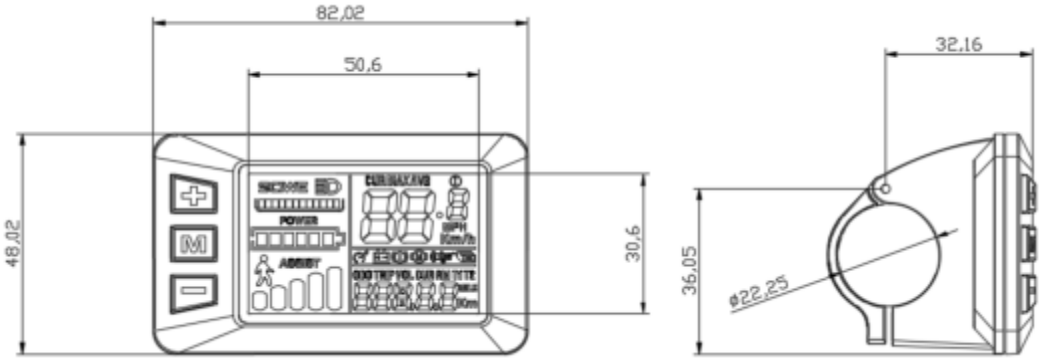
LCD DISPLAY G51
USER'S MANUAL

1. Shell's Size and Material

The shell's material is ABS. LCD screen is made of imported high hardness acrylic, and the hardness is equal to the tempered glass.



2. Working Voltage and Mode of Connection

2.1 Working Voltage: DC24V 36V 48V (set by the meter), other voltage could be customized.

2.2 Mode of Connection:

Connector to Controller Connector from Display Connector to Display

1. Red Line(VCC): Power Positive
2. Blue Line(K): Electric door lock of Controller
3. Black Line(GND): Power Negative
4. Green Line(RX): Receiving communication
5. Yellow Line(TX): Sending communication

Brown Line (DD): Head light control's Positive

White Line (GND): Head light control's Negative

Extended Functions: PWM Assistance grades control, Independent external speed sensor

Note: Part of lines are water-proof, so colors of lines could not be seen.

3. Functions

3.1 LCD Display

Speed indicator, PAS grades indicator, Battery indicator, Error indicator, Single Trip Distance and Total Distance, Cruise Control,

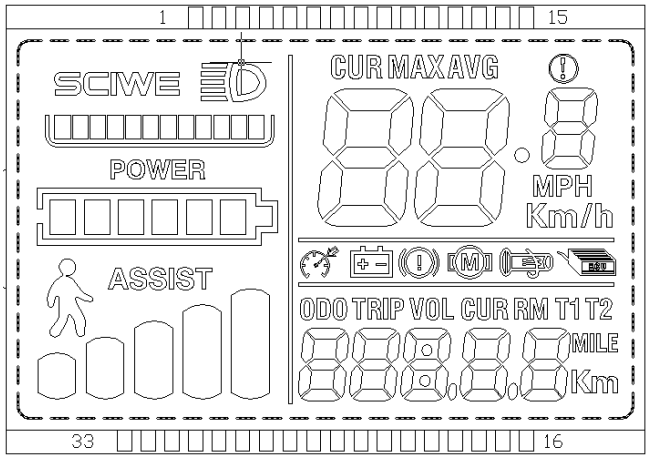
Brake Instruction, Headlight indicator.

3.2 Parameters Setting

Power on/off, Headlight on/off, 6KM/H Cruise control, Real-time Cruise control, Wheel size, PAS mode setting(1-5), Max speed setting, Auto stand-by and sleep mode setting, Background luminance setting, Ways of Start, Ways of Drive, Working voltage setting, and so on.

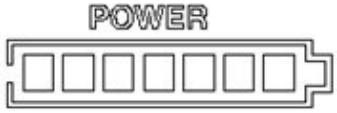
3.3 Communication Protocol: UART

4. All contents on the screen



4.1 Headlight 

4.2 Current Status  This function need the support of controller's software.

4.3 Power Status 

4.4 Multifunction Area 

Total Distance(ODO), Single Trip Distance(TRIP), Voltage(VOLT), Current(CURRENT), Remain Mileage(RM)(Need the support of battery's protective plate software), Runtime(TIME)

4.5 Speed Area 

Average Speed, Max Speed, AVG

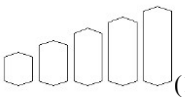
Unit: MPH, KM/H

The display would figure out real speed according to Wheel Size and Data (Need set the magnet of motor).

4.6 Error Status 

Motor's error  , Throttle's error  , Controller error  , Power Brake  , Under Voltage 

4.7 PAS Status 

PAS Status  (1-5 level), Cruise marks 

4.8 Error Code

Error Code	Indications	Remark
0	Normal	
1	Reserved	
2	Brake	
3	PAS Sensor Failure	Not Realized
4	6km/h Cruise	
5	Real-Time Cruise	
6	Low Battery	
7	Motor Failure	
8	Throttle Failure	
9	Controller Failure	
10	Communications Receiving Failure	
11	Communications Sending Failure	
12	BMS Communications Failure	
13	Light Failure	

5. Button Introductions

5. 1 During riding, need change PAS/Speed grades, shortly press  , 

During riding, need change data in Multi-function Area, shortly press 

5.2 ;

Long press 

, could switch status between MODE and ON/OFF;

Long press as a compound button, is mainly used for parameter setting, which could reduce misoperation due to complicated operation.

(No compound button with short-time press, because it's difficult to operate.)

5.3 Specific operation explanations

5.3.1 Change PAS grade

Suppose it's PAS mode now,

shortly press  , PAS grade +1

shortly press  , PAS grade -1

5.3.2 Shift the speed display

Long press

 , to shift the way of speed display

5.3.3 ON/OFF 6KM/H cruising, ON/OFF Headlight, Reset ODO

When e-bike stops, long press  to enter 6KM/H cruising mode. During the riding, long press  to enter Real-time Cruising mode. If the e-bike is on Cruising mode, long press  to exit;

Long press  to turn on/off Headlight;

5.3.4 ON/OFF the screen

Long press  to turn ON/OFF the screen.

5.3.5 Change data in multi-function Area

Shortly press  to change data.

5.3.6 Parameters setting

Long press  to start setting parameters, such as wheel size(inch), background luminance… (Refer to P00-P19)

On the setting interface, shortly press  , or  to plus/minus value. Parameters would be shining after modifying, choose the ones you prefer,

a. Long press  to save the value, the shining would stop.

b. Shortly press  to shift to the next parameter, and to save current values at the same time.

c. Press  to exit setting parameters and to save values. If not press these buttons, it would exit and save parameters modified automatically 10s later.

6. Parameters setting

P00: Restore Factory Settings Set this value to 10 and switch to next setting,the display items will show all contents and restore original factory settings.

P01 Background luminance. 1 is the darkest, 3 is the brightest

P02 Unit of the mileage. 0 is KM, 1 is MILE

P03 Voltage grades. 24V, 36V, 48V. The original voltage is 36V.

P04 Sleep time. 0 never sleep, other numbers stand for the sleep time (1-60 min).

P05 PAS grades.

0, 3 grades mode: 1 grade 2V, 2 grade 3V, 3 grade 4V

1, 5 grades mode: 1 grade 2V, 2 grade 2.5V, 3 grade 3V, 4 grade 3.5V, 5 grade 4V

P06 Wheel size. Unit: inch. Precision: 0.1

P07 Speed measuring magnet. Range: 1-100

P08 Speed limit. Range: 0-50km/h, 50 means without limit

No-Communication Status (controlled by the meter): when the real speed is over the ones we set, the meter would shut off PWM output; when less than the speed we set, the meter would turn on PWM output automatically, the driving speed would be ±1km/h; (Speed limit is for PAS, not for Throttle)

Communication Status (controlled by the controller): The driving speed keeps same with the ones we set. Random error: ±1km/h. (Speed limit is for both PAS and Throttle)

Notes: These data are based on KM. When changing KM to Mile, the speed value on the screen would convert to correct Miles automatically, but if you do not change the setting of speed limit from KM to Mile, it would be different from the real speed limit in Mile.

P09 Zero start & Non-zero Start. 0 is Zero Start, 1 is Non-zero Start

P10 Driving mode.

0: driven by PAS. Throttle is useless at this time.

1: driven by Throttle. PAS is useless at this time.

2: driven by PAS & Throttle. Throttle is useless at Zero Start status.

P11 PAS sensitivity. Range: 1-24

P12 PAS start strength. Range: 0-5

P13 PAS magnet type: 5, 8, and 12.

P14 The Current-limiting of Controller. default is 12A. Range:1-20A

P15 Unspecified

P16 Reset ODO. Long press  for 5s, ODO could be reset.

P17: (Customer Designated) Auto Cruise Option.

0: No Auto-cruise

1: Auto-Cruise On. Trigger time of auto-cruise is decided by the controller.

P18: (K5S, APT Protocol Bound) Throttle Level Option.

0: No throttle level. 1: Has throttle levels.

P19: (K5S Protocol Bound) 6km/h Cruise Throttle Definition.

0: Throttle has no 6km/h cruise definition. 1: Throttle has 6km/h cruise definition.

Note: Due to product upgrade, the product you purchased may be slightly different from the descriptions in this user manual, and this won't affect normal usage.