

TC635-Color Display Manual

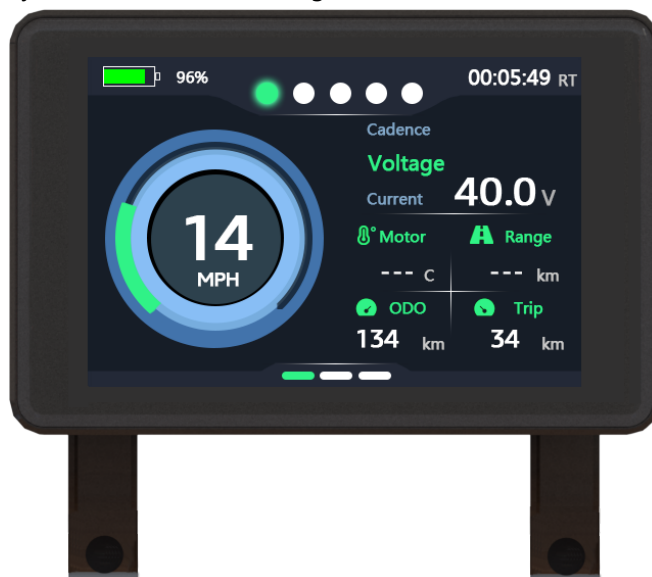
Product: Smart Display
Type: TC635

Content

1. Introduction.....	1
2. Manual Guide	2
1). Appearance.....	2
2). Specifications	2
3). Functions	2
4). Assembly	3
5). Display Area.....	4
6). Remote Definition.....	4
7). Operation	5
8). Settings.....	7
9). Error Code	9
3. Warranty	10

1. Introduction

- 1). Product: Smart Display
- 2). Type: TC635-Color
- 3). Scope: Electric Pedal Assistance Bikes of Standard EN15194
- 4). Protocol: UART & CAN
- 5). Appearance: Zinc alloy frame as in the following.



- 6). Marking: Laser marking according to the specific customer code.

2. Manual Guide

1). Appearance



2). Specifications

- ① Rated Voltage: 36V/48V
- ② Rated Current: 44.9mA
- ③ Current Limit: $\leq 70\text{mA}$
- ④ Power-off Leakage Current $< 1\mu\text{A}$
- ⑤ Output Current to Controller: 25.1mA
- ⑥ Usage Temperature: $-20 \sim 45^{\circ}\text{C}$
- ⑦ Storage Temperature: $-20 \sim 60^{\circ}\text{C}$
- ⑧ Waterproof Grade: IP65
- ⑨ Storage Humidity: 30%-70%

3). Functions

- ① Smart battery power indicates. The optimization algorithm provides a stable power prompt, which solves the problem that the battery power fluctuates when the motor start and stop.
- ② Adjust and indicate pedal assist level.
- ③ Indicate speed (Including real-time speed during trip).
- ④ Indicate motor output power (Including digital and graphical).
- ⑤ Indicate mileage (Including trip and ODO).
- ⑥ Walk assist control and indicator.
- ⑦ Light witch control and indicator.
- ⑧ Battery Details (Including CAN communication with battery).
- ⑨ Error code logs and indicate.
- ⑩ USB Charging, charging current 500mA max.

Prepared: Li Lulu
Date: 2022-6-21

Revised: Wang Xiaolei
Date: 2022-6-28

Approval: Sun Min
Date: 2022-6-28

4). Assembly

- ① Fix the display in a suitable position on the handlebar. Then adjust the angle of the auxiliary switch to make it easier to watch and use when riding. (Applied to outer diameter of 22.2-31.8 mm.)



- ② Fix and tighten the bolt with a hex key (M3*12, stainless, GB/T70.1-2008), the locking torque 1 N·m.



- ③ Fix the remote in a suitable position on the handlebar. Then adjust the angle of the auxiliary switch to make it easier to watch and use when riding. (Applied to outer diameter of 22.2mm.)



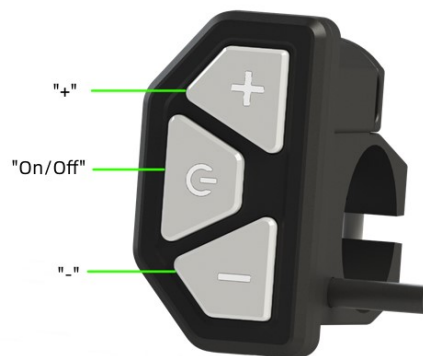
5). Display Area



- 1.) Batter Power Indicator
- 2.) Light Indicator
- 3.) Real-Time Speed
- 4.) Pedal Assist Level 0-5
- 5.) Turn Light Signal
- 6.) Running Time
- 7.) No Assist Indicator
- 8.) Brake Indicator
- 9.) Motor Information
- 10.) Motor Temperature Indicator
- 11.) Distance Range
- 12.) ODO
- 13.) Trip Distance
- 14.) Display Mode Select

6). Remote Definition

Three buttons including "+", "-", and "on-off"



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7). Operation

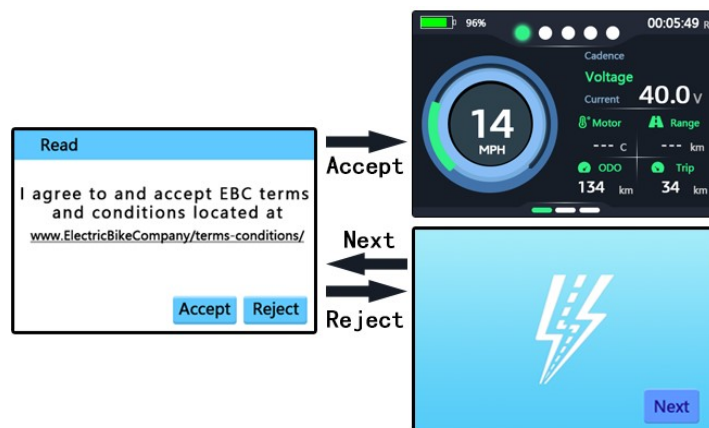
"Long press>2S" referred by "long press" "Short press<0.5S" referred by "press" .

① Power On/Off:

Long press "on-off" to turn on, press "+" or "-" to select when "read" appears, press "on-off" to confirm.

Select "Accept" and press to enter main interface of the display and supply controller power. Select

"Reject" and press to enter LOGO interface, press "Next" to back, long press "on-off" to power off.



② PAS Level

Press "+" or "-" to change the PAS level after display starting up. Motor output power is different under different level. The default levels range is 1-5, and will be set under class 1 when the display starting up.



PAS Level Selection Interface

③ Function Selection

Press "on-off" to select display function: "Watt" / "Cadence" / "Voltage" / "Current" / "Speed" / "Calorie"



Function Interface

④ PAS On/Off

Long press "-" to switch on/off, pedal assist is off when the indicator "PAS" lights up.



PAS On/Off Interface


⑤ Light:

On-off switch: long press "+"



Light Indicator Interface

⑥ Turn Light Signal:

Turn on signal light, corresponding indicator  flashing.



Turn Light Signal Indicator

⑦ Main interface display mode:

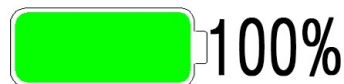
Long press "+" and "-" at same time to enter settings, press "+" or "-" to select "User" and press "on-off" to confirm, then press "+" or "-" to select different modes. Press "Exit" to quit sub-menu, Long press "+" and "-" at same time to quit setting interface.



Mode Interface

⑧ Battery Power:

The battery power indicator is as the following by percentage:

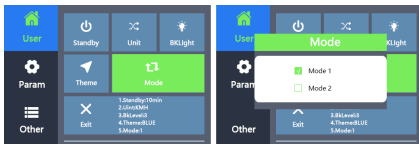
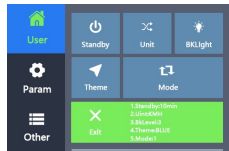
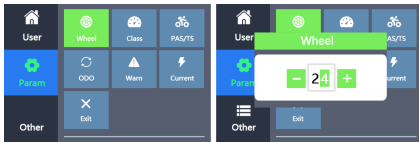

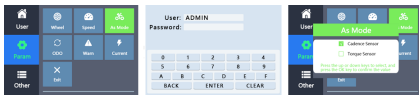
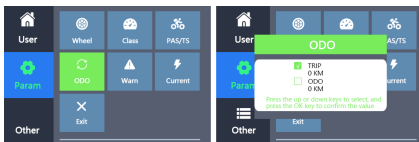


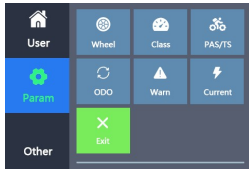
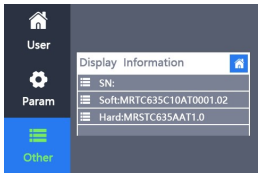


Battery Power Indicator

8). Settings

Long press "+" and "-" at same time to enter settings, press "+" or "-" to select "User", "Param" or "Other", press "on-off" to enter submenu, select and press "Exit" to quit submenu, Long press "+" and "-" at same time to quit setting interface.

Setting Menu	Item	Definition	Setting Interface	Parameter Definition	Note
User	Sleep	Sleep Time		0-15	Default Value: 10min 0: Always On
	Unit	Unit Setting		KM/H MPH	Default Value=KM/H
	Back Light	Backlight Brightness/ Light Sensor		Light Sensor ON Backlight1 Brightness 60% Backlight2 Brightness 80% Backlight3 Brightness100%	Default Backlight3
	Theme	Color Setting			Default Blue

Setting Menu	Item	Definition	Setting Interface	Parameter Definition	Note
User	Mode	Display Mode		Mode1 Mode2	Default Mode1
	Exit	Exit			
Param	Wheel	Wheel Diam.		8-30	Default 24
	Class	Class Selection		Class 1; Class 2; Class 3; Off-road	Enter Password to select Default: Class2
	PAS/TS	Sensor Setting		PAS Sensor Torque Sensor Default: PAS sensor	Enter password to set
	ODO	Mileage clearance		TRIP ODO	Manually Reset
	Warn	Read		On off	Enter password to set
	Current	Current Limit Setting		13-25	Enter password to set Default 23
	Exit	Exit			
Other	Other	Version No.			

Class 1			Class 2 (Default)			Class 3			Off-road		
Throttle	Current	Speed limit MPH	Throttle	Current	Speed limit MPH	Throttle	Current	Speed limit MPH	Throttle	Current	Speed limit MPH
NONE			1	30%-100%	9	1	30%-100%	9	1	30%-100%	10
			2		12	2		12	2		15
			3		15	3		15	3		20
			4		17	4		17	4		25
			5		20	5		20	5		28
Torque			Torque			Torque			Torque		
1	30%-100%	9	1	30%-100%	9	1	30%-100%	10	1	30%-100%	10
2		12	2		12	2		15	2		15
3		15	3		15	3		20	3		20
4		17	4		17	4		25	4		25
5		20	5		20	5		28	5		28
PAS			PAS			PAS			PAS		
1	15%-100%	9	1	15%-100%	9	1	15%-100%	10	1	15%-100%	10
2		12	2		12	2		15	2		15
3		15	3		15	3		20	3		20
4		17	4		17	4		25	4		25
5		20	5		20	5		28	5		28

9). Error Code

UART Protocol:

No.	Code	Definition	Troubleshooting
1	101	Brake un-reset	Brake
2	102	Throttle un-reset	Throttle
3	103	Throttle signal wire short circuit to GND	Throttle
4	105	Speed Sensor Fault	Speed Sensor
5	24	Over Current	Controller
6	25	Under Voltage	Controller
7	26	Over Voltage	Controller
8	34	Motor Stall	Motor
9	35	Motor Phase Wire	Motor
10	36	Motor Hall	Motor
11	52	Unsupported command	Controller

CAN Protocol:

No.	Code	Definition	Troubleshooting
1	27	Over Current	Controller
2	07	Over Voltage	Controller
3	06	Under Voltage	Controller
4	05	Throttle un-reset	Throttle
5	04	Throttle Fault	Throttle
6	31	Under Voltage Protection	Battery
7	32	Over Voltage Protection	Batter
8	08	Motor Hall Fault	Motor
9	09	Motor Phase Wire Fault	Motor
10	10	Motor Temperature Protection	Motor
11	11	Motor Temperature Sensor Fault	Motor
12	14	Controller Temperature Protection	Controller
13	15	Controller Temperature Sensor Fault	Controller
14	12	Current Sensor Fault	Controller
15	23	Light Fault	Light
16	35	15V Power Test Fault	Controller
17	36	Remote Test Circuit Fault	Controller
18	21	Speed Sensor Fault	Speed Sensor/Controller

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3. Warranty

Nanjing DMHC Technology Co., Ltd. (hereinafter referred to as "DMHC") guarantees that:

The warranty service will be provided by DMHC within the warranty period, for the products purchased from DMHC by vehicle manufacturers and distributors occurred any problem because of product components materials and production processes.

Warranty period and scope:

★ Warranty within 15 months from the date of delivered.

Products conforming to the above warranty statement, but if the damage is caused by one of the following circumstances, it is not covered by the warranty:

1. Due to modification, neglect or improper maintenance, for competition or commercial purposes, or due to misuse or abuse, or damage caused by traffic accidents;
2. Damage occurred during the customer's transportation;
3. Product damage caused by unreasonable installation, commissioning or maintenance;
4. Damage caused by non-material or process reasons, such as damage caused by improper use by consumers;
5. Damage caused by changes in the appearance and surface of the product, and the damage does not affect the function of the product;
6. Damage caused by repairing and installing from non-designated repair points or dealers by DMHC
7. Normal damage to the product.

DMHC has the right to choose to repair or replace, and DMHC's sole responsibility is limited to product repair or replacement.

When vehicle manufacturers or dealers encounter quality problems when using or selling DMHC products, they can report the purchase order, production batch number and product serial number to DMHC after-sales service department, it will be repaired or replaced free of charge after the products confirmed to be within the scope of the warranty. If you need repair service expired the warranty period, DMHC will charge the corresponding components, labor and transportation costs.

If DMHC products installed on the vehicle need to be repaired, please contact the vehicle manufacturer or dealer directly. If this warranty statement conflicts with the current laws of China, the laws shall prevail. DMHC reserves the right to modify the above terms without prior notice.

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