

VL1028 Propulsion System Specifications

VL1028 propulsion system is recommended for (4 arms) VTOL
with a take-off weight of 45~50 kg.

一、Parameters

Motor Parameters	Item No.	VL1028
	KV (RPM/V)	190
	Voltage (V)	12S
	Idle Current (A/10V)	≤3.8
	Idle RPM (RPM/10V)	2010±10%
	Interphase Resistance (mΩ/25°C)	8±10%
	Max. Current (A)	180
	Three-phase Wires (mm)	Enameled wire-150±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)	940 (incl. wires) ±15
	Ambient Temperature (°C)	-30 ~ 55
	Temperature Monitoring	Thermistor (optional as per FC)
	Item No.	V200A
	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)	120 (Under certain heat dissipation conditions)
	Max. Current (A/10s)	220 (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-1200±10
	Output Cables (mm)	Silicone wire - orange-14AWG-250±10
	Signal wires (mm)	Shielded cable - Black-OD4.2-5C-800±10 -JP-3P*2-Black blank white - Green yellow gray
	Encoder wires (mm)	Shielded wire - black-24AWG-5C-450±10 -M6 aviation connector
	Length (mm)	127±1.5
	Width (mm)	56±1.5
	Height (mm)	32.8±1.5

	Weight (g)	495±10
<div>Propeller</div> <div>Parameters</div>	Item No.	G29
	Item No. (mm)	736.6mm
	Weight (g)	95±5

二、Test report

VL1028 KV190+V200A+G29						Ambient temperature	25°C
Throttle	Voltage (V)	Current (A)	Power (W)	RPM (RPM)	Torque (N·m)	Thrust (g)	Efficiency (g/W)
40	44.71	14.61	653.08	2742.80	1.82	5565	8.52
42	44.67	16.62	742.37	2878.80	1.98	6080	8.19
44	44.64	18.92	844.49	3010.80	2.18	6664	7.89
46	44.61	21.37	953.36	3142.80	2.37	7279	7.64
48	44.59	24.00	1070.29	3273.00	2.56	7893	7.37
50	44.57	27.01	1203.68	3397.80	2.79	8603	7.15
52	44.54	30.10	1340.91	3525.70	3.01	9236	6.89
54	44.51	33.33	1483.76	3648.60	3.22	9881	6.66
56	44.47	36.82	1637.30	3768.20	3.45	10574	6.46
58	44.42	40.61	1803.86	3885.00	3.68	11284	6.25
60	44.36	44.66	1981.12	3998.50	3.93	12071	6.09
62	44.30	48.95	2168.36	4107.20	4.18	12814	5.91
64	44.25	53.14	2351.18	4216.80	4.40	13501	5.75
66	44.18	57.76	2551.71	4324.00	4.64	14222	5.57
68	44.11	62.59	2760.83	4429.80	4.89	14949	5.41
70	44.04	67.69	2981.20	4532.00	5.14	15640	5.25

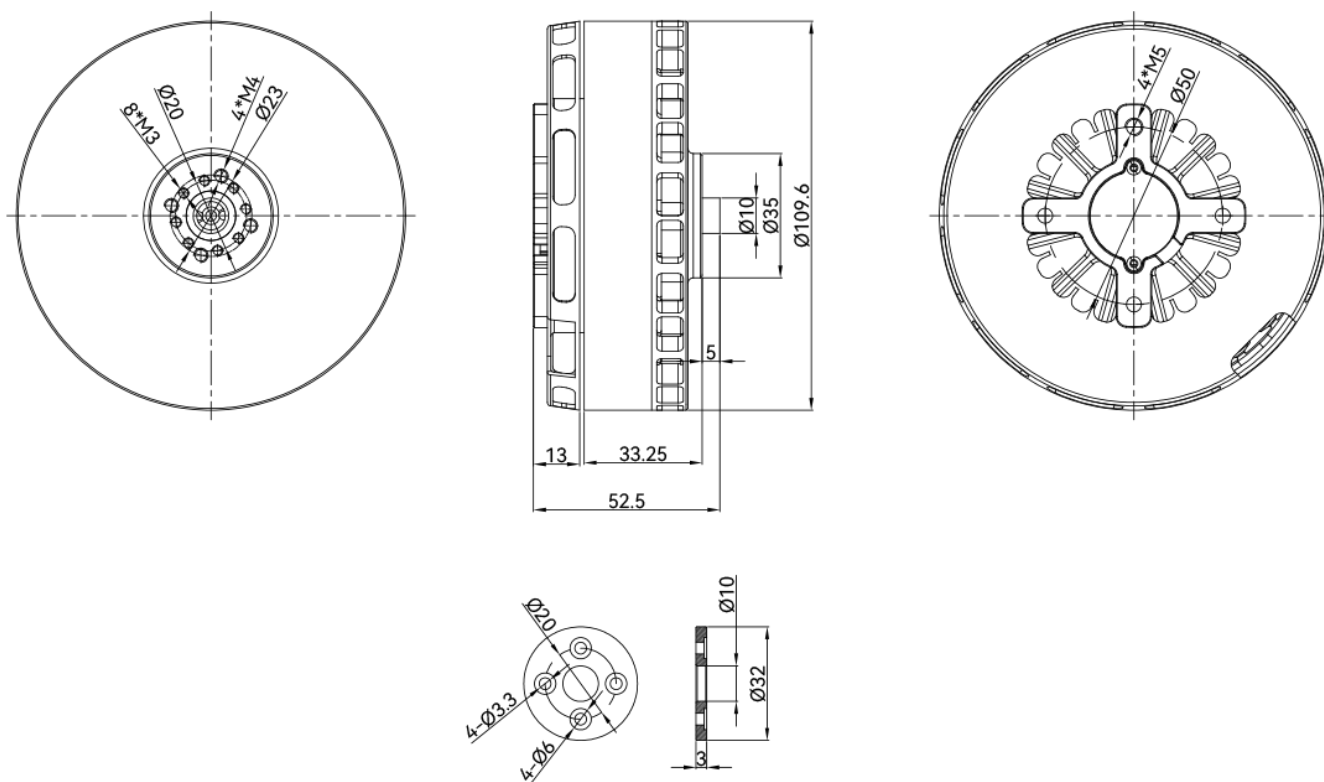
80	43.74	96.45	4219.10	5020.60	6.35	19280	4.57
90	43.88	135.09	5927.57	5465.60	7.58	22918	3.86
100	43.31	177.33	7679.28	5638.30	8.13	24564	3.20

VL1028 KV190+V200A+G29						Ambient temperature	25°C
Throttle	Voltage (V)	Current (A)	Power (W)	RPM (RPM)	Torque (N·m)	Thrust (g)	Efficiency(g/W)
40	50.25	18.25	917.11	3089.20	2.31	7075	7.72
42	50.21	20.91	1049.69	3237.50	2.54	7766	7.39
44	50.16	23.76	1191.55	3383.90	2.77	8472	7.11
46	50.11	26.89	1347.57	3531.60	3.01	9199	6.82
48	50.07	30.21	1512.48	3671.60	3.27	10007	6.62
50	50.02	33.84	1692.91	3808.00	3.53	10786	6.37
52	49.97	37.76	1887.07	3943.60	3.79	11579	6.13
54	49.92	41.97	2095.08	4075.20	4.07	12431	5.93
56	49.85	46.38	2311.99	4203.40	4.35	13296	5.75
58	49.78	51.02	2539.92	4329.70	4.63	14139	5.56
60	49.72	55.88	2778.14	4452.20	4.91	14996	5.40
62	49.65	60.98	3027.82	4577.10	5.20	15826	5.23
64	49.59	66.30	3287.98	4693.00	5.47	16622	5.05

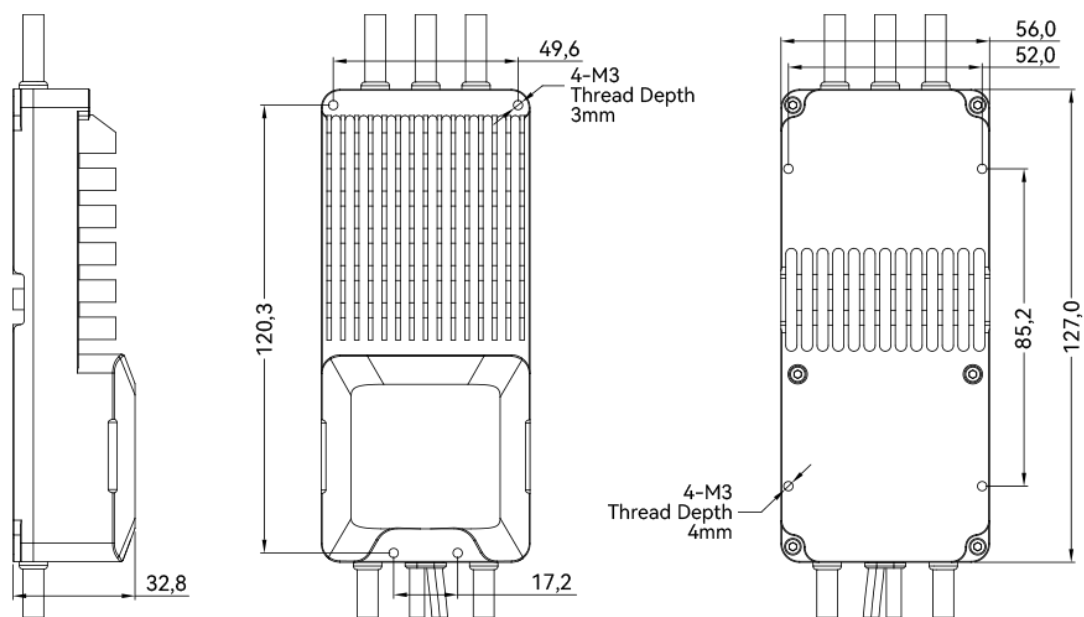
66	49.53	72.19	3575.30	4802.20	5.77	17552	4.91
68	49.46	78.32	3873.58	4909.60	6.07	18445	4.76
70	49.40	84.64	4181.22	5015.50	6.36	19313	4.62
80	49.07	120.83	5929.27	5495.00	7.74	23351	3.94
90	49.21	152.31	7495.28	5600.00	8.11	24306	3.24
100	49.23	158.17	7786.56	5735.00	8.54	25609	3.28

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

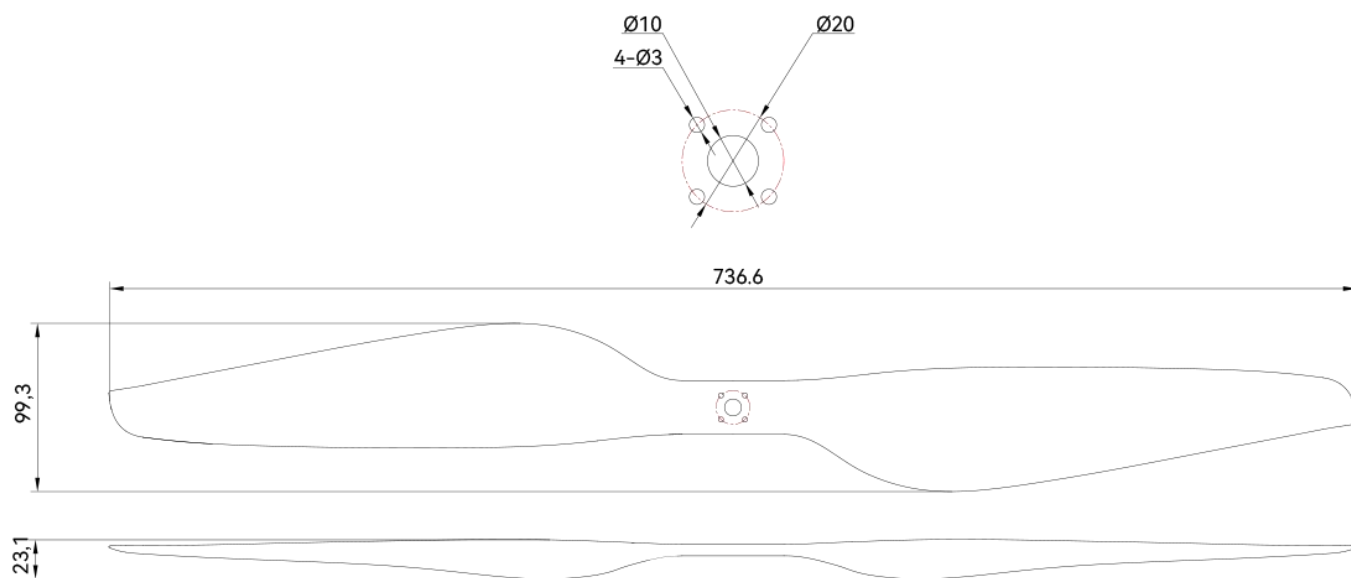
三、 Drawings (mm)



【MOTOR】



【ESC】



【PROPELLER】