +45°C.

Reconnect the battery and charger to the power source.



A serious error has occurred.

Contact an authorised dealer.



Switch off the Drive System.

Check the speed sensor and the position of the magnet.

Restart the Drive System.



Restart the Drive System.

If the problem persists, contact an authorised dealer.



Switch off the Drive System.

Check all lines and plug connections of the brake system.

Restart the Drive System.



Switch off the Drive System.

Check all lines and plug connections of the front and/or rear lighting system.

Restart the Drive System.

27.2 Error indications of the Display Central display unit

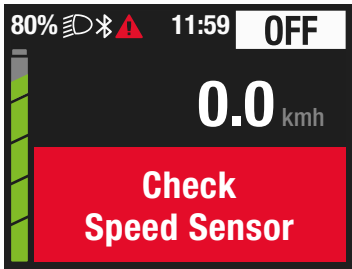


Fig. 12: Example of error message

Indication on the display	Remedy
Check Speed Sensor	Switch off the Drive System. Check the speed sensor and the position of the magnet. Restart the Drive System.
Check Light	Switch off the Drive System. Check all lines and plug connections of the front and/or rear lighting system. Restart the Drive System.
Restart System	Restart the Drive System. If the problem persists, contact an authorised dealer.
Check Brake Light	Switch off the Drive System. Check all lines and plug connections of the brake system. Restart the Drive System.

## Transport, maintenance and cleaning

### 28 Transport

#### NOTE

##### Risk of damage!

If you carry your e-bike outside your car, e.g. on a car rack, moisture can penetrate system components even at low speeds.

- » Remove the battery from the e-bike.
- » Protect all e-bike components such as the control unit, display unit, drive, open plugs, etc. from moisture penetration. You can obtain appropriate protectors from specialist dealers.

#### INFORMATION

Undamaged batteries can be transported on the road by private users without further requirements.

### 29 Maintenance

- Carry out a visual inspection regularly to ensure that the electrical cables, connections and contacts are undamaged and clean.
- Have your Drive System technically checked at least once a year to ensure that all components are present and in working order (including mechanics, system software up-to-dateness).

For service or repairs to the Drive System or in the event of a component failure (e.g. battery or charger), contact an authorised specialist dealer.

## 30 Cleaning

### **WARNING**

#### **Risk of electric shock and short circuit!**

Injury due to electric current during cleaning or maintenance work.

- » Switch off the Drive System.
- » Unplug the charger from the socket.
- » Cover the power supply contacts.
- » Do not use water or other cleaning liquids.
- » Do not immerse the control unit or display unit in water.
- » Do not use high-pressure cleaners or steam cleaners for cleaning.

### **CAUTION**

#### **Risk of burns!**

Brakes, motor and battery can heat up considerably during operation.

- » Always allow the components to cool down before handling them or working in the vicinity of them.

### **CAUTION**

#### **Risk of injury!**

If the drive system is started while you are working on it, you can injure yourself.

- » Switch off the Drive System and remove the battery when cleaning the e-bike or the components.

### **NOTE**

#### **Risk of damage!**

Improper cleaning can damage the Drive System or individual components.

- » Do not use aggressive cleaning agents or care products, especially penetrating oils and brake cleaners.
- » Do not use sharp, edged or metallic cleaning objects.

- Keep all components of your e-bike in a clean condition.
- Avoid soiling the charging connections and the contacts. Damp contacts can lead to corrosion.
- Clean the components with a dry lint-free cloth.



## Technical data

### 31 Display Remote E41227 control unit

E 41227	Display Remote	Operating frequency	2.400 - 2.480 MHz
L × W × H	46 × 43 × 21 mm	Electrical data	12 V // max. 3 W
Weight, approx.	35 g	Operating and storage temperature	-10 °C to +60 °C
Handlebar (d)	22.2 mm	FCC ID // IC	04GRE // 7666A-RE
CAN	CAN Interface ISO 11898 Highspeed CAN	Display	-
Protection class and certificates	IP X7 (HMI) waterproof  CE // ROHS // Reach // Bluetooth (EU, Switzerland, USA, Canada, Japan)		
Bluetooth® Frequency Transmitting power	Low energy 5.0 2.400 - 2.480 MHz < 10 mW		

32 Display Central E41229 display unit

E 41229	Display Central	Operating frequency	2.400 - 2.480 MHz
L × W × H	84 × 70 × 13 mm	Electrical data	12 V // max. 3 W
Weight, approx.	70 g	Operating and storage temperature	-10 °C to +60 °C
Handlebar (d)	31.8 mm (centred)	FCC ID // IC	-
CAN	CAN Interface ISO 11898 Highspeed CAN	Display	3.5 inches TFT colour display (240 × 240 px)
Protection class and certificates	IP X7 (HMI) waterproof  CE // ROHS // Reach //		

33 Declaration of Conformity

The manufacturer hereby declares that radio system type Display Remote complies with Directive 2014/53/EU.

## Disposal

The batteries, chargers, control unit, display unit, drive unit, speed sensor and accessories, as well as the packaging, must be recycled in an environmentally friendly manner.

Do not throw e-bikes and their components in the household waste.

By collecting and recycling waste products separately, you help to conserve natural resources and ensure that the product is disposed of in a way that is safe for health and the environment.

Return e-bikes or components that are no longer serviceable to an authorised specialist dealer.

### ONLY FOR EU COUNTRIES



According to European Directive 2006/66/EC, defective or used (rechargeable) batteries must be collected separately and recycled in an environmentally sound manner.



The symbol indicates that batteries and rechargeable batteries must not be disposed of with household waste.

Batteries or accumulators containing mercury (Hg), cadmium (Cd) or lead (Pb) are marked with the respective chemical symbol below the symbol.

Consumers are legally obliged to return batteries and accumulators to the retailer or to a collection point regardless of whether they contain the above-mentioned pollutants so that they can be disposed of in an environmentally friendly manner and valuable raw materials can be recovered.

This procedure is intended to prevent negative impacts on the environment and human health.

Batteries may contain substances that have adverse health effects on humans, animals and plants if disposed of incorrectly.

There are special risks when handling lithium-containing batteries/rechargeable batteries, such as the high risk of fire/explosion due to the effects of heat or a short circuit.

Batteries and rechargeable batteries that are not permanently installed in the unit must be removed and disposed of separately before disposal.

- For lithium-containing batteries and rechargeable batteries, tape off the terminals before disposal to prevent external short-circuiting.
- The return of old batteries and rechargeable batteries is free of charge. Make sure that batteries and rechargeable batteries are only handed in when discharged.
- Try to avoid waste from old batteries as much as possible, e.g. by using long-life batteries or rechargeable batteries instead of disposable batteries.
- Always ensure proper disposal to counteract littering of public spaces.
- If applicable, use existing options to reuse used batteries instead of disposing of them, e.g. by repairing the battery.



According to the European Directive 2012/19/EU, electrical appliances that are no longer usable must be collected separately and recycled in an environmentally sound manner.

Old machines, replacement parts and packaging are made of recyclable materials. The owner is obliged to dispose of these properly and in an environmentally friendly manner in accordance with the statutory regulations.

All plastic injection moulded parts are marked with a recycling symbol.

- REACH Regulation No. 1907/2006 (EC)
- RoHS Directive (2011/65/EU)

Please return e-bike components that are no longer serviceable to an authorised specialist dealer.

**SUBJECT TO CHANGE WITHOUT NOTICE.**

## Service

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### 34 Customer service and support

If you have any questions regarding the Drive System and its components, please contact an authorised dealer.

### 35 Copyright protection

The contents of these instructions are protected by copyright. Their use is permitted within the scope of use of the unit.

Any use beyond this is not permitted without the written consent of the manufacturer.

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