VL1155 Propulsion System Specifications

(VL1155 power system is recommended for compound-wing quadcopters with a takeoff weight of 90~105 kg)

一、Parameters

Motor Parameters	Item No.	VL1155
	Voltage (V)	24S
	KV (RPM/V)	KV65
	Idle Current (A/25V)	≤2.4A
	Idle RPM (RPM/25V)	1650±5%
	Interphase Resistance (mΩ)	21±5mΩ (Wire length: 150mm 0/+5mm)
	Max Current (A)	161A
	Max Power	16100W
	Wire length (mm)	150±5mm
	Wire Material, wire Gauge, Color	Power wires: Leads
	Ingress protection	IPX5
	Motor Weight (Incl. Cable) (g)	1410±5%
	Ambient Temperature (℃)	-30～50℃
	Model No.	VL200A 24S
	Throttle Pos. Range	1100~1940us
	Protocol	CAN

ESC Parameters	Control	PWM/CAN
	Max Voltage (V)	108V
	Max Continuous Current (A)	120A
	Max Current (A)	200A (Open environment and temperature≤60℃)
	Weight (Excl. Cable) (g)	530±5%g
Propeller Parameters	Model No.	VZ40*16.1
	Length (mm)	1018.1±2
	Weight (g)	205±5

二、Test report

2-1、**Thrust data**

VL1155 KV65+VL200A 24S+88.8V+VZ40				Ambient temperature	34℃
Throttle (%)	Thrust (gf)	Voltage (V)	Current (A)	Motor Efficiency (%)	Overall Efficiency (gf/W)
30	83810	88.77	9.55	83.4	9.9
35	11109	88.77	14.12	84.6	8.9

40	13918	88.81	19.51	86.1	8.0
45	17346	88.88	26.57	86.9	7.3
50	21205	88.94	35.41	87.0	6.7
55	25384	89.22	46.08	86.9	6.2
60	29536	89.08	58.02	86.8	5.7
65	34027	89.02	71.63	86.5	5.3
70	38565	89.07	87.61	85.1	4.9
75	42963	89.47	104.97	83.7	4.6
80	46531	88.87	120.63	82.6	4.3
85	48946	88.82	131.61	81.5	4.2
90	51623	88.73	144.99	80.1	4.0
95	54183	88.56	158.93	78.6	3.9
100	55265	88.59	166.36	77.6	3.8

VL1155 KV65+VL200A 24S+100V+VZ40	Ambient temperature	34℃

Throttle (%)	Thrust (gf)	Voltage (V)	Current (A)	Motor Efficiency (%)	Overall Efficiency (gf/W)
30	10459	99.93	11.92	83.6	8.8
35	13986	99.94	17.58	85.7	8.0

40	17956	99.97	24.86	86.8	7.2
45	22342	100.01	34.10	86.6	6.6
50	27029	100.04	45.05	86.7	6.0
55	32049	100.14	58.16	86.6	5.5
60	36999	100.04	72.49	86.1	5.1
65	41892	100.00	90.25	83.6	4.6
70	46361	100.02	107.03	82.5	4.3
75	50548	100.10	124.62	80.4	4.1
80	53598	100.09	140.63	77.9	3.8
85	54992	99.50	148.64	77.3	3.7
90	56871	99.75	158.46	75.8	3.6
95	57036	99.74	161.83	74.6	3.5
100	56700	99.76	161.49	74.1	3.5

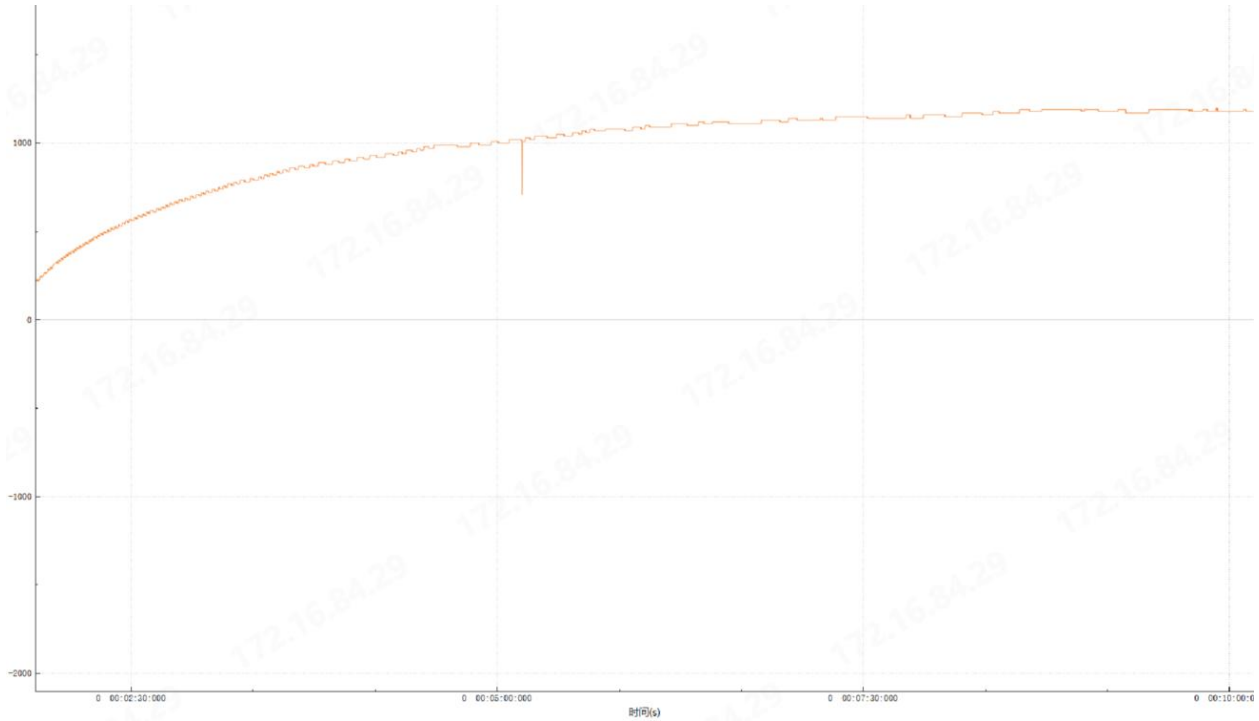
The above data are measured by the professional bench of the laboratory for reference for model selection only.

2-2、Temperature data

Test Conditions: 88.8V, sustained 26kgthrust for 10 minutes (Graph temperature: x0.1℃),

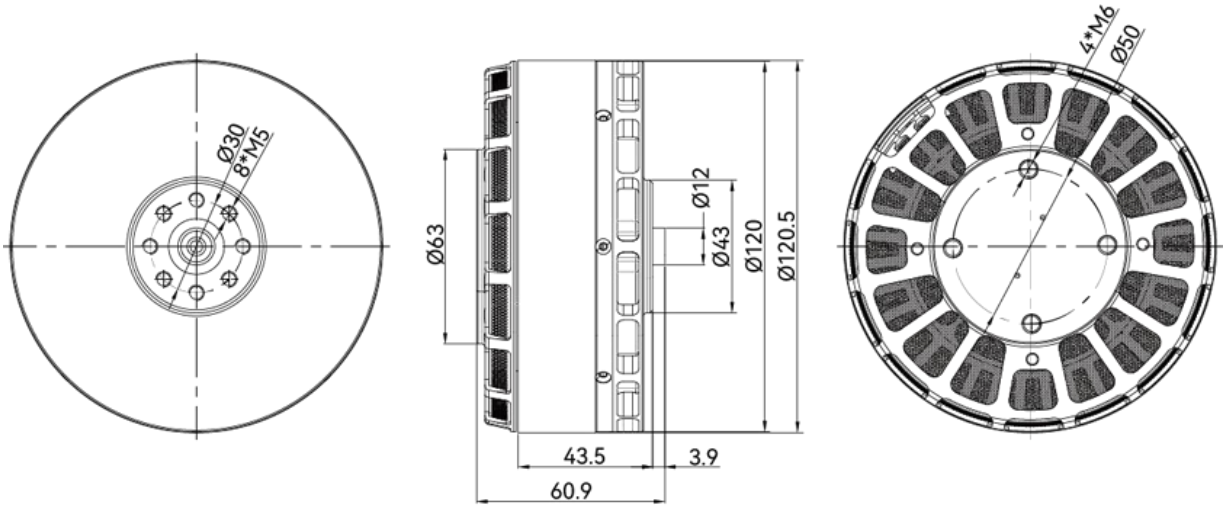
Ambient Temperature：34℃

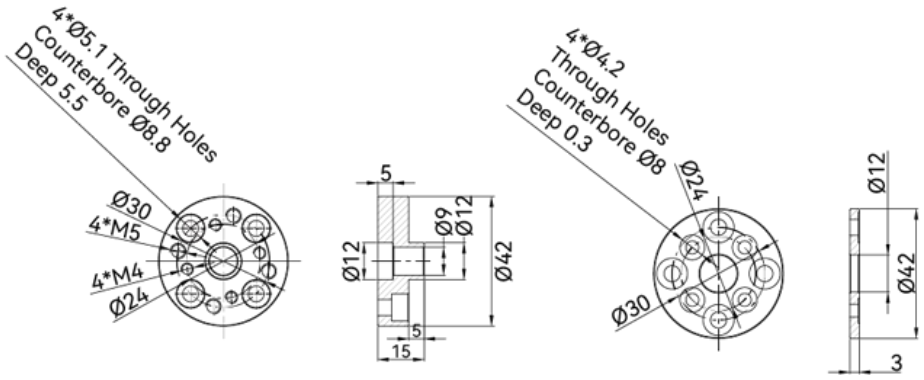
Motor Temperature (Coil Temperatur: 124℃)

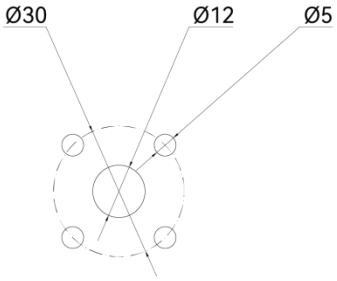


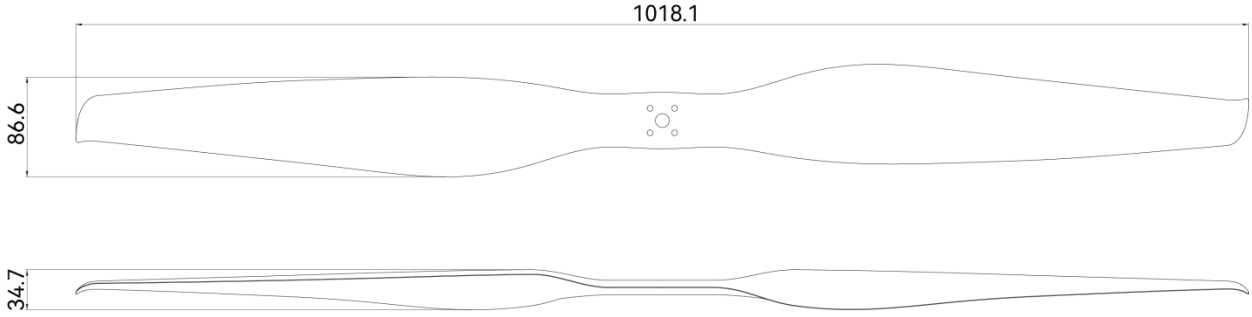
ESC Temperature (ESC MOS Temperature: 54℃)

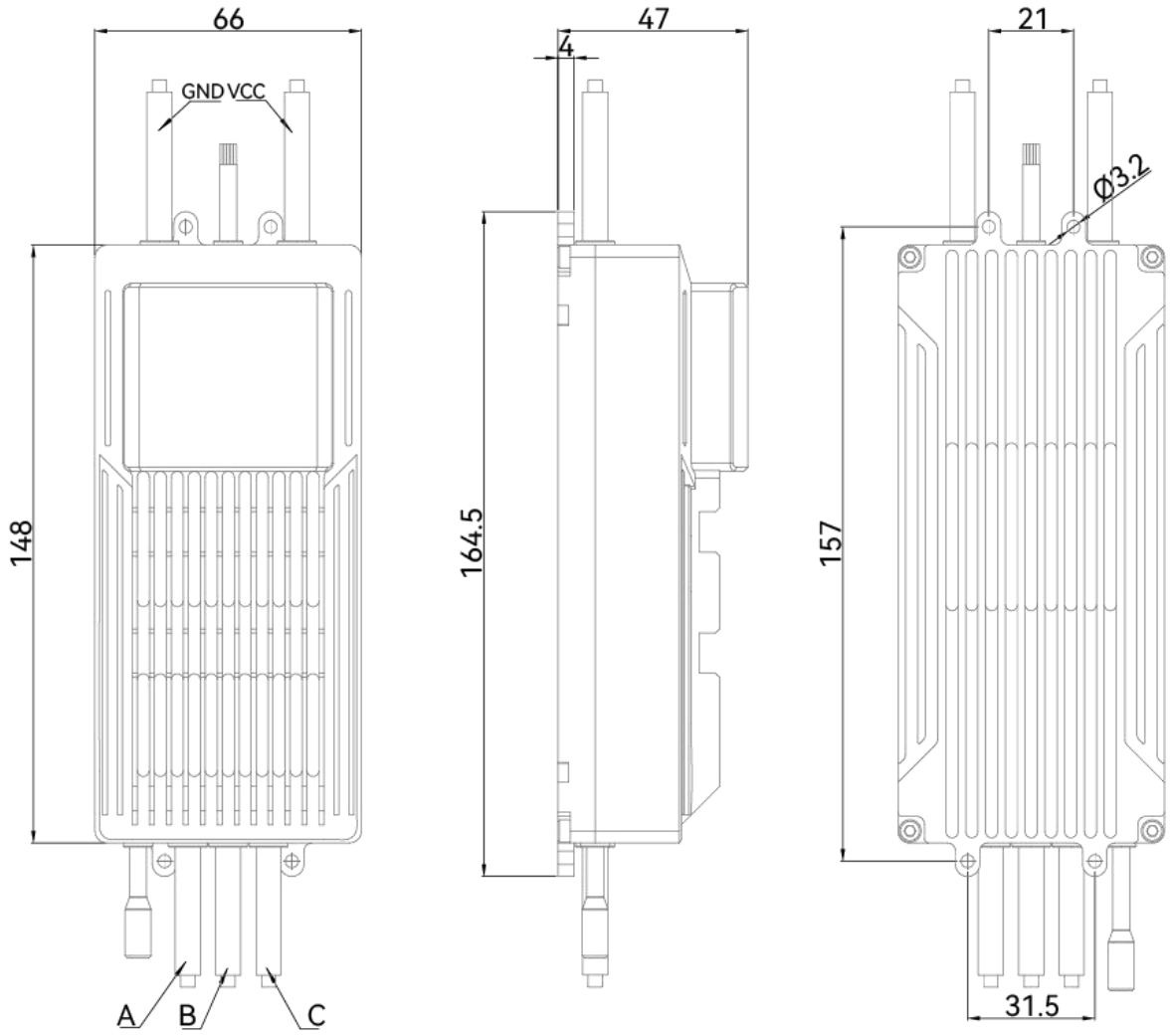
三、Drawings（mm）










66
GND VCC
148
A
B
C
47
4
164.5
21
Φ3.2
157
31.5