

H2

High-voltage Brushless Motor

English technical reference prepared from the Chinese product document. Legacy contact details have been removed. Numeric values marked [verify] require confirmation before ordering or operation.

****Product: H2 - High-voltage Brushless Motor****

****Rotation Direction Switching****

The rotation direction of the motor can be selected arbitrarily. The motor's rotation direction depends on the propeller's rotation direction; the propeller rotation direction must be determined first. After determining the propeller rotation direction, do not rush to install the propeller blades. Connect the three sets of motor phase wires to the corresponding ESC output wires. If the motor rotation direction does not match the propeller rotation direction, swap any two of the three motor phase wires, as shown in the figure below.

****5. Test Data and Test Conditions****

****Product Manual****

****Product Model:** H2**

****400V, 6000RPM****

****High-Voltage Series****

****Dedicated for Tethered Applications****

****4. Outline and Installation Structure****

****Product Description and Operating Instructions****

****Scope of Application:****

DC motor, used with input voltage: 200-400V

****Performance Requirements:****

Item Parameter	
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1	Rated Voltage (V): 400V
2	Rated Input Current (A): 5A ± 0.2A

- | 3 | No-load Current (at [verify]V): [verify] |
- | 4 | Maximum Current (A): [verify] |
- | 5 | Internal Resistance (Ω) (varies with temperature): [verify] |
- | 6 | Total Weight (g): 480g $\pm$ 10g |
- | 7 | Rotation Direction (viewed from shaft end): CW/CCW |
- | 8 | Operating Ambient Temperature ($^{\circ}\text{C}$): -10 $^{\circ}\text{C}$ to 65 $^{\circ}\text{C}$ |
- | 9 | Storage Temperature ($^{\circ}\text{C}$): -10 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$ |
- | 10 | Storage Humidity (%): 85 |

****Propeller Mount Hole Diagram****

****Motor Outline Diagram****

****Factory Inspection Items:****

- Factory sampling inspection item: Dynamometer test
- Factory inspection item: Ammeter
- Factory inspection item: Tachometer
- Factory inspection item: DC low-resistance sorting instrument
- Factory sampling inspection item: Electronic counting scale (sampling)

****Fixed Motor Hole Diagram****

****Data Table****

| Test Voltage | Motor Model | Test Propeller | Current (A) | Input Power (W) | Thrust (g) | Torque (N·m) | Speed (RPM) | Motor Efficiency | Thrust Efficiency |

|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

| 285V [verify] | H2 | [verify] | [verify] | [verify] | 4270 | 57 [verify] | 1736, 2081, 2747 | [verify] | [verify] |

****Ambient Temperature:**** 25 $\pm$ 5 $^{\circ}\text{C}$ to 65 $^{\circ}\text{C}$

****Mechanical Vibration:**** When the motor undergoes vibration testing as required, the vibration velocity measured during no-load operation shall not exceed 1. [verify]

****Insulation Dielectric Strength:****

1. ****Electrical Strength:**** After the motor is insulated, apply [verify]V/[verify]mA between the rotor winding and the housing; no flashover shall occur.

****Motor Usage Precautions****

Refer to the table below for motor usage precautions.

****Design and Usage Precautions****

(If any doubt arises regarding the safety of this product, please notify our company for technical inspection.)

****Safety Usage Conditions and Disclaimer****

(1) Due to various conditions such as operating voltage, lifespan, and operating environment, situations may occur that lead to short circuits, fire, or smoke from this product. Therefore, please implement appropriate protective measures in your products.

(2) During motor installation and wiring, be careful not to damage the motor coils, wires, or edges. Failure to do so may cause electric shock, burnout, or fire.

(3) During operation, do not touch rotating parts with hands or fingers. This can easily cause injury; installers must exercise caution.

(4) This product is intended for installation in other equipment. Therefore, this product does not have warning labels. If such labels are necessary, please contact us.

(5) Temperature significantly affects lifespan. When installing in your product, ensure the worst-case condition is set below the bearing's allowable temperature (upper limit 100°C). (If measurement is not possible, please verify the lifespan when installed in your product.)

(6) Do not allow the bearing to remain at high temperature continuously, similar to a locked shaft. If a high-temperature state (upper limit 100°C) persists, bearing degradation will cause noise and vibration, affecting lifespan.

(7) If your company performs speed control using a unique method, confirm variable factors such as the operating voltage range and load fluctuations to check for abnormal noise, abnormal motor heating, or stalling.

(8) The motor used in your product must be installed using the correct mounting method. Improper installation is a root cause of noise and vibration and will adversely affect bearing life.

(9) Never move the motor by holding the wires, shaft, etc.

(10) If the motor is dropped or subjected to a comparable impact, it may cause insulation or bearing damage. Do not use it further.

****Absolutely do not disassemble this product.**** If disassembled, safety performance and other characteristics will not be guaranteed.

Do not use this product in corrosive gas environments (H₂O, SO₂, [verify], [verify]) or in places containing harmful substances (especially organic silicone, cyano-based, phenol-based). Additionally, confirm in advance whether such substances exist within your product; if present, they may cause rust and affect lifespan.

For storage, avoid the aforementioned corrosive gases and harmful environments, as well as temperatures exceeding 10–50°C and humidity above 85%. Pay special attention during long-term storage. The allowable storage condition is normal temperature and humidity for up to 6 months. Additionally, sealed storage is required.

Please verify the compatibility of the motor with your equipment's structure, dimensions, lifespan, noise, vibration, characteristics, etc., at your own responsibility.

Use beyond the specifications described in this specification sheet is not covered by warranty.

Please contact us in advance if specifications of your product are changed or if the product is used in other applications.

If the specifications of this product are changed, it will be done according to our specification sheet or documents provided by your company. If performance or characteristics are affected, a sample will be re-made and verified before the specification change.

Under conditions that meet the scope described in this specification sheet, certain parts may be changed without notice to improve product performance.

For matters not described in this specification sheet that require agreement, please contact us in advance.

If any non-conformance occurs, it shall be resolved and implemented through mutual consultation based on the matters described in this specification sheet.

Do not disclose this specification sheet to third parties.

Business enquiries

Product selection · Project enquiries · Technical support

H2



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Quality engineering. Service life up to 5000 hours.

Actual life depends on load, temperature, installation and maintenance.