

DP C230.CAN



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1.1 IMPORTANT NOTICE

- If the error information from the display cannot be corrected according to the instructions, contact your retailer.
- The product is designed to be waterproof. However, it is highly recommended that you avoid submerging the display under water.
- Do not clean the display with a steam jet, high-pressure cleaner or water hose.
- Please use this product with care.
- Do not use thinners or other solvents to clean the display. Such substances can damage the surfaces.
- Warranty/guarantee does not cover wear during normal use and ageing.

1.2 INTRODUCTION

- Model: DP C230.CAN BUS



1.3 PRODUCT DESCRIPTION

1.3.1 Specifications

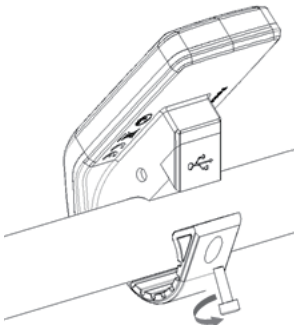
- Operating temperature: -20°C ~45°C
- Storage temperature: -20°C ~50°C
- Waterproof: IP65
- Bearing humidity 30%-70% RH

1.3.2 Functional Overview

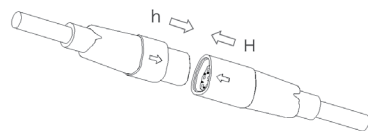
- Speed display (including top speed and average speed, switching between km and miles).
- Battery capacity indicator.
- Automatic sensors to activate the lighting system.
- Brightness setting for backlight.
- Performance indicator.
- Motor power indicator.
- Total journey time display.
- Odometer (including single-trip distance, total distance and remaining distance).
- Walk assistance.
- Assistance level settings.
- Energy consumption indicator in calories (Note: If the display has this function).
- USB charging port.

1.4 DISPLAY INSTALLATION

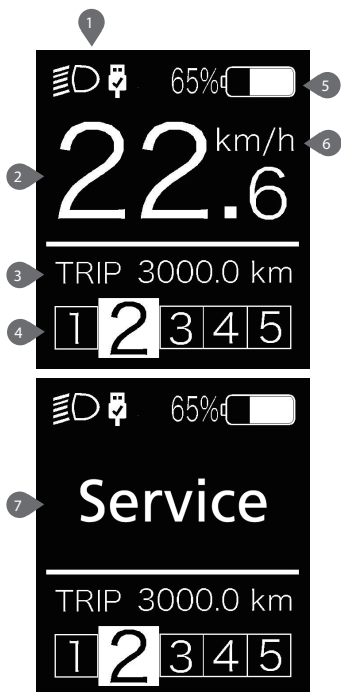
1. Open the display's mounting clamp and position the display on the handlebar. Tighten the M3*10 screw to secure the display in position. The display is suitable for handlebars of diameter 22.2 mm.



2. Connect the display to the EB-BUS cable.



1.5 DISPLAY





- 1 The display shows the icon if the lights are on. If an external USB device is connected, the icon is displayed.
- 2 Current speed.
- 3 Usage Information:
Trip distance (TRIP) - Total distance (ODO) - Top speed (MAX) - Average speed (AVG) - Range (RANGE) - Motor power (POWER) - Energy Consumption (CAL) - Travel time (TIME).
- 4 Assistance level/ Walk assist.
- 5 Current battery capacity.
- 6 Units in km/h or mph.
- 7 Service: see the service section.

1.6 BUTTON DEFINITION





1.7 NORMAL OPERATION

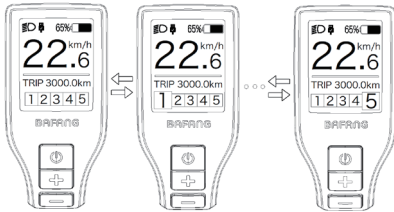
1.7.1 Switching the System ON/OFF

Press and hold the  button (>2 s) to turn on the system. Press and hold the  button (>2 s) again to turn off the system.


When not in operation, the display will automatically turn itself off after a set time. The automatic shutdown time can be adjusted with the "Auto Off" function (see page 9). If the password function is enabled, you must enter the correct password to use the system.


1.7.2 Assistance Level Selection

When the display is turned on, press the  or  (<0.5 s) button to change the assistance level. The lowest level is 0, the highest level is 5. When the system is switched on, the assistance level starts at level 1. There is no assistance from the motor at level 0.



1.7.3 Lights & Display Backlight

Hold the  (>2 s) button to turn on the headlight, tail light and display backlight.






Hold the  (>2 s) button again to turn off the headlight, tail light and display backlight.

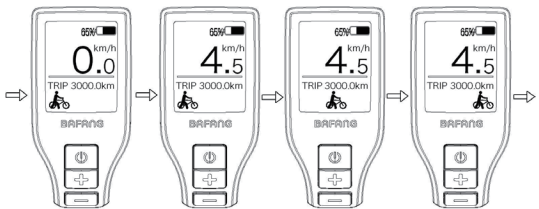
The brightness of the display's backlight can be set in the "Brightness" section of the "Setting" menu (see page 9). If the display is switched on in a dark environment, the lights will automatically be switched on. If the lights have been manually switched off, the automatic sensor function is deactivated, and will only reactivate when you turn the system off and on again.



1.7.4 Walk Assist

Walk Assist can only be activated when the ebike is at a standstill.

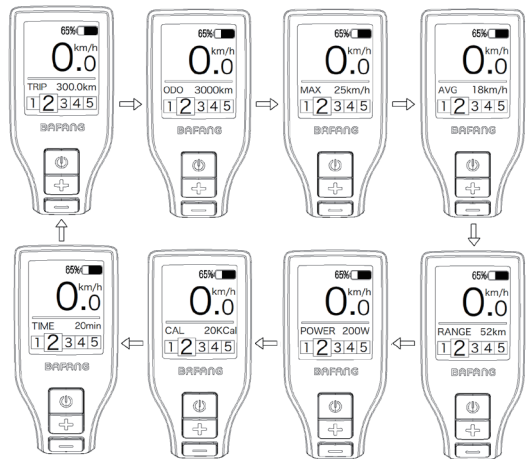
Activation: Press the  button repeatedly until the  icon appears and then hold down the  button. The  icon will flash and the ebike will move at 6 km/h. After releasing the  button, the motor will stop automatically.



1.7.5 Usage Information

Briefly press the  (<0.5 s) button to change the usage information displayed.

Usage information: Trip distance (TRIP) - Total distance (ODO) - Maximum speed (MAX) - Average speed (AVG) - Range (RANGE) - Motor power (POWER) - Energy consumption (CAL) - Travel time (TIME).



1.7.6 Battery capacity

The indicator displays the current battery capacity. When the battery is fully charged, it shows 100%. When the battery has less than 5% capacity remaining, the outline of the indicator will flash, meaning that you should charge the battery immediately.



1.7.7 USB charging

When an external device is connected to the display via the USB port, the USB charging indicator displays the  icon and starts to charge the device (max. Voltage is 5 V, max. Current is 500 mA).



1.7.8 Service

The display shows "Service" every 5,000 km (3,107 miles) or 100 charge cycles completed. This function can be set in the "Setting" menu.

1.8 PROPERTIES

After the display is turned on, press the **+** and **-** button at the same time (>2 s), to access the "PROPERTIES" menu. By pressing the **+** or **-** button (<0.5 s), you can select: "Setting", "Information" or "Exit". Then press the **⏻** button (<0.5 s) to access your selected option.

Selecting "Exit" in the "PROPERTIES" menu will return you to the main screen and your new settings will be saved.

If no button is pressed within 20 seconds, the display will automatically return to the main screen and no data will be saved.



Pressing the **+** and **-** buttons at the same time (>2 s) returns to the main screen.

Selecting "Back" in the "Setting" or "Information" menu returns to the "PROPERTIES" menu.

1.8.1 "Setting"

Press the **+** or **-** button (<0.5 s) to select "Setting", and then briefly press the **⏻** button (<0.5 s) to access the following options:

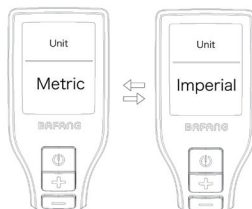


1.8.1.1 "Trip Reset" Reset mileage

Press the **+** or **-** button (<0.5 s) to select "Trip Reset" in the "Setting" menu, and then press the **⏻** button (<0.5 s) to access it. Then with the **+** or **-** button choose "YES" or "NO" and press the **⏻** button (<0.5 s) to save and return to the "Setting" menu.

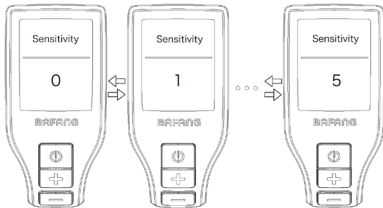
1.8.1.2 "Unit" Selection (km/miles)

Press the **+** or **-** button (<0.5 s) to select "Unit" in the "Setting" menu, and then press the **⏻** button (<0.5 s) to access it. Then with the **+** or **-** button choose "Metric" (kilometers) or "Imperial" (miles) and press the **⏻** button (<0.5 s) to save and return to the "Setting" menu.



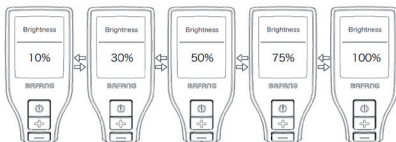
1.8.1.3 "Sensitivity" Automatic light sensitivity

Press the **+** or **-** button (<0.5 s) to select "Sensitivity" in the "Setting" menu, and then press the **⏻** button (<0.5 s) to access it. Then with the **+** or **-** button choose a sensitivity level between 0 and 5 and press the **⏻** button (<0.5 s) to save and return to the "Setting" menu.



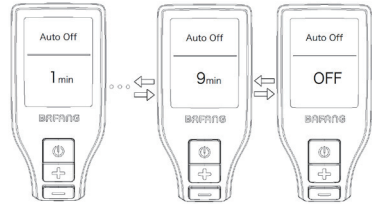
1.8.1.4 "Brightness" Display brightness

Press the **+** or **-** button (<0.5 s) to select "Brightness" in the "Setting" menu, and then press the **⏻** button (<0.5 s) to access it. Then with the **+** or **-** button choose a brightness between 10% and 100% and press the **⏻** button (<0.5 s) to save and return to the "Setting" menu.



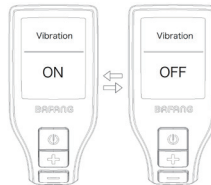
1.8.1.5 "Auto Off" Automatic system switch off time

Press the **+** or **-** button (<0.5 s) to select "Auto Off" in the "Setting" menu, and then press the **⏻** button (<0.5 s) to access it. Then with the **+** or **-** button choose a setting between 1 and 9 minutes, or "OFF". Press the **⏻** button (<0.5 s) to save and return to the "Setting" menu.



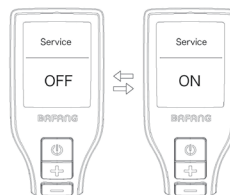
1.8.1.6 "Vibration" Vibration function ON/OFF

Press the **+** or **-** button (<0.5 s) to select "Vibration" in the "Setting" menu, and then press the **⏻** button (<0.5 s) to access it. Then with the **+** or **-** button choose "ON" or "OFF". Press the **⏻** button (<0.5 s) to save and return to the "Setting" menu.








1.8.1.7 "Service" Notifications ON/OFF

Press the **+** or **-** button (<0.5 s) to select "Service" in the "Setting" menu, and then press the **⏻** button (<0.5 s) to access it. Then with the **+** or **-** button choose "ON" or "OFF" and press the **⏻** button (<0.5 s) to save and return to the "Setting" menu.







1.8.2 "Information"

After the display is turned on, press the  and  button at the same time (>2 s), to access the "PROPERTIES" menu.

Press the  or  button (<0.5 s) to select "Information", and then briefly press the  button (<0.5 s) to access the following information:







1.8.2.1 Wheel Size

Press the  or  button (<0.5 s) to select "Wheel Size" in the "Information" menu, and then press the  button (<0.5 s) to access it. Press the  button (<0.5 s) again to return to the "Information" menu.

"Wheel Size" is displayed for information only and cannot be changed.








1.8.2.2 Speed Limit


Press the  or  button (<0.5 s) to select "Speed Limit" in the "Information" menu, and then press the  button (<0.5 s) to access it. Press the  button (<0.5 s) again to return to the "Information" menu.

"Speed Limit" is displayed for information only and cannot be changed.



1.8.2.3 Battery Info

Press the  or  button (<0.5 s) to select "Battery Info" in the "Information" menu, and then press the  button (<0.5 s) to access it. Then press the  or  button to scroll through the information options shown in the table below.

Press the  button (<0.5 s) to return to the "Information" menu.

Content	Explanation
b01	Current temperature in degrees (°C)
b04	Total Voltage (V)
b06	Discharge Current (A)
b07	Remaining Capacity (mAh)
b08	Full charged Capacity (mAh)
b09	Default Loader Status (%)
b10	Instant charge (%)
b11	Charging cycles (number)
b12	Maximum time in which no charge was made (Hr)
b13	Last Uncharged Time (Hr)
d00	Total Cell Number (individual)
d01 - d10	Cell Voltage 1 to 10 (mV)

Content	Explanation
HW	Hardware Version
SW	Software Version

NOTE: If no data is detected, "--" is displayed.

1.8.2.4 Controller Information

Press the **+** or **-** button (<0.5 s) to select "Ctrl Info" and then press the **⏻** button (<0.5 s) to access it. Press the **⏻** button (<0.5 s) again to return to the "Information" menu.



1.8.2.5 Display Information

Press the **+** or **-** button (<0.5 s) to select "Display Info" and then press the **⏻** button (<0.5 s) to access it. Press the **⏻** button (<0.5 s) again to return to the "Information" menu.



1.8.2.6 Torque Information

Press the **+** or **-** button (<0.5 s) to select "Torque Info" and then press the **⏻** button (<0.5 s) to access it. Press the **⏻** button (<0.5 s) again to return to the "Information" menu.



1.8.2.7 Error Code

Press the **+** or **-** button (<0.5 s) to select "Error Code" and then press the **⏻** button (<0.5 s) to access it.

Error information is displayed for the last ten error codes. Error code "00" means there is no error.

To clear the error code, press and hold the **+**, **-**, and **⏻** buttons at the same time. Press the **⏻** button (<0.5 s) again to return to the "Information" menu.

Error codes should only be cleared by a qualified service professional.



1.9 ERROR CODE DEFINITIONS



If an error is detected, the display will show an error code that can be used to identify the problem that has occurred in your electrical system.

Note: Please read the description of the error code carefully. If you see an error code, restart the system first. If the problem is not resolved, contact your dealer.

The BESST tool is Bafang's diagnostic device that a trained ebike mechanic can use to read and repair the electrical system. If your ebike mechanic doesn't have a BESST tool, ask them to contact Bafang or FLIT.

Error	Declaration	Troubleshooting
07	Overvoltage protection	<ol style="list-style-type: none">1. Remove and re-insert the battery to see if this resolves the problem.2. Use the BESST tool to update the controller.3. If 1 & 2 fail, change the battery.
08	Error with the hall sensor signal inside the motor	<ol style="list-style-type: none">1. Check all connectors from the motor are correctly connected.2. If the problem still occurs, change the motor.
09	Error with the motor phases	Change the motor.
10	The temperature inside the motor has reached its maximum protection value	<ol style="list-style-type: none">1. Turn off the system and allow the ebike to cool down.2. If the problem persists, change the motor.
11	The temperature sensor inside the motor has an error	Change the motor.
12	Error with the current sensor in the controller	Change the controller or contact your supplier.

Error	Declaration	Troubleshooting
13	Error with the temperature sensor inside the battery	<ol style="list-style-type: none"> 1. Check all connectors from the battery are correctly connected to the controller. 2. If the problem persists, change the battery.
14	The protection temperature inside the controller has reached its maximum value	<ol style="list-style-type: none"> 1. Allow the ebike to cool down and restart the system. 2. If the problem persists, change the controller or contact your supplier.
15	Error with the temperature sensor inside the controller	<ol style="list-style-type: none"> 1. Allow the ebike to cool down and restart the system. 2. If the problem persists, change the controller or contact your supplier.
25	Torque signal error	<ol style="list-style-type: none"> 1. Check that all connectors are connected correctly. 2. Connect the ebike to the BESST system to see if torque can be read by the BESST tool. 3. Using the BESST Tool, update the controller. <p>If the problem persists, change the torque sensor or contact your supplier.</p>

Error	Declaration	Troubleshooting
26	Speed signal of the torque sensor has an error	<ol style="list-style-type: none"> 1. Check that all connectors are connected correctly. 2. Connect the ebike to the BESST system to see if the speed signal can be read by the BESST tool. 3. Change the display to see if the problem is solved. 4. Using the BESST Tool, update the controller. <p>If the problem persists, change the torque sensor or contact your supplier.</p>
27	Overcurrent from controller	<p>Using the BESST Tool, update the controller. If the problem persists, change the controller or contact your supplier.</p>
30	Communication problem	<ol style="list-style-type: none"> 1. Check all connectors on the ebike are correctly connected. 2. Using the BESST Tool, run a diagnostics test to see if it can pinpoint the problem. 3. Change the display to see if the problem is solved. 4. Change the EB-BUS cable to see if it resolves the problem. 5. Using the BESST tool, re-update the controller software. If the problem persists, change the controller or contact your supplier.
33	Brake signal has an error (If brake sensors are fitted)	<ol style="list-style-type: none"> 1. Check all connectors are correctly connected on the brakes. 2. Change the brakes to see if the problem is solved. 3. If problem persists, change the controller or contact your supplier.
35	Detection circuit for 15V has an error	<p>Using the BESST Tool, update the controller to see if this resolves the problem. If not, change the controller or contact your supplier.</p>
36	Detection circuit on the keypad has an error	<p>Using the BESST Tool, update the controller to see if this resolves the problem. If not, change the controller or contact your supplier.</p>

Error	Declaration	Troubleshooting
37	WDT circuit is faulty	Using the BESST Tool, update the controller to see if this resolves the problem. If not, change the controller or contact your supplier.
41	Total voltage from the battery is too high	Change the battery.
42	Total voltage from the battery is too low	Charge the battery. If the problem persists, change the battery.
43	Total power from the battery cells is too high	Change the battery.
44	Voltage of a single cell is too high	Change the battery.
45	Battery temperature is too high	Let the ebike cool down. If problem persists, change the battery.
46	The temperature of the battery is too low	Allow the battery to warm to room temperature. If the problem persists, change the battery.
47	SOC of the battery is too high	Change the battery.
48	SOC of the battery is too low	Change the battery.
61	Switching detection defect	1. Check the gear shifter is not jammed. 2. Change the gear shifter.
62	Electronic derailleur cannot release.	Change the derailleur.
71	Electronic lock is jammed	1. Using the BESST Tool, update the display to see if it resolves the problem. 2. Change the display. If the problem still occurs, change the electronic lock.
81	Bluetooth module has an error	Using the BESST Tool, re-update the software onto the display to see if it resolves the problem. If not, change the display.

