

## ALIEN POWER SYSTEM SENSORED ESC.

### A NEW VERSION OF APS ESC IS THE SPORT 2 SENSORED MODEL.

Brushless controllers basically drive tri-phase motors (Brushless) by sending sequence of signals for make the rotation. The correct phase varies with the motor rotation, which is to be taken into account by the ESC. Usually, back EMF create by the motor rotation is used to detect this signals (in sensorless controller), but variations exist that use magnetic sensors (in sensored controllers) or optical detectors. Basically what the sensor does is tells to the ESC the exactly position of the rotor. The ESC uses this info to start the rotor spinning perfectly without having to 'guess', so it can precisely send voltage and energize the exact coils at the exact time when they are needed to be energized. Results is a smoother power, better low-speed driveability and more torque particularly noticeable in lower rpm.

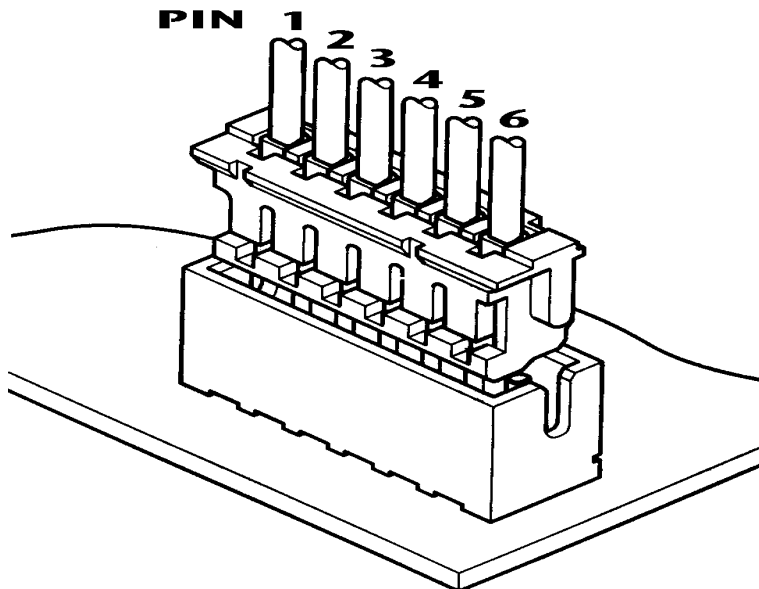
This ESC is recommended for E-bike systems.

Sensored pin illustration:

- Pin 1 = Ground -
- Pin 2 = Phase C
- Pin 3 = Phase B
- Pin 4 = Phase A
- Pin 5 = Temperature control
- Pin 6 = Positive + 5V (+/- 10%)

#### PLEASE NOTE:

DIFFERENT MANUFACTURES USE DIFFERENT COLORS FOR THE 6 WIRES. IN CASE YOUR APPLICATION REQUIRES TO CHANGE CONNECTORS, AND YOU ARE NOT SURE HOW TO CONNECT THEM, PLEASE EMAIL US. DAMAGED CAUSED BY MODIFICATION OF THE GOODS ARE NOT COVERED BY WARRANTY



Sensored systems (Esc/motor) need to be matched. After connection, user needs to start throttle very gently, max 10% and test the system. If the motor doesn't spin well (unsmooth, stops or doesn't turn) it means that the A-B-C phases are not correctly connected to the corresponding sensors. All the user needs to do is swap the wire phases until they find the right sequence that spins the motor well. This needs to be done by the user because the rotation of the motor depends on the application, which sides you need the motor to spin based on your system. In case one motor need to run on the opposite direction and all the combination are been tested without succes, user will need to swap the sensors wires. It is very important to not throttle more than 10-15%. With a wrong sequence the system will be damaged. Any further information please email us.