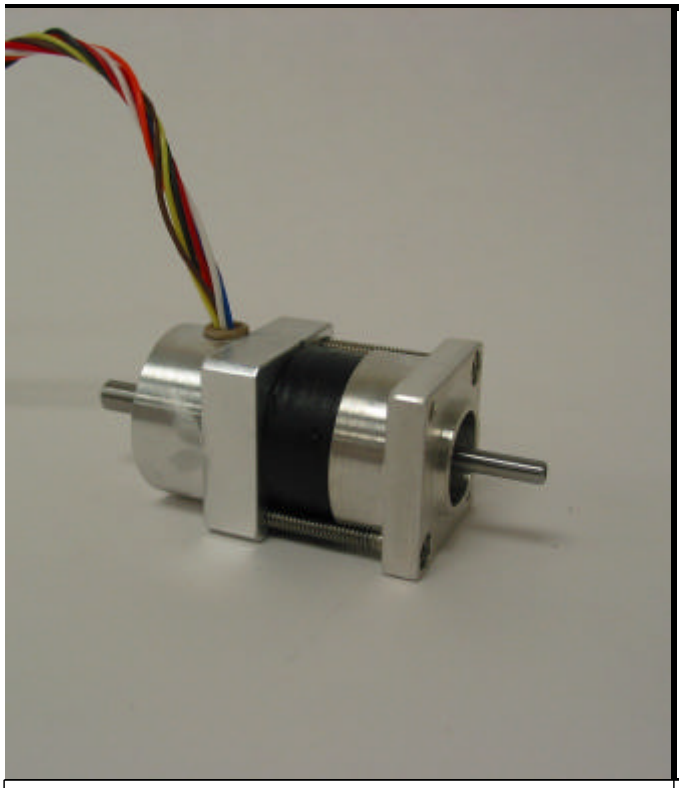
IB100 Series

Instrument Grade Brushless Motors



Performance Features

- Voltage windings up to 48 Vdc
- Continuous Torques from 2 to 4 oz-in
- Speeds up to 9000 rpm
- 4 Pole, Rare Earth Magnet Structure
- 3 Phase winding
- Hall Effect Commutation (120 Degrees)
- 12 Inch Motor Leads
- Standard 1/8 inch shaft diameter
- 1.4 lb Axial Shaft Load
- 4 lb Radial Shaft Load, 1/2 inch from the Front Face

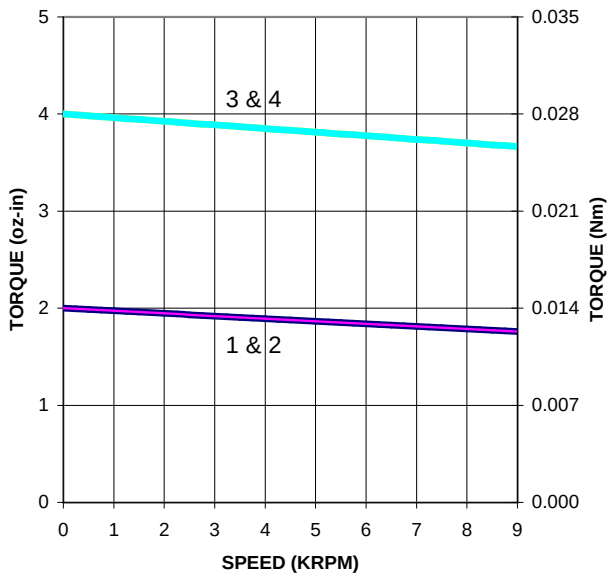
Options

- Optical Encoder
- Hall Free Commutation
- Shaft Diameter up to 1/4 inch
- Thermostat
- MCG Standard Connector

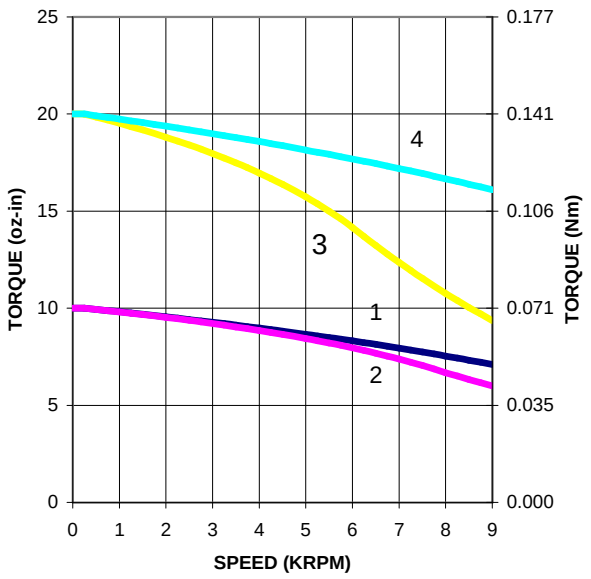
Customer Defined Options

- Custom Shafts
- Custom Mounting
- Special Ke
- Special Connectors

Cont. Torque IB100 Series @ 48 Vdc



Peak Torque IB100 @48 Vdc



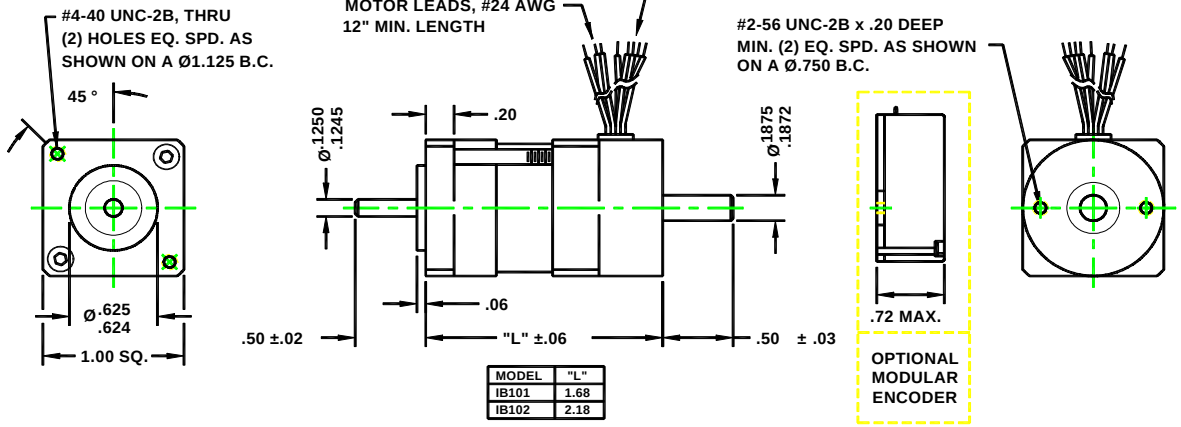
1 = IB101-G 2 = IB101-I 3 = IB102-D 4 = IB102-G

Curves reflect motor performance using peak and continuous ratings. System performance may differ depending on the drive capability.

SEP2003

DIMENSIONS

COLOR CODE			
COLOR	FUNCTION	COLOR	FUNCTION
RED	PHASE R	BROWN	HALL A
WHITE	PHASE S	ORANGE	HALL B
BLUE	PHASE T	YELLOW	HALL C
		RED	+5 VDC
		BLACK	GROUND



MODEL	"L"
IB101	1.68
IB102	2.18

GENERAL	Condition	Units	IB101		IB102	
Stock Motor Equivalent				IB10000		IB10001
Continuous Stall Torque	1)	Nm / oz-in	0.014 / 2		0.028 / 4	
Peak Stall Torque	1)	Nm / oz-in	0.071 / 10		0.141 / 20	
WINDING - TRAPEZOIDAL DC VALUES			G	I	D	G
DC Torque Constant	(+ / -10%)	Nm / A	0.0104	0.0163	0.0100	0.0209
		oz-in / A	1.47	2.31	1.42	2.96
DC Voltage Constant (L-L,DC)	(+ / -10%)	V / KRPM	1.09	1.71	1.05	2.19
Current at Cont. Stall Torque	1)	A	1.43	0.91	2.97	1.42
Current at Peak Torque		A	7.1	4.6	14.8	7.1
Resistance (L-L)	(+ / -10%)	ohms	4.15	9.9	1.58	6.3
Inductance (L-L)	(+ / -15%)	mH	1.51	3.10	0.55	2.40
Max. Terminal Voltage		V dc	48	48	48	48
Rated Speed @ 48 Vdc		RPM	9000	9000	9000	9000
Rated Speed @ 24 Vdc		RPM	8000	6000	8000	6000
WINDING - SINUSOIDAL AC VALUES						
RMS Torque Constant (L-L,RMS)	(+ / -10%)	Nm / A	0.0133	0.0209	0.0129	0.0268
		oz-in / A	1.89	2.97	1.82	3.80
RMS Voltage Constant (L-L,RMS)	(+ / -10%)	V / rad / s	0.0077	0.0121	0.0074	0.0155
		V / KRPM	0.81	1.27	0.78	1.62
Current at Cont. Stall Torque	1)	A (rms)	1.11	0.71	2.31	1.11
Current at Peak Torque		A (rms)	5.57	3.55	11.56	5.54
MECHANICAL						
Rotor Inertia (including hall effects)		kg-cm²	0.00071		0.00141	
		oz-in-s²	0.00001		0.00002	
Thermal Resistance		°C / W	6.60		4.90	
Environmental Protection		IP	42		42	
Weight		Kg / lb	0.07 / 0.16		0.1 / 0.22	
Engineering Part # Prefix			1071-M		1072-M	

1) 155 C winding temp., all others at 25C .

MODEL CONFIGURATIONS

(Final Engineering part number to be assigned by factory, Example: 1072-M99105)

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Models
IB101
IB102

Winding, Letter

Brake, See Brake Section
X = None

Gearhead, See Gear Section
X = None

Encoder, See Encoder Section
X = None
A = 500 Line, 3ch Modular, no LD

Special - Define on Application Sheet
X = Standard, no special requirement
Z = Special, not definable by model number

Please Contact your Local MCG Representative for Assistance with your needs
MCG Representatives can be located at: www.mcg-net.com