



display speed detecting magnet



drive unit

speed detecting sensor

1 Central motor

- ★ Can be installed on standard bike frame easily.
- ★ High starting torque, Max torque \geq 80Nm, good performance on hills
- ★ Double clutch is used on drive unit, more safety.
- ★ Speed sensor and torque sensor can be applied, controller integrated.
- ★ High efficiency, low consumption, long travel mileage.

1.1 Scope of application and numbering rule

Countermark serial number on motor casing as following:

BBS01 36V 250W

15A 25km/h

13010001

1. "BBS01": motor type(speed sensor); "BBS02": motor type(speed sensor with coaster brake); "BBT": motor type (torque sensor)
2. "36V": rated voltage; 250W: rated power.
3. "15A": limited current, 25km/h: max speed.
4. "1301": production date, produced in January of 2013.
5. "0001": serial number.

1.2 Material and waterproof grade

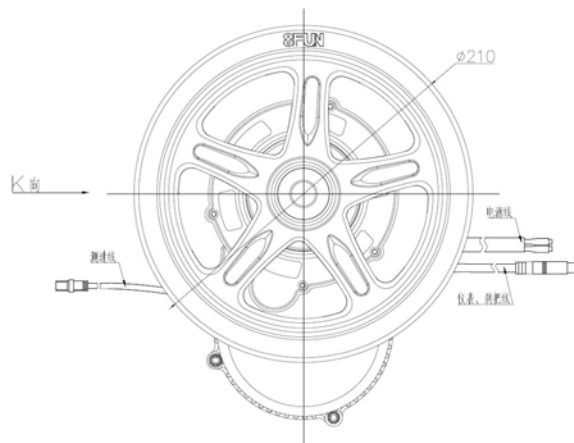
Die-cast aluminum electrophoresis black treatment, working environment temperature:-25 $^{\circ}$ C-55 $^{\circ}$ C, waterproof grade: IP65.

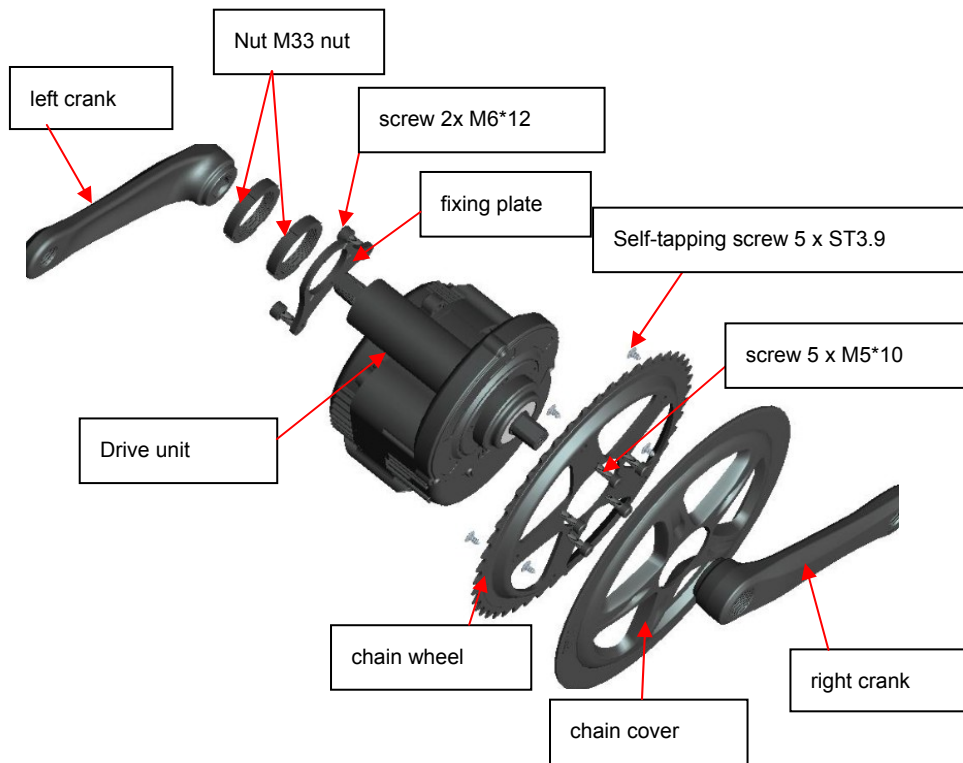
1.3 Main technical parameters

Voltage		DC36V						
Limit current		15A						
Limit speed		25KM/H						
Motor weight		3.7KG						
Chain wheel tooth		46T						
no-load value		Rated value					Max value	
current (A)	speed (RPM)	Output power (W)	speed (RPM)	efficiency (%)	torque (Nm)	current (A)	MAX torque	MAX efficiency (%)
≤1.0	83±5	250	78±5	≥80%	≥30	≤9	≥80N.m	≥80%

Above parameters as the default parameters, can be customized according to customer requirements.

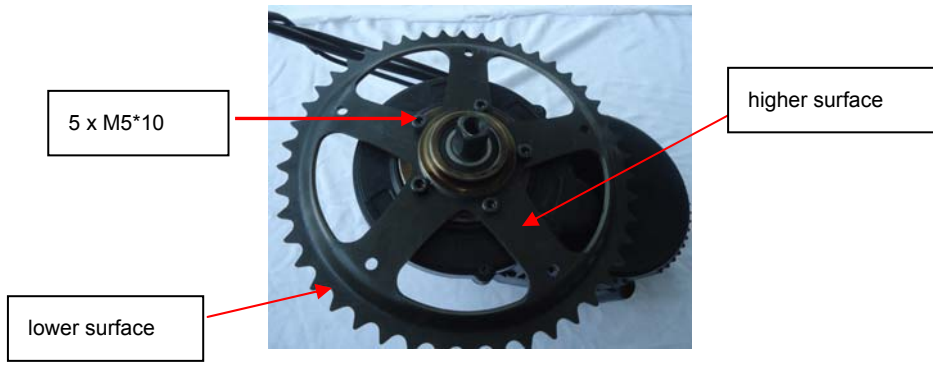
1.4 Installation diagram





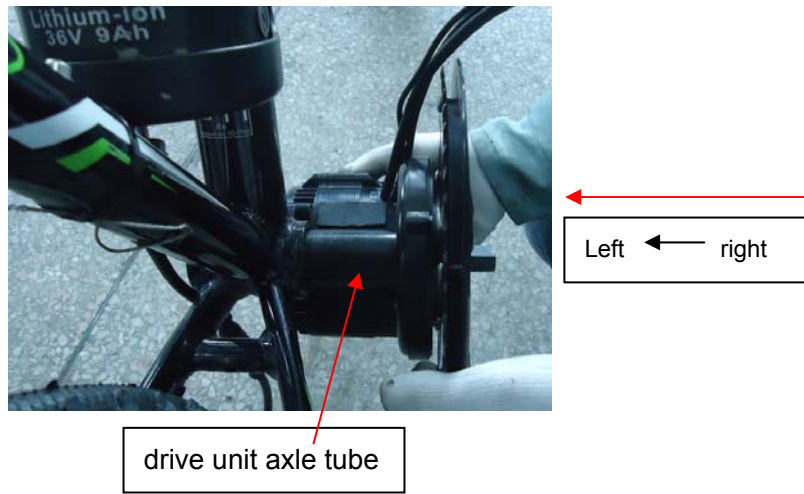
1.5 Installation procedure

1. Open the package and take out the drive unit and accessories;
And check the specification whether it is correct.
2. Fix the chain wheel on drive unit with 5pcs screw M5*10, (see picture 1), then fix chain cover on chain wheel with 5pcs screw ST3.9.



Picture1

3. Fix the drive unit axle tube on frame bottom bracket (see picture 2,picture 3)



Picture 2



Picture 3

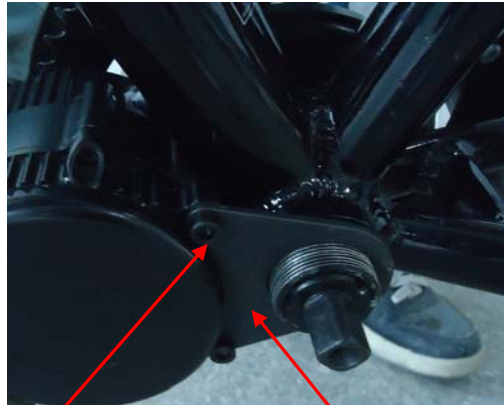
ensure thread of axle tube extend bottom bracket more than 10mm

4. The surface with teeth of fixing plate towards inside, then fix the plate on drive unit with 2pcs M6*10.(see picture 4,picture 5)



the surface with teeth of fixing plate

Picture 4

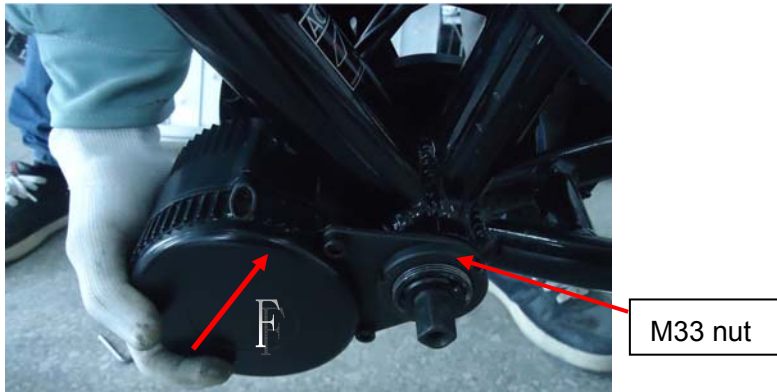


2xM6 nut

Outside surface without teeth

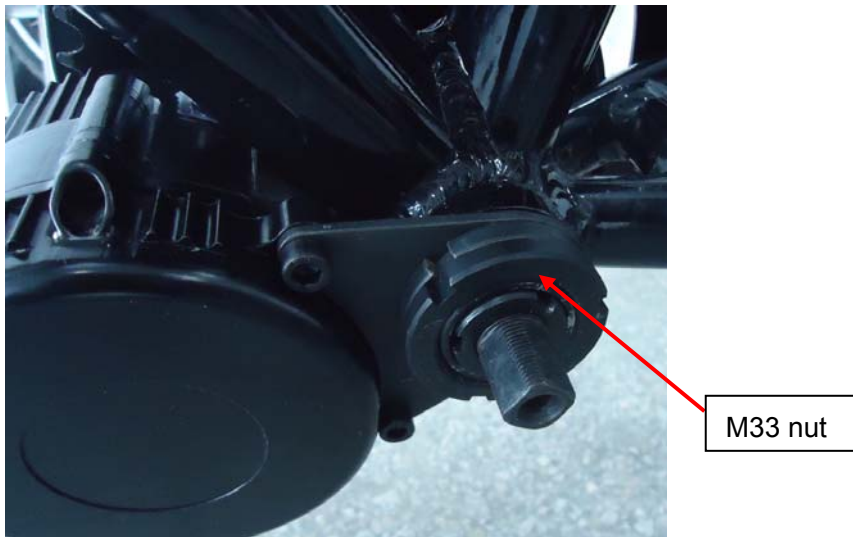
Picture 5

5. Hold the drive unit near to bicycle fork, force less than 5KG, tight 1st nut M33 onto axle tube with force:30-40N.m (see picture 6)



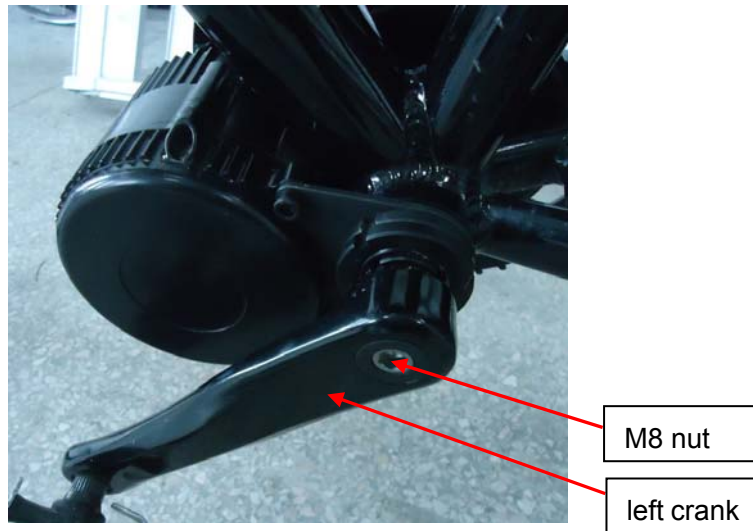
Picture 6

6. Fix 2nd nut M33 onto axle tube, tightening force:30-40N.m(see picture 7)



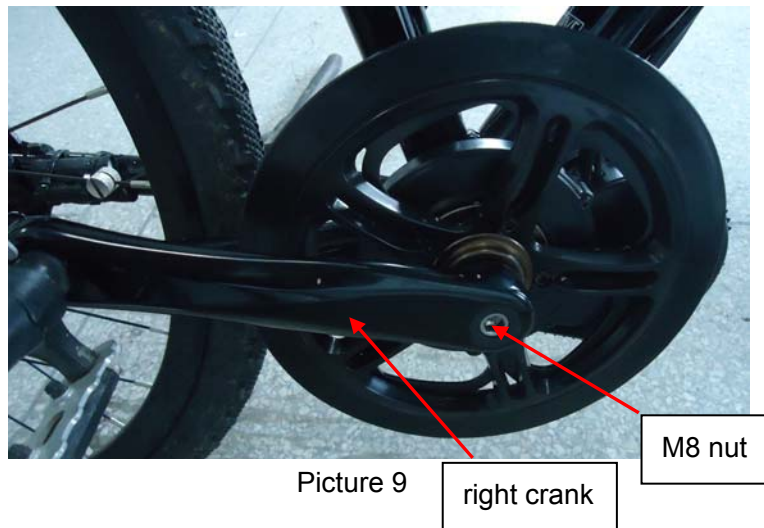
Picture 7

7. Fix the left crank on the bike with M8 inner hexagon screw. Tightening force:35-40N.m (see picture 8)



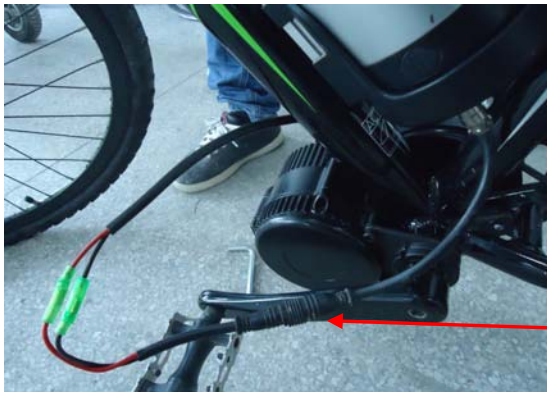
Picture 8

8. Fix the right crank on the bike with M8 inner hexagon screw. Tightening force: 35-40N.m (see picture 9)



Picture 9

9. Connect all cables for battery, display, speed detecting sensor and so on (see picture 10-12)



Water proof connector for battery



Water proof connector for display

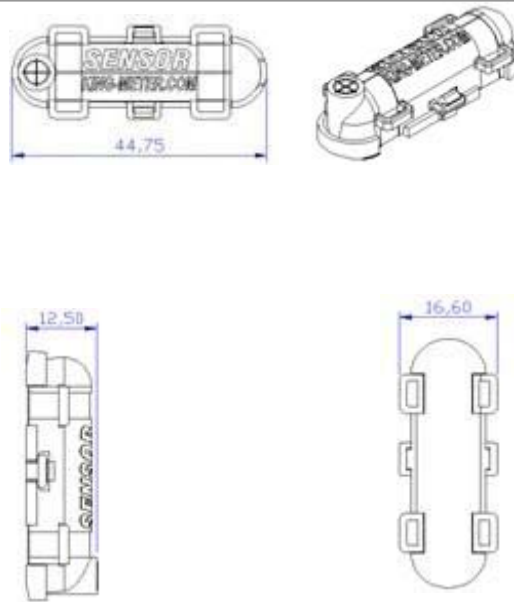


Water proof connector for speed detecting sensor

3 Speed detecting sensor

By measuring the wheel RPM, the signal is transferred to the controller, the speed and mileage will be showed on the display.

3.1 Dimension



3.2 Installation

1. Speed sensor component

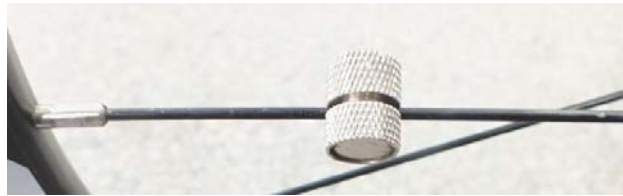


2. Fix the speed sensor on appropriate position (bottom fork is suggested) of frame by ribbon.



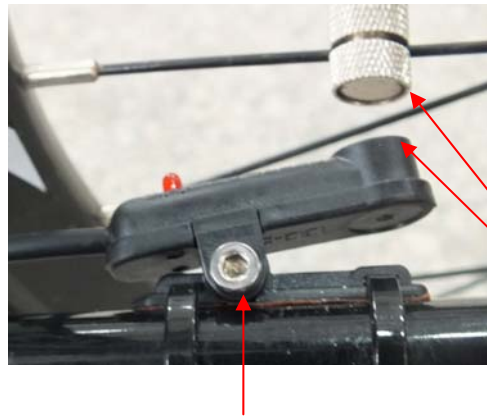
tied by ribbon

3. Fix the magnet on spoke of rear wheel



Note: magnet's surface must be parallelized with sensor's surface

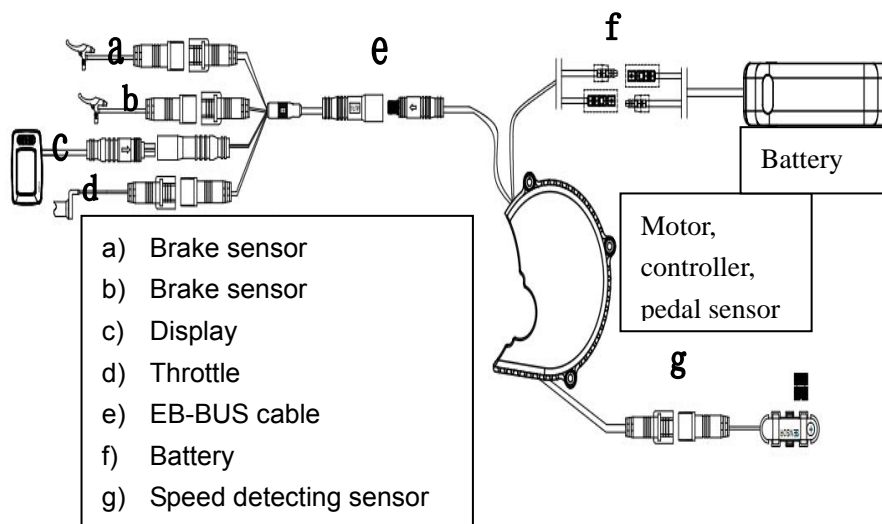
4. Adjust the distance between speed sensor and magnet within 5mm



gap distance \leq 5mm

fix the nut after adjust appropriate position

4 Connection diagram



5 Notes

1. Should be stocked in a dry ventilated warehouse, do not be stocked in a humid, acidic and alkaline area, not coexist with magnetic object
2. Each connector inserted according to arrow to arrow
3. Avoid sharp objects impact on display
4. Avoid overload for long time when using
5. Avoid wading and soaking