



X4219 (short shaft version) VTOL Drone Brushless DC Motor

Our Product Introduction

for more products please visit us on uav-vtoldrone.com

Basic Information

- Place of Origin: Guangdong, China
- Brand Name: GS
- Model Number: X4219 (short shaft version) 270KV 550KV 600KV
- Price: Negotiable
- Delivery Time: 6-8
- Payment Terms: T/T
- Supply Ability: 100



Product Specification

- Motor Model: X4219 IPE V1.0 (short Shaft)
- Motor Size: D:50 X 47 Mm
- Propeller Mounting Holes: D:20 M3x4/ M8 Nut
- Shaft Diameter: IN: 6 Mm
- Bearing: EZ0 686ZZ*2/EZ0 696Z7
- Cable Length: 110 Mm 14# Awg(Black) Silicone
- Rotor Balance: ≤ 5 Mg
- Motor Balance: ≤ 10 Mg
- Motor Mounting Holes: D:30 M4x4, D:56 M4x4, D:60 M4x4
- Disruptive Test: 500 V
- Highlight: Drone Brushless DC Motor, short shaft Brushless DC Motor



More Images



Product Description

X4219 (short shaft version) VTOL Drone Brushless DC Motor

Product Specifications

Attribute	Value
Motor Model	X4219 IPE V1.0 (short shaft)
Motor Size	D:50 x 47 mm
Propeller Mounting Holes	D:20 M3x4/ M8 Nut
Shaft Diameter	IN: 6 mm
Bearing	EZ0 686ZZ*2/EZ0 696Z7
Cable Length	110 mm 14# Awg(Black) silicone
Rotor Balance	≤5 mg
Motor Balance	≤10 mg
Motor Mounting Holes	D:30 M4x4, D:56 M4x4, D:60 M4x4
Disruptive test	500 V

Product Description

X4219 (short shaft version) VTOL Drone Brushless DC Motor is designed for VTOL and airplane applications, engineered to perform in harsh conditions and endurance flying scenarios.

Delivers superior power and efficiency compared to similar thrust motors on the market

Maximum thrust capacity of 6.8kg

IP35 rated for water and dust resistance

X4219 Short Shaft

ENERGY EFFICIENT 270KV
INDUSTRY PROFESSIONAL EDITION

2.0~3.0kgf

RECOMMENDED
HOVER THRUST

OPTIMIZED
WEIGHT 280g

6.8kgf

MAXIMUM
THRUST

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

EFFICIENCY >80%



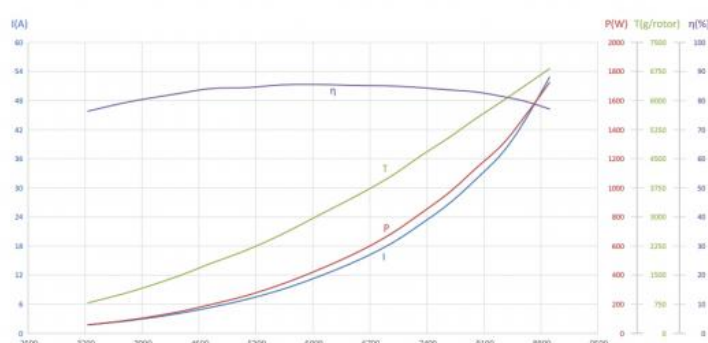
MAD X4229 IPE - short shaft 270KV APC 16x8 AMPX 80A (5-14S)

12S MAX
120°C

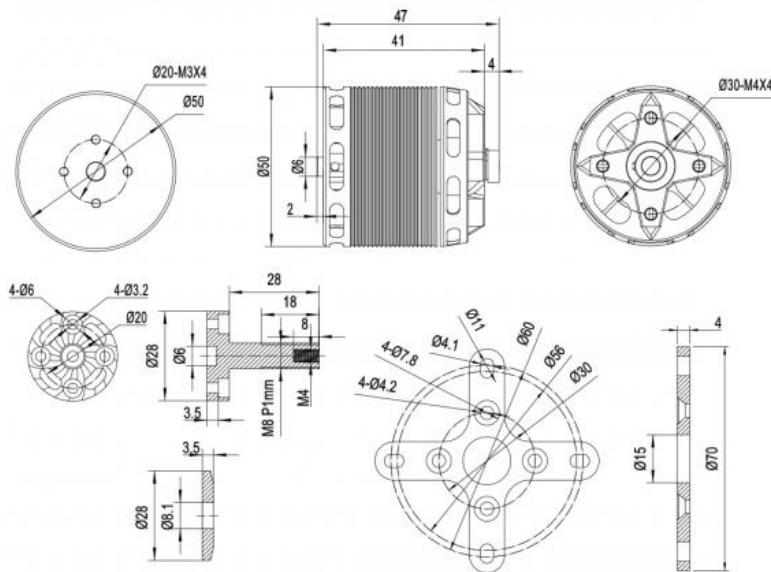
Analytical Graph of Motor Operation

I - Current, P - Input Power, η - 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 X4219 IPE V1.0 (short shaft)	Number of pole pairs	7
Stator	TAIWAN / Anticorrosive	Varnished wire Degree	180°C
Motor Size	D:50 × 47 mm	Magnet Degree	150°C
Degree of Protection	IP35	Cable Length	110 mm 14# Awg(Black) silicone
Centrifugal Heat Dissipation	YES	Rotor Balance	±5 mg
Propeller Mounting Holes	D:20 M3×4 / M8 Nut	Motor Balance	±10 mg
Shaft Diameter	IN: 6 mm	Motor Mounting Holes	D:30 M4×4, D:56 M4×4, D:60 M4×4
Bearing	EZO 686ZZ *2 / EZO 696ZZ	Disruptive test	500 V
Additional Accessories	Propeller Plate *1, Prop Adaper *1, X-Mount *1, 4.0mm Bullet Connector*3, Heat Shrinkable Tube*3, M4*10mm *4 Motor Screws, M3*8mm *4 Prop Adaper Screws, M4*10mm *4 X-Mount Installation Screw, M8 Nut Propeller Screws, Sticker*2		
Specifications			
RPM/V	270 KV	Nominal Voltage	12S lipo battery
No Load Current	0.6A/20V	internal resistance	50mΩ
Motor Weight	280 g	Product Boxed Weight	532g (110 x 110 x 95 mm)
Maximum Current	52.8 A	Maximum Power	2233W
Maximum thrust	6.8 kg	Maximum Torque	1.9 Nm
Recommended ESC	MAD AMPX 80A (5-14S)	Recommended Propellers	15x8, 16x8
UAV take-off weight	12S-16"/ 8kg-Quadcopter 12kg-Hexacopter 16kg-Octocopter	Single rotor take-off weight	2kg – 3kg



MAD X4219 IPE - short shaft 270KV APC 15x8 AMPX 80A (5-14S)								12S	MAX 101°C
Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [g]	Efficiency [%]	Efficiency [g/fW]
30	44.04	1.46	63.5	45.1	0.131	3293	626	71.11	9.8
35	44.01	2.21	96.9	73.1	0.182	3843	870	75.42	8.9
40	43.98	3.2	140.1	112.2	0.244	4397	1160	80.05	8.2
45	43.95	4.23	185.3	151.4	0.299	4840	1428	81.64	7.7
50	43.9	5.56	243.6	202.2	0.365	5291	1723	82.96	7.1
55	43.85	7.25	317.5	267.1	0.442	5776	2072	84.11	6.5
60	43.78	9.29	406.0	345.7	0.528	6255	2464	85.09	6.1
65	43.69	12	523.9	449.4	0.634	6767	2928	85.73	5.6
70	43.59	14.98	652.4	561.3	0.745	7197	3403	85.99	5.2
75	43.5	17.86	776.1	668.4	0.841	7591	3776	86.07	4.9
80	43.38	21.27	922.4	790.9	0.946	7982	4192	85.71	4.5
85	43.25	25.43	1099.4	931.4	1.065	8354	4392	84.66	4.0
90	43.1	29.82	1284.6	1079.1	1.182	8719	4788	83.95	3.7
95	42.92	35.08	1505.3	1257.5	1.327	9052	5236	83.49	3.5
100	42.64	42.84	1825.8	1501.6	1.521	9428	5801	82.2	3.2

MAD X4229 IPE - short shaft 270KV APC 16x8 AMPX 80A (5-14S)								12S	MAX 120°C
Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [g]	Efficiency [%]	Efficiency [g/fW]
30	44.03	1.75	76.5	58.5	0.173	3238	785	76.39	10.2
35	44	2.67	116.9	93.2	0.237	3764	1075	79.68	9.1
40	43.96	4.01	175.7	144.7	0.320	4317	1454	82.27	8.2
45	43.91	5.37	235.4	198.2	0.399	4747	1804	84.13	7.6
50	43.86	7.01	307.2	259.6	0.478	5183	2144	84.45	7.0
55	43.79	9.11	398.3	340.5	0.578	5630	2565	85.42	6.4
60	43.7	11.83	516.3	441.9	0.693	6088	3061	85.53	5.9
65	43.6	15.06	655.9	559.1	0.815	6553	3564	85.19	5.4
70	43.48	18.55	806.0	685.7	0.940	6964	4056	85.02	5.0
75	43.34	22.58	978.4	826.7	1.077	7330	4582	84.45	4.7
80	43.2	26.72	1153.8	966.1	1.203	7670	5044	83.69	4.4
85	43.03	31.77	1366.7	1134.7	1.354	8003	5538	82.97	4.1

90	42.84	37.17	1591.7	1296.9	1.488	8325	5982	81.42	3.8
95	42.61	43.72	1862.9	1487.6	1.652	8597	6375	79.81	3.4
100	42.3	52.8	2233.0	1723.2	1.848	8906	6819	77.13	3.1

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 53A is non-working zone, 15-53A is short-term (about 10-30s), working zone, and below 15A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

X4219 Short Shaft

ENERGY EFFICIENT 550KV
INDUSTRY PROFESSIONAL EDITION

2.0~3.0kgf
RECOMMENDED
HOVER THRUST

5.5kgf
MAXIMUM
THRUST
MAXIMUM THRUST MAY DEPEND ON
BATTERY LEVEL, PROPELLER TYPE,
AIR PRESSURE AND OTHER CONDITIONS

OPTIMIZED
WEIGHT 282g

EFFICIENCY >76%



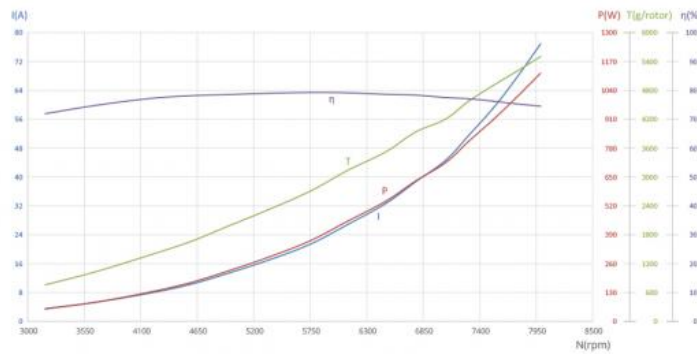
MAD X4229 IPE - short shaft 550KV APC 16x8 AMPX 80A (5-14S)

6S MAX
98°C

Analytical Graph of Motor Operation

I - Current, P - Input Power, η - Electrical Efficiency, T - Thrust, N - Rotational Speed

The data above was measured with an input voltage of 24 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.

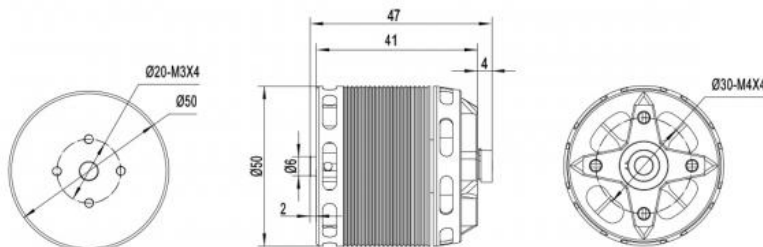


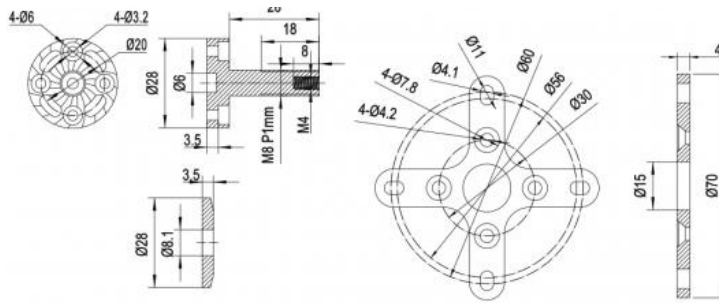
Motor Data

Motor Model	MAD X4219 IPE V1.0 (short shaft)	Number of pole pairs	7
Stator	TAIWAN / Anticorrosive	Varnished wire Degree	180°C
Motor Size	D:50 x 47 mm	Magnet Degree	150°C
Degree of Protection	IP35	Cable Length	110 mm 14# Awg(Black) silicone
Centrifugal Heat Dissipation	YES	Rotor Balance	≤5 mg
Propeller Mounting Holes	D:20 M3x4 / M8 Nut	Motor Balance	≤10 mg
Shaft Diameter	IN: 6 mm	Motor Mounting Holes	D:30 M4x4, D:56 M4x4, D:60 M4x4
Bearing	EZO 686ZZ *2 / EZO 696ZZ	Disruptive test	500 V
Additional Accessories	Propeller Plate *1, Prop Adapter *1, X-Mount *1, 4.0mm Bullet Connector*3, Heat Shrinkable Tube*3, M4*10mm *4 Motor Screws, M3*8mm *4 Prop Adapter Screws, M4*10mm *4 X-Mount Installation Screw, M8 Nut Propeller Screws, Sticker*2		

Specifications

RPM/V	550 KV	Nominal voltage	6S lipo battery
No Load Current	1.5A/10V	Internal resistance	14.2mΩ
Motor Weight	282 g	Product Boxed Weight	534g (110 x 110 x 95 mm)
Maximum Current	76.8 A	Maximum Power	1498W
Maximum thrust	5.5 kg	Maximum Torque	1.3 Nm
Recommended ESC	MAD AMPX 80A (5-14S)	Recommended Propellers	15x8, 16x8
UAV take-off weight	6S-16V 8kg--Quadcopter 12kg--Hexacopter 16kg--Octocopter	Single rotor take-off weight	2kg ~ 3kg





MAD X4229 IPE - short shaft 550KV APC 15x8 AMPX 80A (5-14S)

6S

MAX
89°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	22.02	2.97	64.9	44.1	0.130	3243	616	67.8	9.4
35	21.98	4.31	94.2	68.1	0.173	3753	828	72.22	8.7
40	21.92	6.25	136.5	103.0	0.230	4279	1097	75.39	8.0
45	21.85	8.24	179.4	138.8	0.282	4695	1342	77.32	7.5
50	21.78	10.51	228.5	178.0	0.333	5109	1589	77.86	6.9
55	21.68	13.57	293.8	231.8	0.399	5546	1903	78.84	6.5
60	21.56	17.39	374.6	299.1	0.478	5981	2266	79.8	6.0
65	21.41	22.06	471.8	378.1	0.563	6417	2642	80.08	5.6
70	21.25	26.62	565.2	455.2	0.639	6805	2967	80.5	5.2
75	21.09	31.72	668.5	535.5	0.716	7138	3321	80.04	5.0
80	20.92	36.85	770.5	613.8	0.788	7439	3613	79.64	4.7
85	20.71	42.95	889.0	706.7	0.871	7744	3951	79.44	4.4
90	20.49	49.72	1018.0	803.0	0.956	8025	4286	78.83	4.2
95	20.24	56.62	1145.5	898.6	1.035	8288	4578	78.4	4.0
100	19.92	65.73	1308.6	1016.0	1.130	8588	4913	77.59	3.8

MAD X4229 IPE - short shaft 550KV APC 16x8 AMPX 80A (5-14S)

6S

MAX
98°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	22.01	3.54	77.3	55.6	0.168	3171	759	71.91	9.7
35	21.95	5.24	114.3	85.5	0.224	3651	1024	74.72	8.9
40	21.87	7.78	169.6	131.0	0.299	4180	1372	77.14	8.1
45	21.79	10.23	222.5	173.9	0.363	4582	1655	78.13	7.4
50	21.69	13.41	290.3	228.2	0.439	4960	1987	78.53	6.8
55	21.58	17.06	367.6	290.5	0.518	5354	2331	78.99	6.3
60	21.43	21.4	458.2	363.3	0.603	5752	2707	79.24	5.9
65	21.26	26.79	569.0	450.6	0.704	6113	3135	79.15	5.5
70	21.06	32.66	687.5	540.9	0.796	6485	3522	78.62	5.1
75	20.86	38.68	806.3	632.2	0.891	6777	3935	78.34	4.9
80	20.66	44.59	920.8	714.1	0.965	7067	4202	77.5	4.6
85	20.41	51.63	1053.4	812.2	1.063	7297	4581	77.06	4.3
90	20.16	59.12	1191.2	908.7	1.152	7533	4903	76.24	4.1
95	19.88	66.91	1329.2	1002.3	1.236	7745	5174	75.36	3.9
100	19.5	76.84	1498.3	1117.1	1.335	7992	5500	74.51	3.7

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 77A is non-working zone. 27-77A is short-term (about 10-30s), working zone, and below 27A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

X4219 Short Shaft

ENERGY EFFICIENT 600KV
INDUSTRY PROFESSIONAL EDITION

2.0~3.0kgf

RECOMMENDED
HOVER THRUST

5.0kgf

MAXIMUM
THRUST

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

OPTIMIZED
WEIGHT 281g

EFFICIENCY >79%



MAD X4229 IPE - short shaft 600KV APC 15x8 AMPX 80A (5-14S)

6S

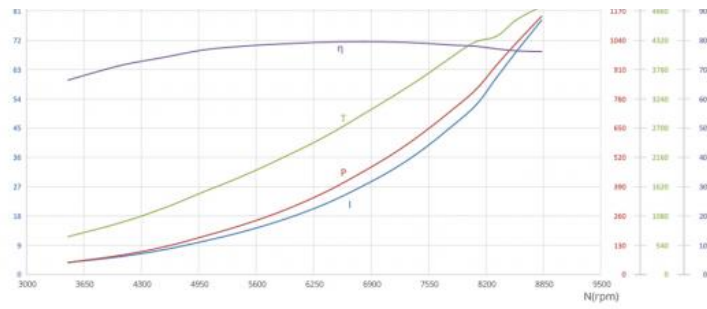
MAX
97°C

Analytical Graph of Motor Operation

I - Current, P - Input Power, η - Electrical Efficiency, T - Thrust, N - Rotational Speed

The data above was measured with an input voltage of 24 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.



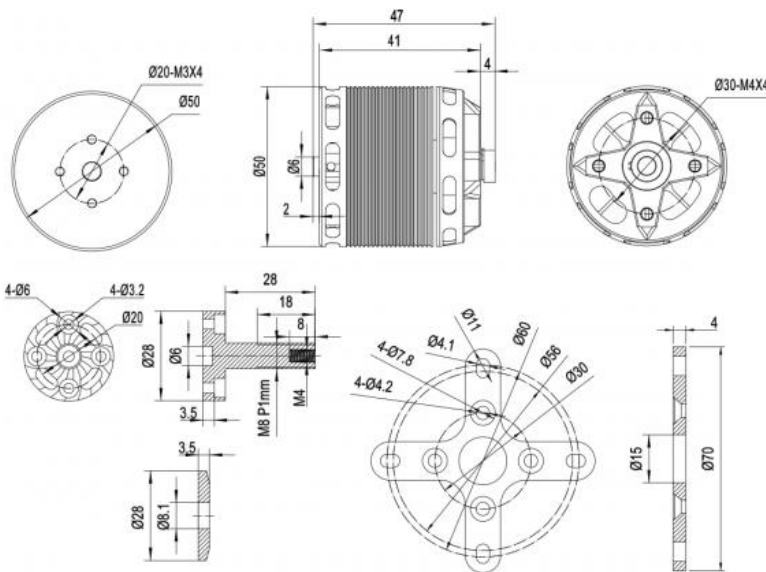


Motor Data

Motor Model	MAD X4219 IPE V1.0 (short shaft)	Number of pole pairs	7
Stator	TAIWAN / Anticorrosive	Varnished wire Degree	180°C
Motor Size	D:50 × 47 mm	Magnet Degree	150°C
Degree of Protection	IP35	Cable Length	110 mm 14# Avg(Black) silicone
Centrifugal Heat Dissipation	YES	Rotor Balance	≤5 mg
Propeller Mounting Holes	D:20 M3×4 / M8 Nut	Motor Balance	≤10 mg
Shaft Diameter	IN: 6 mm	Motor Mounting Holes	D:30 M4×4, D:56 M4×4, D:60 M4×4
Bearing	EZO 686ZZ *2 / EZO 696ZZ	Disruptive test	500 V
Additional Accessories	Propeller Plate *1, Prop Adapter *1, X-Mount *1, 4.0mm Bullet Connector*3, Heat Shrinkable Tube*3, M4*10mm *4 Motor Screws, M3*8mm *4 Prop Adapter Screws, M4*10mm *4 X-Mount Installation Screw, M8 Nut Propeller Screws, Sticker*2		

Specifications

RPM/V	600 KV	Nominal Voltage	6S lipo battery
No Load Current	1.6A/10V	Internal resistance	12.2mΩ
Motor Weight	281 g	Product Boxed Weight	533g (110 x 110 x 95 mm)
Maximum Current	78.2 A	Maximum Power	1505W
Maximum thrust	5 kg	Maximum Torque	1.2 Nm
Recommended ESC	MAD AMPX 80A (5-14S)	Recommended Propellers	14x7, 15x8
UAV take-off weight	6S-15' 8kg-Quadcopter 12kg-Hexacopter 16kg-Octocopter	Single rotor take-off weight	2kg ~ 3kg



MAD X4229 IPE - short shaft 600KV APC 14x7 AMPX 80A (5-14S)

6S MAX 81°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [g]	Efficiency [%]	Efficiency [g/W]
30	21.85	2.64	57.2	43.1	0.114	3611	545	75.19	9.4
35	21.8	4.02	86.9	67.7	0.153	4221	750	77.81	8.6
40	21.76	5.43	117.8	93.4	0.190	4702	947	79.29	8.0
45	21.7	7.29	157.7	126.4	0.234	5168	1171	80.13	7.4
50	21.62	9.52	205.5	168.3	0.285	5649	1413	81.85	6.9
55	21.53	12.43	267.2	220.5	0.341	6170	1712	82.46	6.4
60	21.41	16.09	343.9	286.6	0.408	6704	2041	83.29	5.9
65	21.27	20.22	429.7	358.7	0.478	7172	2378	83.44	5.5
70	21.12	24.58	518.6	433.9	0.546	7592	2686	83.61	5.2
75	20.96	29.39	615.6	512.1	0.614	7970	3009	83.14	4.9
80	20.79	34.42	715.1	592.4	0.680	8326	3301	82.81	4.6
85	20.58	40.51	833.4	687.5	0.758	8657	3660	82.45	4.4
90	20.37	46.52	947.2	777.7	0.826	8992	3895	82.06	4.1
95	20.12	53.87	1083.1	880.2	0.907	9264	4153	81.2	3.8
100	19.78	63.64	1258.3	1011.9	1.007	9598	4425	80.36	3.5

MAD X4229 IPE - short shaft 600KV APC 15x8 AMPX 80A (5-14S)

6S MAX 97°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [g]	Efficiency [%]	Efficiency [g/W]
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U _{in}	I _{in}	P _{in}	U _{out}	I _{out}	P _{out}	U _{ce}	I _{ce}	U _{ce}	I _{ce}
30	21.84	3.7	80.4	53.4	0.147	3472	699	66.41	8.6
35	21.77	5.54	120.2	85.9	0.202	4073	959	71.43	7.9
40	21.71	7.66	165.8	123.1	0.258	4562	1229	74.2	7.4
45	21.62	10.22	220.6	169.3	0.323	5003	1523	76.69	6.9
50	21.52	13.12	281.9	219.9	0.386	5443	1812	77.96	6.4
55	21.4	16.94	361.9	285.3	0.461	5916	2166	78.79	6.0
60	21.24	21.77	461.9	366.9	0.549	6387	2550	79.36	5.5
65	21.07	27.11	570.6	453.9	0.638	6799	2943	79.51	5.2
70	20.87	32.68	681.5	541.5	0.721	7171	3310	79.4	4.9
75	20.67	38.65	798.5	631.3	0.804	7497	3651	79	4.6
80	20.45	45.08	921.8	723.1	0.886	7792	3989	78.4	4.3
85	20.22	52.06	1052.2	820.8	0.969	8086	4293	77.96	4.1
90	19.93	60.3	1201.3	926.7	1.064	8314	4388	77.09	3.7
95	19.63	68.38	1342.1	1026.3	1.148	8541	4689	76.42	3.5
100	19.26	78.17	1505.0	1146.5	1.240	8830	4952	76.13	3.3

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 78A is non-working zone.27-78A is short-term (about 10-30s), working zone, and below 27A 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 Year Warranty included for worry-free purchase
- 14-day return policy for unsatisfied customers (contact required before return)
- 3-month replacement guarantee for defective items (no additional charge)
- Post-3-month replacement available (customer responsible for return shipping)



Frequently Asked Questions

Q1: Do you support OEM/ODM?

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

Q2: About samples.

A2: Samples typically ready within 7 days (10-20 days for OEM/ODM). Sample fee and shipping charges apply.

Q3: What is the delivery time?

A3: Regular orders ship within 15 days; OEM/ODM within 25-45 days (quantity dependent). We notify customers of any delays.

Q4: What is the minimum order quantity?

A4: No MOQ for wholesale (1 piece accepted), including OEM/ODM orders.

Q5: What are your payment terms?

A5: L/C or 100% TT payment accepted.

Q6: Can you reduce the shipping cost?

A6: We always select the most economical and secure shipping option. Customers may arrange their own shipping if preferred.

Q7: Return policy.

A7: Replacement requests must be made within 7 days of receipt. Items must be in original condition with customer responsible for return shipping.



Guangzhou Gesai Intelligent Electronic Technology Co., Ltd.



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