

SPECIFICATION FOR APPROVAL

LED DISPLAY OF E-BICYCLE

MODEL: 790

Customer Name: _____

Address: _____

Approved: _____

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Originality	Auditing	SIMI-G. M.	G. M.

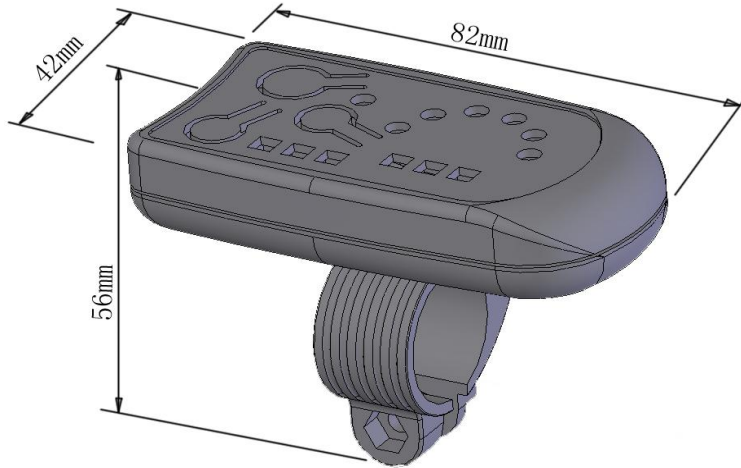
One、Function introduce

790 LED series display is suitable for E-BICYCLE, and the upgraded version of the 780 series.

Control Object:

- 1、 The button of ON/OFF will control the power supply of the controller for the E-Bicycle .When the status is ON, the display will supply the current of 0-300mA for the controller. When the status is OFF, the total current will be less than 1uA.
- 2、 The button of MODE will switchover the maximum PWM value of the output of the controller , to change the speed. When you press MODE, you can select the PAS levels, the default setting is 2-3-1-2-3-1.
- 3、 The LED will indicate the current voltage . It will keep on 3s to check the current voltage, to avoid the LED flashing. When lack of voltage, the minimum power indicator will flash at 1Hz. But the controller will not be power off.
- 4、 The button will control the front and rear lights. (Customer could choose.)
- 5、 Be in conformity with ROHS , CE Report .
- 6、 Waterproof meets IP65 protection standards level.

TWO、Size、Material & Photos (UNIT:MM)

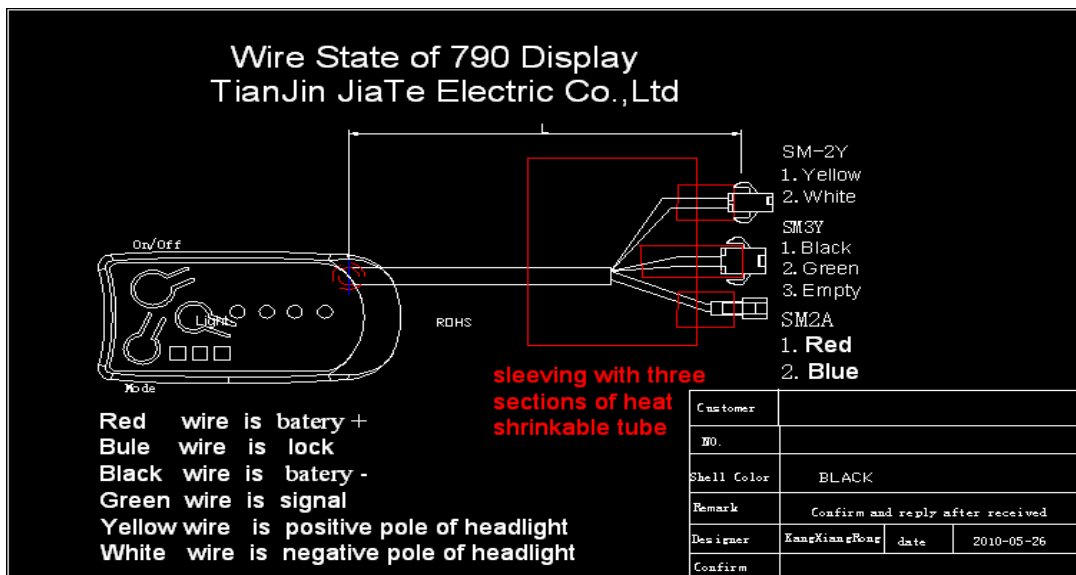


(790)

There are two options for the modes of the shell modeling.

- The capacity indicators are arrayed into horizontal line.

The capacity indicators are arrayed into fan.



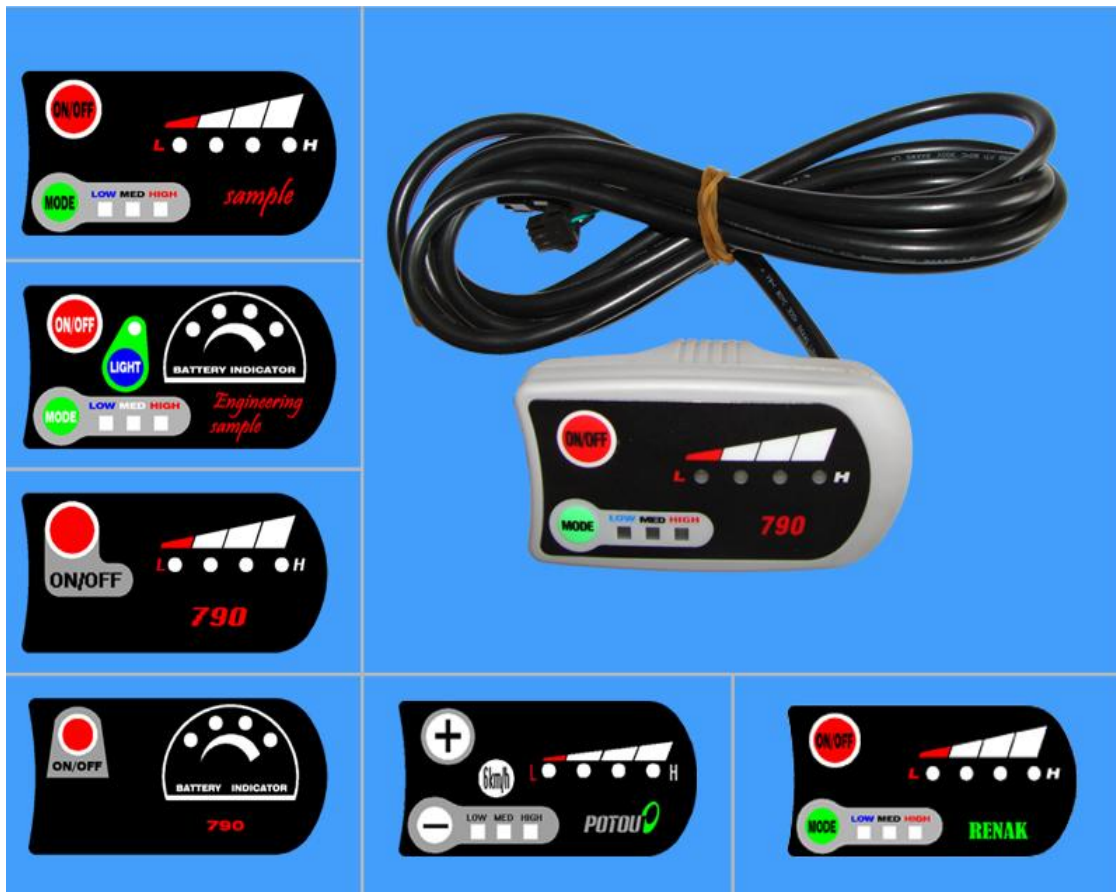
The length of the cable and the connector can be customized.

Material and Color:

1、BLACK 7 PC

2、COOL GRAY 6 PC

Samples Photos



(整体效果图及部分贴膜样式)



(引线端子处防盐化与腐蚀处理图)



(型号标识图)

Three、 Technical parameters & Dependability

1、 Indicator corresponding voltage characteristics

Model	Type	Voltage	Three levels corresponding voltage($\pm 0.2V$)			Four indicators corresponding voltage(± 0.3)			
			L1	L2	L3	L4	L5	L6	L7
24L	Li-ion batteries	24	2.0	3.0	4.2	23.5	24.8	26.6	27.2

The minimum power indicator will flash when the battery voltage is less than L4 for 3 seconds. It tells the users that the battery is seriously lack of the voltage. (The above voltage values for reference.)

2、 The MCU of 12bit high-end unit (CY8C24423) is used in the display, can be suitable to different specifications, different parameters, with high precision. The display parameter is burning through the voltage programmer of CY chip series display.

- ① This system can burn the indicate voltage point of the display which of all the CY series e-bike, Support multiple voltage point (maximum number is 10), could be programmable.

- ② Through the buttons to set up the different parameters when burning power, and stored in the system.
- ③ Through the connection with the checkout equipment, to burn voltage point, after burning, automatic power on again to self-inspection.
- ④ The error of burn voltage is less than 0.01V.
- 3、 The display have the functions of the reverse connect protection and output short circuit protection .
- 4、 Welded shell by means of ultrasonic pressure, meets the watertight and airtight requirements.

Four、 plug & Wire

Control object	Connectors specifications	Plug		The length of the cable (m)
		1	2	
Power of the controller	SM2A	RED	BLUE	According to customize
Three levels of the voltage	SM3Y	BLACK	GREEN	According to customize

explain for the wire:

Red wire is the battery +.

Black wire is the battery - .

Blue wire is the controller of ON / OFF.

Green wire is the signal of the throttle.

The processing for lead:

There is the strengthen protection measures for the lead to avoid corrosion.

Five、Dependability Test

Items		Condition	Specification
Wire	Wire terminals tensile strength test	Tension strength:20N duration:60S	No abnormal
	Housing out going line tensile strength test	Tension strength: 10N duration:60S	No abnormal
	Insulation resistance test	ZC25-3megger test	No abnormal >100M Ω
Locking wire pressure drop		Digital multimeter	Normal electrical property
Battery Indicator test		Temperature: (20 $^{\circ}$ C) (normal temperature)	Normal electrical property ($\pm 0.3V$)
		Temperature:-20 $^{\circ}$ C (low temperature)	Normal electrical property ($\pm 0.3V$)
		Temperature:70 $^{\circ}$ C (high temperature)	Normal electrical property ($\pm 0.3V$)
Mode voltage test		Temperature: (20 $^{\circ}$ C) normal temperature	Normal electrical property ($\pm 0.3V$)
		Temperature:-20 $^{\circ}$ C (low temperature)	Normal electrical property ($\pm 0.3V$)
		Temperature:70 $^{\circ}$ C (high temperature)	Normal electrical property ($\pm 0.3V$)

Undervoltage indication delay test	Stopwatch	No abnormal
Supervoltage test 24V display	Voltage:DC42V duration: 60S	No abnormal
High temperature testing	Temperature: 75°C ±2°C Voltage: rated voltage Duration:>2H	No abnormal
Temperature rise test	Temperature: (20°C) normal temperature	No abnormal Housing temperature<5°C
Steady-state damp heat test	Temperature:45°C ±2°C Relative humidity:90%±5% Duration:>24H	No abnormal
vibratory test	Voltage: rated voltage Vibration frequency: 20HZ Amplitude:>10MM Duration:>2H	No abnormal
Imitate Rain Test	normal operation condition Duration:>2H	No abnormal
Button life test	Life testing machine	100,000 Cycles Min
ROHS and CE compliant	Thirdparty agency approval	Qualified
IP65 Degrees of protection provided by enclosures	Thirdparty agency approval	Qualified

Six、Process & Quality

1. Ensure the device reliability:

①Test of the buttons: be tested tens of thousands of times by the testing machine, to ensure the reliability of the button.

Light emitting diode is used of Taiwan GuangBao LED (the

quality of ordinary light is several times the ordinary),

A1013 triode Fairchild: the quality is above in 6sigma.

Other: meet the ROHS.

② the panel: the whole process was tested by automatic computer testing. Each index has strict requirements.

③ the shell: ultrasonic welding technology, the high efficiency and



the effective assembly process.

Seven、LOGO & Model prints

1、 To meet the requirements of various customers and more parameters of the products. The logo is the skin for color and different from the traditional silk printing. The materials is in conformity with the environmental protection of ROHS and CE report, and so on. (Can be customized.)

2、 Model prints:

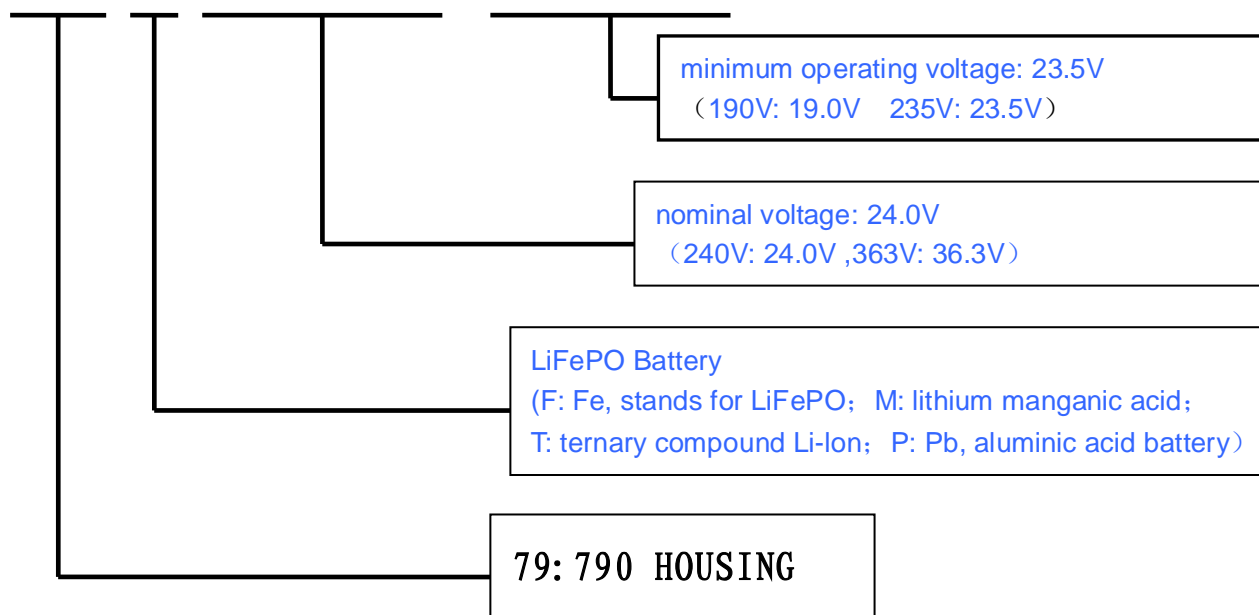
在外壳印制标签对仪表进行描述，样式定义如(标识印制图):

Example: 790-24L 参数及打印字样如下:

Model	Type	Voltage	Three levels corresponding voltage ($\pm 0.2V$)			Three levels corresponding voltage ($\pm 0.2V$)			
			L1	L2	L3	L4	L5	L6	L7
24L	锂锰 LI-MN	24V	2.0V 1.8-2.2	3.0V 2.8-3.2	4.2V 4.0-4.4	23.5V 23.2-23.8	24.8V 24.5-25.1	26.6V 26.3-26.9	27.2V 26.9-27.5

When the battery voltage is lower than 23.5V for 3 seconds, L4 will flash.

79M240V235V



Eight、Package Request

1、Package model specifications

- ① **Plug bandaging: rubber banding.**
- ② **Assembly small packaging: 300cm x 200cm (plastic self-styled bag).**

- ④ **Carton packing specifications: 440 x 380 x 210 (cm).**
- ④ **80 sets per carton.**
- 2、 Product packaging should be marked: Supplier name / logo, product Model specifications, containing the number, production date / batch number and order number.
- 3、 Packaging and packing programs are according to customer's requirement, specific details of consultations by both parties.
It is subject to the sealed sample.

Nine、Others

- 1. Changes of the book shall be validated by both parties. It is invalid amended by either party.
- 2. Please return the book with signature within 7 working days after you get it. Otherwise as tacit admision.