

Brushless DC Motors with Integral Drive

KinetiMax 24 EB Series

24 mm diameter, 6 mNm max. torque, up to 2.7 W output power

The KinetiMax 24 EB is an extremely compact brushless DC motor with integrated drive electronics. This motor is an outer-rotor motor with a robust bearing system capable of handling high side loads.

The KinetiMax 24 EB employs an external rotor and iron core stator to maximize torque production.

High quality components ensure a minimum operating life of 20,000 hours. The KinetiMax 24 EB is a good choice for many types of small pumps, laser scanners, small high performance fans, blowers and medical equipment.

Options & Accessories

- Customized shaft
- Customized mounting flange
- Custom leads and connector configurations
- Special winding configurations
- Gearbox



Features & Benefits

- Outer-rotor, precision 24 mm diameter brushless DC motors with integrated drive electronics
- Rated up to 2.7W power output at 4300 RPM nominal speed
- 6, 12 or 24 VDC winding choice
- 2-wire version is as simple to control as a DC motor, needing only a DC voltage to operate
- Protection against voltage reversal
- Low EMI – complies with EN 55014-1/2, 61000-6-1/3
- IP30 level protection sealing
- 5-wire speed control version
- Integrated electronics with control input
- Tachometer output (18 pulses per rev) for speed monitoring
- Input to enable direction reversal


QuickShip Products

Some of the part number configurations for this product are in stock and available for ***immediate delivery!***

Look for the QuickShip symbol next to available part numbers. Then, click on the part number to go directly to our online store.



KinetiMax 24 EB – Specifications

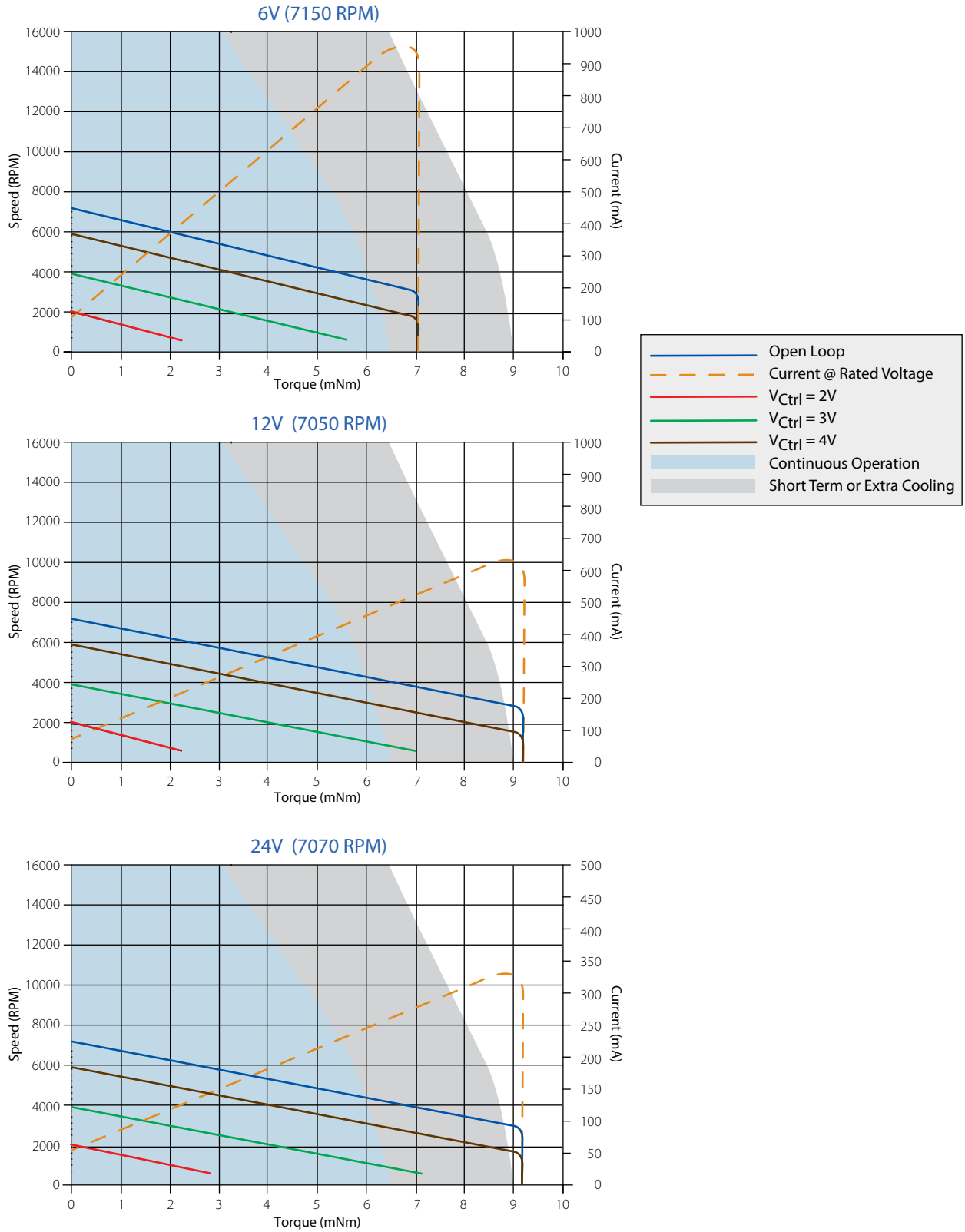
| | | | | |
|----------------------------------|--|--|---|--------------|
| Model | 2-wire CW Rotation | KMX-01621492 | KMX-01621512 | KMX-01621532 |
| | 2-Wire CCW Rotation | KMX-01621502 | KMX-01621522 | KMX-01621542 |
| | 5-Wire | KMX-01621513 |  KMX-01621523 | KMX-01621533 |
| Voltage VDC | Nominal | 6 | 12 | 24 |
| | Range ¹ | 5.5 – 9 | 7 – 17 | 10 – 28 |
| Rated Output Power | W | 2.2 | 2.7 | 2.7 |
| Torque mNm (oz.in.) | Rated | 5 (0.70) | 6 (0.85) | 6 (0.85) |
| | Max | 7 (0.99) | 9 (1.27) | 9 (1.27) |
| Torque Constant | mNm/A (oz.in./A) | 7.6 (1.07) | 15.7 (2.16) | 31.4 (4.45) |
| Speed RPM | Rated | 4200 | 4250 | 4300 |
| | No-load | 7150 | 7050 | 7070 |
| Current mA | Rated | 750 | 445 | 230 |
| | Max | 950 | 630 | 330 |
| | No-load | 105 | 62 | 40 |
| Rotor Inertia | kgm ² (oz.in.s ²) | 0.77 E-6 (1.09 E-4) | | |
| Mechanical Time Constant | ms | 47 | 35 | 35 |
| Thermal Resistance | °C/W Housing-Ambient | 25.5 | | |
| Weight | g (oz) | 30 (1.06) | | |
| Protection Level | | IP30 | | |
| Control Input ² V | Range | 0 - 5 | | |
| | Threshold | 1 | | |
| Direction Input V | CW | High ≥3.5 | | |
| | CCW | Low ≤1.5 | | |
| Speed Output Signal ² | PPR | 18 | | |
| Operating Temperature Range | °C (°F) | 0 – 90 (32 – 194) | | |
| Thermal Limit Protection | °C | N/A (Maintain maximum motor housing temperature ≤ 90 °C) | | |

Values valid for nominal voltage and Tamb = 22 °C

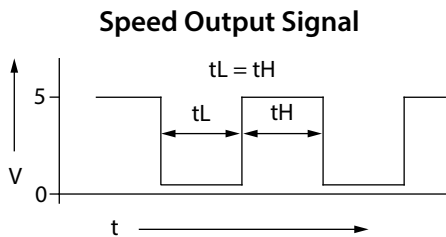
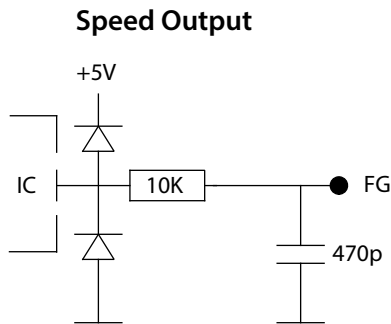
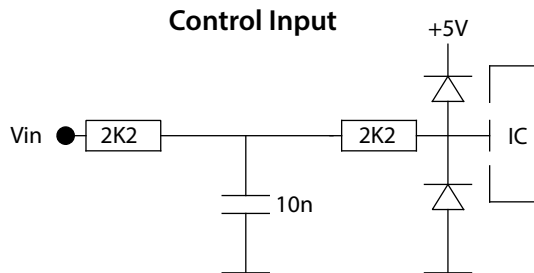
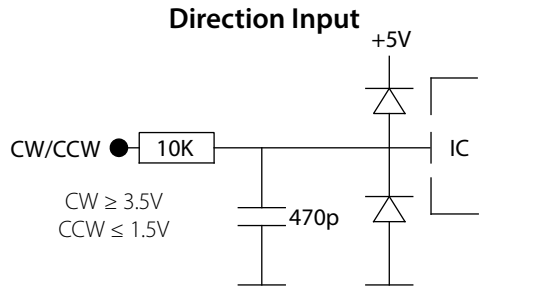
¹ Power supply provided with appropriate 68 µF buffer capacitor between supply voltage and common to comply with EN 55014-1/2

² Applicable for 5 wire versions only

KinetiMax 24 EB – Performance

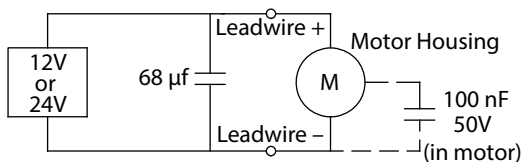


KinetiMax 24 EB – I/O Schematics



EMC

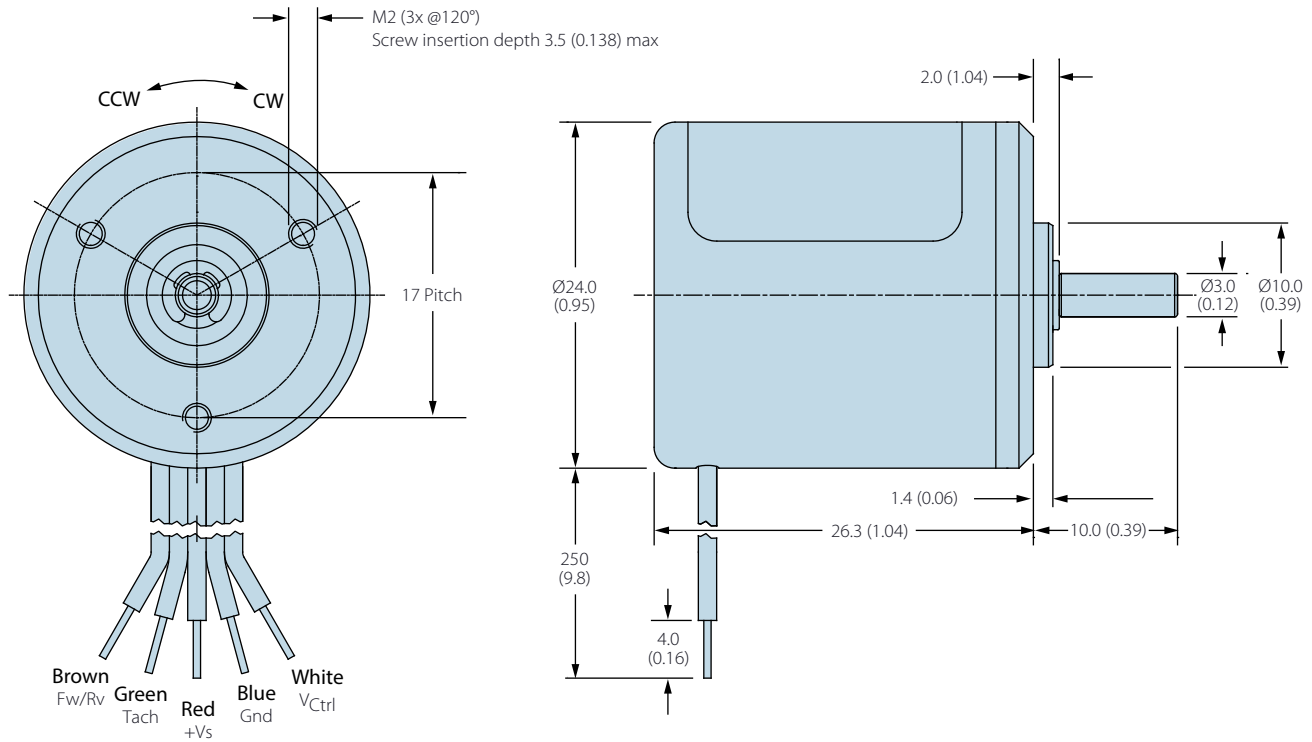
To meet EMC directive EN 55014, the power supply must be provided with a capacitor 68 μ F, 35V at the output:



KinetiMax 24 EB – Electrical Connections

| Version | Description | Wire Color (AWG 26) |
|-------------------|---------------------------------|---------------------|
| 2-Wire (CW & CCW) | Supply Voltage (+Vs) | Red |
| | Common (GND, ground) | Blue |
| 5-Wire | Supply Voltage (+Vs) | Red |
| | Common (GND, ground) | Blue |
| | Control input (V_{Ctrl} , V) | White |
| | Speed output (Tach, FG) | Green |
| | Direction input (CW/CCW) | Brown |

KinetiMax 24 EB Dimensions — mm (in)



Custom & Specific-Purpose Products & Sub-Assemblies

Allied Motion offers a very wide selection of standard motion control solutions to satisfy the requirements found in the commercial, industrial and aerospace and defense markets. And, we are adding new products every year to meet new demands we find in those markets.

However, a recognized strength of Allied Motion is our willingness and ability to develop custom motion control products and systems to meet the specific needs of customers. Please contact us to discuss your specialized application requirements.

Allied Motion Solution Centers

Allied Motion maintains Solution Centers in three geographically strategic locations to assist our customers with all aspects of their product selection and buying decisions. These facilities assure local support no matter your location around the globe.

Each Solution Center's experienced application engineering and customer service team provide:

- Application analysis assistance
- Detailed product information and documentation
- Standard product selection
- Product customization and options guidance
- Specification development assistance for custom-design products
- Price quotations
- Ordering, order status and shipment information
- Logistics assistance

For assistance with your project, contact us at one of our continental Allied Motion Solution Centers listed below.

Allied Motion also has a global network of factory trained selling partners to serve you. Visit our website for contact information for the Allied Motion Sales Partner nearest you.



High-Performance Specialty Motors & Application-Specific Motion Systems

Aerospace & Defense
Automation
Commercial-Consumer
Industrial
Medical
Pumps
Robotics
Vehicles

www.alliedmotion.com

North America

United States, Canada, Mexico:

Allied Motion Technologies NASC

495 Commerce Drive
Amherst, NY 14228 USA

+1 (716) 242-7535

inquiry@alliedmotion.com

Europe

UK, Ireland, continental Europe,
Eastern Europe, Scandinavia, Israel:

Allied Motion Technologies EUSC

Ekbacksvägen 26, PO Box 11198
S-161 11 Bromma, Sweden

+46 (8) 546 111 00

inquiry@alliedmotion.com

Asia

China, Taiwan, Japan, S. Korea, and
other Far East Countries:

Allied Motion Technologies ASC

58 Leshan Road
Xinbei District, Changzhou 213022
China

+852 2607 4038 +86 519 85113625

inquiry@alliedmotion.com