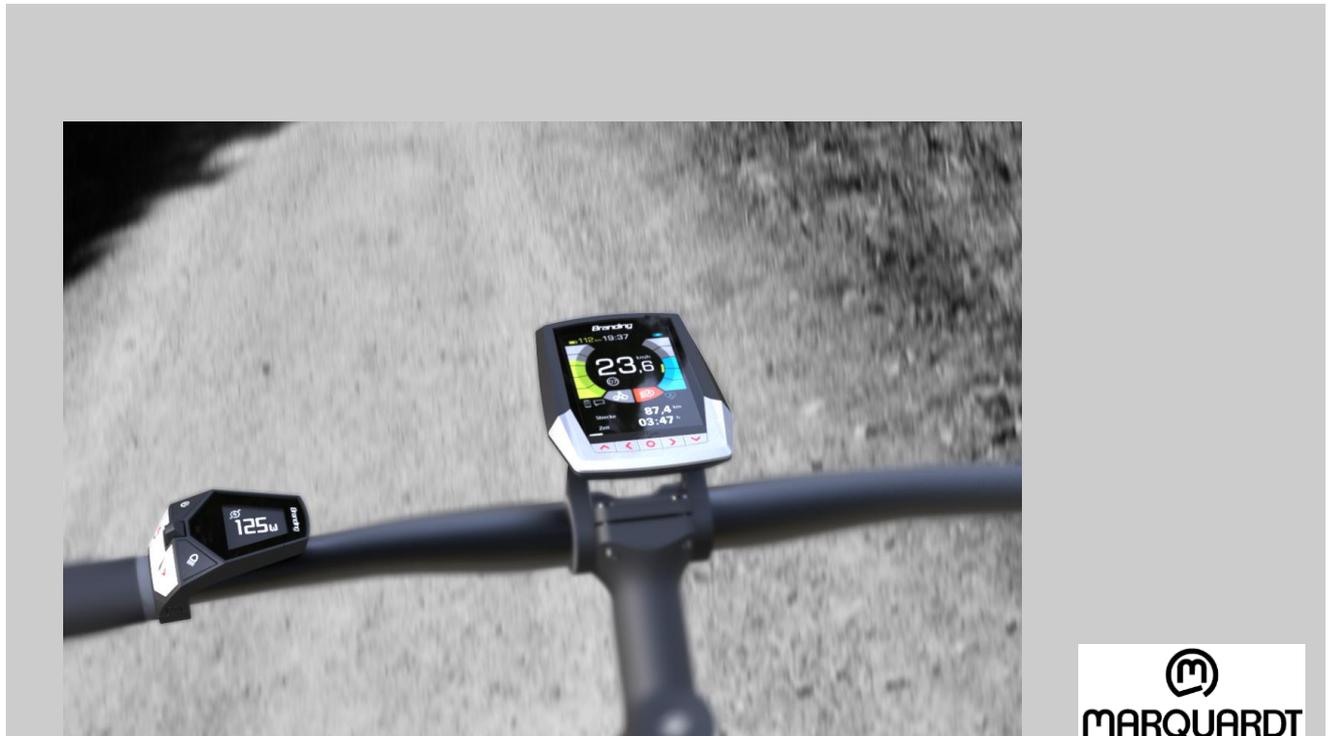


# Instruction Manual (preliminary)

Human Machine Interface - HMI - for Pedelecs



Please keep for prospective use!

Marquardt GmbH  
Schlossstraße 16  
78604 Rietheim-Weilheim  
Telefon: +49 7424 99-0  
Telefax: +49 74 24 99-2399  
E-Mail: [marquardt@marquardt.de](mailto:marquardt@marquardt.de)  
Internet: [www.marquardt.de](http://www.marquardt.de)



MARQUARDT

# Content

<b>Content .....</b>	<b>3</b>
<b>1 Information to this Manual .....</b>	<b>4</b>
1.1 Purpose of the Document .....	4
1.2 Explanation of the Symbols .....	4
1.3 Copyright.....	5
1.4 Contact Data .....	5
<b>2 Safety .....</b>	<b>6</b>
<b>3 Device Overview.....</b>	<b>7</b>
3.1 Components.....	7
3.2 Control and Display Elements .....	8
3.2.1 Control Keys .....	8
3.2.2 Display.....	9
3.2.3 Operating unit (Just Drive Comfort) .....	11
<b>4 Operating .....</b>	<b>12</b>
4.1 Latching and Releasing the Display at the Console ....	12
4.2 Switching On And Off .....	13
4.3 Settings and functions .....	14
4.3.1 Supporting level.....	14
4.3.2 Shoving help.....	15
4.3.3 Switching light on and off .....	15
4.3.4 System settings .....	16
4.3.5 Date, time, format.....	16
4.3.6 MY VIEW .....	17
4.3.7 TOUR .....	17
4.3.8 Navigation.....	18
4.4 USB-Port.....	18
<b>5 Error Messages .....</b>	<b>19</b>

# 1 Information to this Manual

## 1.1 Purpose of the Document

This Manual is part of the HMI and enables a safe and efficient handling with the device. Please read the manual carefully before using the pedelec and familiarize yourself with the HMI's functions. Carry the manual with you on all journeys. So you can read up even less frequently needed functions at any time.

## 1.2 Explanation of the Symbols

### Safety Instructions

In this manual safety instructions are marked by symbols. The Safety instructions are introduced by signal words that show the extent of danger.



#### **RISK!**

This combination of symbol and signal word indicates an immediately dangerous situation that can lead to death or life-endangering injuries if not avoided.



#### **WARNING!**

This combination of symbol and signal word indicates an eventually dangerous situation that can lead to death or life-endangering injuries if not avoided.



#### **CAREFUL!**

This combination of symbol and signal word indicates an eventually dangerous situation that can lead to minor injuries if not avoided.



#### **HINT!**

This combination of symbol and signal word indicates an eventually dangerous situation that can lead to material- or environmental damages if not avoided.

### Tips and Advices



*This symbol emphasizes useful tips, advices and also information about an efficient and undisturbed action.*



## Information to this Manual

### Further Labelling

To emphasize instructions, results, listings, references and other elements, in this manual the following labels will be used:

### Action Steps

Action steps are depicted as a numbered list. The steps' order has to be adhered to. The system's reactions on the current action are labelled with an arrow.

Example:

#### 1. Action Step 1

⇒ The system's reaction on the current action

### Enumerations

Enumerations without a compelling order are depicted as a list with bullet points. Example:

- point 1
- point 2

## 1.3 Copyright

The manual's content is copyrighted. Its usage is acceptable within the utilization of the device. Any further usage without the manufacturer's written consent is not allowed.

## 1.4 Contact Data

Address	Marquardt GmbH Schlossstraße 16 78604 Rietheim-Weilheim / Germany
Phone	+49 7424 99-0
Telefax	+49 074 24 99-2399
E-Mail	marquardt@marquardt.de
Internet	www.marquardt.de

## 2 Safety

**DANGER!**

Please change basic settings before starting a journey. To operate the HMI while driving, only use the operating unit at the handlebar!

By driving unconcentratedly you're endangering yourself and other road-users.

**HINT!**

Take off the HMI from the handlebar during transport and parking.

Otherwise the HMI could be stolen or damaged.



*Before starting your first journey please familiarize yourself with the functions and operation of the HMI.*

*Carry the manual with you on all journeys. So you can read up even less frequently needed functions at any time.*

### 3 Device Overview

#### 3.1 Components



Fig. 1 components

- 1 Display
- 2 Display Holder
- 3 Operating Unit

- The operating unit can be fitted on the right side of the handlebar.
- The display holder will be mounted centrally on the transversal handlebar. Currently, the display holder is constructed for a handlebar diameter of 31,8 mm. A reduction to 25,4 mm with the help of inlays will be possible in future.
- Mount the display holder and operating unit with the attached bolts M3 with a torque of 0,5 Nm .
- The operating unit's protruding side has to be aligned inwards from the handlebar.



#### HINT!

The operating unit's and display holder's bolts have different longitudes.

Don't confuse the bolts. Otherwise the HMI could be damaged.

## 3.2 Control and Display Elements

### 3.2.1 Control Keys

The display is operated with the buttons at the display frame and at the operating unit.



Fig. 2 buttons at the monitor and operating unit

button T1 + T2	Switch display on and off by pressing at the same time
button T1	Navigate to the left (previous display)
button T2	Navigate to the right (next display)
button T3	Menu hierarchy upwards
button T4:	Menu hierarchy downwards
button T5	Rocker key to select supporting level
button T6	Joystick for navigation (left, right, upwards, downwards, enter)
button T7	switch pedelec on and off
button T8	set light on and off

**3.2.2 Display**

The display is separated in five areas:

- 1 Remaining battery range and time  
Warning signal (disturbance)
- 2 current speed  
chosen supporting level (blue bar)  
battery's state of charge (green bar)
- 3 Showing mode, light mode  
Smartphone connected, message received  
Pulse measurement activated
- 4 Multi-purpose panel  
Only navigation so far



*Fig. 3 display area*

<b>Chosen level of support</b>	Is displayed graphically as bar chart at the right side of the main screen.
<b>Battery's state of charge</b>	Is displayed graphically as bar chart at the left side of the main screen. Every segment complies about 20% battery capacity.
<b>Shoving and light mode</b>	Lights up when activated.
<b>Display's background lighting</b>	The display's background lighting is adjusted by a light sensor. The light adapts to the surrounding light to avoid dazzling the driver.

- The following menus can be selected by buttons T1 – T2 or by moving the joystick T6 sideways when operating unit is connected:



1. Main display

2. MY VIEW

3. TOUR

4. SYSTEM



5. Error message (Pop-Up)

Fig. 4: screen's displays

**HINT!**

According to software status / model single menu sections are not available.

Basic operation:

- Subsections of the actual set menu can be chosen by pressing buttons T3 – T4 or by moving the joystick T6 sideways if an operating unit is connected.
- By pressing joystick T6 the display switches into edit mode or save an input.

### 3.2.3 Operating unit (Just Drive Comfort)

The operating unit's display is separated in three areas:

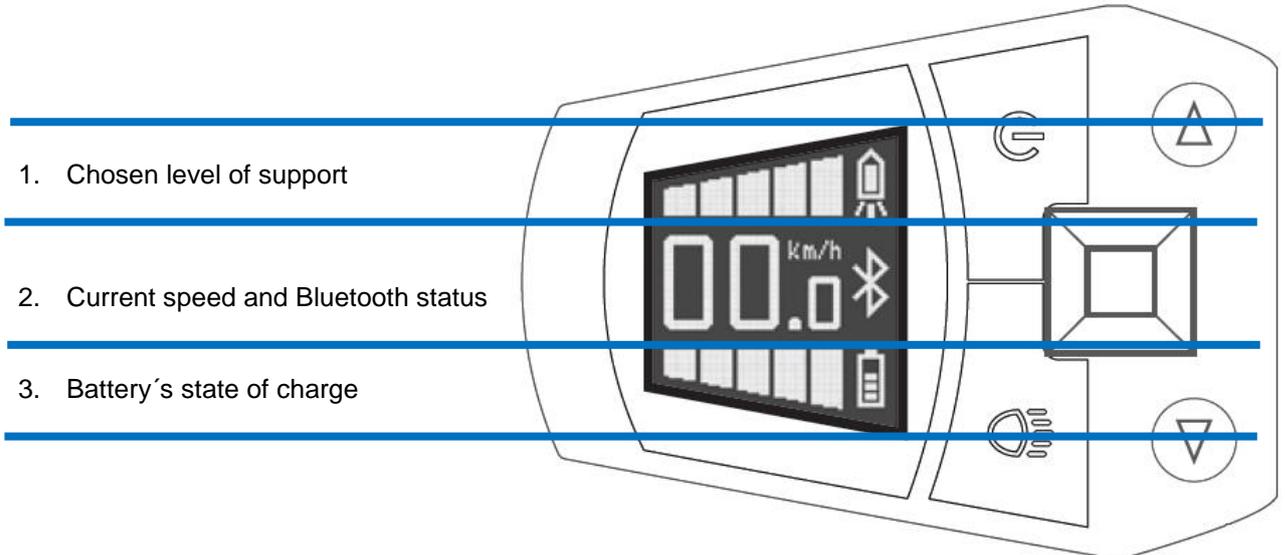


Fig. 5: display area of the operating unit

- If a display unit is connected, the operating unit's joystick only operates the display's menu navigation.
- At the operating unit there's a second page „remaining range“ is shown. If there's no display unit connected the following menus can be selected by the joystick:

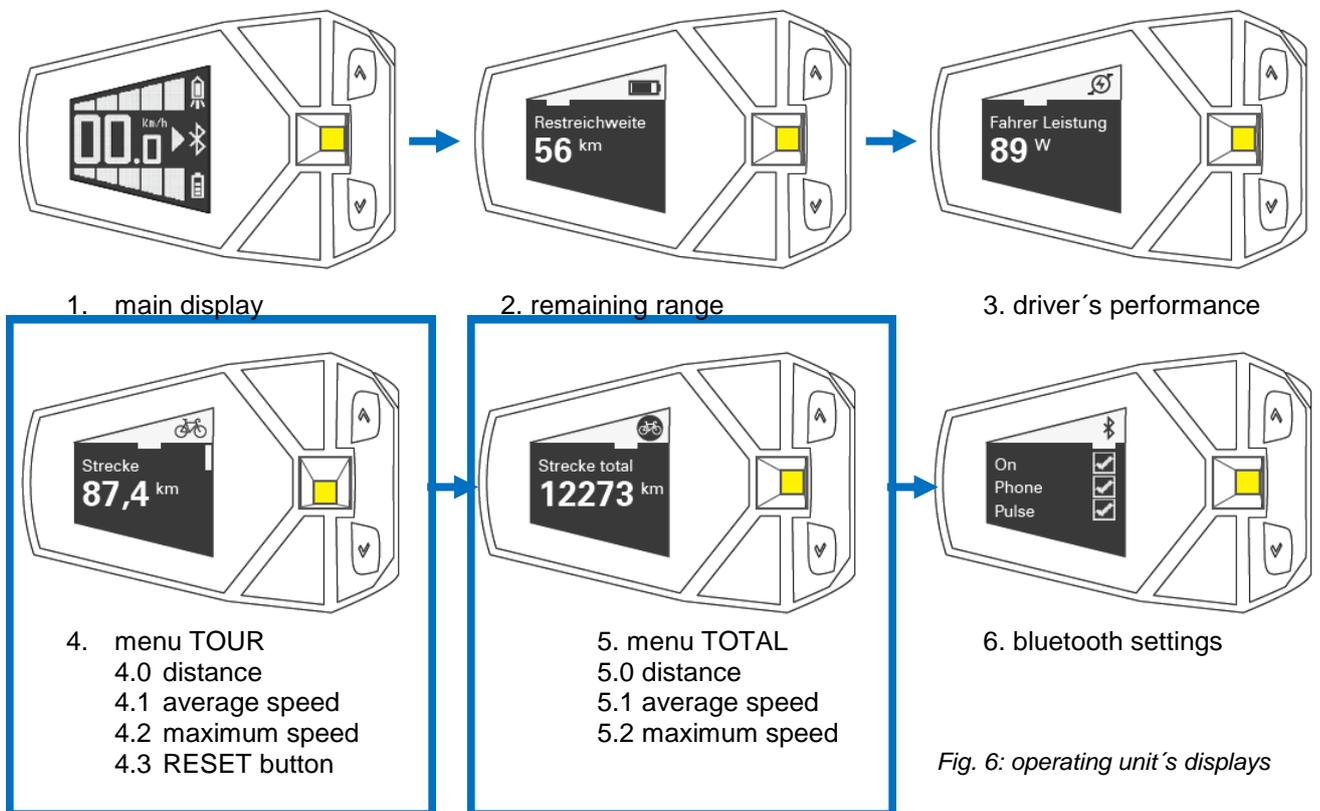


Fig. 6: operating unit's displays

## 4 Operating

### 4.1 Latching and Releasing the Display at the holder



#### HINT!

Don't apply force to mount and remove the display. Otherwise the connection could break off.

#### Releasing the Display

1. By rotating counter clockwise the bayonet connection between display and holder is released.

⇒ The display is now usable in battery mode.



Fig. 7: releasing the display

#### Latching the Display



1. Latch the display into the console's guide. At a rotation of about 45° the display snaps into the holder.
2. Rotate the display 45° clockwise until the limit. The limit is noticeable significantly.



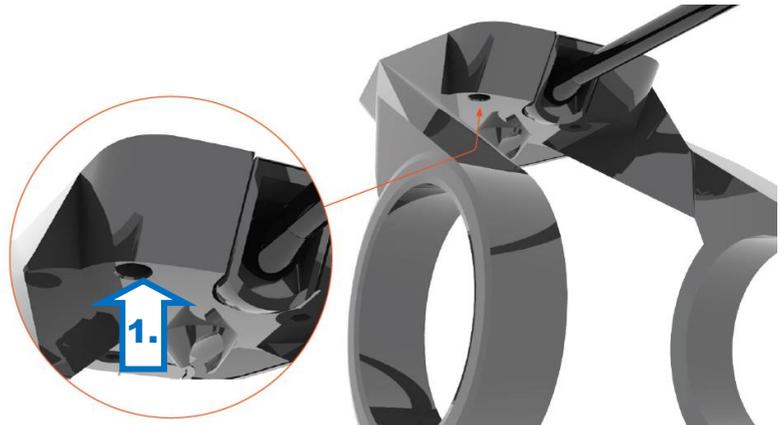
Fig. 8: latching the display

**Anti-theft Device**

If you want to leave the HMI in the holder when parking the pedelec you should avoid unwanted dismantling with the display holder.

Therefore a tapped hole at the bottom of the holder is provided with an already installed Allen screw M3, SW 2, 0.

1. Secure the display with the Allen Screw towards the holder by tightening the screw.



*Fig. 9: anti-theft device*

## 4.2 Switching On And Off

**Switch on the display**

- ⇒ Press buttons T1 + T2 at the same time longer than 0,5s and less than 2s.

**Switch off the display**

- ⇒ Press buttons T1 + T2 longer than 2s.

**Switch on the HMI**

- ⇒ Press button T7 longer than 0,5s and less than 2s. The whole pedelec will be switched on.

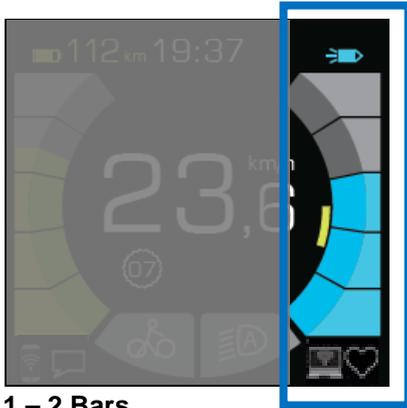
**Switch off the HMI**

- ⇒ Press button T7 longer than 2s. The whole pedelec will be switched off.

## 4.3 Settings and functions

### 4.3.1 Supporting level

#### Selection of supporting level



**1 – 2 Bars**

**2 – 3 Bars**

**3 – 4 Bars**

**4 – 5 Bars**

The chosen level of support is shown by the five blue bars at the right side of the display. As long as the HMI is active, this display is active.

1. To increase the level of support from no bar up to five bars step by step press button T5 (upwards).

To decrease the level of support step by step press button T5 (downwards).

2. If you want to drive without a supporting level, press T5 until the bar chart switches off.

- efficient support for maximum battery range

- equal support for long distances with great battery range

- powerful support for sporty driving on hilly tracks and city traffic

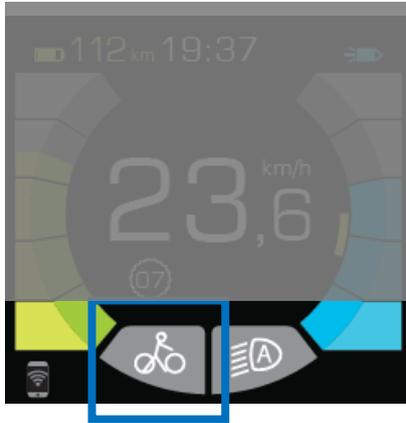
- maximum support for sporty driving with high velocities



The remaining range is shown at the top left side of the display. By increasing the level of support the remaining range decreases.

### 4.3.2 Shoving help

#### Function



Shoving the pedelec can be supported by scoop mode. The symbol lights up when scoop mode is activated. According to model and equipment there are two modi available:

1. Pedelec – scoop mode up to 6km/h: press and hold button T5 (upwards) to use shoving help. Release the button to end scoop mode.
2. Only S-Pedelec - Starting assistance until 20 km/h: press and hold button T5 (downwards) to use starting assistance. Release the button to end starting assistance.



#### **DANGER!**

Use the scoop mode consciously. Familiarize yourself with this function outside of traffic!

By using it unconcentratedly you're endangering yourself and other road users.

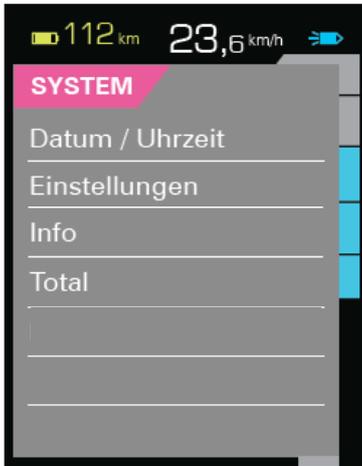
### 4.3.3 Switching light on and off

#### Function



By switching on the system the low beam is activated generally. According to model and built-in lights button T8 can be pressed for 0,5s to change the light between high and low beam.

To switch off the light press T8 longer than 2s. Press T8 again to switch on the light again.

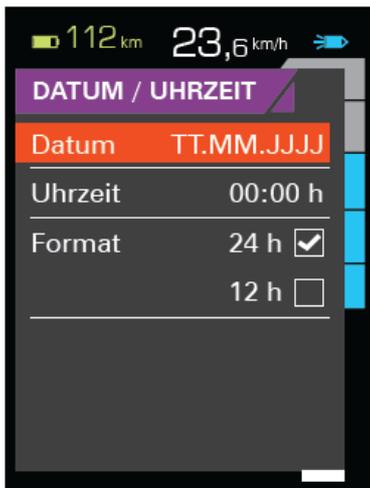
**4.3.4 System settings**

Choose the menu SYSTEM.

By moving the joystick vertically (up- and downwards) you choose the wanted submenu.

Confirm the choice of the submenu point (for example date or time) by pressing the joystick.

Currently, the Bluetooth function can only be activated by the operating unit.

**4.3.5 Date, time, format****Setting date / time**

Choose the menu SYSTEM and confirm your chosen submenu point date / time by pressing the joystick. Press the joystick again to get into the red backgrounded edit mode.

If there are several positions editable, you can choose the value that has to be edited by moving sideways on the display.

After confirming your choice you can change the value by vertical movements (up- and downwards) of the joystick.

Your input will only be saved if the joystick is pressed again.

Only then you can chose the next submenu point (time / format) or navigate into another menu.



*The setup menu has no „time out“and won't be terminated automatically. End the settings by leaving edit mode. The setup mode is not available while driving.*

**4.3.6 MY VIEW**

On the site MY VIEW heart rate, driver's performance and energy consumption are shown while driving.

In the future the displayed values on the site MY VIEW will be configurable by the user.

**4.3.7 TOUR**

On the site TOUR information about trip distance since the last RESET are shown. These data are cumulated as long as the HMI is in operation.

It shows the cumulated trip distance, required time, used battery performance, average speed and reached maximum speed.

By moving the joystick vertically you get to the RESET selection field. By pressing the joystick these data are irrevocably deleted and the values are set back to zero.

You find the function "total distance" (amount of all trips driven) in the menu SYSTEM - submenu TOTAL.



During use without a display unit the driving data are shown and saved by the operating unit. The data will be updated when a display is connected to the display holder.

**4.3.8 Navigation**

For displaying the navigation on the main display your smartphone has to be connected by the Naviki App (not included in delivery) to the system and an active route has to be in the App. Pay attention to the smartphone symbol below the battery's state of charge at the bottom left corner.

After choosing a planned route in the App, direction arrows and distances for the next waypoint and the one after that are shown in the main display.

Textual presentation can deviate from sample image.

**4.4 USB-Port**

*Fig. 10: USB Port*

**Connecting a USB device**

The USB port is at the operating unit's inboard side.

Your smartphone can be charged by the USB socket. Please only use USB cables that are suggested by the smartphone manufacturer and that can be connected with a USB Micro A plug into the operating unit.

For bicycle dealers the USB port helps connecting the service equipment (plug USB Micro B).

1. Remove the USB-port's sealing.
2. Connect the charging cable to smartphone and charging socket.
3. After charging, close the USB socket to protect it against moisture and pollution.

**HINT!**

A USB connection is no waterproof plug connection. While raining, external devices must not be connected and the USB port has to be completely closed by the protection cover. If these issues are ignored, operating unit and connected device can be damaged.

## 5 Error Messages

Currently, errors are displayed by a pop-up. Some errors are blocking the system. That means that they can only be reset by switching off and on again. In this case the error message is visible until the system is switched off.