MJK, Inc. Brushless DC Motor BL21 EE 1.0 Watt

Features

Brushless DC motor with laminated 9 coil stator and 12 pole rotor fitted with 4 wire flat cable and connector.

High Performance- State of the art design offers exceptional performance in a small size. For applications requiring even greater performance, options include: windings customized to meet your exact power requirements.

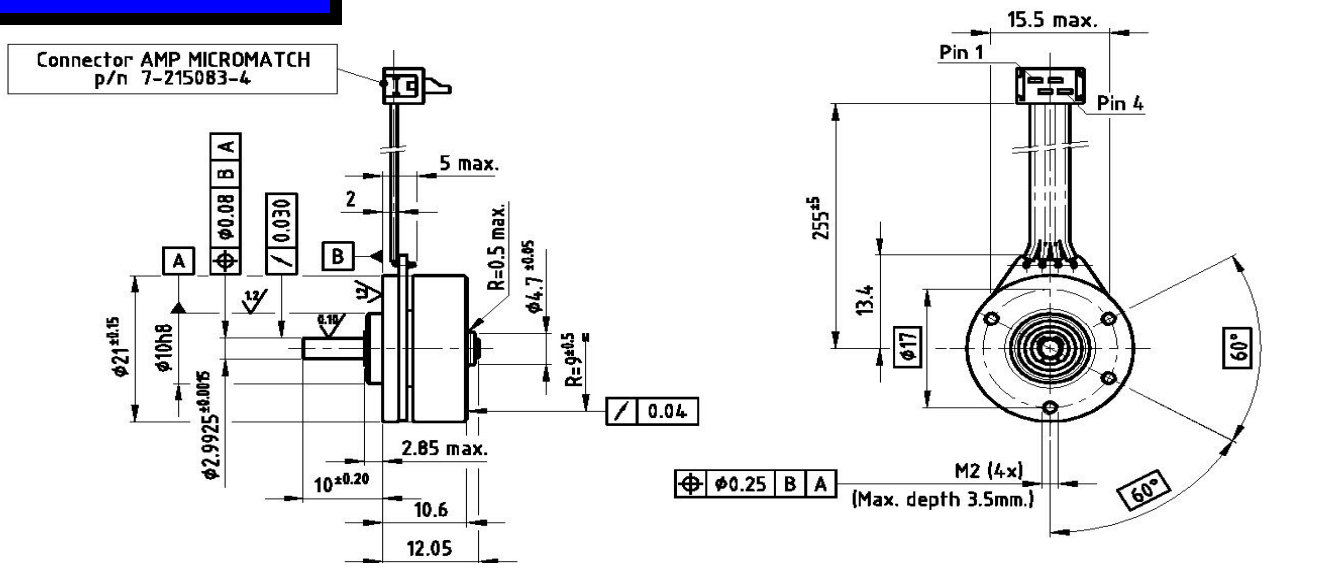
Speed Stability- Low instantaneous Speed Variation (ISV) due to outside spin rotor.

Low Torque Ripple– Minimizes detent torque by utilizing a specially designed 9 slot stator and 12 pole magnet.

Mounting- Industry standard 17 mm coreless DC motor mounting pattern interchangeable with standard DC motor.

Robust design –High reliability and long life maintenance free ball bearing construction.

Dimensions in Millimeters



Motor Data

Motor Order Number	4322 016 21011	
Nominal Voltage	[V]	12
No load Speed	[rpm]	5600
Torque constant	[mNm/A]	17
Stator resistance between two phases	[Ohm]	39
Stator inductance between two phases	[mH]	5.0
Mechanical time constant	[ms]	75
Max. winding temperature	[°C]	90
Thermal resistance from winding to ambient	[K/W]	62
Thermal resistance from winding to ambient with cooling plate (aluminum, 100x200x2)	[K/W]	32

Operating temperature range	[°C]	0 /+50
Insultation resistance at 500 V	[M Ohm]	min. 1
Rotor Inertia	[kgm^2]	0.53x10 $^{-6}$
Mass of motor	[g]	16
Maximum radial load 8 mm from mounting front at 6000 rpm (no axial load towards flange)	[N]	3.0
Maximum axial load at 6000 rpm -towards flange (no radical load) -from flange	[N] [N]	2.0 1.0

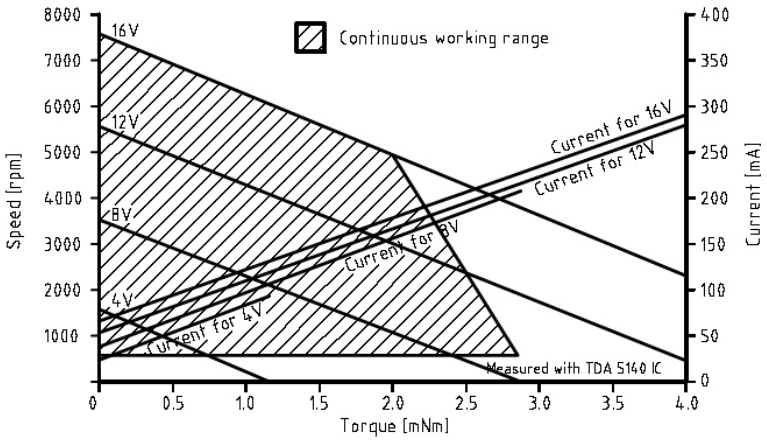
MJK, Inc.
396 Chase PKWY, Waterbury, CT 06708 USA
Telephone (203) 596-1258 Fax (203) 757-1724
www.mjkinc.net Email inquiry@mjkinc.net

Electrical Connection

Signals

Pin no.	Description
1	Center tap
2,3,4	Phase leads

Performance Curve



Sensorless commutation – Conform to industry standard 60° electrical. Motor using sensorless drive technology, to be used in combination with back-EMF commutating motor-IC (likes Philips TDA 51… family)

For thermal reasons it is advised to mount the motor on a heat conducting frame if high output power is desired.

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MJK, Inc. Brushless DC Motor BL21 EE 1.5 Watt

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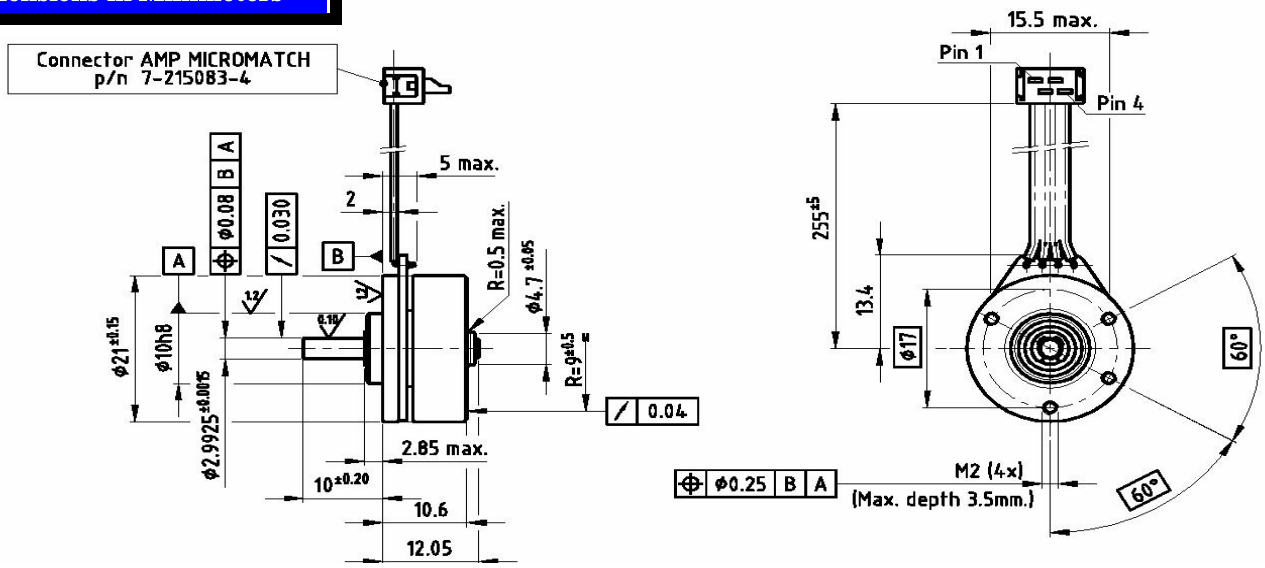

Motor Data

Motor Order Number	4322 016 21001	
Nominal Voltage	[V]	10
No load Speed	[rpm]	10000
Torque constant	[mNm/A]	7.9
Stator resistance between two phases	[Ohm]	10
Stator inductance between two phases	[mH]	1.0
Mechanical time constant	[ms]	95
Max. winding temperature	[°C]	90
Thermal resistance from winding to ambient	[K/W]	62
Thermal resistance from winding to ambient with cooling plate (aluminum, 100x200x2)	[K/W]	32

Operating temperature range	[°C]	0 /+50
Insultation resistance at 500 V	[M Ohm]	min. 1
Rotor Inertia	[kgm^2]	0.53x10 $^{-6}$
Mass of motor	[g]	16
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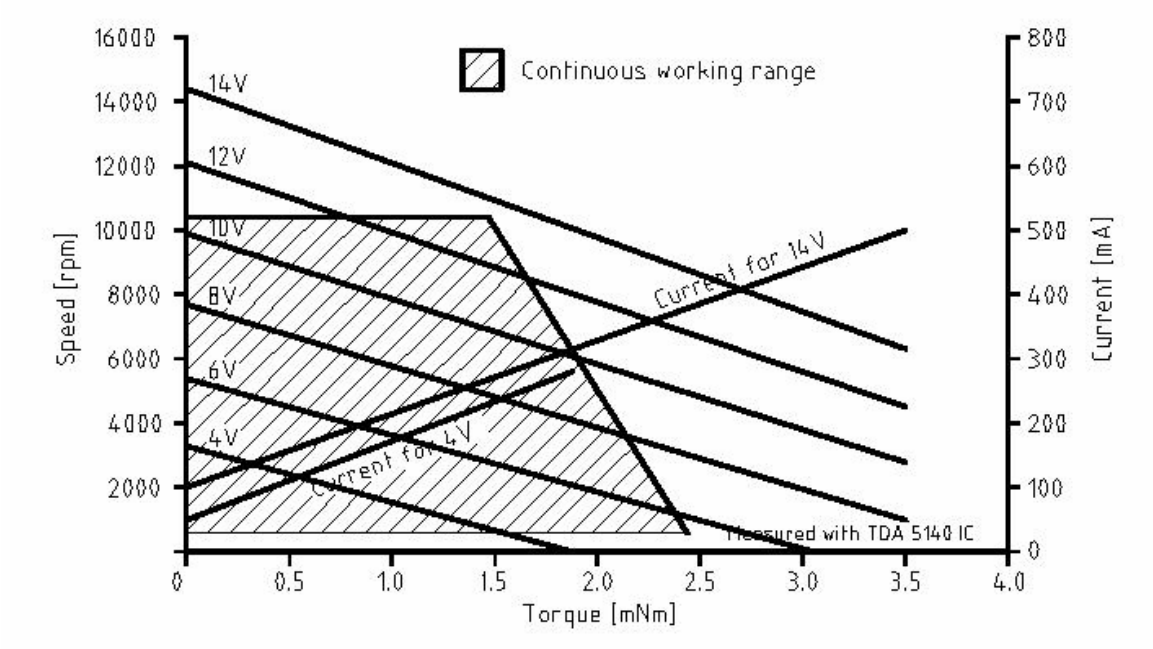

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