25A/35A/45A/60A/80A/120A SENSORLESS SPEED CONTROLLER FOR 1/10 RC CAR

Thank you for your purchasing this Brushless Electronic Speed Controller (ESC). This electronic speed controller is specifically designed for operating Sensorless brushless motors. High power systems for RC models can be very dangerous and we strongly suggest that you read this manual carefully. We have no control over the correct use, installation, application or maintenance of these products, thus no liability shall be assumed nor accepted for any damages, losses or costs resulting from the use of this item. Any claims arising from the operating, failure or malfunction, etc. will be denied. We assume no liability for personal injury, property damage or consequential damages resulting from our product or our workmanship. As far as is legally permitted, the obligation for compensation is limited to the invoice amount or product in question.

FEATURES

1. Specially designed for RC cars with excellent start-up, acceleration and linearity.
2. Compatible with sensorless brushless motors. .
3. Easily programmed with pocket-sized program card.
4. **Low Voltage Cut-Off:** Used to prevent lithium battery packs from over-discharging. When using lithium battery packs, please ensure the cut-off value is set to your desired setting. **WARNING:** Never use the "0V" setting when using Lithium batteries, this setting is **ONLY FOR NiMH BATTERIES**.
5. **3 start modes** (Also called "Punch") from "soft" to "very aggressive"
7. **Maximum brake force:** 100%，25%，50%，75%
10. **Maximum reverse force:** 25%，50%，75%，100%
11: **Neutral range:** 9% (narrow), 6% (Normal), 12% (Wide)

Model	25A	35A	45A	60A	80A	120A
Cont. Current/ Burst Current	25A/100A	35A/120A	45A/180A	60A/320A	80A/480A	120A/600A
Motor Type	Sensorless Brushless Motor					
Suitable Car	1/18, 1/16 car	1/18, 1/16, 1/14 car	1/10 car	1/10 car	1/8 car	1/8 car
Suitable Brushless Motor	>=12T	>=12T	>=9T	>=9T	>=5.5T	>=3.5
Resistance	0.004ohm	0.003ohm	0.0014ohm	0.0007ohm	0.0005ohm	0.00035ohm
Battery	2 cells Lipo 4~6 cells NiMH	2 cells Lipo 4~6 cells NiMH	2~3 cells Lipo 4~9 cells NiMH		2~4 cells Lipo 4~12 cells NiMH	
BEC Output	5V/2A (analog mode)	5V/2A (analog mode)	5.8V/3A (switch mode)		6.1V/3A (switch mode)	
Dimensions	25*30*14.5mm	25*30*18.5mm	32.5*34*24mm		41*51*36mm	

INSTRUCTIONS

1. Connect BEC (signal harness) to receiver throttle channel (black wire to "-" or outer edge of receiver).
2. Connect motor wires with ESC.
3. Turn on the transmitter.
4. Connect battery pack to ESC then switch on the ESC.
5. Motor will beep when connection is established.
6. When the throttle is in the neutral position, the motor will beep again indicating ESC is ready to use.
7. If motor rotates opposite of direction desired, swap any 2 of 3 motor wires to reverse rotation.
8. **NOTE:** With default reverse setting of 25%, if car runs faster in reverse than forward then you must power off ESC, set your Throttle Channel on your radio to REV and re-start ESC.

PROGRAMMING

1. Connect BEC (signal lead) to program card (align wire colors) and then switch on ESC.
2. The "Work State" LED will flash twice and then switch off. LED lights will indicate current settings.
3. Press the "↓" button to select different settings.
4. Press the "→" button to select different value of the current setting.
5. Press the "Program" button to confirm your selection, the "Work State" LED will flash indicating successful programming change.
6. Pressing the Reset button will restore default settings.
7. When done making changes, turn off ESC and unplug program card.