Tianjin UKriver Science and Technology Co., Ltd

Production Specification

Customer： _____

Customer Audit： _____

Name： Central Installed Negative LCD

Model： UKS2

Post Date： _____

Approver： _____

1. Production Name

Central Installed Negative LCD, model UKS2

2. Supplier

Tianjin UKriver Science and Technology Co., Ltd

3. Electrical Parameters

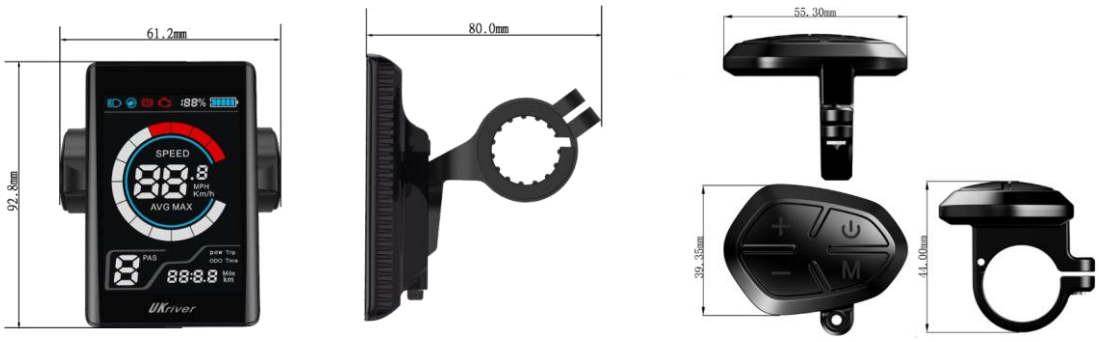
- 24V/36V/48V power supply
- Rated power 1W
- Max power: 1W
- Power off leak current<1uA
- Controller supply work current: 100 mA ~ 300mA
- Operating temperature -20～70℃
- Storage temperature -30～80℃

4. Product Appearance and Material

ABS product shell

LCD transparent window is made of imported high strength Acrylic

Product holder material is glass fiber mixed with nylon.

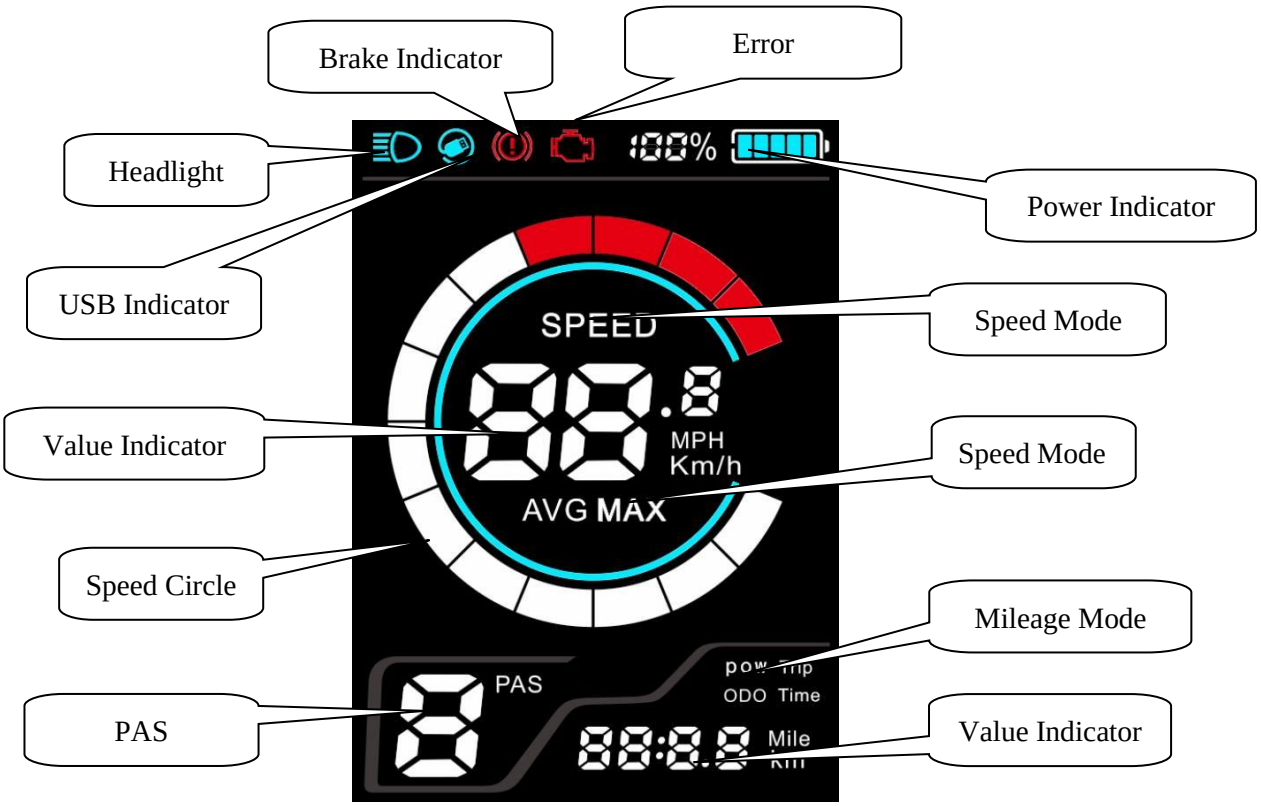


5. Product Introduction

- **Speed indicator:** “RT SPEED”, “MAX SPEED”, “AVG SPEED”

- **Unit system:** Users can either change it to metric or imperial.
- **Intelligent battery indicator:** Provide stable battery reminder through optimization algorithm, power is not affected by motor start-stop fluctuations, if the system supports battery communication, it can display accurate percentage power
- **Backlight brightness:** It has an option from 1 to 5.
- **Assist level:** can be set according to user needs, like 3/5/9/6
- **Mileage indicator:** "ODO", "Trip", "Time"
- **Output power indicator:** It can display real-time output power of the battery
- Error code indicator.
- **Walk mode:** support 6km walk mode
- **Speed measuring magnets number adjustment:** numbers can be set according to the actual requirements of customers
- **PAS magnets number adjustment:** numbers can be set according to the actual requirements of customers
- **Endurance mileage indication (requires battery to support communication)**
- **Battery indicator (requires battery to support communication)**
- **USB charging port, can provide rated charging for mobile devices, current:** 500mA / 5V
- Software can be upgraded by UART. For detailed information, please refer to related documents.
- **Parameter setting:** parameters can be set, including assist levels, wheel size, voltage, speed limit, limit current, etc. Please refer to the description of parameter setting operation steps.

6. Screen Instructions



- **Speed indicator:** AVG SPEED, MAX SPEED, RT SPEED
- **Speed mode:** It is displayed as Km/h or MPH
- **Power Indicator:** Provide stable battery reminder through optimization algorithm, power is not affected by motor start-stop fluctuations, if the system supports battery communication, it can display accurate percentage power
- **Headlight indicator:** The icon shows up on the screen when the headlights are on
- **Brake Indicator:** When the brake is power off, the icon shows up on the screen.
- **Assist level:** It has an option from 0 to 9. 0 is for neutral. When the bike goes into walk mode, the screen displays P.
- When an error is detected, an icon will be displayed on the screen.
- **Mileage mode:** “TRIP”, “ODO”, “TIME”.
- **Mileage display:** Display mileage information or time information according to the set mode.
- The icon means USB function has been enabled.

7. Function Description

Button description as follow:

7.1 Power On/Off

Press and hold **Power Button** to turn on or turn off the display. The Display will automatically shut down when there is no operation& ride for X minutes（X could be 0~9.

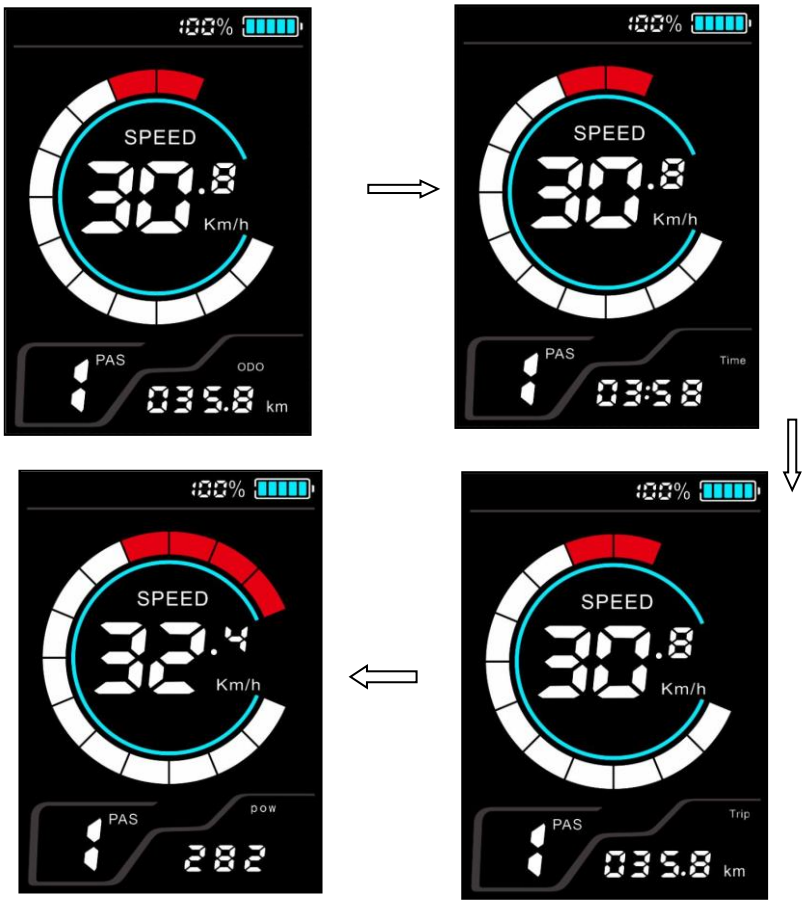
7.2 PAS Level

In the manual shift mode, short press **Plus Button** or **Minus Button** to switch the assist level and change the assist ratio. Top assist level is 9. The default is 1st when the display is turned on, and 0 is the neutral assist.

0 3 9

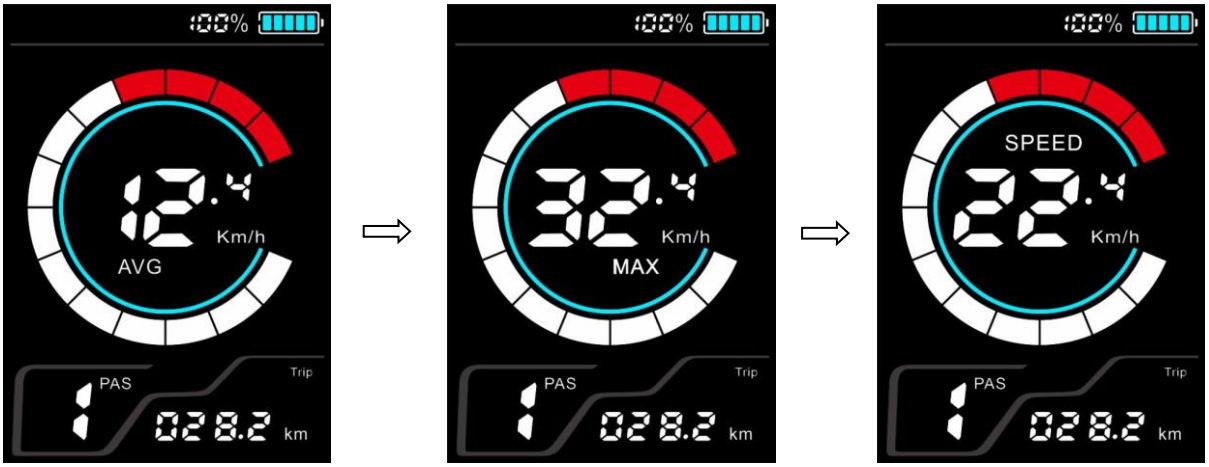
7.3 Mileage Mode Switch

When power on, short-press **Power Button** to switch the mileage display mode. And the following information is displayed cyclically: riding time (Time) → accumulated mileage (ODO) → power information (Pow) → single mileage (Trip).



7.4 Speed Mode Switch

Press the **Mode Button** to switch the speed display mode, and the following information is displayed cyclically: real time speed (RT SPEED) → average speed (AVG SPEED) → maximum speed (MAX SPEED).

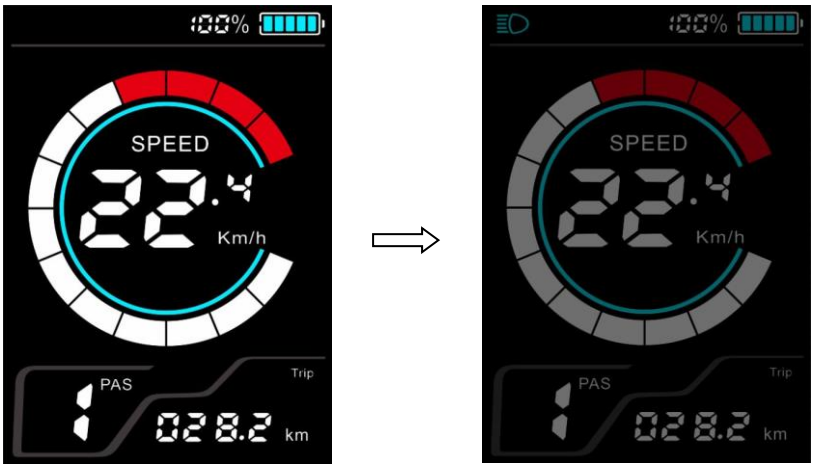


Average Speed（AVG） Max Speed（MAX） Real time speed(SPEED）

*If there is no key operation for 5 seconds, the system will automatically return to the real-time speed display state.

7.5 Headlight / Backlight Switch

Press and hold **Plus Button** (1 second), the brightness of the meter's backlight decreases, and the lights are turned on (requires controller support). Press and hold **Plus Button** again (1 second), the display backlight will return to its original brightness, and the lights will be turned off at the same time.

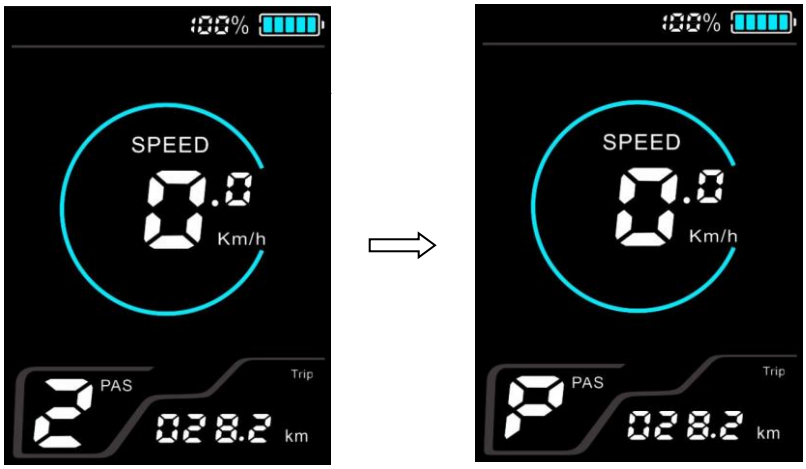


Headlight off Headlight on

* Backlight brightness can be adjusted in 5 levels. Users can set it according to their needs.

7.6 Walk Mode(6km walk assist）

Press and hold MINUS button longer than 1 second to enter walk mode. And the screen show P. When release the button, it will exit the mode.

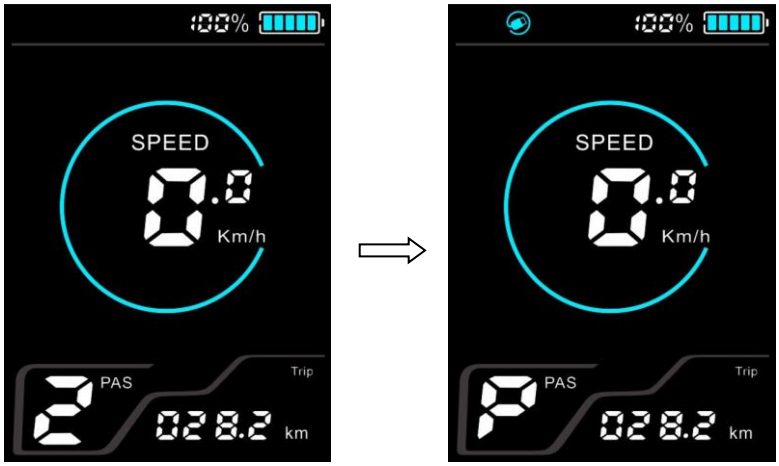


Walk Mode Off Walk Mode On

*Some controllers may not support this function

7.7 USB Function

Hold on M button longer than 1 second, USB charger is on. Hold on M button longer than 1 second again, USB charger is off. Charging parameters: DC 5V 500mA.



USB ON USB OFF

7.8 Data Zero Out

To zero the data out, including AVG Speed, MAX Speed, Trip and Time, hold PLUS and MINUS buttons for a few seconds.

*These temporary data will not be erased when the display or the bike is powered off.

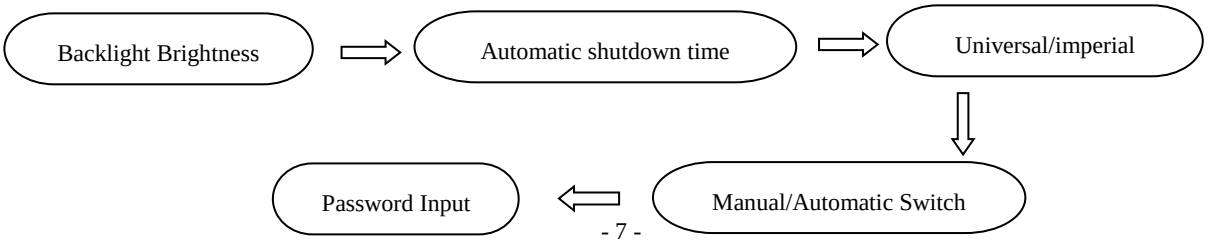
8. MENU Parameter Setting

Press the M button twice within 0.3S, it will enter the menu. Press M button twice again to exist (time interval must be within 0.3S).

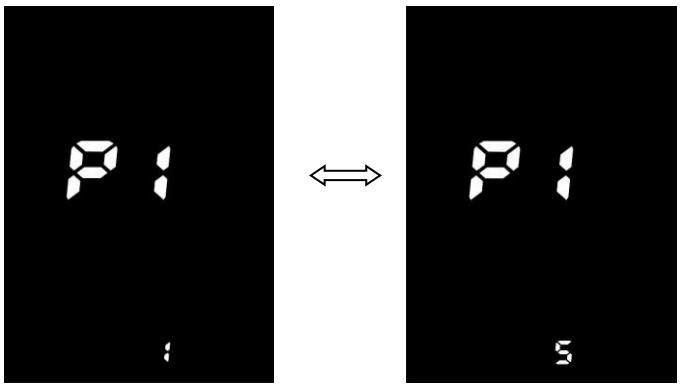
Press M Button to select the desired adjustment item and the item starts flashing. Click Plus Button and Minus Button to adjust the parameters. Press Power Button to save and switch, and press Mode Button twice quickly to exit the menu.

*In the parameter setting state, if no key operation is performed for 30 seconds, the meter automatically exits the setting state. In the riding state (the speed indication is not 0), you cannot enter the setting interface. If you start cycling in the setting interface (the speed indicator is not 0), you will automatically exit the setting.

8.1 The display setting items are as follows:

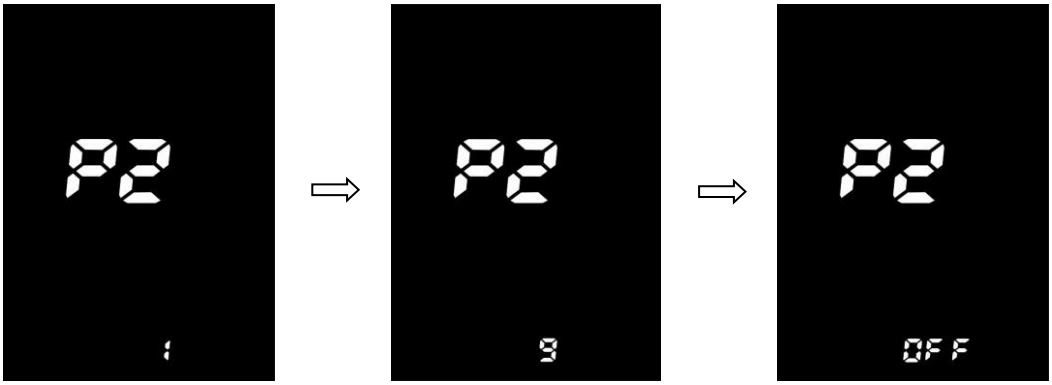


- **P1: Backlight Brightness:** Press Plus Button and Minus Button to select brightness levels. It has five options from 1 to 5.



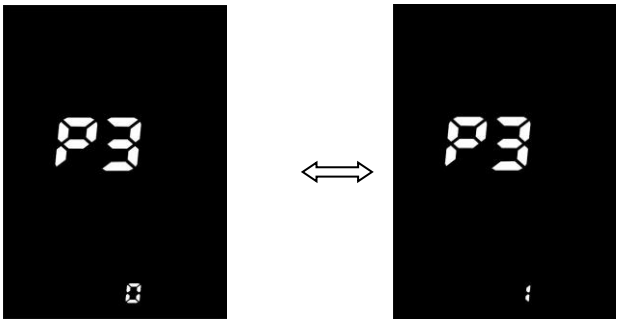
Backlight Brightness Adjust Interface

- **P2: Auto off time:** Press Plus Button and Minus Button to adjust auto off time.1 ~ 9 minutes represents the automatic shutdown time. Or you can click OFF to cancel the auto off function.



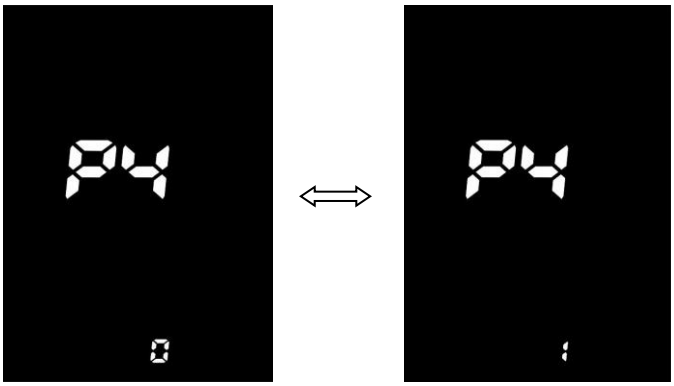
Automatic Shutdown time Adjust Interface

- **P3: Universal/ Imperial:** Press Plus Button and Minus Button to switch km / h or MPH. 0 stands for universal system and 1 stands for imperial system.



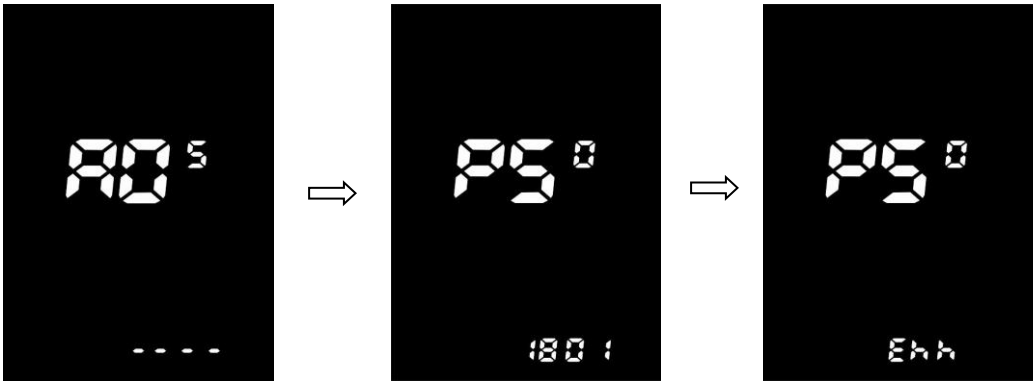
Universal/ imperial Switch Interface

- **P4: Manual / Automatic Switching:** Press Plus Button and Minus Button to select manual / automatic switching. 0 means manual, 1 means automatic.



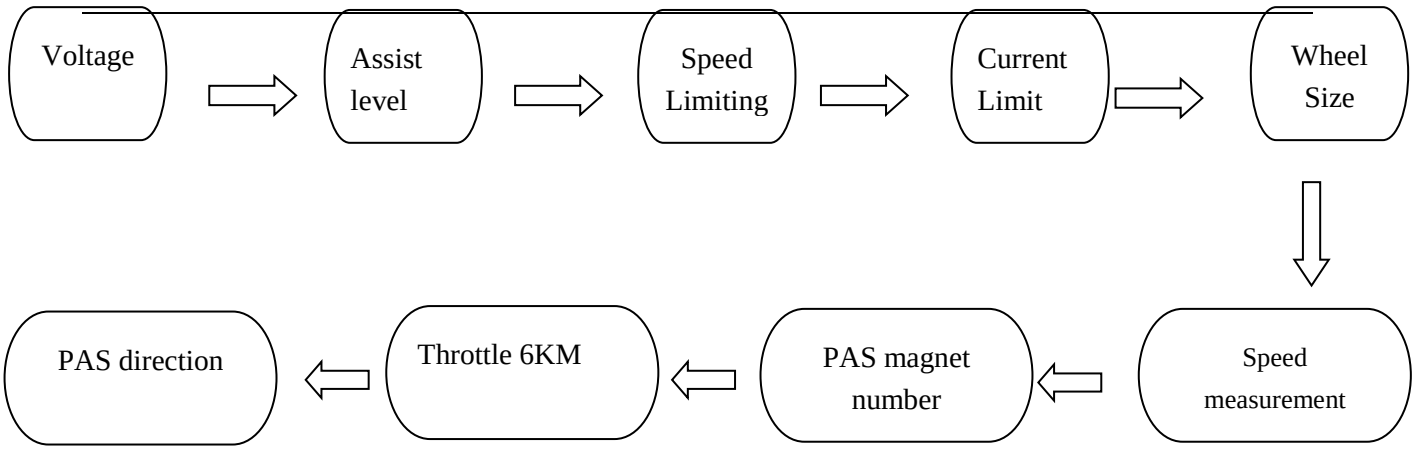
Manual / Automatic Switch Interface

- **ADS: Password input:** Press Plus Button and Minus Button to set the password value (0 ~ 9) and press M Button to switch the password item. The default password "1801". Press M Button to confirm the entry after the password adjustment is completed. If the password is wrong, “Err” will be displayed, and the display will automatically return to the real-time speed /single mileage display state. If the password is correct, enter the advanced settings sub-item.

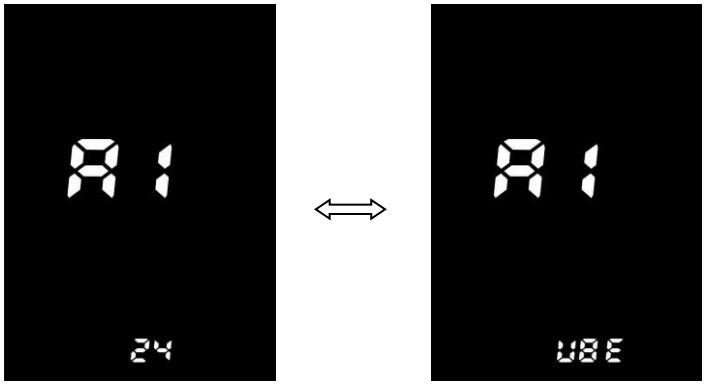


Password Input Surface

8.2 The advanced setting items are as follows：

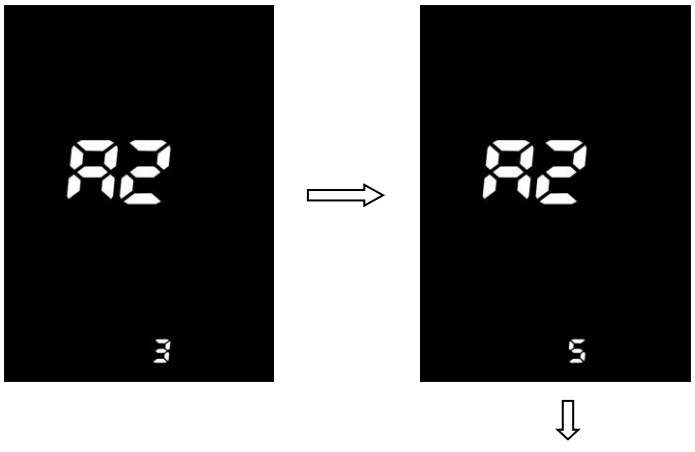


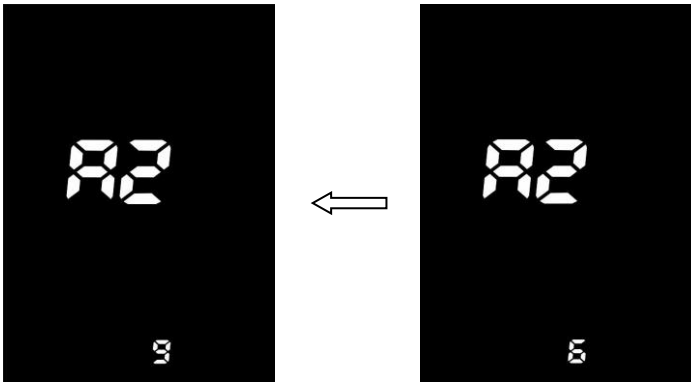
- **A1: Voltage Choices：** Press **Plus Button** and **Minus Button** to switch between 24V / 36V / 48V / 60V / 72V / UBE. UBE stands for user-defined voltage (the voltage value can be set by a computer program. For details, please refer to the computer parameter setting instruction file).



Voltage Choices Interface

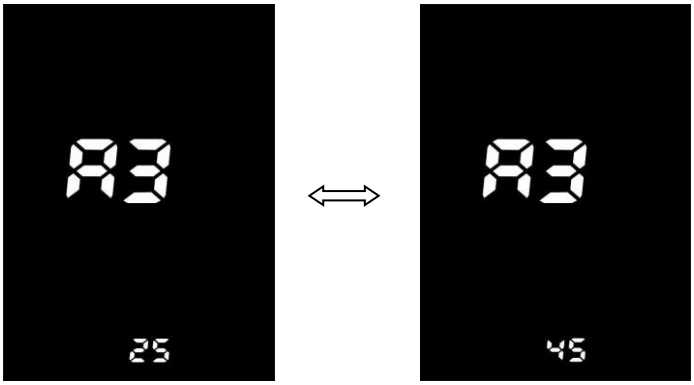
- **A2: Assist level selection:** Press Plus Button and Minus Button to set the assist level 3/5/9/6. 1 is 3-level system; 2 means 5- level system; 3 means 6- level system; 4 means 9- level system.





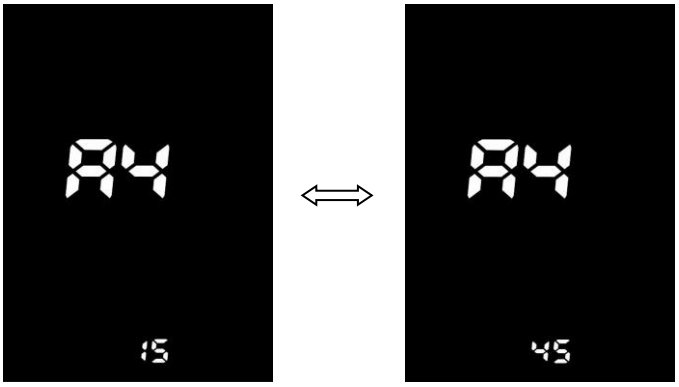
Assist level selection Interface

- **A3: Speed Limit Adjustment:** Press **Plus Button** and **Minus Button** to adjust the speed limit value. The default is 25km / h. Users can set the speed limit value according to their needs. After the adjustment is completed, press **Power Button** to confirm and exit.



Speed Limiting Adjustment Interface

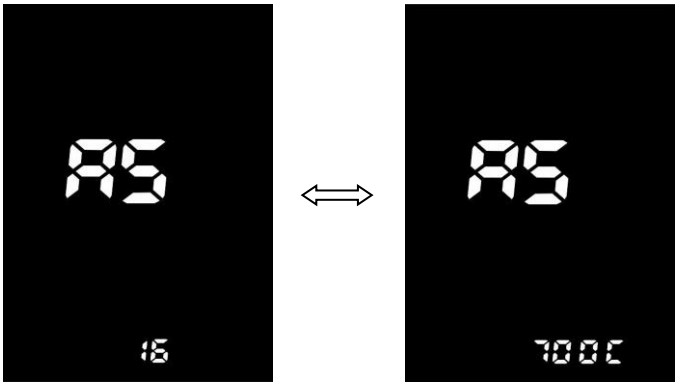
- **Current Limiting Adjustment:** item A4, Press **Plus Button** and **Minus Button** to adjust the current limit value. The default is 15A. Users can set the current limit value according to their needs. After the adjustment is completed, press **Power Button** to confirm and exit.



Currant Limiting Adjusting Interface

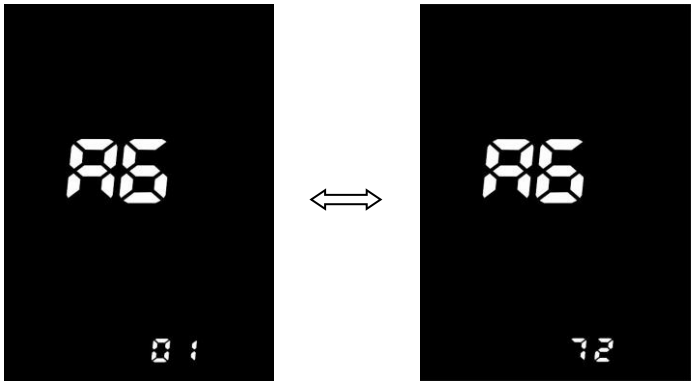
*Speed and current are restricted by the motor and controller at the same time and may not be able to reach the set value.

- **A5: Wheel Diameter/size Selection:** Press **Plus Button** and **Minus Button** to switch the wheel size 16/18/20/22/24/26/27 / 700C / 28/29/30/31/32. Select the corresponding wheel diameter and the unit is inch. Incorrect selection of wheel diameter will cause abnormal speed.



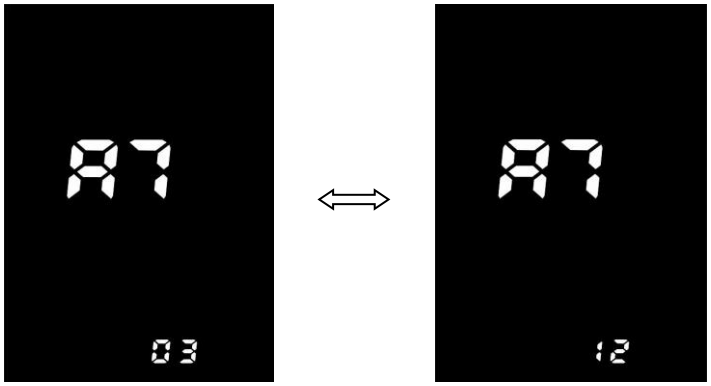
Wheel Diameter Selection Interface

- **A6: Number of speed measuring magnets:** Press Plus Button and Minus Button to adjust the number of speed measuring magnets from 1 to 72. The user can set the number of speed measuring magnets as needed. Then press Power Button to confirm and exit.



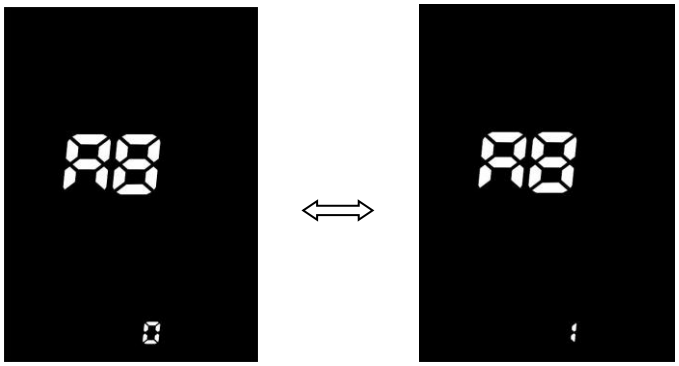
Number of speed measuring magnets Selection Interface

- **A7: Number of PAS magnets:** Press the Plus Button and Minus Button to boost the number of booster magnets 3 ~ 15. The user can set the number of PAS magnets as needed.Then press Power Button to confirm and exit.



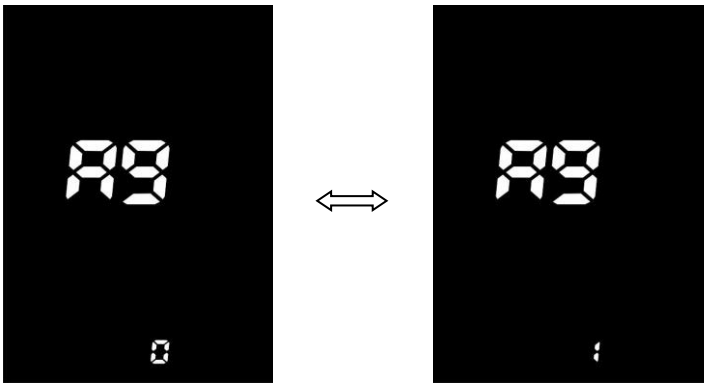
Number of PAS magnets Selection Interface

✧ **A8:** Throttle 6KM: press Plus Button and Minus Button to select the 6km function.



Throttle 6KM Adjust Interface

✧ **A9: PAS orientation:** Press **Plus Button** and **Minus Button** to select the direction of the power sensor.



PAS orientation Adjustment Interface

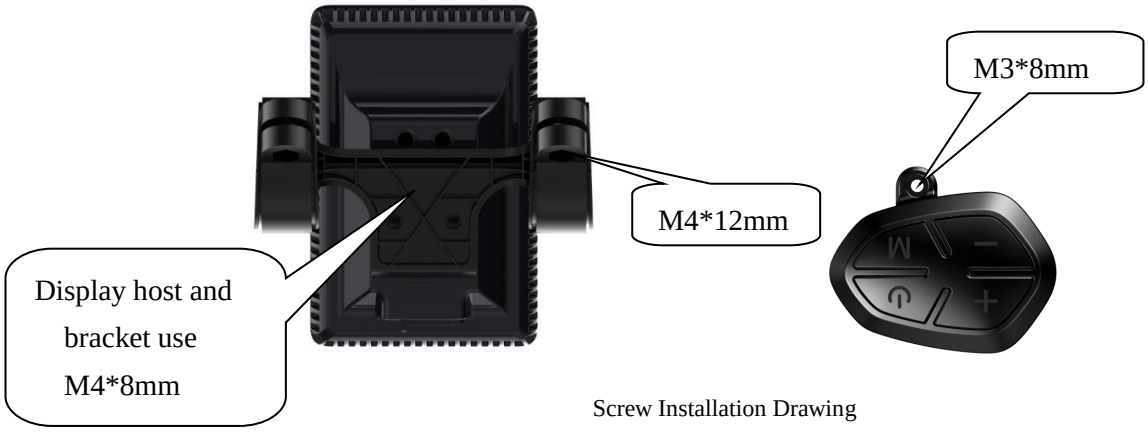
9. Error Code Definition

UKS2 can provide error indications for vehicle faults. When a fault is detected, the LCD screen displays , and the error code “n” and error description are displayed at the speed display position. Please refer to the error code comparison table to determine the corresponding fault.

Error Warning Interface

10. Installation Instruction

10.1 Please refer to the following figure for the instrument screw assembly. Pay attention to the screw tightening torque. Instrument damage caused by excessive torque is not covered by the warranty.



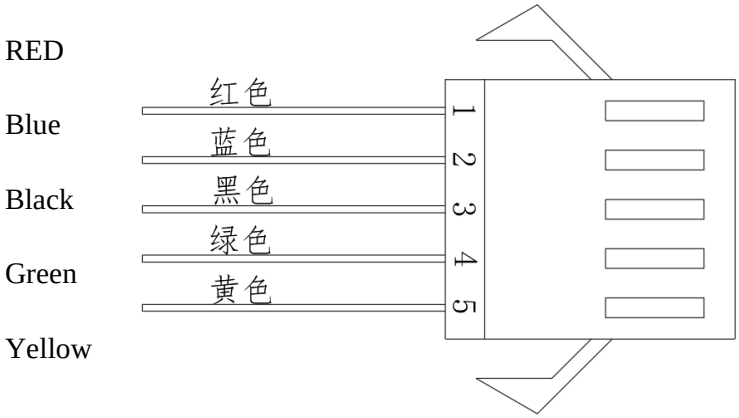
Screw Installation Drawing

10.2 Clips are suitable for three handlebar sizes, 31.8mm, 25.4mm, and 22.2mm. Customers can choose according to actual needs.

And 25.4mm and 22.2mm need to be matched with corresponding conversion.

11.Cable Outlet Definition

The color of the five-core waterproof line is <red, blue, black, green, and yellow>. The order is defined as follows:



1、 RED：Power+ (Battery power 24V/36V/48V)

2、 Blue：Controller lock cable

3、 Black：GND

4、 Green：RXD display input signal, display receives signal from controller

5、 Yellow：TXD display output signal, display sends signal to controller