

Ultrafly B/18/xx Series

Brushless, Sensorless Motors

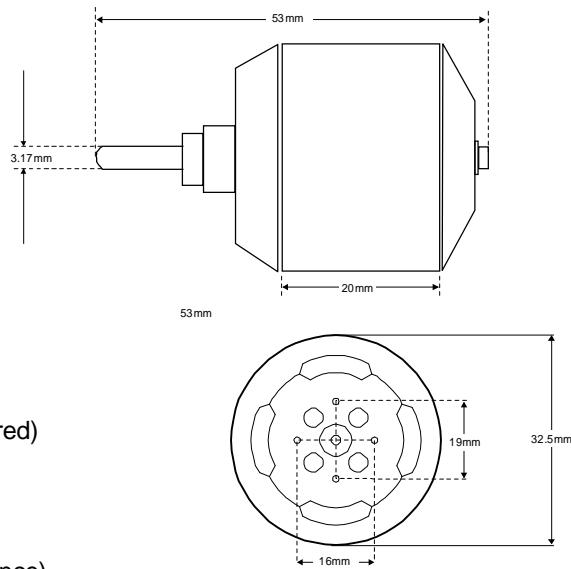


The “Motor” for electric Convergent on 20 - 30 Gas Power models

Ultrafly's B/18/xx series brushless sensorless motor is a light weight 90.5g motor with over whelming 320 watt power with enough cooling air flow through. It may be used for electric power models up to 2.5kg or small helicopters as well as E-conversion a 20 - 30 class gas power model. The precision CNC tooling with hi-quality material allows this motor to operate at higher RPM without vibrations. A unique patented design forces the magnet to hold its position when your propeller suddenly stops in high RPM. Quality, efficiency and light weight are the goal we are shooting for! Versatile is the word best describe it capability! Please use the table below to match your application.

Specification

- Shaft diameter: 3.17mm, 1/8inch
- Shaft Length: 11.5mm
- Motor Diameter: 32.5mm
- Motor Length: 53mm
- Motor Weigh: 90.5g (3.20oz)
- Distance of mounting holes: 16mm & 19mm
- Mounting screw: M3x3mm
- Maximum Input Power: 320watt (cooling air required)
- Maximum RPM: 16,000
- Maximum Operating Temperature: 100 ° C
- Magnet: Neodymium (150 ° C temperature tolerance)



Model	Max Amp	RPM/Volt	Airplane	AUW	Prop size
B/18/07	20	650	Sports	1.5kg, 3.3lb	10 - 12 inch
			Hi-Wing	2.2kg, 5lb	11 - 13 inch
B/18/08	23	750	Sports	1.5g, 3.3lb	10 - 12 inch
			Hi-Wing	2.2g, 5lb	11 - 13 inch
B/18/10	28	1000	Sports	1.6kg, 3.5lb	9 – 11 inch
			Hi-Wing	2.4kg, 5.4lb	10 – 11 inch

** B/18/07 & B/18/08 are designed for hi voltage application with lower amp limitation. Please use Amp meter or Watt meter to adjust your power source. Do not exceed its amp & power limit!

B/18/xx motor application reference table with APC propeller

MODEL	V	A	W	RPM
B/18/10				
10x7E	8.0	14.4	115.20	6810
	10.0	19.8	198.00	8100
	10.8	21.0	226.80	8370
11x5.5E	8.0	15.5	124.00	5750
	10.0	22.2	222.00	7890
	10.8	24.8	267.84	8310
11x7E	8.0	19.0	152.00	6300
	10.0	26.4	264.00	7350
	10.8	** 29.4	317.52	7770
11x3.8SF	8.0	18	144.00	6510
	10.0	25.3	253.00	7500
11x4.7SF	8.0	20.3	162.40	6300
	10.0	27.3	273.00	7320
B/18/08				
10x7SF	10.0	17.8	178.00	6060
	10.8	19.8	213.84	6360
	12.0	** 23.3	279.60	6810
11x4.7SF	10.0	16.2	162.00	6390
	10.8	18.4	198.72	6780
	12.0	20.6	247.20	7170
10x7E	12.0	16.5	198.00	7710
	13.8	20.9	288.42	8460
11x5.5E	10.0	12.6	126.00	6780
	10.8	14.4	155.52	7200
	12.0	16.9	202.80	7740
11x7E	10.0	15.2	152.00	6390
	10.8	17.1	184.68	6750
	12.0	20.1	241.20	7260
12x6E	10	16.3	163.00	6270
	10.8	18.6	200.88	6630
	12	20.9	250.80	6990
B/18/07				
10x7E	13.8	14.3	197.34	7680
	16	17.7	283.20	8580

	17	19.6	333.20 **	8910
11x5.5E	13.8	14.2	195.96	7710
	16	17.8	284.8	8520
11x7E	13.8	18.3	252.54	7290
12x6E	13.8	18.3	253.92	7110
12x10E	12	19.8	237.60	5550

**** Over power limit application just for reference. Do not use in real application!**

Option Parts:

UF-PS001	Aluminum Propeller Adapter 3.17/5.0 mm
UF-SFT-019	3.17x53mm v2 motor shaft (back mount) for B/06 & B/12 & B/18
UF-SHC-003	019 shaft w/ bearing 010x2 combo for B/18
UF-BRN-010	3.17x7.94x3.54mm bearing for B Series motor
UF-MNT-001	Aluminum back mount plate for B series

Cautions:

Speed Controller: You must use a brushless, sensorless speed controller.

Cooling: You must provide proper cooling to avoid exceeding the 100-degree-celcius limit.

Overheating will damage the magnets and windings, and is not covered under warranty. Proper cooling is necessary when you are trying to use it in larger power (>120 watt) application. In poor air flow applications like Helicopter or boat, you may have to use proper airflow redirection device or power fan to cool the motor or you may result in over heat situation to the motor.

Over current: Please use a current meter to control the battery cell count and the propeller size. When changing propeller size, or battery type you must measure the current. You must limit current to the specifications above, or less, to avoid damage to the motor. Reduce prop size or battery cell count to reduce current.

Max input watt: For each motor, its structural design will limit its heat dissipation. Watt input is proportional to heat generated. The maximum watt input for B/18 series is 320 watts. Do not exceed this limit or you may easily burn out the motor.

Rotation: Switch any two of the three wires between speed controller and motor to reverse motor direction. NEVER reverse polarity from battery to speed controller.

Limited Warranty:

Ultrafly brushless motors have a one-year, limited warranty from date of purchase. All motors are guaranteed to be free from manufacturing defects for one year. The warranty does not cover over-current, over-temperature, or crash damage. The customer must properly cool the motor and keep the current and input wattage within specifications. Improper use of the motor can be determined in service and will not be covered in the warranty.

All warranty issues shall be handled by your dealer first. If necessary, you may also contact us for warranty issues. Send mail to service@ultraflymodel.com or contact the distributor in your country.

