

VL7015 Propulsion System Specifications

VL7015 propulsion system is recommended for (4 arms) VTOL
with a take-off weight of 22~24 kg.

一、Parameters

Motor Parameters	Item No.	VL7015
	KV (RPM/V)	190
	Voltage (V)	12S
	Idle Current (A/15V)	≤2.1
	Idle RPM (RPM/15V)	2970±10%
	Interphase Resistance (mΩ/25°C)	35±10%
	Max. Current (A)	85
	Three-phase Wires (mm)	Silicone 14#-600±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)	540 (incl. wires) ±10
	Ambient Temperature (°C)	-30 ~ 55
Temperature Monitoring	Thermistor (optional as per FC)	
	Item No.	V80A
	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)	40 (Under certain heat dissipation conditions)
	Max. Current (A/10s)	80 (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-14AWG-110±10
	Signal wires (mm)	Shielded cable - Black-OD4.2-5C-450±10mm -JP-3P*2-Black blank white - Green yellow gray
	Encoder wires (mm)	Shielded wire - black-26AWG-5C-450 ±10-M6aviation connector
	Length (mm)	84±1.5
	Width (mm)	34.4±1.5
Height (mm)	19±1.5	

	Weight (g)	110±5
Propeller	Item No.	P24
	Item No. (mm)	610
Parameters	Weight (g)	60±5

二、 Test report

VL7015 KV190+V80A+P24						Ambient temperature	25°C
Throttle	Voltage (V)	Current (A)	Power (W)	RPM (RPM)	Torque (N·m)	Thrust (g)	Efficiency (g/W)
40	44.31	6.70	297	2975	0.71	2639	8.88
42	44.30	7.64	338	3128	0.78	2915	8.61
44	44.28	8.72	386	3276	0.86	3232	8.37
46	44.27	9.89	438	3428	0.95	3547	8.10
48	44.25	11.13	492	3574	1.03	3867	7.86
50	44.23	12.53	554	3724	1.12	4227	7.63
52	44.21	13.97	617	3867	1.21	4591	7.44
54	44.19	15.51	685	4012	1.31	4936	7.20
56	44.16	17.20	759	4156	1.40	5310	6.99
58	44.14	18.95	836	4295	1.50	5685	6.80
60	44.11	20.77	916	4426	1.59	6054	6.61
62	44.08	22.79	1005	4564	1.70	6454	6.42
64	44.06	24.74	1090	4702	1.79	6781	6.22
66	44.02	27.06	1191	4840	1.90	7210	6.05
68	43.99	29.54	1299	4979	2.02	7669	5.90
70	43.95	32.14	1413	5114	2.13	8130	5.75

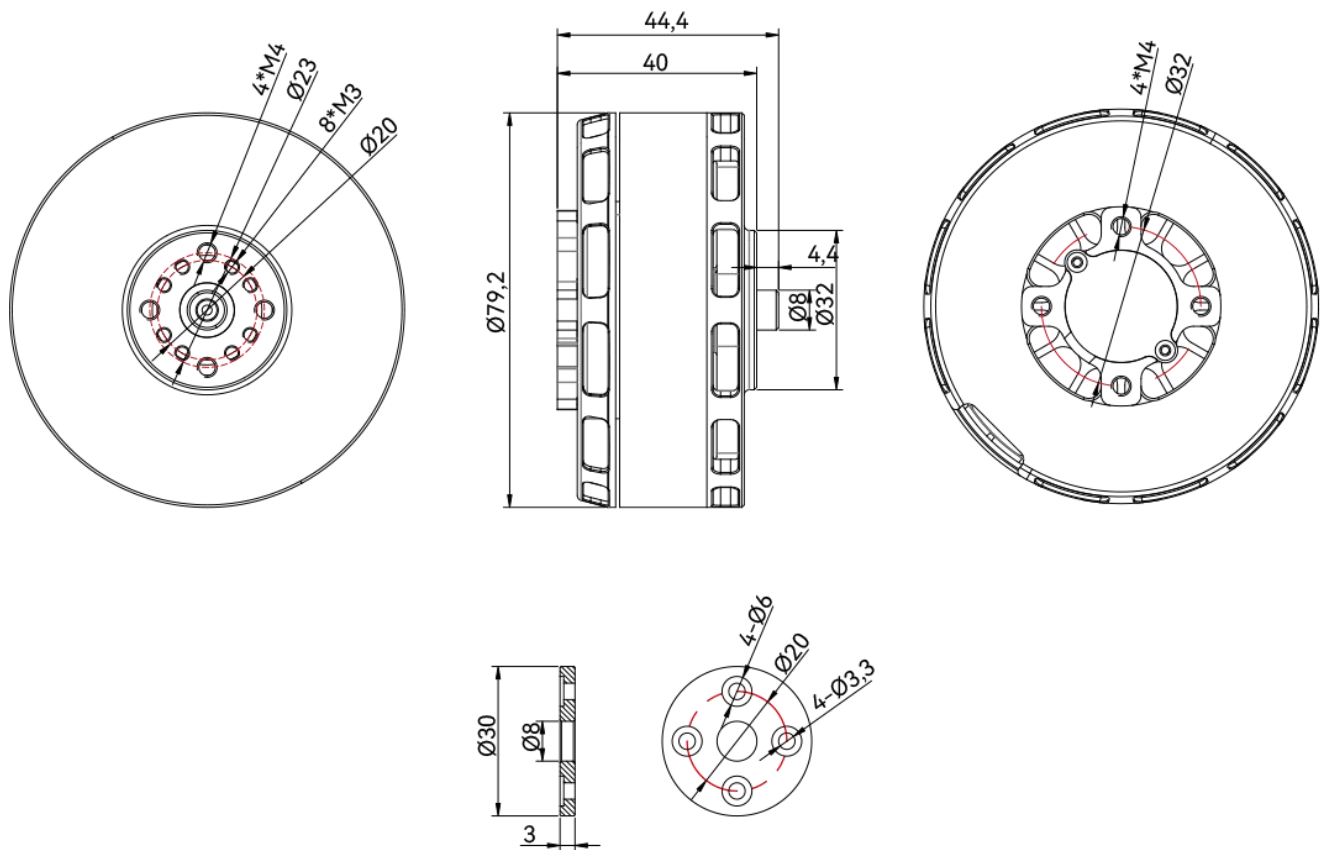
80	43.73	47.74	2088	5783	2.77	10545	5.05
90	43.42	69.14	3002	6441	3.49	13234	4.41
100	43.32	75.39	3266	6584	3.66	13839	4.24

VL7015 KV190+V80A+P24						Ambient temperature	25°C
Throttle	Voltage (V)	Current (A)	Power (W)	RPM (RPM)	Torque (N·m)	Thrust (g)	Efficiency (g/W)
40	49.89	8.25	412	3337	0.89	3354	8.15
42	49.87	9.49	473	3509	0.99	3719	7.86
44	49.85	10.80	539	3675	1.09	4103	7.62
46	49.83	12.25	610	3844	1.19	4507	7.38
48	49.81	13.82	688	4008	1.29	4922	7.15
50	49.78	15.49	771	4173	1.40	5320	6.90
52	49.76	17.32	862	4333	1.51	5765	6.69
54	49.73	19.32	961	4494	1.63	6231	6.49
56	49.70	21.48	1068	4656	1.76	6696	6.27
58	49.67	23.71	1178	4810	1.88	7186	6.10
60	49.63	26.17	1299	4970	2.02	7679	5.91
62	49.60	28.52	1415	5121	2.13	8114	5.74
64	49.56	31.38	1555	5274	2.27	8645	5.56

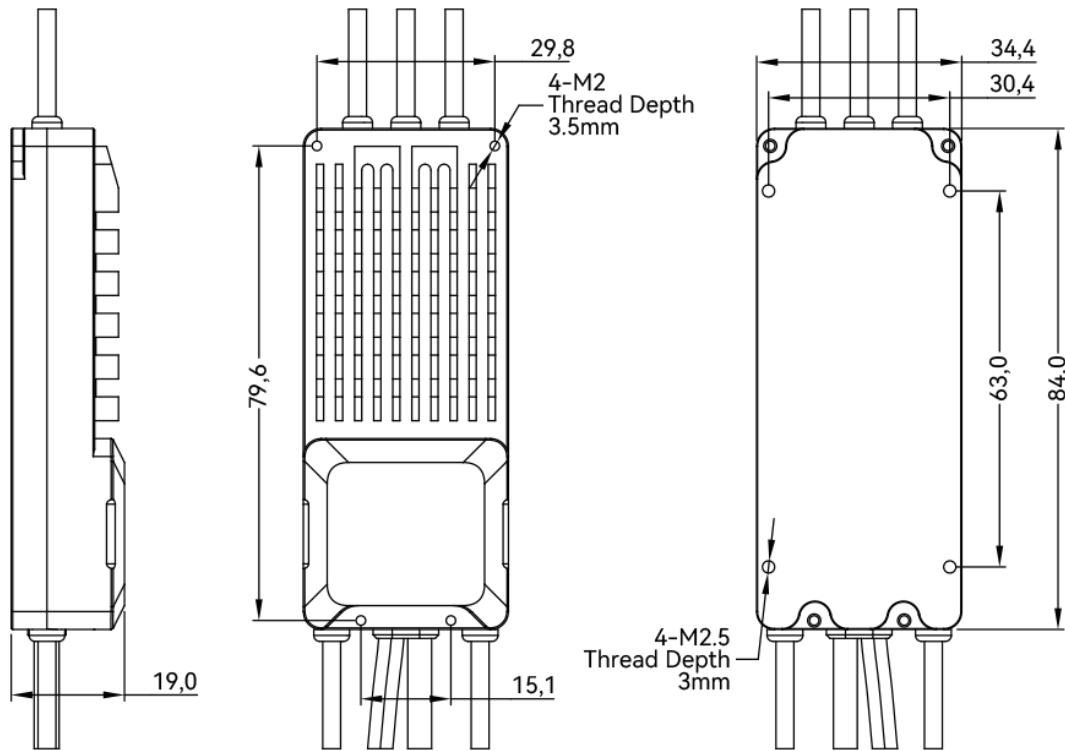
66	49.52	34.23	1695	5423	2.41	9163	5.41
68	49.47	37.18	1840	5570	2.54	9674	5.26
70	49.43	40.28	1991	5716	2.67	10167	5.11
80	49.15	59.91	2945	6408	3.45	13102	4.45
90	49.00	69.49	3405	6683	3.76	14024	4.18
100	48.79	83.63	4080	6988	4.16	15867	3.84

The above data are measured by the professional bench of the laboratory for reference
for model selection only.

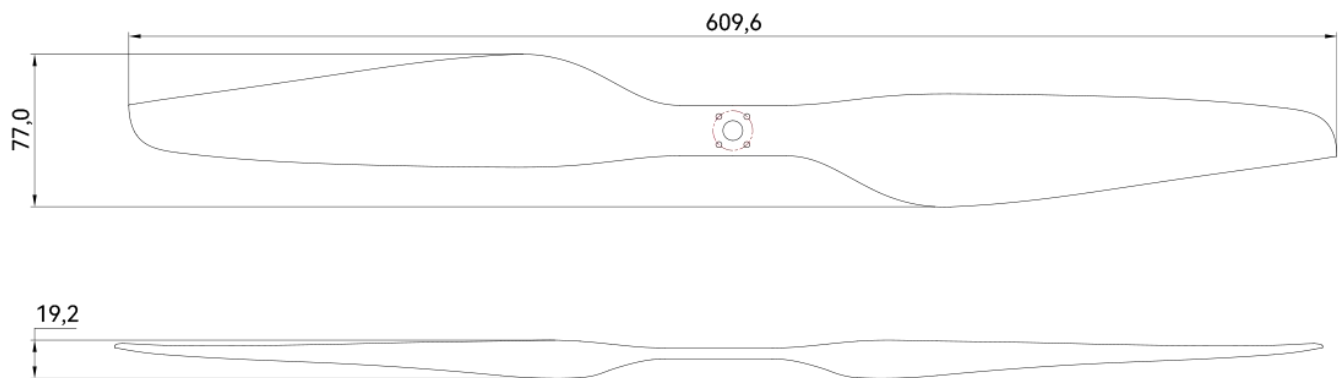
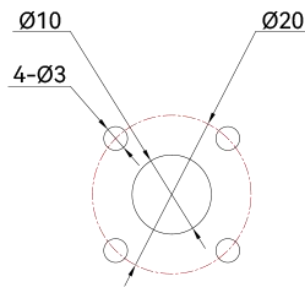
三、 Drawings (mm)



【MOTOR】



【ESC】



【PROPELLER】