

VL8018 Propulsion System Specifications

VL8018 propulsion system is recommended for (4 arms) VTOL

with a take-off weight of 30~32 kg.

一、Parameters

Motor Parameters	Item No.	VL8018
	KV (RPM/V)	180
	Voltage (V)	12S
	Idle Current (A/15V)	≤2.2
	Idle RPM (RPM/15V)	2980±10%
	Interphase Resistance (mΩ/25°C)	37±10%
	Max. Current (A)	100
	Three-phase Wires (mm)	Silicone 14#-1000±5
	Encoder Wire (mm) (Measured from the center of the motor)	Shielded Wire - Black-24AWG-5C-210± 10mm-M6 aviation connector
	Ingress protection	IPX5
	Motor Weight (g)	655 (incl. wires) ±10
	Ambient Temperature (°C)	-30 ~ 55
	Temperature Monitoring	Thermistor (optional as per FC)
	Item No.	V120A
	Throttle Range (us)	1100-1940 (Fixed)
	Protocol	DRONECAN/UVACAN

ESC	Control Methods	PWM/CAN
Parameters	Propeller Locking Method	Electronic
	Max. Voltage (V)	60
	Max. Continuous Current (A)	60 (Under certain heat dissipation conditions)
	Max. Current (A/10s)	130 (Under certain heat dissipation conditions)
	Ambient Temperature (°C)	-30 ~ 65
	Ambient Humidity (%)	15 ~ 85
	Storage Temperature (°C)	-40 ~ 65
	Storage Humidity (%)	15 ~ 85
	Standby Power Consumption (mA)	≤50
	Throttle Response Speed (ms)	300
	Throttle Refresh Frequency (Hz)	50-500
	Input Cables (mm)	Silicone wire - red/black-12AWG-180±10mm
	Output Cables (mm)	Silicone wire - orange-12AWG-85±10mm
	Signal wires (mm)	Shielded cable - Black-OD4.2-5C-500±10mm -JP-3P*2-Black blank white - Green yellow gray
	Encoder wires (mm)	Shielded wire - black-26AWG-5C-450 ±10-M6 aviation connector
	Length (mm)	103±1.5
	Width (mm)	50±1.5
Height (mm)	26±1.5	

	Weight (g)	170±5
Propeller	Item No.	G26
	Item No. (mm)	660
Parameters	Weight (g)	68±5

二、 Test report

VL8018 KV180+V120A+G26						Ambient temperature	25°C
Throttle	Voltage (V)	Current (A)	Power (W)	RPM (RPM)	Torque (N·m)	Thrust (g)	Efficiency (g/W)
40	44.38	7.97	354	2628	1.01	3277	9.26
42	44.35	9.14	405	2758	1.11	3623	8.94
44	44.33	10.41	461	2886	1.22	3971	8.61
46	44.29	11.78	522	3014	1.32	4349	8.34
48	44.25	13.28	587	3140	1.44	4741	8.07
50	44.22	14.85	657	3266	1.55	5123	7.80
52	44.18	16.55	731	3390	1.67	5527	7.56
54	44.13	18.48	816	3517	1.81	5980	7.33
56	44.09	20.50	904	3638	1.94	6424	7.11
58	44.05	22.62	996	3757	2.07	6860	6.89
60	44.00	24.87	1094	3875	2.20	7328	6.70
62	43.95	27.25	1198	3991	2.34	7794	6.51
64	43.90	29.72	1305	4105	2.47	8246	6.32
66	43.85	32.34	1418	4218	2.61	8720	6.15
68	43.79	35.13	1538	4329	2.76	9188	5.97
70	43.73	38.08	1665	4436	2.90	9667	5.80

80	43.34	55.09	2388	4940	3.65	12133	5.08
90	42.93	75.04	3222	5364	4.34	14394	4.47
100	42.48	95.16	4043	5657	4.88	16107	3.98

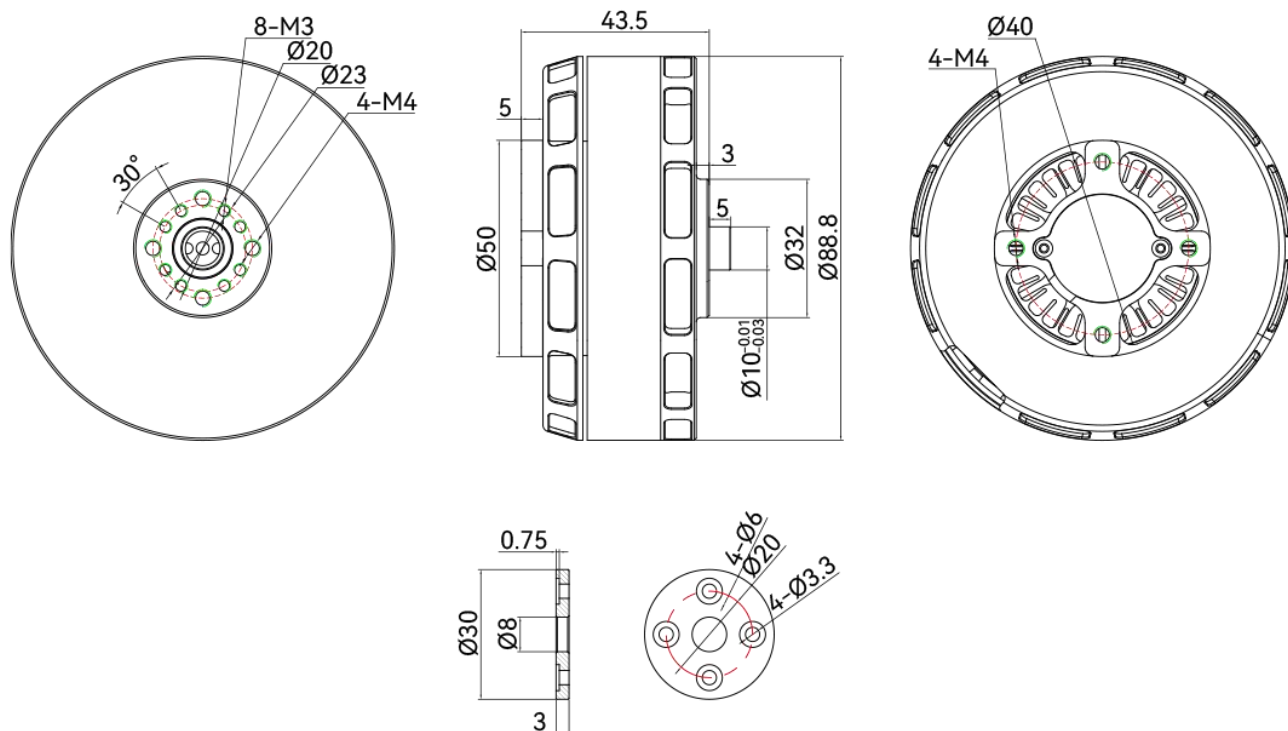
VL8018 KV180+V120A+G26						Ambient temperature	25°C
Throttle	Voltage (V)	Current (A)	Power (W)	RPM (RPM)	Torque (N·m)	Thrust (g)	Efficiency (g/W)
40	49.91	9.65	482	2927	1.25	4097	8.50
42	49.88	11.08	553	3071	1.37	4525	8.19
44	49.84	12.60	628	3213	1.50	4967	7.91
46	49.81	14.29	712	3353	1.64	5423	7.62
48	49.76	16.15	804	3488	1.78	5900	7.34
50	49.73	18.09	899	3606	1.92	6392	7.11
52	49.68	20.20	1004	3758	2.07	6894	6.87
54	49.64	22.46	1115	3890	2.22	7388	6.63
56	49.61	24.89	1235	4021	2.38	7938	6.43
58	49.55	27.45	1360	4147	2.53	8452	6.22
60	49.49	30.16	1493	4273	2.70	8996	6.03
62	49.42	33.03	1632	4397	2.86	9529	5.84
64	49.35	36.12	1783	4519	3.03	10077	5.65

66	49.28	39.32	1938	4642	3.19	10632	5.49
68	49.21	42.71	2102	4755	3.36	11190	5.32
70	49.14	46.19	2270	4867	3.52	11751	5.18
80	48.74	66.04	3219	5353	4.34	14450	4.49
90	48.28	87.07	4204	5712	4.97	16458	3.91
100	48.03	99.04	4756	5855	5.22	17587	3.63

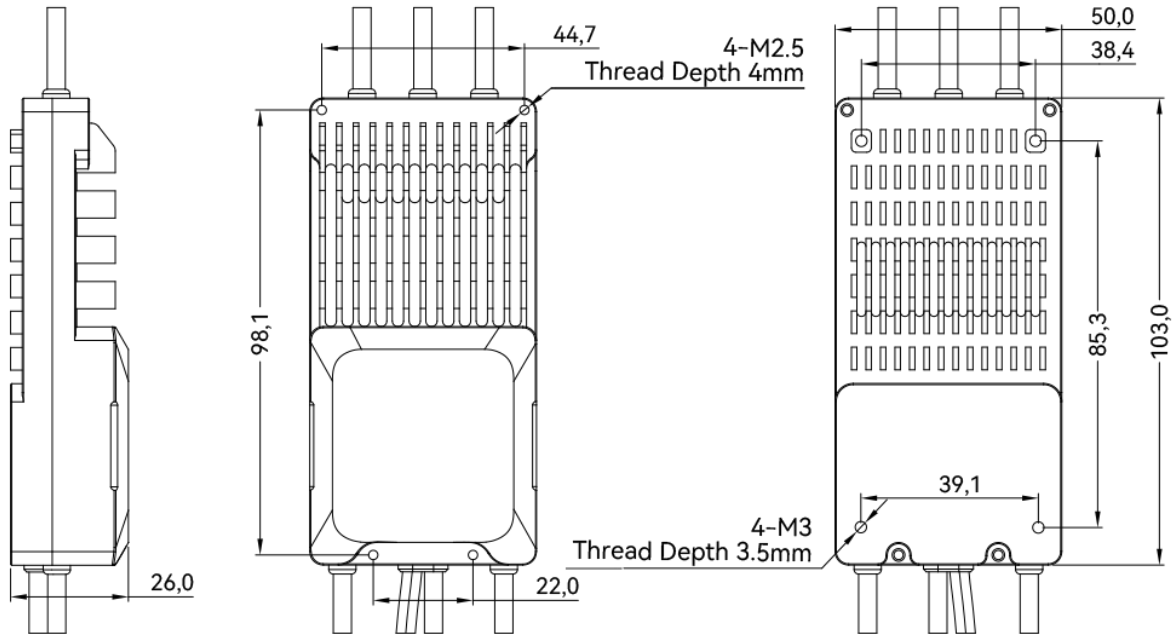
The above data are measured by the professional bench of the laboratory for reference

for model selection only.

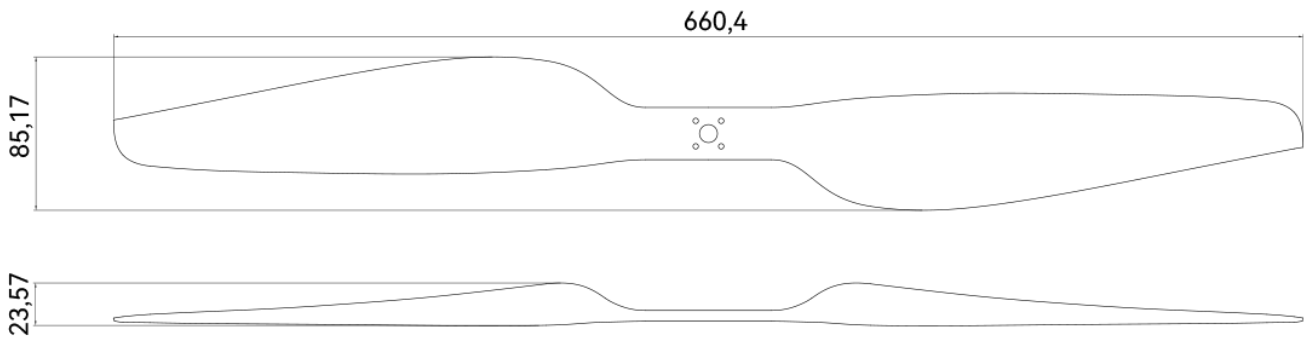
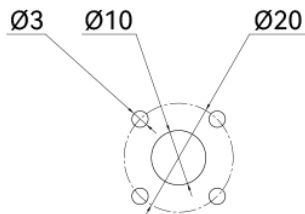
三、 Drawings (mm)



【MOTOR】



【ESC】



【PROPELLER】