Wiring diagram

POWER

MKSESC MINI V6.7
based upon VESC6

◆ 8V-60V(3s to 13s LiPo)
◆ Continuous 50A
◆ Burst 150A

1.SIN
2.CAN
3.USB
4.SENSE
5.SWD
6.COMM

1
2
5
3
6
4

GND 5V SIN
RECEIVCE

If the motor has hall sensors

MOTOR

1 SIN

PPM 5V GND

5 SWD
— 3.3V
— CLK
— GND
— DIO
— RST

GND
CANL
CANH
5V
2 CAN

USB — 3 USB

6 COMM
— ADC3
— ADC2
— TX/SCL
— RX/SDA
— ADC1
— GND
— 3.3V
— 5V

GND   —o———o—
H3   CS   I
H2   MISO   B   4 SENSE
H1   SCK   A
TEMP —o———o—
5V   MOSI
      =V+

HALL   AS5047   ABI

MINIU6.7

MKSESC

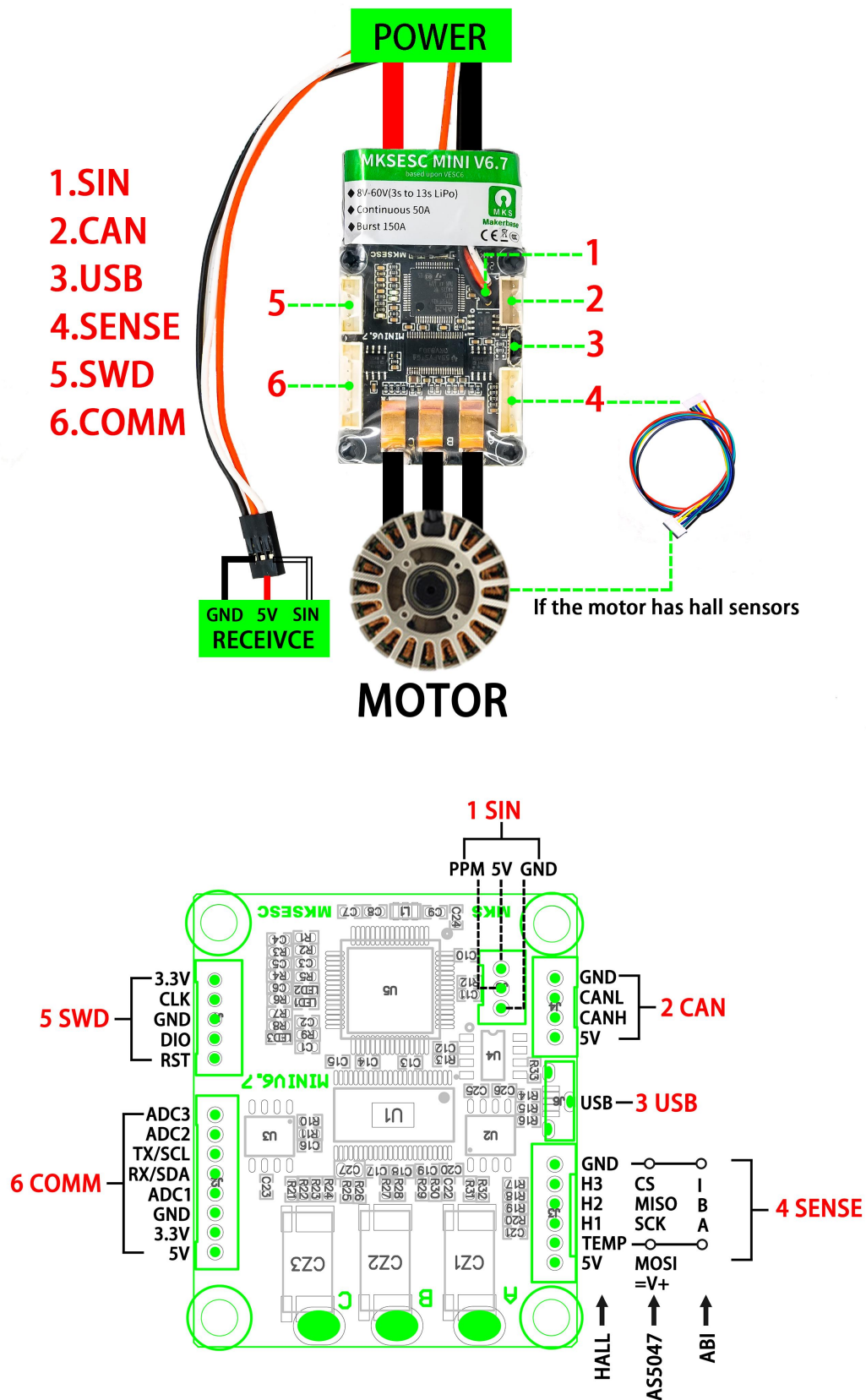C B A

MKSESC MINI V6.7 MANUAL

The Makerbase ESC is based upon the VESC Open Source Project,and compatible with VESC Software.

Feature:

- ➢ Support four control modes: Current/Dutycycle/Speed/Position control mode.
- ➢ Using 6pcs NTMFS5C628NL high current MOSETS.
- ➢ Protection functions: Low voltage protection,high voltage protection, over-current protection, temperature abnormally protection, mosfets over-temperature protection.
- ➢ Support the function of balancing car by connecting the IMU module through the IIC interface; support inertial measurement unit modules such as MPU9250, MPU9150, MPU6050, LSM6DS3, BMI160.

Specs:

- ➢ Hardware: V6.7
- ➢ Firmware: Latest Version
- ➢ Voltage: 8V-60V(Cell: 3-13S; safe for 3S to 12S)
- ➢ Voltage spikes: May not exceed 60V
- ➢ Current: 50A continuous, 150A peak
- ➢ BEC: 5V@1A
- ➢ ERPM: 150000
- ➢ Control interface Ports: USB, CAN,UART
- ➢ Supported Sensors: ABI, HALL, AS5047, AS5048A
- ➢ Input Set Support: PPM, ADC, NRF, UART, SPI, IIC
- ➢ Modes: DC, BLDC, FOC(sinusoidal)
- ➢ Regenerative capacity: Yes
- ➢ Programmable: Yes
- ➢ Motor Cable: 12AWG
- ➢ Power Cable: 12AWG
- ➢ Product Size: 67mm*39mm*20mm

Technical support:

MKSESC step by step lessons in YouTube:

https://www.youtube.com/playlist?list=PLc2RScfrSFECJst8vKtBXp192P-YP1ry5

MKSESC repository in Github:

https://github.com/makerbase-mks/VESC-MKS

The shipping package contains:

1*MKSESC MINI V6.7
1*Micro USB Cable
1*MKSESC Sensor Cable
1*MKSESC MINI V6.7 Manual