

# 7 USER MANUAL FOR DP C240.CAN

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# 7.1 IMPORTANT NOTICE

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- If the error information from the display cannot be corrected according to the instructions, please contact your retailer.
- The product is designed to be waterproof. It is highly recommended to 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 is not included due to wear and normal use and aging.

# 7.2 INTRODUCTION OF DISPLAY

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- Model: DP C240,CAN BUS
- The housing material is PC; the display windows is made of ACRYLIC material:
- The label marking is as follows:



- **Note:** Please keep the QR code label attached to the display cable. The information from the Label is used for a later possible software update.

# 7.3 PRODUCT DESCRIPTION

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## 7.3.1 Specifications

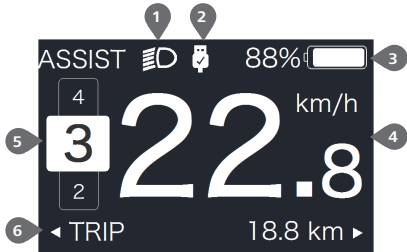
- Operating temperature: -20 °C~45 °C
- Storage temperature: -20 °C~50 °C
- Waterproof: IP65
- Storage room Humidity: 30%-70% RH

## 7.3.2 Functional Overview

- Speed indication (including the real-time speed, max. speed and average speed)
- Unit switching between km and mile
- Battery capacity indicator
- Automatic sensors explanation of the lighting system
- Brightness setting for backlight
- Indication of performance support
- Kilometer stand (including single-trip distance, total distance and remaining distance)
- BOOST function (NOTE: it needs the controller has this function)
- Indication of power assistance level
- Time indication for ride
- Input power of motor indication
- Walk assistance
- Indication for error messages
- Indication for consumption of energy CALORIES (NOTE: If the controller has this function)
- Indication for the remaining distance. (NOTE: it needs the controller has this function)
- Button vibration setting
- USB charging (5V and 500mA)

## 7.4 DISPLAY

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- 1 Headlight indication
- 2 USB connection indication
- 3 Battery capacity indication
- 4 Speed display in real-time
- 5 Assistance level indication
- 6 Multiple data indication



## 7.5 KEY DEFINITION

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# 7.6 NORMAL OPERATION



## 7.6.1 Switching the System ON/OFF

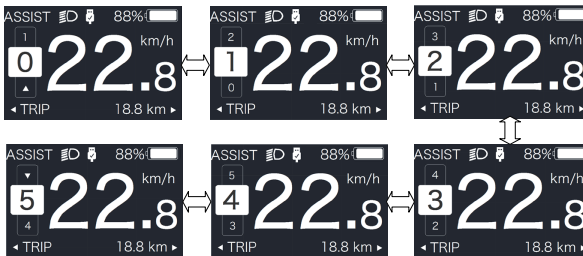
Press  and hold (>2S) to power on the display, the HMI begin to show the boot up LOGO. Press  and hold (>2S) again can power off the HMI.


If the "automatic shutdown" time is set to 5 minutes (it can be set in function "Auto Off"), the HMI will be automatically turned off within this set time, When it is not operated.



## 7.6.2 Selection of Support Levels

When HMI power on, briefly press  or  to select the assistance level (the number of assistance level needs to be adapted to controller), The lowest level is Level 0, the highest Level is 5. On the default is Level 1, "0" means no power assistance. The interface is as following:

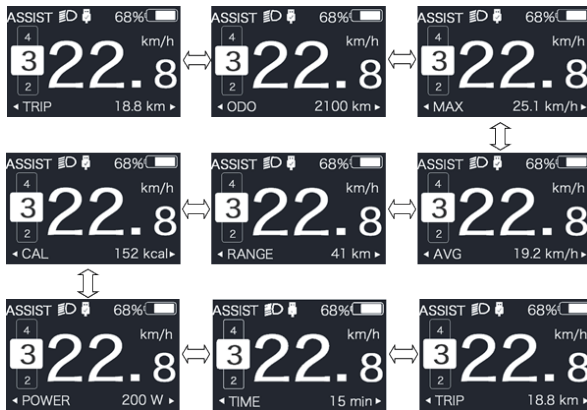


**Note:** if the controller has Boost function, can be selected this level with briefly press .

## 7.6.3 Selection Mode

Briefly press  button to view the different mode and information.

1. System with torque sensor, circularly show single trip distance (TRIP,km) → total distance (ODO,km) → maximum speed (MAX,km/h) → average speed (AVG,km/h) → remaining distance (RANGE,km) → energy consumption (CALORIES/CAL,KCal) → real-time output power (POWER,w) → riding time (TIME,min).
2. If system with a speed sensor, circularly show single trip distance (Trip,km) → total distance (ODO,km) → maximum speed (MAX,km/h) → average speed (AVG,km/h) → remaining distance (RANGE,km) → riding time (TIME,min).



### 7.6.4 Headlights / backlighting



Press and hold **+** (>2S) to turn on the backlight as well as headlight.

Press and hold **+** (>2S) again to turn off the backlight and the headlight. The brightness of backlight can be set in function "Brightness". (If the display is turned on in a dark environment, the display backlight/ headlight will be turned on automatically. If the display backlight/headlight are turned off manually, they also need to be turned on manually afterwards)





### 7.6.5 Walk Assistance


The Walk assistance can only be activated with a standing pedelec.

Activation: briefly press **+** button until this symbol  appears. Next hold down the **+** button whilst the  symbol is displayed. Now the Walk assistance will activate. The symbol will flash and the pedelec moves approx. 6 km/h. After releasing the **+** button the motor stops automatically and if no operations within 5s will automatically return to 0 level (as following).



### 7.6.6 BOOST Function

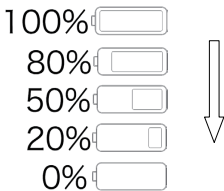
In riding, when speed is arrived 25km/h, can select in BOOST level, at this point press  button and hold (>2S), then the Pedelec enters in BOOST function. The indicator  on display will flash and the motor output with max. power. (BOOST function as following). If release the button or do any other operation will stop BOOST.

NOTE: If the speed is not arrived 25km/h, this function can not be implemented and press  button and hold (>2S) the HMI can powered off.



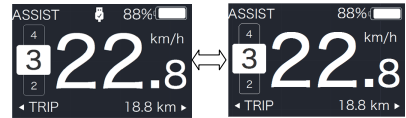
### 7.6.7 Battery Capacity Indication

The percentage of current battery capacity and total capacity is displayed from 100% to 0% according to the actual capacity (as shown in the figure below)



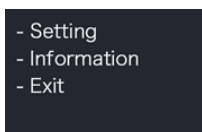
### 7.6.8 USB Charge Function

When the HMI is off, insert the USB device to the USB charging port on the HMI, and then turn on HMI to charge. When the HMI is on, can direct charge for USB device. The maximum charging voltage is 5V and the maximum charging current is 500mA.



# 7.7 SETTINGS

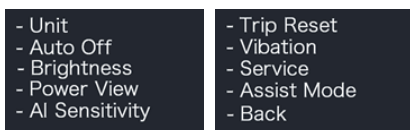
After the HMI powered on, press and hold **+** and **-** button (at the same time) to enter into the setting interface. Briefly press (<0.5S) **+** or **-** button to select "Setting", "Information" or "Exit", then briefly press (<0.5S) **⏻** button to confirm.



You can press and hold **+** and **-** button at any time, to return to the main screen.

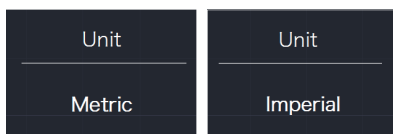
## 7.7.1 "Setting" interface

After the HMI powered on, press and hold **+** and **-** button to enter into the setting interface. Briefly press (<0.5S) **+** or **-** to select "Setting" and then briefly press **⏻** (<0.5S) to confirm.



### 7.7.1.1 "Unit" Selections in km/Miles

Briefly press **+** or **-** to select "Unit", and briefly press **⏻** to enter into the item. Then choose between "Metric" (kilometer) or "Imperial" (Miles) with the **+** or **-** button. Once you have chosen your desired selection, press the **⏻** button (<0.5S) to save and exit back to the "Setting" interface.



### 7.7.1.2 "Auto Off" Set automatic Off time

Briefly press **+** or **-** to select "Auto Off", and briefly press **⏻** to enter into the item. Then select the automatic Off time as "OFF" / "9" / "8" / "7" / "6" / "5" / "4" / "3" / "2" / "1" with the **+** or **-** button. Once you have chosen your desired selection, press the **⏻** button (<0.5S) to save and exit back to the "Setting" interface.

Notice: "OFF" means this function is off, the unit is minute.

Auto Off	Auto Off	Auto Off
9	1	OFF

### 7.7.1.3 "Brightness" Display brightness

Briefly press **+** or **-** to select "Brightness", and briefly press **⏻** to enter into the item. Then select the percentage as "100%" / "75%" / "50%" / "30%" / "10%" with the **+** or **-** button. Once you have chosen your desired selection, press the **⏻** button (<0.5S) to save and exit back to the "Setting" interface.


Notice: "10%" is the weakest brightness and "100%" is the strongest brightness.

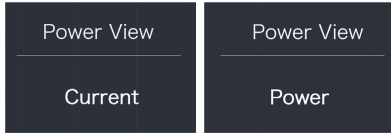
Brightness	Brightness	Brightness
100%	75%	50%
Brightness	Brightness	
30%	10%	

### 7.7.1.4 "Power View" Set output display mode







Briefly press **+** or **-** to select "Power View", and briefly press **⏻** to enter into the item. Then select the output display mode as "Power" / "Current" with the **+** or **-** button.



Once you have chosen your desired selection, press the  button (<0.5S) to save and exit back to the "Setting" interface.









### 7.7.1.5 "AL Sensitivity" Set light sensitivity

Briefly press  or  to select "AL Sensitivity", and briefly press  to enter into the item. Then select the level of the light sensitivity as "0"/"1"/"2"/"3"/"4"/"5" with the  or  button. Once you have chosen your desired selection, press the  button (<0.5S) to save and exit back to the "Setting" interface.

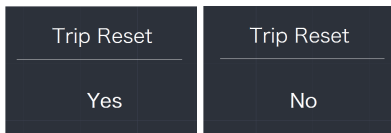
Notice: "0" means light sensor is off. Level 1 is the weakest sensitivity and level 5 is the strongest sensitivity.









### 7.7.1.6 "TRIP Reset" Set reset function for single-trip

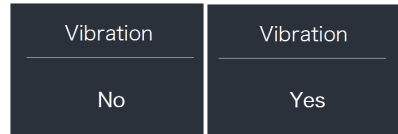
Briefly press  or  to select "AL Sensitivity", and briefly press  to enter into the item. Then select "NO"/"YES" ("YES"- to clear, "NO"-no operation) with the  or  button. Once you have chosen your desired selection, press the  button (<0.5S) to save and exit back to the "Setting" interface.

Notice: The riding time(TIME), average speed (AVG) and maximum speed (MAXS) will be reset simultaneously when you reset TRIP.









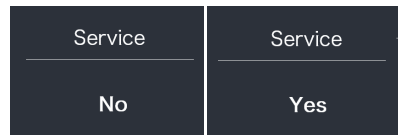
### 7.7.1.7 "Vibration" Set the button vibration

Briefly press  or  to select "Vibration", and briefly press  to enter into the item. Then select "NO"/"YES" ("YES" means vibration button is on; "NO" means vibration button is off) with the  or  button. Once you have chosen your desired selection, press the  button (<0.5S) to save and exit back to the "Setting" interface.









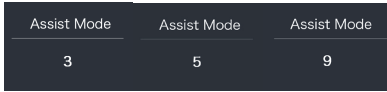
### 7.7.1.8 "Service" Turn on/off the Service indication

Briefly press  or  to select "Service", and briefly press  to enter into the item. Then select "NO"/"YES" ("YES" means Service indication is on; "NO" means Service indication is off) with the  or  button. Once you have chosen your desired selection, press the  button (<0.5S) to save and exit back to the "Setting" interface.



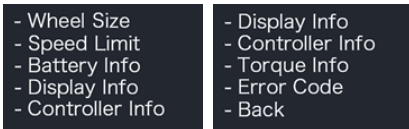
### 7.7.1.9 "Assist Mode"---set the assist level

Briefly press  or  to select "Assist Mode", and briefly press  to enter into the item. Then select the assistance level as "3"/"5"/"9" with the  or  button. Once you have chosen your desired selection, press the  button (<0.5S) to save and exit back to the "Setting" interface.



### 7.7.2 "Information"

After the HMI powered on, press and hold **+** and **-** to enter into the setting function. Briefly press (<0.5S) **+** or **-** to select "Information" and then briefly press **⏻** (<0.5S) to confirm.

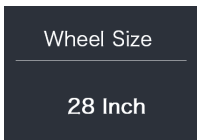


**Note:** All information here cannot be changed, it is to be viewed only.

#### 7.7.2.1 "Wheel Size"

Briefly press **+** or **-** to select " Wheel Size", and then briefly press **⏻** to view the wheel size default.

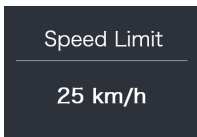
Press the **⏻** button (<0.5S) to exit back to the "Information" interface.



#### 7.7.2.2 "Speed Limit"

Briefly press **+** or **-** to select " Speed Limit", and then briefly press **⏻** to view the speed limit default.

Press the **⏻** button (<0.5S) to exit back to the "Information" interface.

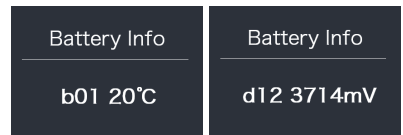


### 7.7.2.3 "Battery Info"

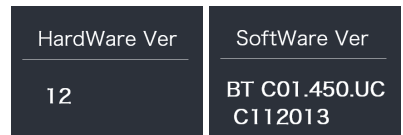
Briefly press **+** or **-** to select "Battery Info", and briefly press **⏻** to enter, then briefly press **+** or **-** to view the battery data (b01 → b04 → b06 → b07 → b08 → b09 → b10 → b11 → b12 → b13 → d00 → d01 → d02 → ... → dn → Hardware Ver → Software Ver).

Press the **⏻** button (<0.5S) to exit back to the "Information" interface.

Notice: If the battery doesn't have communication function, you won't see any data from battery.



View the battery information



View the hardware and software version of battery

Code	Code Definition	Unit
b01	Current temperature	°C
b04	Battery voltage	mV
b06	Current	mA
b07	Remaining battery capacity	mAh
b08	Battery capacity of Full charged	mAh
b09	Relative SOC	%

Code	Code Definition	Unit
b10	Absolute SOC	%
b11	Cycle Times	times
b12	Max Uncharge Time	Hour
b13	Last Uncharge Time	Hour
d00	The number of cell	
d01	Voltage Cell 1	mV
d02	Voltage Cell 2	mV
dn	Voltage Cell n	mV
Hardware Ver	Battery Hardware Version	
Software Ver	Battery Software Version	

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

#### 7.7.2.4 "Display Info"

Briefly press **+** or **-** to select "Display Info", and briefly press **⏻** to enter, briefly press **+** or **-** to view "Hardware Ver" or "Software Ver".

Press the **⏻** button (<0.5S) to exit back to the "Information" interface.

HardWare Ver	SoftWare Ver
DP C240.C 2.0	DPC240CI1020 2.0

#### 7.7.2.5 "Ctrl Info"

Briefly press **+** or **-** to select "Ctrl Info", and briefly press **⏻** to enter, briefly press **+** or **-** to view "Hardware Ver" or "Software Ver".

Press the **⏻** button (<0.5S) to exit back to the "Information" interface.

HardWare Ver	SoftWare Ver
X10B.350.FC 1.0	CRX10BC4313 E101003.0

#### 7.7.2.6 "Torque Info"

Briefly press **+** or **-** to select "Torque Info", and briefly press **⏻** to enter, briefly press **+** or **-** to view "Hardware Ver" or "Software Ver".

Press the **⏻** button (<0.5S) to exit back to the "Information" interface.

HardWare Ver	SoftWare Ver
SR PA212.32. ST.C 1.0	SRPA212CF1 0101.0

NOTE: If your Pedelec doesn't have torque sensor, "--" will be displayed.

#### 7.7.2.7 "Error Code"

Briefly press **+** or **-** to select "Error Code", and then briefly press **⏻** to enter, briefly press **+** or **-** to view message of error for last ten times by "E-Code00" to "E-Code09". Press the **⏻** button (<0.5S) to exit back to the "Information" interface.

NOTE: 00 means no error exist.

Error Code	Error
E-Code00 30	30

# 7.8 ERROR CODE DEFINITION



The HMI can show the faults of Pedelec. When a fault is detected, one of the following error codes will be indicated too.

**Note:** Please read carefully the description of the error code. When the error code appears, please first restart the system. If the problem is not eliminated, please contact your dealer or technical personnel.

Error	Declaration	Troubleshooting
04	The throttle is not back in its correct position.	Check the throttle can adjust back into its correct position, if the situation does not improve, please change to a new throttle.(only with this function)
05	The throttle has fault.	1. Check the connector of throttle whether they are correctly connected. 2. Disconnect the throttle, If the problem still occurs, please contact your retailer. (only with this function)
07	Overvoltage protection	1. Remove the battery. 2. Re-Insert the battery. 3. If the problem persists, please contact your retailer.
08	Error with the hall sensor signal inside the motor	Please contact your retailer.
09	Error with the Engine phase's	Please contact your retailer.
10	The temperature inside the engine has reached its maximum protection value	1. Turn off the system and allow the Pedelec to cool down. 2. If the problem persists, please contact your retailer.
11	The temperature sensor inside the motor has an error	Please contact your retailer.
12	Error with the current sensor in the controller	Please contact your retailer.
13	Error with the temperature sensor inside of the battery	Please contact your retailer.

Error	Declaration	Troubleshooting
14	The protection temperature inside the controller has reached its maximum protection value	<ol style="list-style-type: none"> <li>1. Turn off the system and let the pedelec cool down.</li> <li>2. If the problem persists, please contact your retailer.</li> </ol>
15	Error with the temperature sensor inside the controller	Please contact your retailer.
21	Speed sensor Error	<ol style="list-style-type: none"> <li>1. Restart the system</li> <li>2. Check that the magnet attached to the spoke is aligned with the speed sensor and that the distance is between 10 mm and 20 mm.</li> <li>3. Check that the speed sensor connector is connected correctly.</li> <li>4. If the error persists, please contact your retailer.</li> </ol>
25	Torque signal Error	<ol style="list-style-type: none"> <li>1. Check that all connections are connected correctly.</li> <li>2. If the error persists, please contact your retailer.</li> </ol>
26	Speed signal of the torque sensor has an error	<ol style="list-style-type: none"> <li>1. Check the connector from the speed sensor to make sure it is connected correctly.</li> <li>2. Check the speed sensor for signs of damage.</li> <li>3. If the problem persists, please contact your retailer.</li> </ol>
27	Overcurrent from controller	Please contact your retailer.
30	Communication problem	<ol style="list-style-type: none"> <li>1. Check all connections are correctly connected.</li> <li>2. If the error persists, please contact your retailer.</li> </ol>
33	Brake signal has an error (If brake sensors are fitted)	<ol style="list-style-type: none"> <li>1. Check all connectors.</li> <li>2. If the error continues to occur, please contact your retailer.</li> </ol>

Error	Declaration	Troubleshooting
35	Detection circuit for 15V has an error	Please contact your retailer.
36	Detection circuit on the keypad has an error	Please contact your retailer.
37	WDT circuit is faulty	Please contact your retailer.
41	Total voltage from the battery is too high	Please contact your retailer.
42	Total voltage from the battery is too low	Please contact your retailer.
43	Total power from the battery cells is too high	Please contact your retailer.
44	Voltage of the single cell is too high	Please contact your retailer.
45	Temperature from the battery is too high	Please contact your retailer.
46	The temperature of the battery is too low	Please contact your retailer.
47	SOC of the battery is too high	Please contact your retailer.
48	SOC of the battery is too low	Please contact your retailer.
61	Switching detection defect	Please contact your retailer. (only with this function)
62	Electronic derailleur cannot release	Please contact your retailer. (only with this function)
71	Electronic lock is jammed	Please contact your retailer. (only with this function)
81	Bluetooth module has an error	Please contact your retailer. (only with this function)