



## M7C10 IPE V2 Brushless DC Motor With Motor Balance $\leq 10$ Mg

### Our Product Introduction

#### Basic Information

- Place of Origin: Guangdong, China
- Brand Name: GS
- Model Number: M7C10 100KV 120KV 190KV
- Price: Negotiable
- Delivery Time: 6-8
- Payment Terms: T/T
- Supply Ability: 100



#### Product Specification

- Motor Model: M7C10 IPE V2.0
- Motor Size: D:78.3 X27.8 Mm
- Propeller Mounting Holes: D:20 M3x4, D:23 M3x4
- Shaft Diameter: IN: 12 Mm
- Bearing: 6901ZZ\*2
- Cable Length: 150 Mm 16# Awg(Black) Silicone
- Rotor Balance:  $\leq 5$  Mg
- Motor Balance:  $\leq 10$  Mg
- Motor Mounting Holes: D:32 M4x4
- Disruptive Test: 500 V
- Highlight: **M7C10 IPE V2 Brushless DC Motor, Brushless DC Motor M7C10 IPE V2**



#### More Images



## Product Description

### M7C10 IPE V2 Brushless DC Motor

The M7C10 is designed for unmanned aerial vehicles (UAVs), multirotor hexacopters and octocopters, to carry a payload of 3.5-5kg and support 12S voltage.

#### Brushless design:

Brushless: Reduces friction and wear, and has a longer life and less maintenance than traditional brushed motors. High efficiency: Provides higher efficiency by eliminating energy loss from brush friction.

#### V2 design Enhancements:

Improved thermal management: Features an enhanced cooling mechanism to prevent overheating even during prolonged operations. Optimized magnetic circuit: Designed for better efficiency and performance under various load conditions. Rugged construction: Designed to withstand harsh environments, with durable materials and design considerations to increase resilience.

#### Small and lightweight:

Space saving: Ideal for applications where space is limited. Weight reduction: Helps to reduce the overall weight of the system, which is beneficial to the UAV.

# M7C10

ENERGY EFFICIENT 100KV  
INDUSTRY PROFESSIONAL EDITION

2.0~3.0 kgf

RECOMMENDED  
HOVER THRUST

7.6kgf

MAXIMUM  
THRUST

MAXIMUM THRUST MAY DEPEND ON  
BATTERY LEVEL, PROPELLER TYPE,  
AIR PRESSURE, AND OTHER CONDITIONS

OPTIMIZED  
WEIGHT 264g

EFFICIENCY >83%



MAD M7C10 IPE 100KV FLUXER PRO 28x8.4 MATT AMPX 40A (5-14S) HV

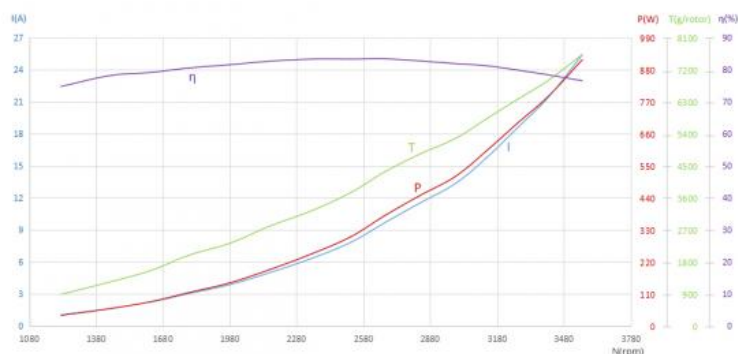
12S

MAX  
70°C

#### Analytical Graph of Motor Operation

I – Current, P – Input Power,  $\eta$  – Electrical Efficiency, T – Thrust, N – Rotational Speed

The data above was measured with an input voltage of 48 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.



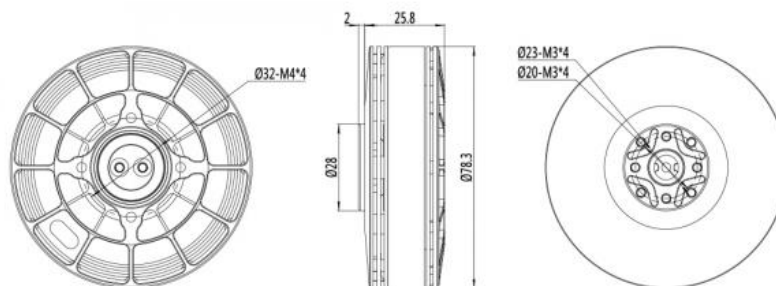
#### Motor Data

Motor Model	MAD M7C10 IPE V2.0	Number of pole pairs	21
Stator	TAIWAN / Anticorrosive	Varnished wire Degree	180°C
Motor Size	D:78.3 × 27.8 mm	Magnet Degree	150°C
Degree of Protection	IP35	Cable Length	150 mm 16# Awg(Black) silicone
Centrifugal Heat Dissipation	YES	Rotor Balance	±5 mg
Propeller Mounting Holes	D:20 M3×4, D:23 M3×4	Motor Balance	±10 mg
Shaft Diameter	IN: 12 mm	Motor Mounting Holes	D:32 M4×4
Bearing	EZO 6901 ZZ*2	Disruptive test	500 V
Additional Accessories	Propeller Plate *1, Locating Pin *1, M4*10mm *4 (Motor Screws), M3*14mm *4 (Motor Screws) 3.5mm Bullet Connector *3, Heat Shrinkable Tube *3, Sticker*2.		

#### Specifications

RPM/V	100KV	Nominal Voltage	12S lipo battery
No Load Current	0.6A / 20V	Internal resistance	151mΩ
Motor Weight	264 g	Product Boxed Weight	514g (150 x 150 x 65 mm)
Maximum Current	25.5 A	Maximum Power	1205W

Maximum thrust	7.6 kg	Maximum Torque	2.45 Nm
Recommended ESC	MAD AMPX 40A (5-14S) HV	Recommended Propellers	26x7.8, 27x8.1, 28x8.4
UAV take-off weight	12S-28"/ 11kg--Quadcopter 16.5kg--Hexacopter 22kg--Octocopter	Single rotor take-off weight	2kg ~ 3kg



**MAD M7C10 IPE 100KV FLUXER PRO 26x7.8 MATT AMPX 40A (5-14S) HV**

**12S** MAX  
57°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	47.89	0.81	39.0	26.8	0.205	1252	661	70.52	17.4
35	47.88	1.26	60.3	44.4	0.286	1482	961	75.7	16.4
40	47.87	1.7	81.3	61.8	0.355	1662	1186	78.07	15.0
45	47.86	2.25	107.7	83.1	0.430	1847	1481	78.95	14.1
50	47.85	2.9	138.6	110.6	0.519	2035	1793	81.55	13.2
55	47.83	3.76	179.7	145.6	0.620	2244	2169	82.64	12.3
60	47.82	4.77	228.3	187.0	0.730	2447	2568	83.37	11.5
65	47.8	5.86	279.9	231.7	0.838	2640	2971	84.38	10.8
70	47.78	7.06	337.2	279.7	0.948	2817	3328	84.39	10.0
75	47.75	8.59	409.9	341.8	1.095	2980	3842	84.78	9.5
80	47.72	10.15	484.2	404.4	1.228	3144	4271	84.83	9.0
85	47.69	11.92	568.4	475.3	1.371	3309	4681	84.84	8.4
90	47.65	14.09	671.6	559.8	1.544	3462	5290	84.54	8.0
95	47.62	16.01	762.4	631.2	1.659	3634	5600	83.88	7.4
100	47.56	19.07	906.8	743.7	1.852	3835	6134	82.99	6.9

**MAD M7C10 IPE 100KV FLUXER PRO 27x8.1 MATT AMPX 40A (5-14S) HV**

**12S** MAX  
64°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	47.88	1.02	48.7	33.1	0.256	1234	728	70.25	15.5
35	47.87	1.56	74.6	55.0	0.358	1465	1061	75.53	14.6
40	47.86	2.18	104.4	80.2	0.468	1636	1431	78.72	14.0
45	47.84	2.92	139.6	109.1	0.575	1812	1772	79.67	13.0
50	47.83	3.74	179.0	143.4	0.688	1990	2126	81.75	12.1
55	47.81	4.87	232.8	190.1	0.833	2180	2575	83.24	11.3
60	47.79	6.18	295.4	243.1	0.980	2368	3081	83.82	10.6
65	47.76	7.59	362.7	300.4	1.125	2549	3548	84.23	10.0
70	47.73	9.24	441.1	365.1	1.283	2718	4055	84.09	9.3
75	47.7	10.87	518.5	428.1	1.419	2882	4510	83.84	8.8
80	47.67	12.81	610.7	501.7	1.581	3030	5019	83.31	8.3
85	47.65	14.91	710.4	579.6	1.737	3187	5480	82.71	7.8
90	47.58	17.25	820.9	663.8	1.902	3333	5970	81.87	7.4
95	47.55	20.05	953.4	756.9	2.082	3472	6527	80.31	6.9
100	47.49	23.72	1126.4	877.0	2.295	3650	7190	78.66	6.5

**MAD M7C10 IPE 100KV FLUXER PRO 28x8.4 MATT AMPX 40A (5-14S) HV**

**12S** MAX  
70°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	47.88	1.08	51.7	37.6	0.294	1223	894	74.76	17.8
35	47.87	1.69	80.7	61.4	0.404	1450	1257	78.23	16.0
40	47.86	2.28	109.3	84.8	0.498	1628	1569	79.14	14.6
45	47.84	3.07	146.8	115.8	0.615	1798	1997	80.53	13.9
50	47.83	3.88	185.5	148.2	0.716	1977	2322	81.51	12.8
55	47.82	5.03	240.4	195.0	0.861	2162	2815	82.65	11.9
60	47.79	6.36	304.1	248.8	1.011	2349	3245	83.28	10.9
65	47.76	7.85	374.7	306.9	1.161	2523	3751	83.28	10.2
70	47.72	9.75	465.5	382.0	1.361	2681	4350	83.35	9.5
75	47.7	11.58	552.5	450.1	1.514	2838	4845	82.7	8.9
80	47.66	13.34	636.1	513.4	1.639	2992	5267	81.89	8.4
85	47.62	15.81	753.1	603.3	1.838	3135	5830	81.19	7.9
90	47.58	18.53	881.5	695.5	2.031	3270	6360	79.88	7.3
95	47.53	21.3	1012.2	785.0	2.202	3405	6879	78.43	6.9
100	47.44	25.41	1205.6	914.5	2.451	3563	7626	76.54	6.4

The above data are the theoretical values when the input voltage is 48V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 25A is non-working zone, 8-25A is short-term (about 10-30s) working zone, and below 8A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

**MAD M7C10**



# M7C10

## ENERGY EFFICIENT 120KV

### INDUSTRY PROFESSIONAL EDITION

3.0~4.0 kgf  
RECOMMENDED  
HOVER THRUST

8.7 kgf  
MAXIMUM  
THRUST  
MAXIMUM THRUST MAY DEPEND ON  
BATTERY LEVEL, PROPELLER TYPE,  
AIR PRESSURE, AND OTHER CONDITIONS

OPTIMIZED  
WEIGHT 266g

EFFICIENCY >83%

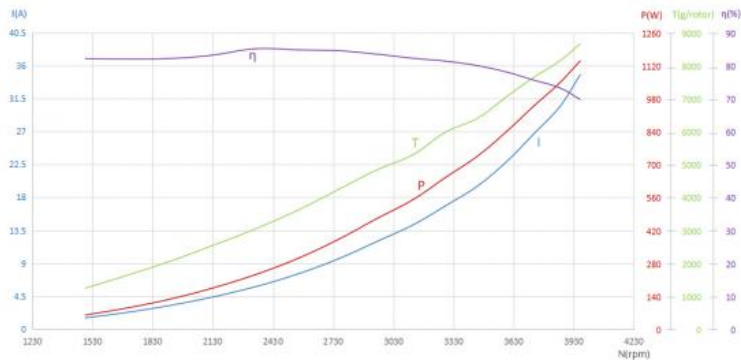


MAD M7C10 IPE 120KV FLUXER PRO 28x8.4 MATT AMPX 40A (5-14S) HV

12S MAX  
84°C

#### Analytical Graph of Motor Operation

I - Current, P - Input Power,  $\eta$  - Electrical Efficiency, T - Thrust, N - Rotational Speed  
The data above was measured with an input voltage of 48 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.



#### Specifications

RPM/V	120KV	Nominal Voltage	12S lipo battery
No Load Current	0.7A / 20V	Internal resistance	106mΩ
Motor Weight	266 g	Product Boxed Weight	516g (150 x 150 x 65 mm)
Maximum Current	34.8 A	Maximum Power	1639W
Maximum thrust	8.7 kg	Maximum Torque	2.75 Nm
Recommended ESC	MAD AMPX 40A (5-14S) HV	Recommended Propellers	26x7.8, 27x8.1, 28x8.4
UAV take-off weight	12S-28"/ 14kg--Quadcopter 21kg--Hexacopter 28kg--Octocopter	Single rotor take-off weight	3kg ~ 4kg

MAD M7C10 IPE 120KV FLUXER PRO 26x7.8 MATT AMPX 40A (5-14S) HV

12S MAX  
75°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	48.09	1.43	68.6	48.6	0.306	1518	1052	71.55	15.5
35	48.08	1.98	95.1	70.8	0.389	1738	1359	74.81	14.4
40	48.06	2.67	128.5	97.5	0.478	1948	1681	76.14	13.1
45	48.05	3.54	170.1	134.2	0.591	2168	2076	79.22	12.3
50	48.01	4.85	233.0	186.6	0.740	2409	2587	80.32	11.1
55	47.97	6.36	305.0	249.0	0.900	2640	3153	83.39	10.6
60	47.92	8.07	386.9	316.6	1.058	2858	3692	83.46	9.7
65	47.87	9.91	474.5	388.4	1.214	3054	4178	83.41	9.0
70	47.82	11.96	571.8	468.2	1.381	3238	4761	83.34	8.5
75	47.76	14.2	678.4	552.1	1.541	3421	5284	82.71	7.9
80	47.69	16.83	802.4	648.1	1.723	3592	5800	81.92	7.3
85	47.62	19.28	918.0	735.8	1.870	3757	6231	81.19	6.9
90	47.54	22.3	1060.2	841.8	2.043	3934	6810	80.31	6.5
95	47.44	26.01	1233.7	961.1	2.248	4082	7466	78.62	6.1
100	47.35	29.41	1392.4	1065.2	2.399	4239	7906	77.05	5.7

MAD M7C10 IPE 120KV FLUXER PRO 27x8.1 MATT AMPX 40A (5-14S) HV

12S MAX  
81°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	48.08	1.56	74.8	56.0	0.356	1502	1118	75.43	15.1
35	48.07	2.23	107.1	82.7	0.459	1719	1460	77.47	13.7
40	48.04	3.07	147.4	116.4	0.578	1922	1863	79.27	12.7
45	48.02	4.14	198.9	160.2	0.718	2131	2343	80.76	11.8
50	47.98	5.57	267.2	218.5	0.883	2363	2853	83.6	10.9
55	47.93	7.18	344.1	284.9	1.052	2587	3399	84.51	10.1
60	47.89	9.13	437.4	360.9	1.233	2796	3976	84.15	9.3
65	47.83	11.15	533.4	439.1	1.400	2994	4490	83.82	8.6
70	47.77	13.42	640.9	522.2	1.571	3173	5032	82.86	8.0
75	47.7	15.98	762.4	615.6	1.762	3337	5584	81.96	7.4
80	47.63	18.69	890.3	708.7	1.929	3508	6146	80.66	7.0
85	47.55	21.85	1039.1	814.7	2.126	3660	6793	79.31	6.6



90	47.45	24.95	1183.7	914.0	2.291	3809	7351	77.94	6.3
95	47.37	28.48	1349.0	1016.8	2.451	3962	7806	75.96	5.8
100	47.24	32.61	1540.9	1121.4	2.623	4082	8409	73.14	5.5

MAD M7C10 IPE 120KV FLUXER PRO 28x8.4 MATT AMPX 40A (5-14S) HV

12S

MAX  
84°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	48.07	1.53	73.5	59.8	0.383	1494	1244	82.09	17.1
35	48.06	2.31	111.2	90.7	0.507	1707	1645	82.03	14.9
40	48.04	3.2	153.7	125.9	0.630	1908	2042	82.14	13.3
45	48.01	4.32	207.5	171.8	0.775	2117	2512	83.12	12.2
50	47.97	5.8	278.1	231.6	0.944	2342	3043	85.13	11.2
55	47.92	7.58	363.3	302.0	1.128	2558	3624	84.81	10.2
60	47.86	9.65	461.9	383.2	1.326	2760	4252	84.52	9.4
65	47.81	11.99	573.1	470.4	1.523	2949	4839	83.5	8.6
70	47.75	14.24	679.9	550.4	1.680	3128	5295	82.26	7.9
75	47.67	16.83	802.5	644.0	1.870	3289	5976	81.39	7.6
80	47.59	19.59	932.6	736.9	2.038	3452	6411	80	7.0
85	47.5	23.04	1094.5	844.7	2.240	3601	7086	77.98	6.5
90	47.41	26.6	1260.9	946.3	2.424	3728	7636	75.67	6.1
95	47.3	30.35	1435.6	1046.1	2.588	3859	8139	73.31	5.7
100	47.17	34.75	1639.2	1139.9	2.748	3962	8662	69.76	5.3

The above data are the theoretical values when the input voltage is 48V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 35A is non-working zone, 12-35A is short-term (about 10-30s), working zone, and below 12A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

# M7C10

ENERGY EFFICIENT 190KV  
INDUSTRY PROFESSIONAL EDITION

2.0~2.5 kgf

RECOMMENDED  
HOVER THRUST

OPTIMIZED  
WEIGHT 270g

5.8 kgf

MAXIMUM  
THRUST

EFFICIENCY >76%

MAXIMUM THRUST MAY DEPEND ON  
BATTERY LEVEL, PROPELLER TYPE,  
AIR PRESSURE AND OTHER CONDITIONS



MAD M7C10 IPE 190KV FLUXER PRO 28x8.4 MATT AMPX PRO 40A (2-6S)

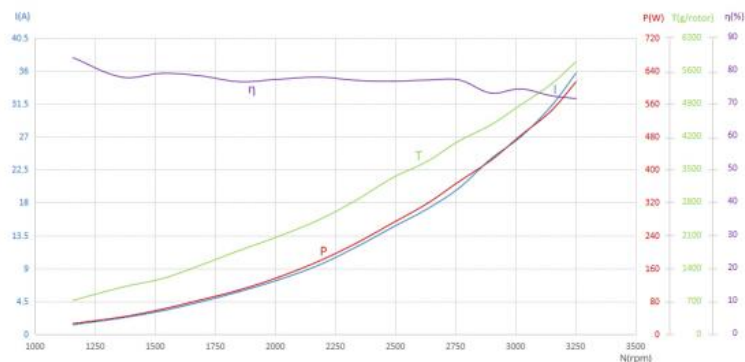
6S

MAX  
53°C

Analytical Graph of Motor Operation

I – Current, P – Input Power,  $\eta$  – Electrical Efficiency, T – Thrust, N – Rotational Speed

The data above was measured with an input voltage of 48 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.



Specifications

RPM/V	190KV	Nominal Voltage	6S lipo battery
No Load Current	1.2A / 20V	Internal resistance	61mΩ
Motor Weight	270 g	Product Boxed Weight	520g (150 x 150 x 65 mm)
Maximum Current	36 A	Maximum Power	857W
Maximum thrust	5.8 kg	Maximum Torque	1.8 Nm
Recommended ESC	MAD AMPX PRO 40A (2-6S)	Recommended Propellers	27x8.1, 28x8.4
UAV take-off weight	12S-28V 8kg--Quadcopter 12kg--Hexacopter 16kg--Octocopter	Single rotor take-off weight	2kg ~2.5kg

MAD M7C10 IPE 190KV FLUXER PRO 27x8.1 MATT AMPX PRO 40A (2-6S)

6S

MAX  
49°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
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MAD M7C10 IPE 190KV									
30	24.15	1.25	30.3	22.1	0.180	1170	615	74.71	20.4
35	24.14	2.1	50.8	37.6	0.260	1381	879	74.87	17.3
40	24.13	3.06	73.8	55.0	0.339	1548	1089	74.74	14.8
45	24.13	4.14	99.9	75.6	0.422	1709	1339	75.89	13.4
50	24.12	5.4	130.4	97.8	0.501	1865	1617	75.36	12.4
55	24.1	7.03	169.5	129.0	0.606	2032	1963	76.36	11.6
60	24.09	8.9	214.5	164.8	0.712	2210	2276	76.95	10.6
65	24.11	11.16	269.0	207.4	0.833	2377	2666	77.16	9.9
70	24.11	13.59	327.6	252.5	0.954	2528	3056	77.12	9.3
75	24.07	16.27	391.7	298.7	1.068	2671	3422	76.27	8.7
80	24.08	19.02	458.1	351.6	1.198	2803	3848	76.77	8.4
85	24.06	21.87	526.2	403.5	1.308	2947	4178	76.75	7.9
90	24.05	25.28	608.1	463.1	1.438	3075	4599	76.16	7.6
95	24.05	29.41	707.3	521.1	1.554	3202	4997	73.7	7.1
100	24.04	33.6	807.6	586.2	1.683	3326	5437	72.58	6.7

MAD M7C10 IPE 190KV			FLUXER PRO 28x8.4 MATT			AMPX PRO 40A (2-6S)			6S	MAX 53°C
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Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	24.12	1.28	31.0	25.5	0.210	1158	716	83.94	23.2
35	24.13	2.23	53.9	41.7	0.292	1365	1000	78.01	18.6
40	24.13	3.21	77.4	60.9	0.380	1533	1185	79.2	15.3
45	24.13	4.42	106.6	83.3	0.470	1691	1468	78.41	13.8
50	24.12	5.79	139.8	106.9	0.552	1849	1775	76.68	12.7
55	24.11	7.41	178.8	138.1	0.655	2013	2076	77.39	11.6
60	24.11	9.44	227.5	177.4	0.776	2182	2430	78.04	10.7
65	24.1	11.99	289.1	222.5	0.907	2342	2862	77.04	9.9
70	24.1	14.56	350.8	269.2	1.034	2486	3317	76.82	9.5
75	24.07	17.08	410.9	316.8	1.150	2631	3668	77.14	8.9
80	24.05	19.92	479.2	369.9	1.279	2763	4100	77.22	8.6
85	24.08	24	578.0	422.9	1.393	2899	4454	73.18	7.7
90	24.04	26.92	647.3	482.0	1.524	3020	4868	74.46	7.5
95	24.05	31.15	749.0	542.3	1.645	3148	5312	72.4	7.1
100	24.02	35.69	857.2	613.2	1.800	3252	5792	71.52	6.8

The above data are the theoretical values when the input voltage is 24V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 36A is non-working zone, 12-36A is short-term (about 10-30s), working zone, and below 12A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

## Our Services

1. We provide 1 Year Warranty. Buy with confidence.
2. If you are not satisfied when you receive your item, please return it within 14 days for a replacement or money back. Please contact me before you return it.
3. If item is defective in 3 months, We will send you a replacement without extra charger, or offer refund after we receive the defective item.
4. If item is defective after 3 months, you can still send it back to us. We will send you a new one after receiving the defective item. But you have to pay the extra shipping fee.



## FAQ

Q1: Do you support OEM/ODM?

A1: Yes. We can print your logo on the product.

Q2: About samples.

A2: Under normal circumstances, samples will be ready within 7 days, and 10-20 days for OEM/ODM orders. Sample fee and shipping will be charged.

Q3: What is the delivery time?

A3: For regular orders, we can ship within 15 days, for OEM/ODM, we can ship within 25-45 days (depending on the quantity).  
In the event of delays, we will notify you in advance of the status and resolution.  
Q4: What is the minimum order quantity?  
A4: There is no MOQ for wholesale (1 piece accepted), including OEM/ODM.  
Q5: What are your payment terms?  
A5: L/C.TT100%.  
Q6: Can you reduce the shipping cost?  
A6: When calculating the shipping cost for you, we always choose the cheapest and safest express. Although we have partnerships with shipping companies, we can't keep costs down because it's not us who get paid. If you think it's expensive for you. You can always make your own choice.  
Q7: Return policy.  
A7: If you want to replace the received item, you must contact us within 7 days after receiving the item. Returned items should be in their original condition and you should pay for additional shipping.



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