## Guangzhou Gesai Intelligent Electronic Technology Co., Ltd.

### 5010 EEE Brushless DC Motor 200KV 240KV 310KV 370KV

### **Basic Information**

• Place of Origin: Guangdong, China

Brand Name: GS

• Model Number: 5010 EEE 200KV 240KV 310KV 370KV

• Price: Negotiable



### **Product Specification**

Motor Model: MAD 5010 EEE V2.0
 Stator: Anticorrosive
 Motor Size: D:56 X32.7 Mm
 Propeller Mounting Holes: D:12 M3x2, D:18 M3x2
 Bearing: EZ0 685ZZ\*1/695ZZ\*1

Number Of Pole Pairs: 14

Cable Length: 150 Mm 16# Awg(Black) Silicone

Rotor Balance: ≤5 MgMotor Balance: ≤10 Mg

• Motor Mounting Holes: D:25 M3x4, D:30 M3x4

• Disruptive Test: 500 V

• Highlight: Tethered UAV Systems Vertical Uplift,

Vertical Uplift tethered drone systems, Long Term Tethered UAV Systems



### More Images











### **Product Description**

### 5010 EEE Brushless DC Motor 200KV 240KV 310KV 370KV

The 5010 EEE Brushless DC Motor is a versatile component commonly used in various applications such as drones, electric vehicles, and other robotics or hobby projects. The different KV ratings (200KV, 240KV, 310KV, 370KV) refer to the motor's RPM (revolutions per minute) per volt applied to it.

**ENERGY EFFICIENT 200KV** ENTHUSIASTS EXTREME EDITION

1.5~2.0 kgf
RECOMMENDED HOVER THRUST

5.2 kgf

MAXIMUM MAXBURI THRUST MAY
BATTERY LEVEL PROPE
ARE PRESSURE AND OTH

OPTIMIZED 162.9 g

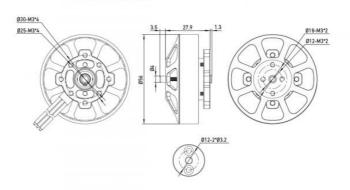
EFFICIENCY > 82%



# 12S MAX 99°C MAD 5010 EEE 200KV FLUXER PRO 17x5.8 MATT AMPX 40A (5-14S) HV Analytical Graph of Motor Operation

| Notor Model                 | MAD 5010 EEE V2.0      | Number of pole pairs  | 14                             |
|-----------------------------|------------------------|-----------------------|--------------------------------|
| tator                       | TAIWAN / Anticorrosive | Varnished wire Degree | 180°C                          |
| Notor Size                  | D:56 × 32.7 mm         | Magnet Degree         | 150°C                          |
| egree of Protection         | Rain protection        | Cable Length          | 150 mm 16# Awg(Black) silicone |
| entrifugal Heat Dissipation | Independent            | Rotor Balance         | ≤5 mg                          |
| ropeller Mounting Holes     | D:12 M3×2, D:18 M3×2   | Motor Balance         | ≤10 mg                         |
| haft Diameter               | IN: 5 mm               | Motor Mounting Holes  | D:25 M3×4, D:30 M3×4           |
| learing                     | EZO 685ZZ*1 / 695ZZ*1  | Disruptive test       | 500 V                          |

| Specifications      |                                       |                              |  |
|---------------------|---------------------------------------|------------------------------|--|
| RPM/V               | 200 KV                                | Nominal Voltage              | 6-12S lipo battery                     |
| No Load Current     | 0.69A / 20V                           | Internal resistance          | 106mΩ                                  |
| Motor Weight        | 162.9 g                               | Product Boxed Weight         | 323g (110 x 110 x 50 mm)               |
| Maximum Current     | 22.3 A                                | Maximum Power                | 1029 W                                 |
| Maximum thrust      | 5.2 kg                                | Maximum Torque               | 1.09 Nm                                |
| Recommended ESC     | AMPX PRO 40A(2~6S) AMPX 40A(5-14S) HV | Recommended Propellers       | 16x5.4, 17x5.8, 22x6.6, 22x7.0, 24x7.2 |
| UAV take-off weight | 125-17"/ 7kgQuadcopter                | Single rotor take-off weight | 1.5kg ~ 2kg                            |



| MAD 50          | 010 EEE 200    | KV FLUXE       | R PRO 16x             | 5.4 MATT AN         | IPX 40A (5-     | 14S) HV |                | 125               | MAX<br>68°C |
|-----------------|----------------|----------------|-----------------------|---------------------|-----------------|---------|----------------|-------------------|-------------|
| Throttle<br>[%] | Voltage<br>[V] | Current<br>[A] | Input<br>Power<br>[W] | Output Power<br>[W] | Torque<br>[N×m] | RPM     | Thrust<br>[gf] | Efficiency<br>[%] | Temp.       |
| 30              | 48.18          | 0.89           | 42.5                  | 27.7                | 0.098           | 2703    | 452            | 65.30             | 10.6        |
| 35              | 48.16          | 1.23           | 58.8                  | 40.6                | 0.126           | 3090    | 596            | 69.20             | 10.1        |
| 40              | 48.16          | 1.69           | 80.7                  | 59.1                | 0.161           | 3514    | 784            | 73.30             | 9.7         |
| 45              | 48.14          | 2.3            | 110.4                 | 85.5                | 0.206           | 3960    | 1025           | 77.80             | 9.3         |
| 50              | 48.13          | 3.09           | 148.6                 | 118.9               | 0.258           | 4411    | 1296           | 80.50             | 8.8         |
| 55              | 48.11          | 3.85           | 184.9                 | 151.6               | 0.301           | 4804    | 1531           | 82.20             | 8.3         |
| 60              | 48.1           | 4.77           | 228.6                 | 190.5               | 0.351           | 5181    | 1791           | 83.40             | 7,8         |
| 65              | 48.08          | 5.76           | 276.3                 | 232.1               | 0.401           | 5530    | 2053           | 84.10             | 7.4         |
| 70              | 48.06          | 6.82           | 327.2                 | 277.6               | 0.452           | 5860    | 2321           | 84.90             | 7.1         |
| 75              | 48.03          | 8.1            | 388.8                 | 332.0               | 0.510           | 6223    | 2615           | 85.40             | 6.7         |
| 80              | 48             | 9.6            | 460.5                 | 396.0               | 0.575           | 6580    | 2946           | 86.20             | 6.4         |
| 85              | 47.98          | 11.23          | 538.2                 | 462.9               | 0.637           | 6935    | 3273           | 87.80             | 6.2         |
| 90              | 47.95          | 13.07          | 626.2                 | 539.8               | 0.708           | 7280    | 3621           | 87.90             | 5.9         |
| 95              | 47.91          | 15.06          | 721.1                 | 621.1               | 0.779           | 7616    | 3971           | 87.80             | 5.6         |

100 47.87 17.88 855.2 731.7 0.869 8044 4403 87.10 5.2 

| Throttle<br>[%] | Voltage<br>[V] | Current<br>[A] | Input<br>Power<br>[W] | Output Power<br>[W] | Torque<br>[N×m] | RPM  | Thrust<br>(gf) | Efficiency<br>[%] | Temp. |
|-----------------|----------------|----------------|-----------------------|---------------------|-----------------|------|----------------|-------------------|-------|
| 30              | 47.99          | 1.07           | 51.0                  | 34.0                | 0.122           | 2661 | 578            | 67.50             | 11.5  |
| 35              | 47.98          | 1.49           | 70.9                  | 49.5                | 0.157           | 3018 | 752            | 70.90             | 10.8  |
| 40              | 47.97          | 1.97           | 94.0                  | 68.7                | 0.192           | 3410 | 954            | 74.50             | 10.3  |
| 45              | 47.95          | 2.75           | 131.4                 | 100.3               | 0.248           | 3867 | 1248           | 77.80             | 9.7   |
| 50              | 47.93          | 3.71           | 177.2                 | 140.5               | 0.311           | 4310 | 1570           | 80.80             | 9.0   |
| 55              | 47.91          | 4.68           | 223.8                 | 180.5               | 0.367           | 4700 | 1840           | 82.20             | 8.4   |
| 60              | 47.89          | 5.83           | 278.8                 | 227.7               | 0.430           | 5062 | 2093           | 83.20             | 7.7   |
| 65              | 47.86          | 7.09           | 339.1                 | 278.5               | 0.492           | 5404 | 2460           | 83.60             | 7.4   |
| 70              | 47.84          | 8.34           | 398.1                 | 325.7               | 0.545           | 5705 | 2778           | 83.20             | 7.1   |
| 75              | 47.81          | 9.89           | 472.1                 | 390.4               | 0.616           | 6054 | 3133           | 84.10             | 6.8   |
| 80              | 47.79          | 11.64          | 555.5                 | 458.7               | 0.685           | 6395 | 3460           | 83.90             | 6.3   |
| 85              | 47.75          | 13.69          | 653.2                 | 540.1               | 0.768           | 6719 | 3716           | 84.00             | 5.8   |
| 90              | 47.71          | 15.75          | 751.0                 | 621.1               | 0.842           | 7045 | 4034           | 83.90             | 5.5   |
| 95              | 47.65          | 18.3           | 871.6                 | 719.6               | 0.935           | 7349 | 4441           | 83.70             | 5.2   |
| 100             | 47.61          | 21.62          | 1029.0                | 829.3               | 1.021           | 7754 | 5181           | 81.60             | 5.1   |

MAD 5010 EEE 200KV FLUXER PRO 22x6.6 MATT AMPX 40A PRO (2-6S)

6S MAX 46°C

| Throttle<br>[%] | Voltage<br>[V] | Current<br>[A] | Input<br>Power<br>[W] | Output Power<br>[W] | Torque<br>[N×m] | RPM  | Thrust<br>(gf) | Efficiency<br>[%] | Efficiency<br>[gf/W] |
|-----------------|----------------|----------------|-----------------------|---------------------|-----------------|------|----------------|-------------------|----------------------|
| 30              | 23.93          | 0.68           | 15.8                  | 10.9                | 0.082           | 1279 | 308            | 71.90             | 20.2                 |
| 35              | 23.92          | 0.99           | 23.1                  | 16.6                | 0.107           | 1478 | 419            | 73.30             | 18.5                 |
| 40              | 23.92          | 1.42           | 33.7                  | 25.5                | 0.145           | 1690 | 575            | 79.70             | 17.9                 |
| 45              | 23.91          | 1.96           | 46.6                  | 35.8                | 0.180           | 1903 | 735            | 80.30             | 16.5                 |
| 50              | 23.9           | 2.52           | 59.7                  | 47.0                | 0.216           | 2078 | 897            | 81.70             | 15.6                 |
| 55              | 23.89          | 3.12           | 74.1                  | 58.5                | 0.250           | 2239 | 1048           | 82.30             | 14.8                 |
| 60              | 23.87          | 3.76           | 89.2                  | 71.1                | 0.283           | 2398 | 1191           | 82.60             | 13.8                 |
| 65              | 23.86          | 4.77           | 113.4                 | 92.3                | 0.337           | 2614 | 1439           | 84.40             | 13.2                 |
| 70              | 23.83          | 5.82           | 138.1                 | 113.7               | 0.389           | 2792 | 1653           | 85.00             | 12.4                 |
| 75              | 23.82          | 6.95           | 165.0                 | 135.8               | 0.435           | 2985 | 1870           | 85.30             | 11.8                 |
| 80              | 23.79          | 8.08           | 191.6                 | 158.0               | 0.479           | 3152 | 2072           | 85.30             | 11.2                 |
| 85              | 23.78          | 9.45           | 224.0                 | 184.6               | 0.531           | 3323 | 2307           | 85.10             | 10.6                 |
| 90              | 23.75          | 10.88          | 257.7                 | 212.1               | 0.581           | 3484 | 2524           | 84.90             | 10.1                 |
| 95              | 23.72          | 12,41          | 294.0                 | 240.9               | 0.632           | 3640 | 2741           | 84.50             | 9.6                  |
| 100             | 23.68          | 14.82          | 350.5                 | 286.0               | 0.711           | 3840 | 3072           | 84.00             | 9.0                  |

MAD 5010 200KV HAVOC 22x7.0 folding propeller AMPX 40A PRO (2-6S)

6S MAX 56°C

| Throttle<br>[%] | Voltage<br>[V] | Current<br>[A] | Input<br>Power<br>[W] | Output Power<br>[W] | Torque<br>[N×m] | RPM  | Thrust<br>[gf] | Efficiency<br>[%] | Efficiency<br>[gf/W] |
|-----------------|----------------|----------------|-----------------------|---------------------|-----------------|------|----------------|-------------------|----------------------|
| 30              | 23.94          | 0.98           | 22.8                  | 16.8                | 0.133           | 1213 | 418            | 77.00             | 19.1                 |
| 35              | 23.93          | 1.47           | 34.9                  | 26.1                | 0.179           | 1398 | 590            | 79.30             | 17.9                 |
| 40              | 23.92          | 2.07           | 48.8                  | 38.1                | 0.229           | 1590 | 785            | 81.30             | 16.7                 |
| 45              | 23.9           | 2.91           | 69.0                  | 54.8                | 0.288           | 1817 | 1015           | 82.40             | 15.3                 |
| 50              | 23.88          | 3.75           | 89.0                  | 71.2                | 0.343           | 1987 | 1224           | 83.00             | 14.3                 |
| 55              | 23.87          | 4.57           | 108.4                 | 86.1                | 0.387           | 2123 | 1381           | 82.50             | 13.2                 |
| 60              | 23.84          | 5.66           | 134.3                 | 107.0               | 0.449           | 2275 | 1619           | 82.60             | 12.5                 |
| 65              | 23.82          | 7.01           | 166.7                 | 132.6               | 0.517           | 2449 | 1867           | 82.50             | 11.6                 |
| 70              | 23.8           | 8.47           | 201.2                 | 159.7               | 0.583           | 2617 | 2128           | 82.20             | 11.0                 |
| 75              | 23.77          | 10.1           | 239.6                 | 190.4               | 0.659           | 2761 | 2365           | 82.10             | 10.2                 |
| 80              | 23.74          | 11.92          | 282.5                 | 223.6               | 0.734           | 2908 | 2597           | 81.70             | 9.5                  |
| 85              | 23.71          | 13.88          | 328.7                 | 257.2               | 0.807           | 3045 | 2846           | 80.60             | 8.9                  |
| 90              | 23.67          | 15.94          | 376.8                 | 292.0               | 0.879           | 3171 | 3105           | 79.70             | 8.5                  |
| 95              | 23.63          | 18,16          | 428.6                 | 327.9               | 0.949           | 3299 | 3357           | 78.50             | 8.0                  |
| 100             | 23.57          | 21.55          | 507.5                 | 381.5               | 1.053           | 3461 | 3717           | 77.00             | 7.5                  |

MAD 5010 EEE 200KV FLUXER PRO 24x7.2 MATT AMPX 40A PRO (2~6S)

6S MAX 67°C

| Throttle<br>[%] | Voltage<br>[V] | Current<br>[A] | Input<br>Power<br>[W] | Output Power<br>[W] | Torque<br>[N×m] | RPM  | Thrust<br>[gf] | Efficiency<br>[%] | Temp<br>[°C] |
|-----------------|----------------|----------------|-----------------------|---------------------|-----------------|------|----------------|-------------------|--------------|
| 30              | 23.93          | 0.97           | 22.8                  | 17.1                | 0.135           | 1210 | 467            | 78.20             | 21.3         |
| 35              | 23.92          | 1.47           | 34.6                  | 26.2                | 0.180           | 1395 | 636            | 78.70             | 19.1         |
| 40              | 23.9           | 2.1            | 49.5                  | 38.4                | 0.232           | 1583 | 834            | 80.40             | 17.5         |
| 45              | 23.89          | 3              | 71.0                  | 55.9                | 0.296           | 1807 | 1074           | 81.50             | 15.7         |
| 50              | 23.87          | 3.9            | 92.8                  | 73.0                | 0.353           | 1977 | 1284           | 82.00             | 14.4         |
| 55              | 23.85          | 4.79           | 113.8                 | 89.5                | 0.403           | 2122 | 1470           | 81.60             | 13.4         |
| 60              | 23.83          | 5.79           | 137.6                 | 108.3               | 0.457           | 2264 | 1678           | 81.60             | 12.7         |
| 65              | 23.81          | 7.17           | 170.2                 | 133.4               | 0.524           | 2432 | 1948           | 81.10             | 11.8         |
| 70              | 23.78          | 8.67           | 205.6                 | 161.2               | 0.594           | 2591 | 2221           | 81.00             | 11.2         |
| 75              | 23.76          | 10.42          | 247.1                 | 192.6               | 0.671           | 2741 | 2505           | 80.50             | 10.5         |
| 80              | 23.72          | 12.3           | 291.3                 | 225.4               | 0.747           | 2883 | 2803           | 79.80             | 9.9          |
| 85              | 23.68          | 14.32          | 338.8                 | 260.4               | 0.824           | 3020 | 3080           | 79.20             | 9.4          |
| 90              | 23.65          | 16.33          | 385.7                 | 294.0               | 0.892           | 3149 | 3308           | 78.30             | 8.8          |
| 95              | 23.61          | 18.68          | 440.6                 | 332.9               | 0.974           | 3264 | 3601           | 77.50             | 8.4          |
| 100             | 23.54          | 22.31          | 524.9                 | 389.0               | 1.086           | 3422 | 3983           | 75.90             | 7.8          |

**ENERGY EFFICIENT 240KV** ENTHUSIASTS EXTREME EDITION

1.5~2.0 kgf
RECOMMENDED HOVER THRUST
RECOMMENDED THRUST
RECOMMENDED THRUST
HOVER THRUST
RECOMMENDED THRUST
HERUST
RECOMMENDED THRUST
HERUST
RECOMMENDED THRUST
RECOMM

OPTIMIZED 161 a EFFICIENCY > 79%





MAX MAD 5010 EEE 240KV FLUXER PRO 22x6.6 MATT AMPX 40A PRO (2-6S) 65 67°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 I(A) 22.5 20 360 - 3600 -80 315 - 3150 -10 7.5 135 - 1350 - 30 90 - 900 - 20 45 - 450 - 10 25 240 KV Nominal Voltage 6S lipo battery No Load Current 0.76A / 20V 94.6mΩ Product Boxed Weigh Motor Weight 322g (110 x 110 x 50 mm) Maximum Current 28.9 A 681W Maximum thrust 4.1 kg Maximum Torque Recommended ESC MAD AMPX PRO 40A (2-65) Recommended Propellers 20x6.0, 21x6.3, 22x6.6, 22x7.0 65-22"/ 5kg--Quadcopter 7.5kg--Hexacopter 10kg--Octocopter UAV take-off weight Single rotor take-off weight 1.5kg ~ 2kg MAX 65 MAD 5010 EEE 240KV FLUXER PRO 20x6.0 MATT AMPX 40A PRO (2~6S) 50°C Voltage [V] 1498 68.30 23.94 0.71 10.8 0.069 267 16.9 40 23.94 1.44 34.0 24.B 0.120 1982 495 76.40 15.2 23.93 1.85 0.146 2184 603 14.3 43.6 33.2 78.70 57.1 0.178 23.9 3.04 72.2 57.2 0.209 2620 82.50 13.1 3.8 0.244 90.3 72.5 83.50 12.2 23.89 23.88 0.280 3067 1235 83.90 23.86 5.75 136.6 110.6 0.321 3292 1427 83.90 10.8 80 23.82 8.06 191.3 156.3 0.403 3707 1823 84.50 9.9 181.7 23.8 9.35 221.9 0.446 84.60 23.77 10.72 254.5 209.4 0.492 4062 85.10 23.75 12.11 287.3 235.3 0.529 4252 2417 84.60 23.7 14.5 343.4 281.4 84.40 8.2 MAX 65 MAD 5010 EEE 240KV FLUXER PRO 21x6.3 MATT AMPX 40A PRO (2~6S) 61°C 23.92 1.21 28.3 20.4 0.114 1710 457 75.10 16.8 30.4 78.10 23.92 40.6 23.91 2.23 52.8 40.6 0.182 2134 80.10 14.9 50 23.9 2.81 67.0 52.0 0.214 2320 81.10 14.1 60 23.87 4.55 108.1 86.6 0.302 2739 1293 83.10 12.4 11.5 23.85 5.67 134.8 108.5 0.349 2972 83.60 23.83 167.2 23.8 8.35 198.1 160.2 0.448 3413 1957 83.60 10.2 23.78 9.87 234.2 23.75 11.39 269.8 217.9 0.552 3769 2430 83.40 13.07 309.7 0.605 90 23.73 249.5 3941 2651 83.10 8.8 100 23.65 17.6 415.6 333.2 0.734 4333 3155 82.40 7.8 MAD 5010 EEE 240KV FLUXER PRO 22x6.6 MATT AMPX 40A PRO (2-6S) 65 67°C 24.07 0.89 20.9 15.2 0.102 1429 376 72.80 18.0 40 24.05 1.86 44.3 34.5 0.175 1888 676 77.90 15.3 57.8 50 24.03 3.11 74.4 59.0 0.248 2276 79.40 13.3 55 24.01 4.05 96.6 77.3 0.295 2504 1183 80.00 12.2 23.97 6.37 152.3 124.2 0.408 85.00 193.7 157.7 10.6 23.94 8.11 0.478 3149 1962 84.90 80 23.88 11.13 265.4 215.8 0.586 3517 2446 84.50 9.6 23.86 12.74 303.4 244.7 0.636 3677 2642 83.60 23.83 14.62 348.1 278.6 0.693 3840 2873 82.90 23.79 16.62 394.9 315.9 0.756 3992 3130 82.70 8.2 82.00 MAX 65 MAD 5010 EEE 240KV HAVOC 22x7.0 folding propeller AMPX 40A PRO (2~6S) 74°C

| 30  | 24.05 | 1.25  | 29.8  | 21.7  | 0.156 | 1331 | 519  | 72.80 | 17.4 |
|-----|-------|-------|-------|-------|-------|------|------|-------|------|
| 35  | 24.04 | 1.95  | 46.4  | 34.5  | 0.213 | 1550 | 712  | 74.40 | 15.3 |
| 40  | 24.02 | 2.81  | 67.2  | 50.2  | 0.274 | 1747 | 927  | 74.90 | 13.8 |
| 45  | 24.01 | 3.65  | 87.1  | 65.4  | 0.326 | 1917 | 1118 | 75.10 | 12.8 |
| 50  | 23.99 | 4.71  | 112.5 | 85.1  | 0.389 | 2089 | 1332 | 78.70 | 12.3 |
| 55  | 23.97 | 6.01  | 143.6 | 108.6 | 0.458 | 2265 | 1577 | 78.80 | 11.4 |
| 60  | 23.93 | 7.87  | 188.1 | 143.2 | 0.553 | 2471 | 1893 | 79.20 | 10.5 |
| 65  | 23.9  | 9.67  | 230.4 | 175.3 | 0.632 | 2650 | 2170 | 79.00 | 9.8  |
| 70  | 23.86 | 11.78 | 280.6 | 213.4 | 0.720 | 2832 | 2468 | 78.90 | 9.1  |
| 75  | 23.83 | 13.92 | 331.3 | 248.9 | 0.796 | 2988 | 2643 | 77.80 | 8.3  |
| 80  | 23.79 | 16.51 | 392.3 | 290.8 | 0.883 | 3144 | 2948 | 76.60 | 7.8  |
| 85  | 23.74 | 18.86 | 447.2 | 329.7 | 0.962 | 3273 | 3221 | 76.10 | 7.4  |
| 90  | 23.69 | 21.59 | 511.0 | 370.7 | 1.038 | 3411 | 3477 | 74.70 | 7.0  |
| 95  | 23.63 | 24.52 | 579.1 | 413.7 | 1.119 | 3530 | 3749 | 73.40 | 6.7  |
| 100 | 23.56 | 28.92 | 680.8 | 473.3 | 1.229 | 3677 | 4119 | 71.20 | 6.2  |

The above data are the theoretical values when the input voltage is 24 V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 23% is non-working zone. 10-298 is short-term (about 10-30s), working zone, and below it is sustainable working zone, in actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

**ENERGY EFFICIENT 310KV** ENTHUSIASTS EXTREME EDITION

2.0~2.5 kgf 5.2 kgf

RECOMMENDED HOVER THRUST WAY (BETTER LINEL PROPELLER FOR APPRESSION AND OTHER ST MAY (

 $\begin{array}{cc} \text{OPTIMIZED} & 162\,g & \text{efficiency} > 78\% \end{array}$ 



MAD 5010 EEE 310KV FLUXER PRO 20x6.0 MATT AMPX 40A PRO (2-6S)

65

MAX 76°C

## Analytical Graph of Motor Operation $I-Current, P-Input Power, \eta-Electrical Efficiency, T-Thrust. N-Rotational Speed \\ The data above was measured with an input voltage of 24 V, at a temperature of 25°C and sea level. The$



| Specifications      |  |                              |                                |
|---------------------|--|------------------------------|--------------------------------|
| RPM/V               | 310 KV   | Nominal Voltage              | 6S lipo battery                |
| No Load Current     | 1.25A / 20V  | Internal resistance          | 51mΩ                           |
| Motor Weight        | 162 g  | Product Boxed Weight         | 324g (110 x 110 x 50 mm)       |
| Maximum Current     | 46.8 A   | Maximum Power                | 991W                           |
| Maximum thrust      | 5.2 kg   | Maximum Torque               | 1.4 Nm                         |
| Recommended ESC     | MAD AMPX PRO 40A (2~6S)                                  | Recommended Propellers       | 20x6.0, 21x6.3, 22x6.6, 22x7.0 |
| UAV take-off weight | 65-20"/ 7kgQuadcopter<br>10.5kgHexacopter 14kgOctocopter | Single rotor take-off weight | 2kg ~ 2.5kg                    |

#### MAD 5010 EEE 310KV FLUXER PRO 20x6.0 MATT AMPX 40A PRO (2-6S)

6S MAX 76°C

| Throttle<br>[%] | Voltage<br>[V] | Current<br>[A] | Power<br>(W) | Output Power<br>(W) | Torque<br>[N×m] | RPM  | Thrust<br>(gf) | Efficiency<br>(%) | Efficiency<br>[gf/W] |
|-----------------|----------------|----------------|--------------|---------------------|-----------------|------|----------------|-------------------|----------------------|
| 30              | 24.01          | 1.48           | 35.0         | 24.5                | 0.118           | 1986 | 508            | 70.40             | 14.6                 |
| 35              | 24             | 2.17           | 51.6         | 37.7                | 0.159           | 2273 | 697            | 73.90             | 13.6                 |
| 40              | 23.99          | 2.92           | 69.9         | 52.5                | 0.198           | 2539 | 865            | 77.90             | 12.8                 |
| 45              | 23.96          | 4.36           | 104.0        | 81.1                | 0.262           | 2957 | 1161           | 81.10             | 11.6                 |
| 50              | 23.94          | 5.72           | 136.3        | 107.7               | 0.316           | 3254 | 1413           | 82.00             | 10.8                 |
| 55              | 23.91          | 7.26           | 173.2        | 138.2               | 0.372           | 3549 | 1672           | 83.10             | 10.0                 |
| 60              | 23.88          | 8.96           | 213.3        | 171.1               | 0.429           | 3815 | 1961           | 83.20             | 9.5                  |
| 65              | 23.85          | 10.79          | 256.7        | 205.8               | 0.482           | 4076 | 2218           | 83.10             | 9.0                  |
| 70              | 23.81          | 12.71          | 302.1        | 242.7               | 0.540           | 4297 | 2482           | 83.10             | 8.5                  |
| 75              | 23.78          | 14.98          | 355.5        | 285.5               | 0.603           | 4526 | 2774           | 83.00             | 8.1                  |
| 80              | 23.73          | 17.34          | 411.2        | 330.4               | 0.665           | 4747 | 3028           | 82.90             | 7.6                  |
| 85              | 23.68          | 19.77          | 467.7        | 375.2               | 0.721           | 4969 | 3308           | 82.50             | 7.3                  |
| 90              | 23.64          | 22.67          | 535.4        | 426.4               | 0.787           | 5175 | 3621           | 81.80             | 7.0                  |
| 95              | 23.58          | 25.75          | 606.6        | 481.4               | 0.855           | 5377 | 3913           | 81.30             | 6.6                  |
| 100             | 23.5           | 30.07          | 706.0        | 555.9               | 0.939           | 5656 | 4308           | 80.40             | 6.2                  |

### MAD 5010 EEE 310KV FLUXER PRO 21x6.3 MATT AMPX 40A PRO (2-6S)

MAX 6S 89°C

| Throttle<br>[%] | Voltage<br>[V] | Current<br>[A] | Input<br>Power<br>[W] | Output Power<br>[W] | Torque<br>[N×m] | RPM  | Thrust<br>(gf) | Efficiency<br>[%] | Efficiency<br>[gf/W] |
|-----------------|----------------|----------------|-----------------------|---------------------|-----------------|------|----------------|-------------------|----------------------|
| 30              | 24.03          | 1.69           | 40.0                  | 29.9                | 0.149           | 1922 | 549            | 74.70             | 13.7                 |
| 35              | 24.02          | 2.54           | 60.7                  | 46.5                | 0.200           | 2223 | 766            | 77.00             | 12.7                 |
| 40              | 24.01          | 3.42           | 81.7                  | 64.0                | 0.247           | 2474 | 961            | 78.30             | 11.8                 |
| 45              | 23.98          | 5.1            | 122.1                 | 98.5                | 0.328           | 2863 | 1306           | 84.20             | 11.2                 |
| 50              | 23.95          | 6.83           | 163.0                 | 132.2               | 0.397           | 3177 | 1644           | 84.40             | 10.5                 |

| 55  | 23.91 | 8.72  | 207.9 | 170.1 | 0.471 | 3448 | 1975 | 85.10 | 9.9 |
|-----|-------|-------|-------|-------|-------|------|------|-------|-----|
| 60  | 23.88 | 10.66 | 254.1 | 207.6 | 0.537 | 3694 | 2273 | 84.90 | 9.3 |
| 65  | 23.84 | 12.92 | 307.6 | 250.4 | 0.607 | 3940 | 2609 | 84.40 | 8.8 |
| 70  | 23.8  | 15.22 | 361.8 | 294.3 | 0.676 | 4159 | 2870 | 84.10 | 8.2 |
| 75  | 23.75 | 17.81 | 422.5 | 342.2 | 0.748 | 4368 | 3174 | 83.60 | 7.8 |
| 80  | 23.7  | 20.65 | 488.9 | 394.2 | 0.824 | 4569 | 3532 | 83.00 | 7,4 |
| 85  | 23.65 | 23.63 | 558.3 | 445.8 | 0.894 | 4760 | 3844 | 82.10 | 7.1 |
| 90  | 23.59 | 26.9  | 634.2 | 502.1 | 0.966 | 4962 | 4157 | 81.20 | 6.7 |
| 95  | 23.52 | 30.37 | 713.7 | 560.6 | 1.040 | 5146 | 4461 | 80.30 | 6.4 |
| 100 | 23.44 | 35.48 | 831.1 | 643.1 | 1.139 | 5393 | 4866 | 78.80 | 6.0 |

MAD 5010 EEE 310KV HAVOC 22x7.0 folding propeller AMPX 40A PRO (2-6S)

6S MAX 91°C

| Throttle<br>[%] | Voltage<br>[V] | Current<br>[A] | Input<br>Power<br>[W] | Output Power<br>[W] | Torque<br>[N×m] | RPM  | Thrust<br>(gf) | Efficiency<br>[%] | Efficiency<br>[gf/W] |
|-----------------|----------------|----------------|-----------------------|---------------------|-----------------|------|----------------|-------------------|----------------------|
| 30              | 21.97          | 2.17           | 47.3                  | 35.9                | 0.208           | 1656 | 710            | 80.00             | 15.8                 |
| 35              | 21.95          | 3.45           | 75.3                  | 57.9                | 0.286           | 1935 | 1012           | 80.30             | 14.0                 |
| 40              | 21.92          | 4.69           | 102.3                 | 78.1                | 0.350           | 2136 | 1262           | 79.60             | 12.9                 |
| 45              | 21.9           | 6.15           | 134.2                 | 102.8               | 0.423           | 2324 | 1522           | 79.90             | 11.8                 |
| 50              | 21.86          | 8.32           | 181.4                 | 139.2               | 0.510           | 2608 | 1869           | 79.80             | 10.7                 |
| 55              | 21.8           | 11.2           | 243.6                 | 187.3               | 0.619           | 2892 | 2270           | 79.90             | 9.7                  |
| 60              | 21.75          | 14.28          | 310.1                 | 235.0               | 0.723           | 3104 | 2648           | 78.50             | 8.8                  |
| 65              | 21.7           | 16.87          | 365.7                 | 274.6               | 0.802           | 3271 | 2923           | 77.60             | 8.3                  |
| 70              | 21.65          | 19.84          | 429.0                 | 318.9               | 0.886           | 3437 | 3229           | 76.60             | 7.8                  |
| 75              | 21.58          | 23.75          | 512.0                 | 372.9               | 0.990           | 3597 | 3601           | 74.80             | 7.2                  |
| 80              | 21.52          | 27.32          | 587.4                 | 420.9               | 1.070           | 3758 | 3869           | 73.40             | 6.7                  |
| 85              | 21,45          | 31.36          | 672.0                 | 471.3               | 1.153           | 3904 | 4133           | 71.60             | 6.3                  |
| 90              | 21.37          | 35.5           | 757.9                 | 523,4               | 1.238           | 4038 | 4301           | 70.20             | 5.8                  |
| 95              | 21.29          | 40.19          | 854.8                 | 571.4               | 1.316           | 4147 | 4580           | 67.70             | 5.4                  |
| 100             | 21.16          | 46.84          | 991.0                 | 635.9               | 1.404           | 4324 | 4993           | 64.60             | 5.1                  |

MAD 5010 EEE 310KV FLUXER PRO 22x6.6 MATT AMPX 40A PRO (2-6S)

6S MAX 106℃

| Throttle<br>[%] | Voltage<br>[V] | Current<br>[A] | Input<br>Power<br>[W] | Output Power<br>[W] | Torque<br>[N×m] | RPM  | Thrust<br>(gf) | Efficiency<br>[%] | Efficiency<br>[gf/W] |
|-----------------|----------------|----------------|-----------------------|---------------------|-----------------|------|----------------|-------------------|----------------------|
| 30              | 24.03          | 1.92           | 45.8                  | 34.8                | 0.177           | 1881 | 642            | 76.20             | 14.0                 |
| 35              | 24.01          | 2.88           | 68.6                  | 53.4                | 0.234           | 2178 | 877            | 77.90             | 12.8                 |
| 40              | 23.99          | 3.86           | 92.1                  | 71.8                | 0.284           | 2418 | 1075           | 80.30             | 12.0                 |
| 45              | 23.96          | 5.8            | 138.5                 | 111,4               | 0.378           | 2812 | 1462           | 83.70             | 11.0                 |
| 50              | 23.92          | 7.75           | 184.9                 | 148.9               | 0.459           | 3099 | 1819           | 83.90             | 10.3                 |
| 55              | 23.89          | 9.87           | 235.3                 | 189.3               | 0.537           | 3364 | 2164           | 83.60             | 9.6                  |
| 60              | 23.85          | 12.15          | 289.1                 | 231.6               | 0.614           | 3602 | 2510           | 83.00             | 9.0                  |
| 65              | 23.81          | 14.43          | 342.9                 | 274.5               | 0.687           | 3815 | 2814           | 82.80             | 8.5                  |
| 70              | 23.76          | 16.86          | 400.2                 | 319.2               | 0.759           | 4018 | 3100           | 82.30             | 8.0                  |
| 75              | 23.71          | 19.89          | 471.4                 | 373.1               | 0.841           | 4234 | 3388           | 81.60             | 7.4                  |
| 80              | 23.65          | 23.22          | 548.8                 | 430.3               | 0.927           | 4436 | 3751           | 80.60             | 7.0                  |
| 85              | 23.6           | 26.52          | 625.4                 | 483.7               | 0.999           | 4622 | 4094           | 79.30             | 6.7                  |
| 90              | 23.53          | 30.41          | 715.1                 | 545.6               | 1.087           | 4792 | 4482           | 78.00             | 6.4                  |
| 95              | 23.46          | 34.12          | 800.0                 | 603.2               | 1,160           | 4966 | 4773           | 76.90             | 6.1                  |
| 100             | 23.36          | 39.65          | 926.0                 | 685.1               | 1.261           | 5187 | 5209           | 75.10             | 5.7                  |

The above data are the theoretical values when the input voltage is 24 V. for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 20A is non-working zone.14-40A is short-term (about 10-30s), working zone, and below 14A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation control in actual use, please control the motor running time according to the working environment temperature and heat dissipation control.

**ENERGY EFFICIENT 370KV** ENTHUSIASTS EXTREME EDITION

1.5~2.0 kgf 4.9 kgf

RECOMMENDED HOVER THRUST WAS ARREST MAY DEPOSIT ON THRUST MAY DEPOSIT ON TH

OPTIMIZED 162.2 g EFFICIENCY > 77%

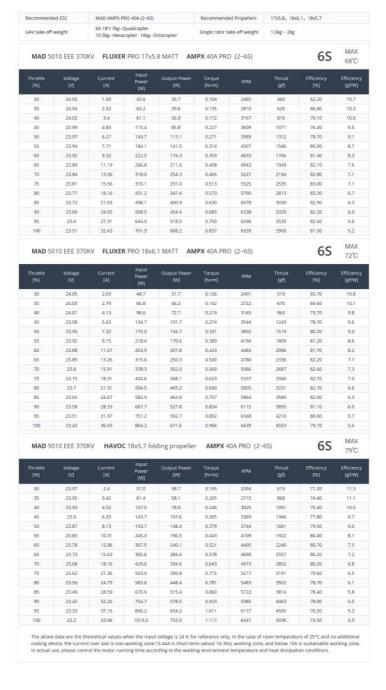


MAD 5010 370KV FLUXER PRO 18x6.1 MATT AMPX 40A PRO (2~65)

6S MAX 72°C

|      | sured morali input v | oitage or 24 v, at a r | temperature of | 25 C and sea leve | f. The rotational sp | eed was adjust | ted by the | trirottie. |
|------|----------------------|------------------------|----------------|-------------------|----------------------|----------------|------------|------------|
| NA)  |                      |                        |                |                   |                      | P(W)           | Tig/rocori | η(%)       |
| 40.5 |                      |                        |                |                   |                      | 765            | 4950       | 90         |
| 36   |                      | 7                      | _              |                   | -                    | 2 680          | 4400       | 80         |
| 31.5 |                      | "                      |                |                   |                      | 595            | 3850       | 70         |
| 27   |                      |                        |                |                   |                      | 510            | 3300 -     | 60         |
| 22.5 |                      |                        |                | / /               |                      | 425            | - 2750 -   | 50         |
| 18   |                      |                        |                |                   |                      | 340            | 2200       | 40         |
| 13.5 |                      |                        |                |                   |                      | 255            | 1890       | 30         |
| 9    |                      |                        |                |                   |                      | 170            |            | 20         |

| Specifications  |             |                      |                          |
|-----------------|-------------|----------------------|--------------------------|
| RPM/V           | 370 KV      | Nominal Voltage      | 6S lipo battery          |
| No Load Current | 1.56A / 20V | Internal resistance  | 38mΩ                     |
| Motor Weight    | 162.2 g     | Product Boxed Weight | 324g (110 x 110 x 50 mm) |
| Maximum Current | 44 A        | Maximum Power        | 1019 W                   |
| Maximum thrust  | 4.9 kg      | Maximum Torque       | 1.12 Nm                  |



### **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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