Motor and Controller files(one-for-one)

----2015.6.25-Cherry

The motor cover with "WP" is Extra Type V3, if without "WP", then the motor is Export Type V2.

Pole Pairs of V3 motor: 16pairs

Pole Pairs of V2 205 motor: 23pairs

Pole Pairs of V2 260 motor: 24pairs

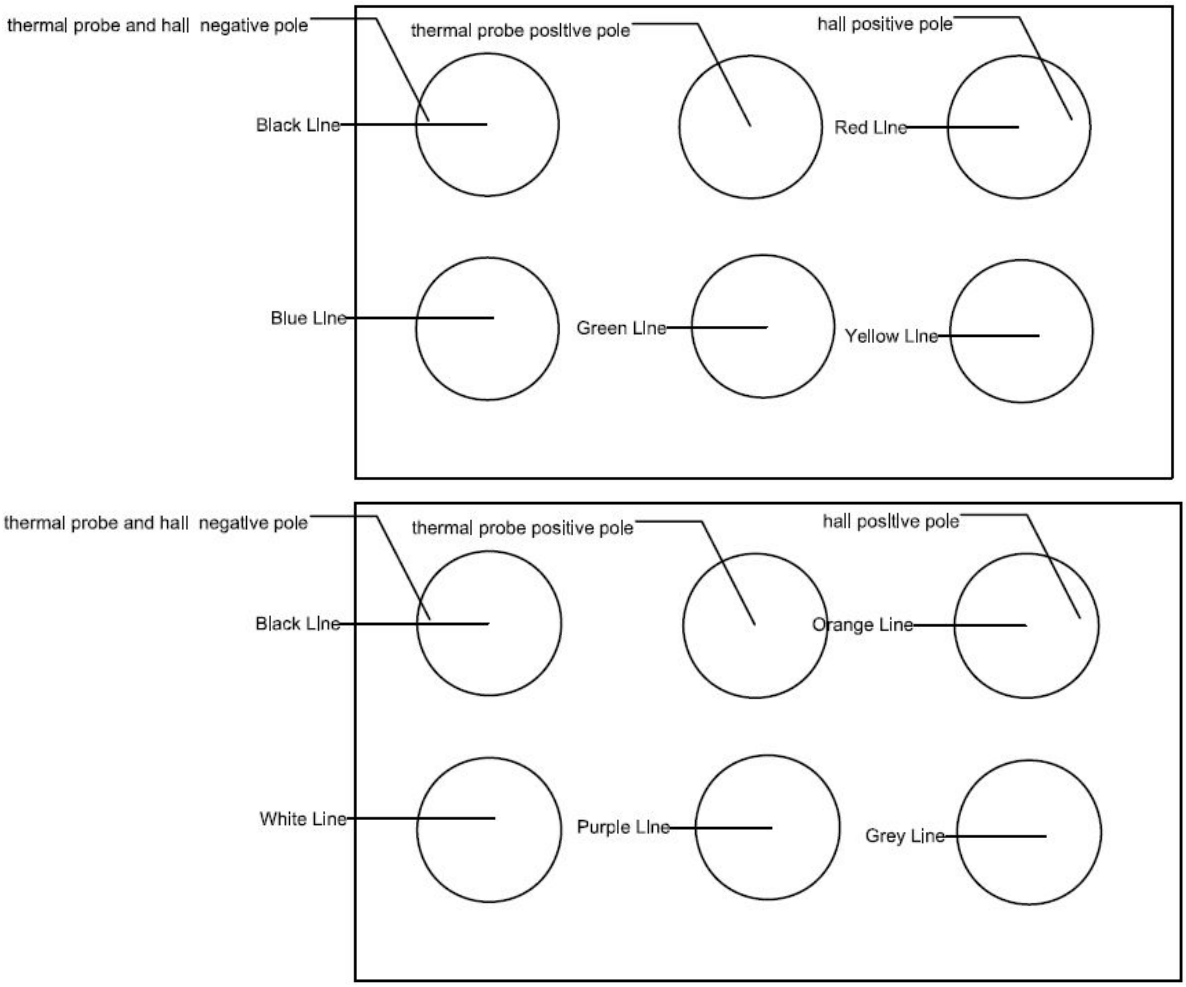
Pole Pairs of V2 273 motor: 28pairs

Phase Angle of motor: 120°

a. Motor wires: three phase lines and two hall

1. three phase lines

2. two halls of our motor(V2 / V3 type): you could choose one hall to use, the other one is for spare, in case of inconvenient of maintenance in abroad.
The diagram of two halls for your reference.

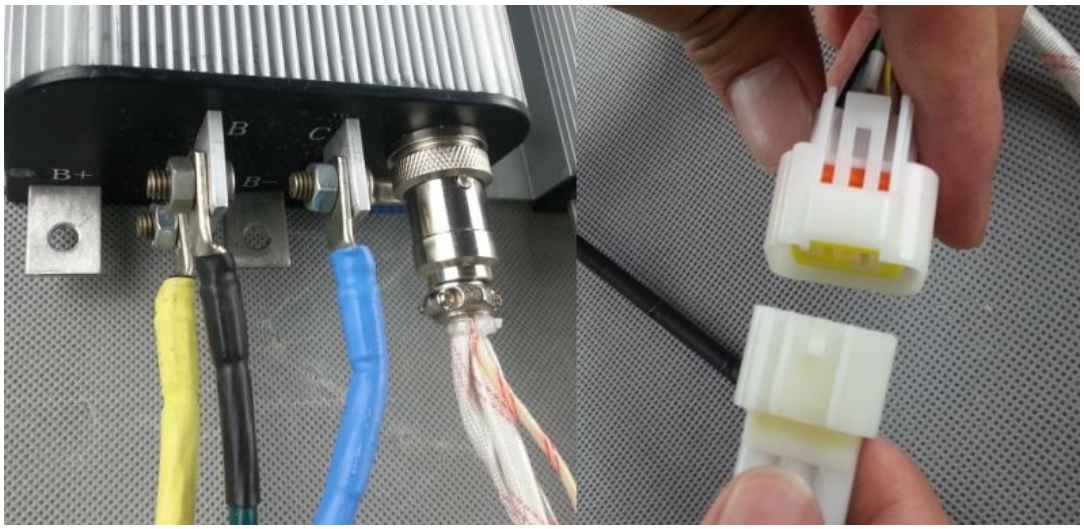


b. Kelly KBLS sine wave controller (the files as same as KEB series except Software)

1. how to connect Kelly controller to our motor

The connection way of motor and controller—— three phase and hall connection.

three phase lines **hall (plug to plug)**



2. Kelly Controller user manual
http://kellycontroller.com/mot/downloads/KellyKEBUserManual.pdf
3. KBLS Controller Software(Sine Wave Controller)
Android System(phone):
https://www.dropbox.com/s/emkg9apj7trk1nt/Software%28phone%29ACAduserEnglish.apk?dl=0
P.S.: for phone using, you should buy one more USB cable to connect controller with your phone.

Computer software:
For XP:
https://www.dropbox.com/s/h2xg3r4yc6h7om5/WinXP%20sine%20wave%20controller%20software.rar?dl=0
For Windows 7:
https://www.dropbox.com/s/i138ydfjc2o3fe1/win7%20sine%20wave%20controller%20software.rar?dl=0
4. Connect Kelly Controller to a Computer
http://kellycontroller.com/ConnectHelp.php
5. How to adjust parameters of controller
http://kellycontroller.com/KEBhelp.php
6. Wiring Diagram of Controller
http://kellycontroller.com/mot/downloads/KEB.zip
7. USB to RS232 driver
For Visa:
http://kellycontroller.com/mot/downloads/vista-prolific-chip-driver-for-serial-adapters.zip
For Win7:
http://kellycontroller.com/mot/downloads/USB-CONVERTER-RS232-U232-P9-Win-Seven7.zip
For XP/2000:
http://kellycontroller.com/mot/downloads/Win2000_xp_Driver.zip

Kelly KEB controller

1. Kelly Controller user manual
http://kellycontroller.com/mot/downloads/KellyKEBUserManual.pdf
2. Controller Software
http://kellycontroller.com/mot/downloads/Kelly%20KBL%20and%20KEB%20User%20Program%20Release%20Setup%20v4.1.zip

3. Connect Kelly Controller to a Computer

http://kellycontroller.com/ConnectHelp.php

4. How to adjust parameters of controller

http://kellycontroller.com/KEBhelp.php

5. Wiring Diagram of Controller

http://kellycontroller.com/mot/downloads/KEB.zip

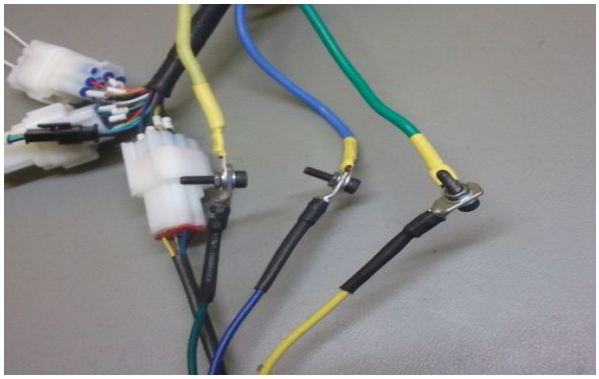
6. USB to RS232 driver
For Visa:
http://kellycontroller.com/mot/downloads/vista-prolific-chip-driver-for-serial-adapters.zip
For Win7:
http://kellycontroller.com/mot/downloads/USB-CONVERTER-RS232-U232-P9-Win-Seven7.zip
For XP/2000:
http://kellycontroller.com/mot/downloads/Win2000_xp_Driver.zip

Kelly KBL controller

1. User manual
http://kellycontroller.com/mot/downloads/KellyKBLUserManual.pdf
2. Controller Software
http://kellycontroller.com/mot/downloads/Kelly%20KBL%20and%20KEB%20User%20Program%20Release%20Setup%20v4.1.zip
3. Connect Kelly Controller to a Computer
http://kellycontroller.com/ConnectHelp.php
4. How to adjust parameters of controller
http://kellycontroller.com/KBLHelp.php
5. For more information
http://kellycontroller.com/support.php
6. USB to RS232 driver
For Visa:
http://kellycontroller.com/mot/downloads/vista-prolific-chip-driver-for-serial-adapters.zip
For Win7:
http://kellycontroller.com/mot/downloads/USB-CONVERTER-RS232-U232-P9-Win-Seven7.zip

For XP/2000:
http://kellycontroller.com/mot/downloads/Win2000_xp_Driver.zip
7. Notice: If the controller comes with CAN protocol, For J1 cable, only need to use No. 10 and No.11CAN wires. J2 cable is normal using.

Kelly KBS controller
1. User manual
http://kellycontroller.com/mot/downloads/KellyKBS-XUserManual.pdf
2. Controller Software
http://kellycontroller.com/mot/downloads/Kelly%20KBS%20User%20Configuration%20Program%20Setup%20v4.5.zip
3. Connect Kelly Controller to a Computer
http://kellycontroller.com/ConnectHelp.php
4. How to adjust parameters of controller
http://kellycontroller.com/KBS-Xhelp.php
5. For more information
http://kellycontroller.com/support.php
6. USB to RS232 driver
For Visa:
http://kellycontroller.com/mot/downloads/vista-prolific-chip-driver-for-serial-adapters.zip
For Win7:
http://kellycontroller.com/mot/downloads/USB-CONVERTER-RS232-U232-P9-Win-Seven7.zip
For XP/2000:
http://kellycontroller.com/mot/downloads/Win2000_xp_Driver.zip
7. **Notice:** If the KBS48101XY controller match with QS motor(from ours), the connect way should like below picture.



Kelly KHB controller
1. User manual
http://kellycontroller.com/mot/downloads/KellyKHB_HPUserManual.pdf
2. Controller Software
http://kellycontroller.com/mot/downloads/Kelly%20HP%20KHB%20User%20Program%20Release%20Setup%20v4.4.zip

3. Connect Kelly Controller to a Computer
http://kellycontroller.com/ConnectHelp.php
4. Kelly KHB wiring diagram
http://kellycontroller.com/mot/downloads/KHB.zip
5. How to adjust parameters of controller
http://kellycontroller.com/HPKBLI%20Help.php
6. For more information
http://kellycontroller.com/support.php
8. USB to RS232 driver
For Visa:
http://kellycontroller.com/mot/downloads/vista-prolific-chip-driver-for-serial-adapters.zip
For Win7:
http://kellycontroller.com/mot/downloads/USB-CONVERTER-RS232-U232-P9-Win-Seven7.zip
For XP/2000:
http://kellycontroller.com/mot/downloads/Win2000_xp_Driver.zip

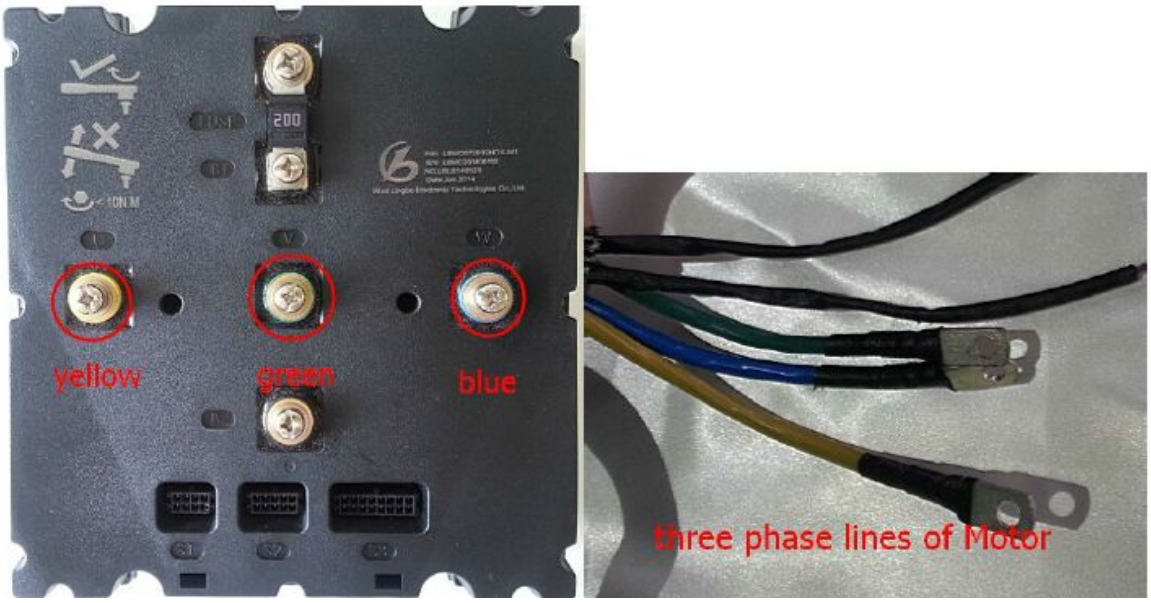
c. LBMC controller - 2015.5.21 updated

1. how to connect LB controller to our motor

1) QS motor match with LB controller (except 103 series model)

	steps	Wires-out	Products Item	Color					
	1	Phase Wire	LBMC except 103 series	U	V	W			
			QS V2 motor	yellow	green	blue			
	2	Hall	LBMC except 103 series	red	black	yellow	green	blue	
			QS V2 motor	red orange	black black	yellow grey	green purple	blue white	1st Hall 2nd Hall
option 1	1	Phase Wire	LBMC except 103 series	U	V	W			
			QS V3 motor	yellow	green	blue			
	2	Hall	LBMC except 103 series	red	black	yellow	green	blue	
			QS V3 motor	red orange	black black	yellow grey	green purple	blue white	1st Hall 2nd Hall
	3	Adjust parameters in Controller	Phase and Hall settings	U-V-W setting		1: Y-B-G			
				Hall Setting		1: Y-B-G			
option 2	1	Phase Wire	LBMC except 103 series	U	V	W			
			QS V3 motor	yellow	blue	green			
	2	Hall	LBMC except 103 series	red	black	yellow	blue	green	
			QS V3 motor	red orange	black black	yellow grey	green purple	blue white	1st Hall 2nd Hall

For V2 Type motor, normal connection.
---> Phase wire: U-yellow, V-green, W-blue **(controller parameter: Y-G-B)**
---> Hall sensor: color - to - color **(controller parameter: Y-G-B)**



For V3 motor,

---> Phase wire: U-yellow, V-blue, W-green **(controller parameter: Y-B-G)**

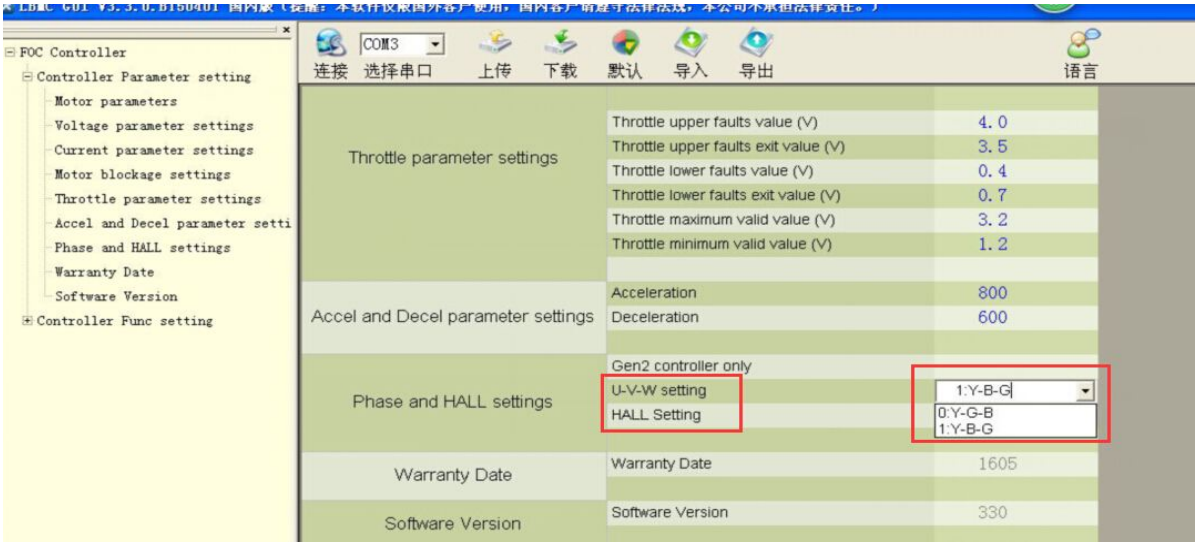
---> Hall sensor: red-red, black-black, yellow-yellow, green-blue, blue-green.

(controller parameter: Y-B-G)

That means the **green and blue** color(phase wires and hall) should be exchanged.

(**Note:** you can achieve it by set controller parameters.)

Motor Brand	Type of Motor	No. Of Pole-Pairs	Phase-shift	Phase Configuration			Hall Configuration		
				Yellow U	Green V	Blue W	yellow	green	blue
Quanshun Tile-shaped Motor	10、12 inches、13 inches Tile-shaped (with X)	16	-120		blue	green		blue	green
	10、12inches、13inches Tile-shaped (without X)	20							



2) QS motor match with LB controller 103 series model

steps	Wires-out	Products Item	Color					
1	Phase Wire	LBMC 103 series	U	V	W			
		QS V2 motor	blue	green	yellow			
2	Hall	LBMC 103 series	red	black	yellow	green	blue	
		QS V2 motor	red orange	black black	yellow grey	green purple	blue white	1st Hall 2nd Hall
1	Phase Wire	LBMC 103 series	U	V	W			
		QS V3 motor	green	blue	yellow			
2	Hall	LBMC 103 series	red	black	yellow	blue	green	
		QS V3 motor	red orange	black black	yellow grey	green purple	blue white	1st Hall 2nd Hall

For V2 Type motor, normal connection.

---> Phase wire: U-blue, V-green, W-yellow **(controller parameter: whatever)**

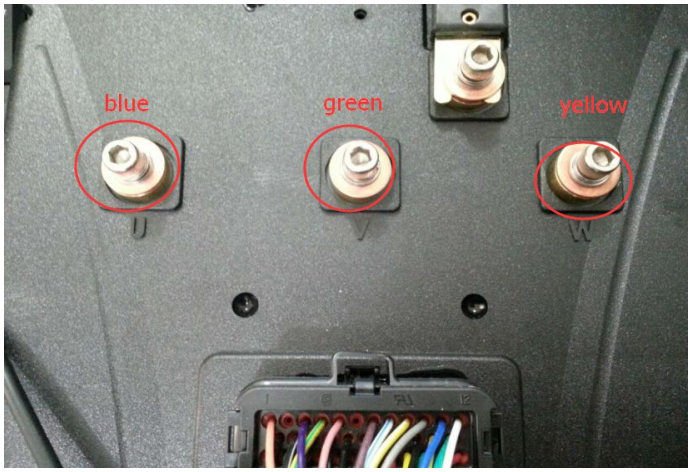
---> Hall sensor: color - to - color **(controller parameter: whatever)**

For V3 Type motor

---> Phase wire: U-green, V-blue, W-yellow **(controller parameter: whatever)**

---> Hall sensor: red-red, black-black, yellow-yellow, green-blue, blue-green. **(controller parameter: whatever)**

That means the **green and blue** color(phase wires and hall) should be exchanged. (**Note:** you cannot achieve it by set controller parameters, only through exchange the real wires of controller or motor.)



2. LB controller files.
https://www.dropbox.com/s/xrtdovw6hr1ztb4/LB%20controller%20user%20manual%20%EF%BC%8820150425%EF%BC%89.rar?dl=0

d. Sabvoton Controller

Sabvoton controller flies:
https://www.dropbox.com/sh/ipt3a1g2u234co9/AAAIxAdwuu6XzuBCSNEfW0ITa?dl=0

Pls. Note: When the Hall connector have 6 wires, it means the controller come with **Thermistor/Temperture Sensor**, if you don't want to use this function, you can connect the controller **Thermistor/Temperture Sensor wire** with ground wire.
If you connect our QS motor with sabvoton controller cannot running, pls. exchange the Green and Blue wires(phase wire and Hall wire) of controller to match with motor.
If the motor with shock and abnormal sound, pls. adjust the parameter "current loop kp".

e. Electric Speedometer X8-E

Programmable, suitable for 48-120v

Speedometer X8-E files:

https://www.dropbox.com/s/fr15gr4e3kb10kt/Speedometer%20files%20X8-E%202015.5.21.rar?dl=0

f. Electric Foot throttle

Foot Throttle Manual:

https://www.dropbox.com/s/45rs8y5r3djrxf5/Foot%20Throttle%20Manual.pdf?dl=0

For QS Motor after-sales issues

1. Hall Sensor

To detect the voltage of Hall Sensor by the voltage gear of multimeter ,which could judge the Hall sensor work or not.
Detailed schedule as below :
Set the multimeter to voltage test, and connect the red probe with the red wire of hall sen sor. In the same way , connect the black probe with the blue wire of Hall sensor.
Then, turn the motor slowly by hands, the multimeter should change between 5V (actual 4.2V-4.8V) to 0V, it means the blue hall senor is work/ok .
If the voltage keep 5V or 0V, the blue hall sensor is not work .
Use the same method as above to test the yellow wire with red wire, green wire with red wire.

P.S.: Hall Sensor is sensitivity, if might be brake down by static electricity over 5V.
The static electricity in our hand is far more than 5V.
Please don't touch the metal part when modifying. If you have to, please wear wrist strap.

2. Thermistor

To check Temp/thermal Sensor by multimeter, set the multimeter to ohm test.
Connect the red probe with the transparent wire of hall sensor. In the same way , connect

the black probe with the black wire of Hall sensor.
Generally, it's 1kΩ for KTY83/122 at 25℃(data below).

https://www.dropbox.com/s/7mdygm9bbwxtv63/Thermistor%20KTY83-122%20%20Data.pdf?dl=0