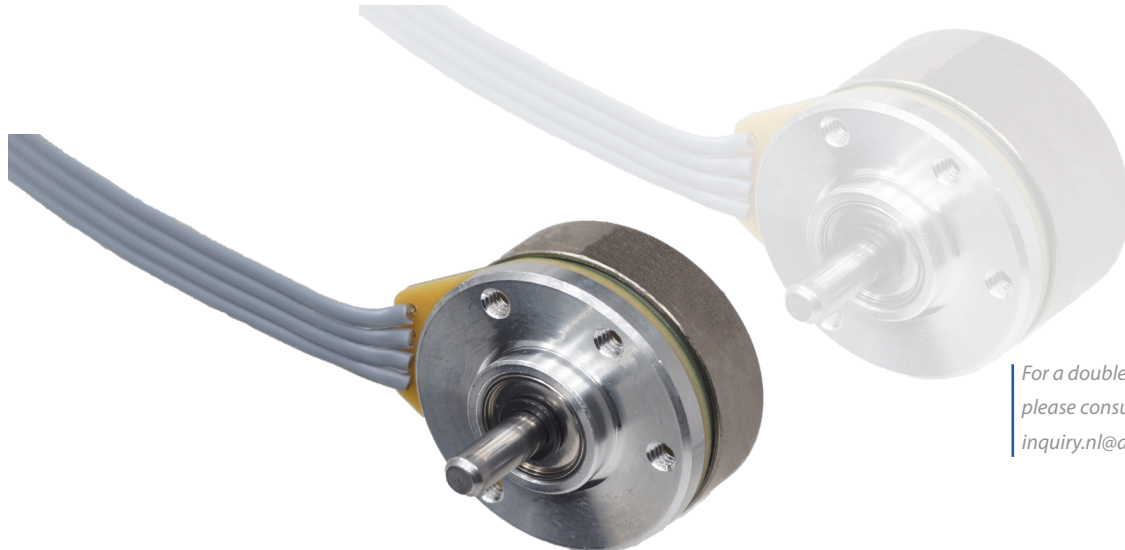


Brushless DC Motors

KinetiMax 21 EE Series

21 mm diameter, up to 2.2 mNm continuous torque, 2.1 Watts output power



*For a double power version,
please consult us at
inquiry.nl@alliedmotion.com*

The KinetiMax 21EE is an extremely compact brushless DC motor based on outer rotor technology.

This 3 phase brushless sensorless DC motor, comes with preloaded ball-bearings for precise and reliable rotation realizing a minimum operating life of 20,000 hours.

The KinetiMax 21EE is a spindle motor designed for applications where continuous speed is required in a small and compact size, such as: laser scanners, shutter-wheels, mixing devices, among others.

Features & Benefits

- 3 phase brushless sensorless DC motor
- Preloaded precision ball-bearings
- Outer rotor design with 6 pole-pair magnetizations
- Stator with 9 coils, 3-phase Y-configuration
- Flat cable connection (4 conductors) with TE Micro-MaTch connector

Options & Accessories

- Custom shaft
- Customized connections
- Customized winding
- Hall sensors
- Flex PCB

Typical Applications

- Barcode scanners
- Shutter wheels
- Mixing devices
- Pumps

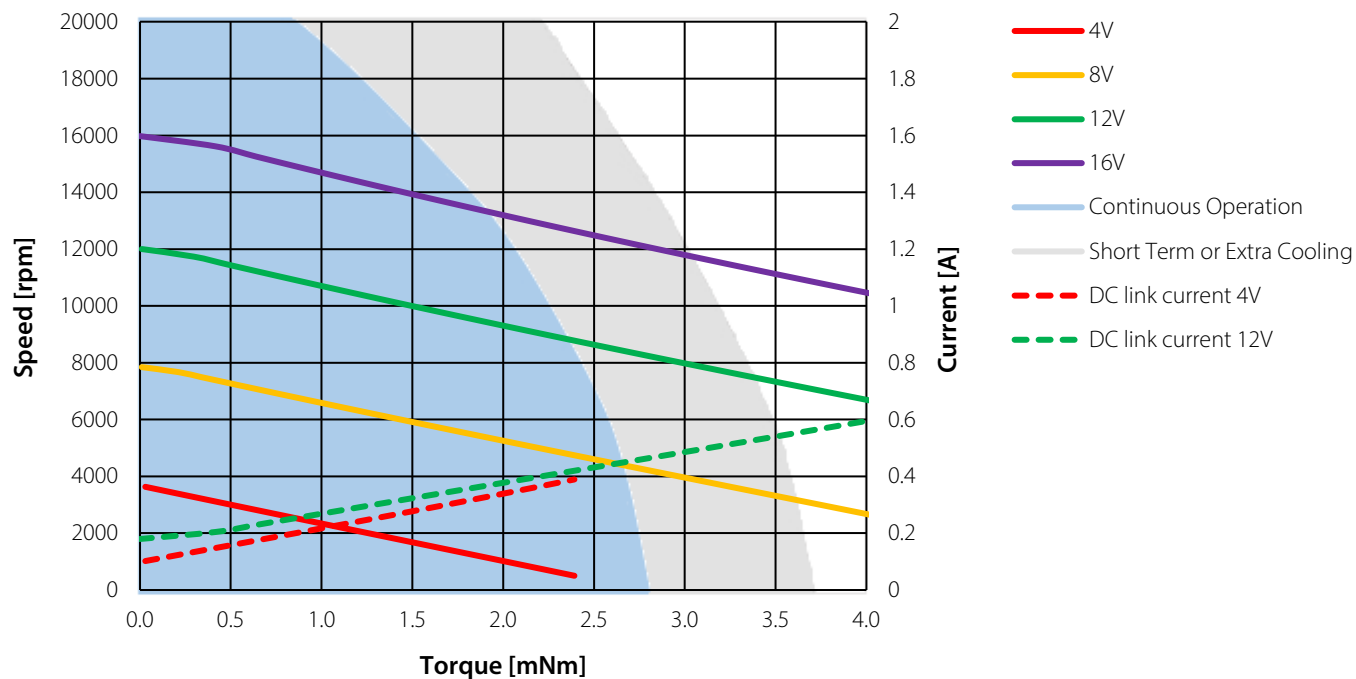
Specifications

		4322 016 21001	4322 016 21011
Operating Voltage - Rated ¹	Volt	12	16
Output Power – Rated	Watt	2.1	1.1
Torque – Rated	mNm	2.2	
Speed – Rated	RPM	9000	4650
DC bus rated current	mA	380	175
Speed – No-load (@ operating voltage)	RPM	12000	7300
Current (no load) - Motor speed 3000/6000 [rpm]	mA	135	60
Rotor Inertia (x10-6)	kgm ²	0.53	
Max Winding Temperature	°C	130	
Thermal resistance from winding to ambient in free air @ standstill	K/W	56	
Thermal resistance from winding to ambient. with extra cooling ²	K/W	28	
Number of pole pairs		6	
Weight	g	16.7	
Max Continuous load torque (Tamb=22 [°C]) no heatsink	mNm	2.5	
Max Continuous load torque (Tamb=22 [°C]) with extra cooling ²	mNm	3.4	3.6
Back EMF (@3000 RPM terminal-to-terminal)	Volt RMS	1.9	4.3
Torque - Constant	mNm/A	9	19
Resistance (terminal-to-terminal)	mOhm	9.5	42
Inductance (terminal-to-terminal)	uH	0.9	4.4
Mechanical time constant	ms	65	
Max. axial force @ 6000 [rpm] on shaft towards flange	N	2	
Max. axial force @ 6000 [rpm] on shaft from flange	N	1	

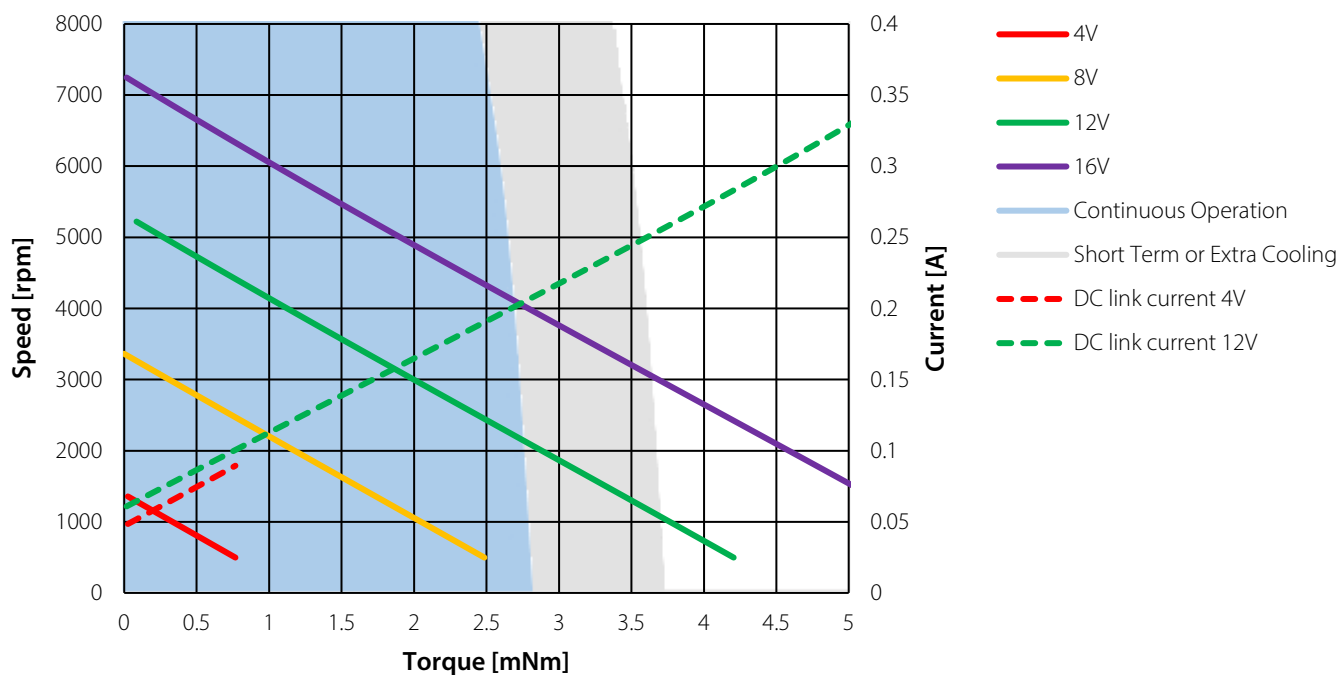
⁽¹⁾ Motor performance without additional cooling, no heatsink

⁽²⁾ Extra cooling by mounting on heatsink or rotor rotating in free air

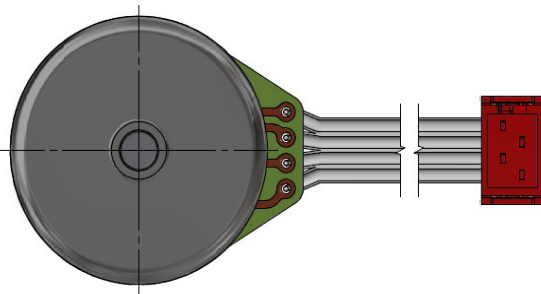
KinetiMax 21 EE 001 – Performance



KinetiMax 21 EE 011 – Performance



Technical drawing of the M2 (4x) connector. The drawing shows a side view of the connector with dimensions and specifications. The dimensions are: L ± 5, 13.4, 0.17, 0.25, 1.5 MAX, and 60°. The specifications are: M2 (4x), Insertion depth 3.5 MAX, and Pin 1, Pin 4.



Allied Motion Solution Centers

Allied Motion Solution Centers provide support to customers around the world from five geographically-strategic locations. Each facility is staffed by experienced application engineers and customer service teams to assist you with all aspects of your motion control needs. We also have a global network of factory-trained Allied Motion Sales Partners to serve you. For contact information on the location nearest you, please see below or visit our website.

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