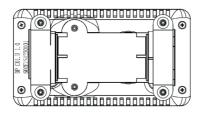# DP C01.UART

CONTENT

INTRODUCTION

- Name: Intelligent display HMI
- Model: DP C01.UART
- Scope: EN15194 electrical bicycle
- Appearance (as shown in the figure)

- Numbering on the back of HMI

  Number on the middle of display back, number is divided into up row and down row (as shown in the figure):

A. First line as below

  DP C01.U 1.0

  ① DP C01.U : BAFANG Display model

  ② 1.0: Hardware version number

B. Second line as below

  602E1S1230001

  ① 602: Wire length and connector model

  850 M5.2, keypad250

② EI: The internal identity code

③ S1230001: The production date is Jan. 23, 2018, and the serial number 0001.

  please refer to <Instrument labelling rules> for other detailed description, the document number is BF-TS-753-C0-02II.

- Display HMI P type wire label number rule

  Number on the middle of P type label, number is divided into up row and down row and QR code is at right side (as shown in the below figure).

The first line:

DPC01E10101.0- Software version

The second line:

PD2528051305 - Parameter code
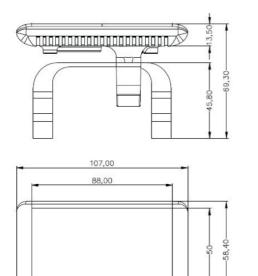
Content of QR code:
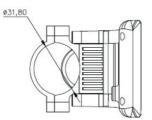
  DPC01E10101.0

  PD2528051305

  DPC01.U 1.0

  602E1S1230001

APPEARANCES AND DIMENSIONS

SPECIFICATIONS

- Rated voltage: 36V/43V/48DC
- Rated current: 10mA
- Maximum operating current: 30mA
- Power-off leakage current: <1uA
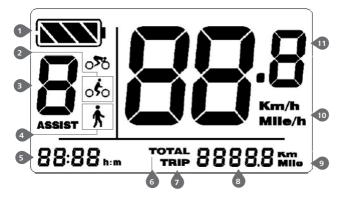- Operating current supplied to controller: 50mA

- Operation temperature: -20℃~45℃
- Storage temperature: -30℃~70℃
- IP level: IP65
- Ambient humidity in storage: 30%-70%

FUNCTIONAL OVERVIEW

- Support level adjustment and indication.
- Speed indication (including maximum speed, average speed, and switchover between km and mile).
- Single ride time and clock display.
- Trip indication (including single-trip distance and total distance).
- Control and indication for push assistance.
- Control and indication for the headlight.
- Check of battery data.

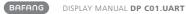# NORMAL INDICATION AREA

1. Battery capacity indication
2. General mode indication
3. Indication for support level
4. Indication for walk assistance
5. Time indication
6. ODO indication
7. Trip indication
8. Trip data indication
9. Distance unit
10. Speed unit
11. Speed indication

BUTTON DEFINITION

Mode button

"+" button

"-" button

NORMAL OPERATION

- **ON/OFF Switch**

  Press and hold the MODE button for power-on. In the power-on status, press and hold the MODE button for power-off.

  Advice: If the electric bicycle is not used for over four hours, please take the battery off and store it properly.

- **Switching of support level and assistance mode**

  Switch the support level: press the + button to raise the support level, or press the - button to reduce the support level.

  Enter and exit the assistance mode: in the power-on status, press the - button and hold it for about three seconds to enter the walk assistance mode; and release the button to return to the ride mode.

  Warning: the walk assistance mode applies only when the rider is walking and pushing the bicycle. Do not use the mode when riding.
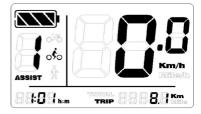
- **Backlight On/Off**

  In the power-on status, press the + button and hold it for two seconds to turn on the backlight; and then press the - button and hold it for two seconds to turn off the backlight. If the bicycle is equipped with the front/rear headlamps, the headlamps will be on or off together with the backlight.

- **Trip reset**

  In the power-on status, press the MODE and - buttons at the same time for two seconds, the single-trip distance will be reset.
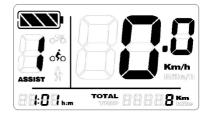
  The interface of single-trip distance indication is as below:

- **Switching between single-trip distance and total distance**

  In the power-on status, press the + button to switch between single-trip distance and total distance.

  The interface of total distance indication is as below:
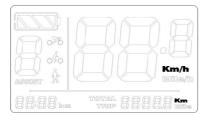

- **Battery capacity indication**

  The indication of remaining battery capacity and corresponding capacity are shown in the following figure:

| <20% | 20%-40% | 40%-60% | 60%-80% | 80%-100% |

PARAMETER SETTING

- **Km/mile system setting**

  After power-on, press the + and - buttons simultaneously and hold them for three seconds to enter the general setting mode. The units of the km/mile systems is to be set first. Press the + or - button to switch between the km/mile systems. The interface of setting is shown in the following figure:
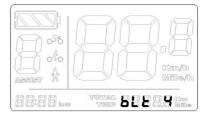

- **Speed limit setting**

  After completing the selection of km/mile system, press the MODE button to enter the speed limit setting interface. Press the + button to increase the speed limit, or press the - button to decrease the speed limit. Set range: 15-40; Unit: Km/H. The interface of setting is shown in the following figure:

  Note: when the wheel speed reaches or surpasses the set value, the output power of the motor will decline continuously. For the safety of ride, it is advised to set the speed limit at 25Km/H and below.
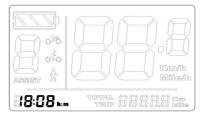
- **Brightness setting**

  After completing the selection of speed limit, press the MODE button to enter the brightness setting interface. Press the + button to increase the brightness, or press the - button to decrease the brightness. Set range: 1-8. The interface is shown in the following figure:

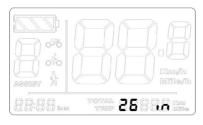- **Clock setting - Exiting general settings**

  After completing the selection of backlight brightness, press the MODE button to enter the clock setting interface. Set hours first (24-hour system). Press the + button to increase the hour value, and press the - button to decrease the hour value. After completing the selection of hour value, press the MODE button to enter the minute setting interface. Press the + button to increase the minute value, and press the - button to decrease the minute value. After completing the selection of minute value, press the MODE button to exit the setting interface, which is shown in the following figure:

Note: after setting the parameters, the instrument has to be turned off and then restarted to make the settings effective.
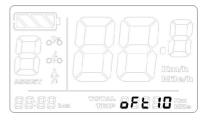
• **Wheel size setting**

After power-on, press the + and - buttons simultaneously and hold them for three seconds to enter the general setting mode; release all the buttons; and then press and hold the + and - buttons and press the MODE button for eight times to enter the advanced setting interface. The wheel size (in inches) is the first to be set. Press the + button to increase the wheel size, and press the - button to decrease the wheel size. Set range: 8-32; Set unit: inch. The interface of setting is shown in the following figure:

• **Setting of automatic power-off time**

After completing the selection of wheel size, press the MODE button to enter the automatic power-off time setting interface. Press the + button to increase the automatic power-off time, and press the - button to
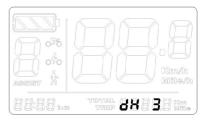
decrease the automatic power-off time. Set range: 0-60; Unit: min. When the bicycle does not move in the set duration, the instrument will automatically power off and disconnect the power supply for itself and the controller. The interface of setting is shown in the following figure:

Note: if the automatic power-off time is set to zero, this means the automatic power-off function is disabled and manual operation is required for shutdown.

• **Total support level number setting - Exiting advanced settings**
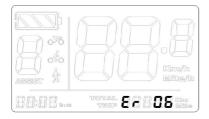
After completing the selection of automatic power-off time, press the MODE button to enter the interface for total support level number setting, in which there are options for 3/5/9 levels. As shown in the following figure:

Note: the total support level number does not include the parking position, i.e. Level 0. E.g.: if the total support level number is set

to 3, the actual levels include Levels 0/1/2/3. After setting the parameters, the instrument has to be turned off and then restarted to make the settings effective.

- **Error code indication**

When any fault occurs to the electric bicycle's electrical control system, the instrument will automatically indicate an error code, of which the meaning is defined in the following table. The error code indication interface is shown in the following figure:

- **Indication of battery communication information**

Information code	Definition	Unit
P1	Charge and discharge times	
P2	Full charge capacity (FCC)	mAh
P3	Remaining capacity (RC)	mAh
P4	Total voltage	mV
P5	Longest period without charge	H
P6	Battery temperature	°C
P7.1	Voltage of cell 1	V
P7.2	Voltage of cell 2	V
...	...	
P7.C	Voltage of cell 12	V
P8	Average current	A
P9	Absolute state of charge	
P10	Relative state of charge	
P11	Period since last charge	H

ERROR CODE DEFINITION

ℹ The DP C01.UART display can show e-bike faults. When a fault is detected, the icon will be displayed. In the speed field one of the following error codes will be displayed:

Error	Explanation	Troubleshooting
03	Brakes enabled	Check whether a brake cable is stuck.
07	High voltage protection	Bring your Pedelec to your dealer or to a specialist to have the error fixed.
08	Fault with motor hall sensor inside	Bring your Pedelec to your dealer or to a specialist to have the error fixed.
10	The motor temperature reaches to the max protection value	Stop the e-bike for a rest.
12	Fault with current sensor inside controller	Bring your Pedelec to your dealer or to a specialist to have the error fixed.
13	Fault with temperature sensor inside battery	Bring your Pedelec to your dealer or to a specialist to have the error fixed.
21	Fault with wheel speed detecting sensor	Bring your Pedelec to your dealer or to a specialist to have the error fixed.
22	BMS communication fault	Bring your Pedelec to your dealer or to a specialist to have the error fixed.
25	Torque sensor torque signal fault	Bring your Pedelec to your dealer or to a specialist to have the error fixed.
26	Torque sensor speed signal fault	Bring your Pedelec to your dealer or to a specialist to have the error fixed.
30	Communication fault	Bring your Pedelec to your dealer or to a specialist to have the error fixed.

Note: Error Code 10 will probably appear on the dispaly when the e-bike is climbling for a long time. This indicates that the motor temperature has reached the protection value, in which case the user needs to stop the e-bike for a rest. If the user continues to run the e-bike, the motor will automatically cut off the power.