



苏州福豪斯电子科技有限公司  
Suzhou Forehorse Electronics Technology Co.,Ltd

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## » Company Profile

Suzhou Forehorse Electronics Technology Co., Ltd is located in Zhujiang S.Road, Suzhou City. Forehorse has an outstanding R& D, Production and sales team. It devotes to designing and producing the e-bike system products, upgrading technology from wired to wireless.

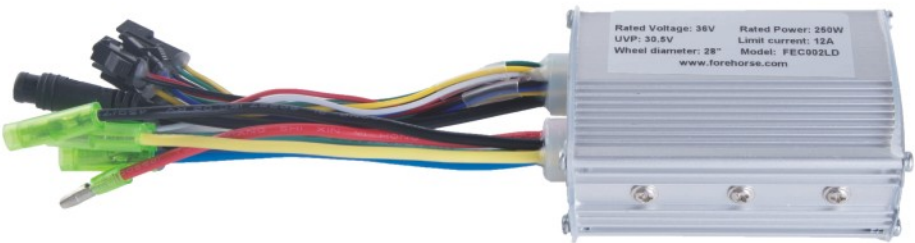
The R&D leader has a senior research in e-bike industry for about 17 years. The main products are hall controller, hallless controller, wireless electronic pedal, LCD displays, and LCD wireless displays, etc. And these products have already passed aging test, water proof test, seismic slip resistance test, CE test etc. The self-developed products meet international standards, and has achieved several utility model patents and one invention patent.

Forehorse has experienced designers and a professional team. Custom-designed service and other value-added service are provided to every customer. Forehorse is willing to have sincere cooperation with you, and create beautiful future together.





# Common Controller FC2

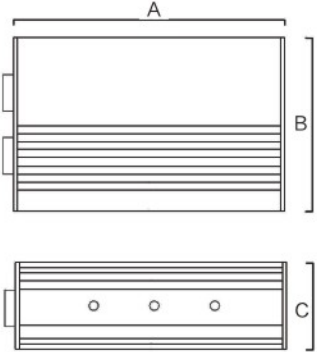


**Function** It controls the start and running of the motor.

## Parameters

Voltage	36V/43V/48V
Rated current	10A-5A
Throttle Voltage Input	0.8-4.2DCV
Rated Power	250W/350W/500W/750W
Hall Sensor	Optional
Control Type	Sine Wave
Current Limiting	20A-10A
Power Assist Mode	Speed Sensor;Torque Sensor
Gearshift	0-3/0-5/0-9

## Dimensions



A	83-115mm
B	53mm
C	32mm

# Built-in-battery Controller FC4-6-01



**Function** The contoller could be oriented designed by customer's special requirements.

## Parameters

Voltage	36V/43V/48V
Rated current	7A/6A/5A
Throttle Voltage Input	0.8-4.2DCV
Rated Power	250W/350W
Hall Sensor	Optional
Control Type	Sine Wave
Current Limiting	13A/11A/10A
Power Assist Mode	Speed Sensor;Torque Sensor
Gearshift	0-3/0-5/0-9

## Dimensions

The shape and dimensions could be customized according to the specific requirement of customers.

Built-in-Motor Controller FC4-6-02



**Function** The controller could be oriented –designed and developed by customer's special requirements.

Parameters

Voltage	36V/43V/48V
Rated current	7A/6A/5A
Throttle Voltage Input	0.8–4.2DCV
Rated Power	250W/350W
Hall Sensor	Optional
Control Type	Sine Wave
Current Limiting	13A/11A/10A
Power Assist Mode	Speed Sensor;Torque Sensor
Gearshift	0–3/0–5/0–9

Dimensions

The shape and dimensions could be customized according to the specific requirement of customers.

Torque Sensor E-pedal FEP1



**Function** The pedal uses special piezoelectric material to collect pedal pressure, and adjust speed of e-bike by torque sensor.

Parameters

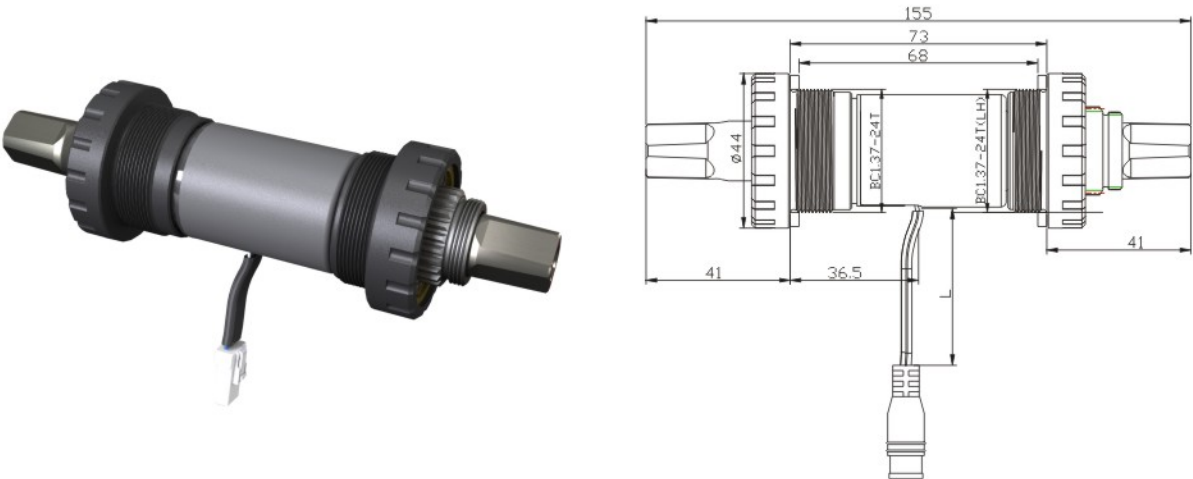
Supply Voltage	3V
Sleep Current	<10uA
Protocol	ANT+
Material	Respect ROHS
Battery Capacity	1000mAh
Pressure Measurement	10N–400N
Transmission Distance	>2meters
Waterproof Grade	IPX6
Working Current	<1.2mA
Maximum Load	800N
Weight	500g
Working Environment	–20℃~60℃

Dimensions



A	103mm
B	M14*1mm
C	32.5mm
D	105mm

# Torque Sensor BBTS1.0

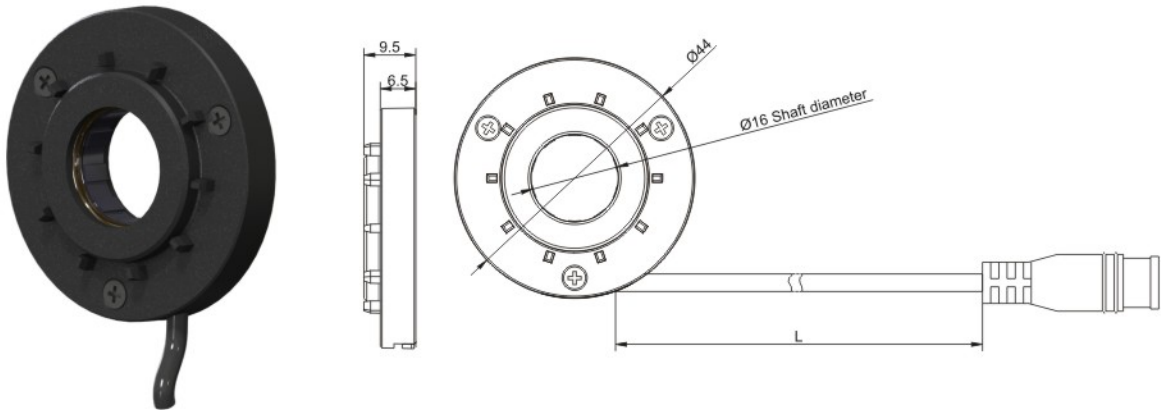


**Function** BBTS-sensor is a torque sensor which fixed on the bottom bracket

## Parameters

Type	Unit	Parameter
Input voltage	V	4.5~5.5
Input power	W	< 0.3
Torque output range	V	0.75~3.4
Speed signal pulse	r	36
Speed signal duty cycle	%	50%
Torque signal resolution	mv/ N.m	35
Torque measuring range	N.m	0.5~80
Design standard	EN	14764

# Speed Sensor BBSS1.0



**Function** BBSS-sensor is a PAS sensor, installed in the axis of ebike on the left. It is mainly used in power signal detection.

## Parameters

Type	Min	Typ	Max	Units
Supply Voltage	4.0V	–	5.5V	V
Output High Voltage	Vcc-0.7	–	Vcc	V
Output Low Voltage	0	–	0.6	V
Supply Current	1	–	6	mA
Forward Output Signal per circle	–	48	–	–
Operating Temperature	-40	–	85	°C



## LCD CK01

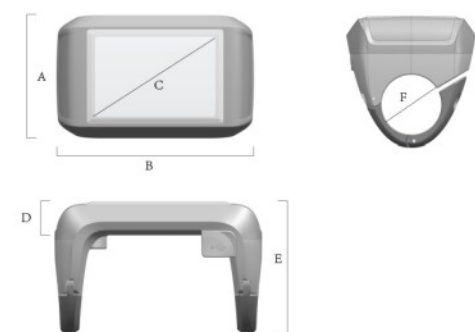


**Function** The LCD displays cycling data, and the feedback of ebike running states.

### Parameters

### Dimensions

Supply Voltage	36V/48V
Working Environment	-25℃-80℃
Top cover Material	Acrylic transparent board
Shell Material	PC
Bracket Material	PC
Keypad Material	Silicone rubber
Waterproof Grade	IP65



DimensionA	68mm
DimensionB	109.5mm
DimensionC	3.2"
DimensionD	17.35mm
DimensionE	84.36mm
DimensionF	φ 22.2/25.4/31.5mm

## LCD M2

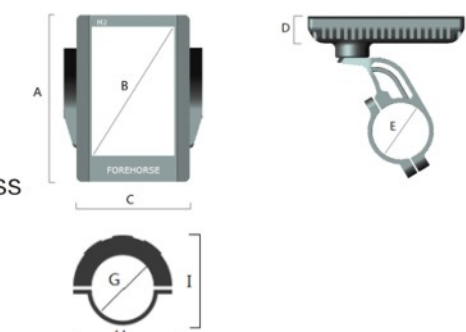


**Function** The LCD displays cycling data, and feedback the riding states.

### Parameters

### Dimensions

Supply Voltage	36V/48V
Shell Material	PC1414
Waterproof Grade	IP65
Display Window Material	white transparent organic glass
Working Environment	-25℃-80℃



Dimension A	87.5mm
Dimension B	3.5"
Dimension C	59mm
Dimension D	15mm
Dimension E	φ 22.2/25.4/31.5mm
Dimension F	90mm
Dimension G	φ 22.2/25.4/31.5mm
Dimension H	51mm
Dimension I	38mm

## LCD M3

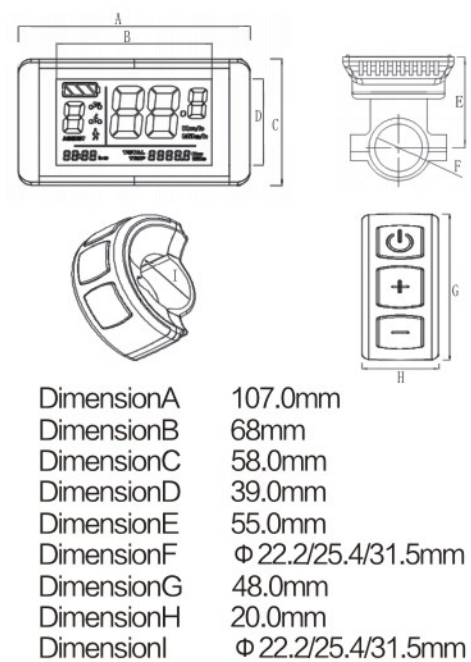


**Function** The wireless meters displays cycling data and feedback the riding states, with no cable.

### Parameters

Supply Voltage	3.3V-4.2V
Working Environment	-25℃-80℃
Transmission Distance	> 2M
Shell Material	PC
Display window Material	Transparent Acrylic panel
Transmit Frequency Band	2.4-2.5GHz
Waterproof Grade	IP65

### Dimensions



## LCD M5

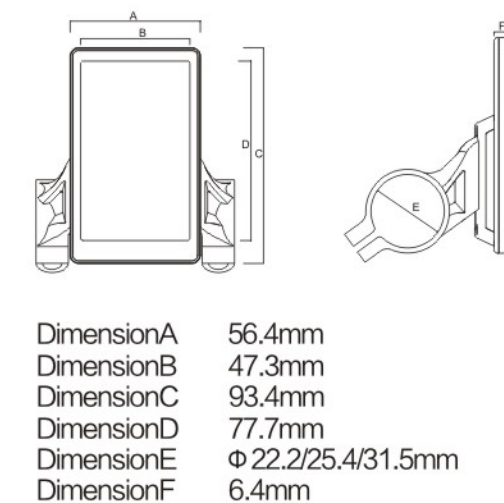


**Function** The LCD meter displays cycling data, and feedback the riding states.

### Parameters

Supply Voltage	20V-55V
Working Environment	-25℃-80℃
Top cover Material	Acrylic transparent board
Shell Material	PC
Bracket Material	PC
Keypad Material	Silicone rubber
Waterproof Grade	IP65
Shell Material	PC

### Dimensions



## Connectors

EB-bus



6 pins



Motor cable

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