

## Display DP-16 Functions and Diagnostics of the motor M25

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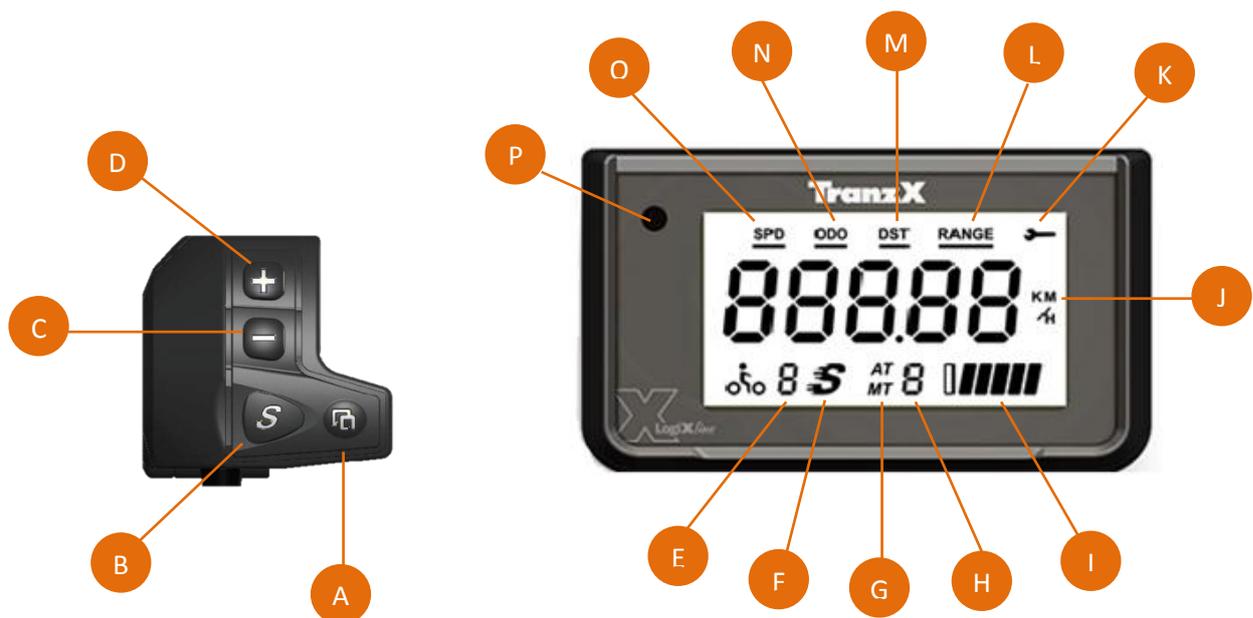
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Please note: For your own safety, make sure to always cut off electricity by removing the battery BEFORE you start working on electric bicycles!

# Display DP-16 Functions and Diagnostics of the motor M25

## 1. Basic functions

external control unit and display



- A. On/off and display change
- B. Turbo (push once)  
Walking assistance (hold)
- C. Decrease power support level 3-2-1-0
- D. Increase power support level 0-1-2-3
- E. Preset power support level 1/2/3
- F. Turbo activated
- G. With AGT: MT manually; AT automatic
- H. With AGT: current gear
- I. Battery capacity indicator
- J. Unit of the displayed value
- K. Key symbol (in connection with a displayed error code)
- L. Remaining range (based on the remaining battery capacity)
- M. Trip meter
- N. Total mileage
- O. Current speed
- P. Light sensor

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## 2. Settings

Different settings options such as the assistance (2.1), AGT shifting time (2.2), LCD background lighting (2.3) and the sensitivity of the light sensor (2.4) can be changed.

Push the & buttons to get to the settings menu.

Briefly push the button for confirmation and to get to the next setting.

Briefly push the button for confirmation and to get to the previous setting.

Hold the button for confirmation and to leave the settings.

Push the button to increase the value.

Push the button to decrease the value.

### 2.1 Adjusting the support parameters (from software version 225)<sup>1</sup>

The support is determined by the ratio of the pedaling force and the pedaling frequency. You can adjust the ratio of these parameters within a specified range of -15 to +15.

At **-15** the support is mainly regulated by the **pedaling force**.

At **+15** the support is mainly regulated by the **pedaling frequency**.



This setting can also be carried out during the ride, in which case the rider would feel the immediate effect.

### 2.2 AGT shifting time<sup>2</sup>

You can adjust the shifting time of the AGT system (**A9 – A1**).

At **A9** the system only shifts to a higher gear at a very high pedaling frequency.



At **A1** the system already shifts to a higher gear at a lower pedaling frequency.

<sup>1</sup> Software version 224: This setting is regulated with the key combination &

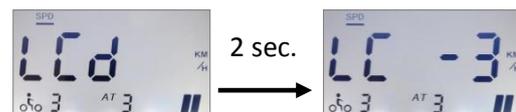
<sup>2</sup> Software version 224: This setting is regulated with the key combination &

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## 2.3 The brightness of the background lighting (from software version 225)

The brightness of the display background lighting can be adjusted according to the respective surrounding light.

Cover up the light sensor and set the desired brightness (from -15 for lowest, to +15 for highest).



## 2.4 Adjusting the automatic light sensor (from software version 225)

The sensitivity of the light sensor can be adapted to the respective surrounding light.

Adjust the settings to the desired sensitivity (-15 to +15).

At +15 the light stays on permanently (daytime running lights).



## 2.5 Resetting trip mileage (from software version 225)

Change to page „DST“ in the Display. Hold the  button to reset the trip mileage to 0.

## 2.6 When the battery is being charged, the display shows CHARG“ (from software version 224)



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## 3. Error code memory

### 3.1 Reading out the error code memory

1. Turn on the system.
2. Hold  and  for 3 seconds.



3. The display changes and shows the recorded error.



If there are several different codes, they would be displayed in a row.  
 You can find out about the meaning of the respective error in the error codes list.

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## 4. Diagnostics function

Generally you would perform a diagnosis with the LogiX diagnostics software via the PC. You will receive more details by doing so. However, if necessary you can also perform a diagnosis via the display.



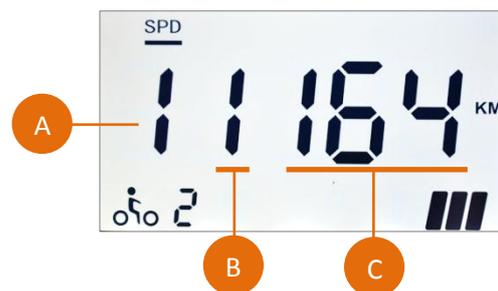
1. Turn on the system .
2. Hold for 10 seconds to start the diagnostics function.

### 4.1. Recorded calibration value

The recorded default settings and the current settings for the left and right crank are shown in the “SPD” menu.

Page 1 shows the recorded calibration default value.

- A Page 1 of the “SPD” menu.
- B 1 = right crank is pointing forward at the moment.  
2 = left crank is pointing forward at the moment.
- C Sample calibration value of 164 (right crank).



This is the sample calibration value of the left crank.



There are three reasons why the left crank may be pointing forward and the display shows a “1”:

1. The crank was mounted incorrectly. Mount the crank according to the stamping marks.
2. Check the **motor cable connection**. If the connection is okay, you have to ...

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3. ... replace the **motor**.

## 4.2. Current calibration value

1. Next step.
2. Push the (A) button to select page 2 of the menu “SPD”.
3. Apply pressure on the forward pointing pedal with your foot.
4. The value must slowly increase under pressure and decrease again after 30 seconds.  
If that is not the case, the motor needs to be replaced.



5. Please also follow this procedure with the other crank.



## 4.3. Current force value

Next step.

Again push the (A) button to get to the “ODO” menu.

The value must increase upon putting pressure on the right crank and decrease when putting pressure on the left crank. If that is not the case, the **motor needs to be replaced**.

Sample value of the right crank increases



Sample value of the left crank decreases



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## 4.4. Selftest of the controller

Next step.

Push the (A) button again to get to the menu “DST”.

Two values appear.

Value “A” is the command of the controller to the motor and must lie between 01 and 99 during the ride.

However, if 00 appears, the controller is damaged.

Value B represents the transmitted voltage from controller to motor.

If this value is at 00 during the ride, the controller is damaged.



## 4.5. Selftest of the RPM Sensor

Next step.

Push the (A) button again to activate the “RANGE” menu.

Value “A” shows the pedal that is pointing forward at that moment. 1 = right pedal; 2 = left pedal.

Value “B” only indicates a value higher than 00 when the motor has a coaster brake! If the value is at 00, the sensor signal of the coaster brake is interrupted.

Value “C” shows the value of the pedaling frequency sensor (RPM) during pedaling.

If the value is at 00, the RPM signal is interrupted.



If all three values are not working, it could be for the following three reasons:

Check the connection of the **display cable**.

Check the connection of the **motor cable**.

Replace the **motor** if necessary.

If this does not solve the problem and all three values are not okay, then the **controller** needs to be changed.