

Shenzhen Sempu Motor Co.,Ltd



Sempu BB Torque Sensor

- New Creative Solution



E-bike torque sensor development direction and questions

Common power driven sensor system proportion and types

Sempu New Generation BB bilateral torque sensor

E-bike torque sensor development direction and questions

Electric bicycle is between motorcycle and bicycle direct product.

Its development direction will tend to be the portable and flexible fashion. Electric power system for electric bicycle bring portability and speed for people travelling however its power is only assisted.

Therefore, how to scientifically measure the pedal force of human , That is to say , how to develop pedal force sensor for accurate measurement ?

Thus intelligent coordination pedal force and electric power problem become research focus for bicycle intelligent power system.

Torque Sensor Proportion and different type



Chain Wheel Torque Sensor startup immediately according to the size of pedaling force and output linear proportionally. Disadvantages: the signal error will be turbulent and affected in ridden environment factor and signal acquisition is not accurate enough. Need to customize and replacement .



Speed sensor are widely used in the market currently because of its low cost, wide use of cycling enthusiasts. However the speed sensor has birth defects in precision and sensitivity.



Right Chain Torque Sensor collect the pedaling force signal via acquire chain distortion variation, then send the acquisition data back to controller ensure the coordination between pedaling force and assist power through adjust the motor.



Claw type torque sensor measure the variation of pedaling force through monitor the variation of chain data and pass the signal to control system for process

Sempu New Generation of Smart Bilateral Sensors

Significant difference compared with traditional torque sensor

Sempu bilateral BB torque sensor is a new generation product acquired international patent which takes the leading pioneer in the industry



Sempu New Generation of Smart Bilateral Sensors

The pedal force of left and right side can be detected

The output signal of both side can be collected

Non contact type electromagnetic signal acquisition mode

- Reduced wear and signal error substantially
- Ensure the stability and reliability of the signal

Compatible with standard bottom bracket,requiring no modification the frame design

100MS corresponding velocity precision to pedal force variation for per kilogram





Background of Sempu Founders



Mr Tang Mingxi who used to work in XDS ,biggest bike factory in mainland China acted as senior manager mainly take charge of E-bike business.

Sempu set up in 2011 and create much more better performance double-sided torque sensor and made remarkable improvement during 3 years research and development create torque sensor series through V0,V1.0,V2.1 and current V2.2 version during the three years after great efforts via hardworking.

The intelligent bilateral torque sensor applied for technological patent and acquire the patent acknowledged by China government for new technical innovation .

Currently our torque sensor is the process of short run production and production quantity ranges 1-2K and to be well received for the performance and reliability after test by customers at home and abroad and we plan to roll in mass production to support customers from all over the world to provide much more convenience for cycling .

Company Overview and Philosophy

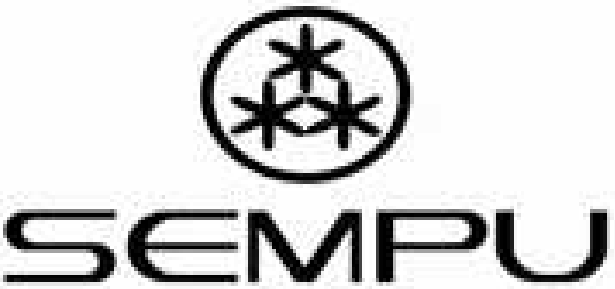
Shenzhen Sempu Motor

SEMPU

we were founded in 2011 by a group of experienced engineer who have a decade of experience in developing and manufacturing e-bike drive system. This is a high-tech enterprise committed to providing intelligent drive system solutions and key components for e-bikes, it extends across magnetic , mechanical and electronical etc. Sempu e-bike drive system supply you an extra power in hilly area, headwind situation, so that you can conquer the coming hills easily. Sempu intelligent e-bike drive system gives cyclist a unique sensation.

Quick response and double-sided pedaling force output detection, it makes cyclist can feel a smooth and seamlessly ride travel. Sempu e-bike drive system is a real power-assist, it not only works in hilly and headwind, but also helps people to ride faster, father by motor power offered. Sempu BB torque sensor,motor brushless gear motor,Brushless with gear ,inner rotor,e-bike drive system offer a performance to you have an easy and interesting riding feeling, you will enjoy it.





Thank you for your time!

Jerry Yu, Sales Manager 2014