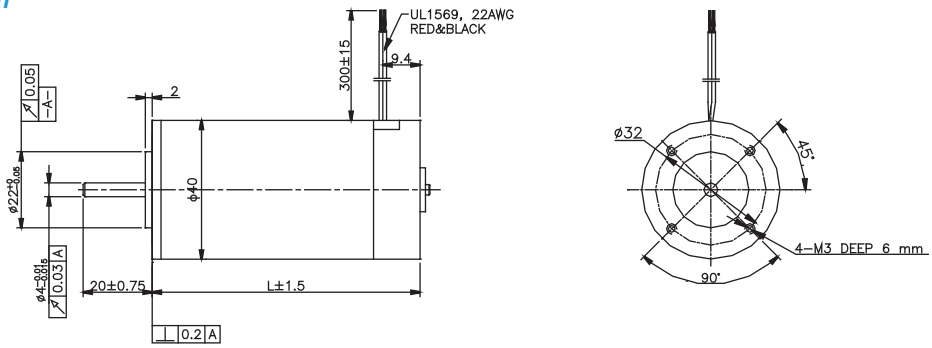
MB040JS PMDC Series Motor

General information

- Ball bearing/sintered Bronze bearing available
- Ceramic magnet
- 7-slot Armatare
- Copper-graphite Brush
- Encoder planetary gearbox available

Mechanical

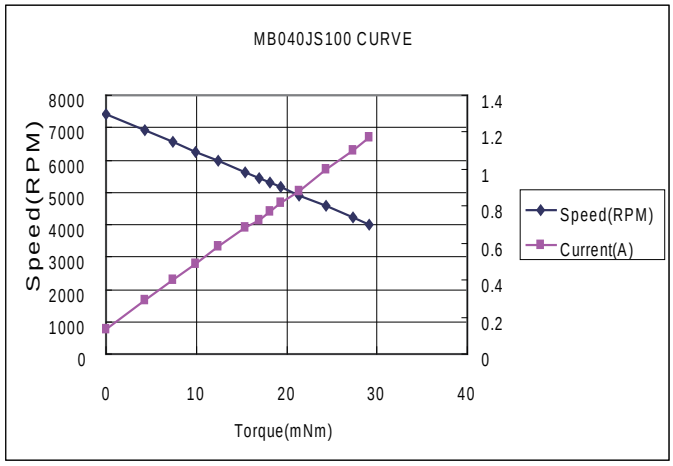


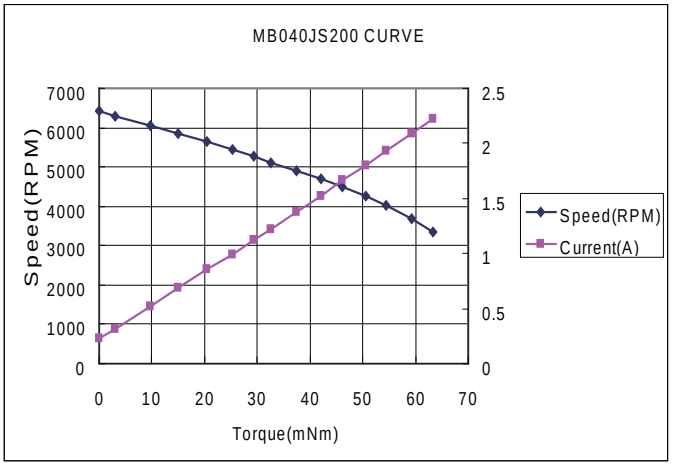
Specifications

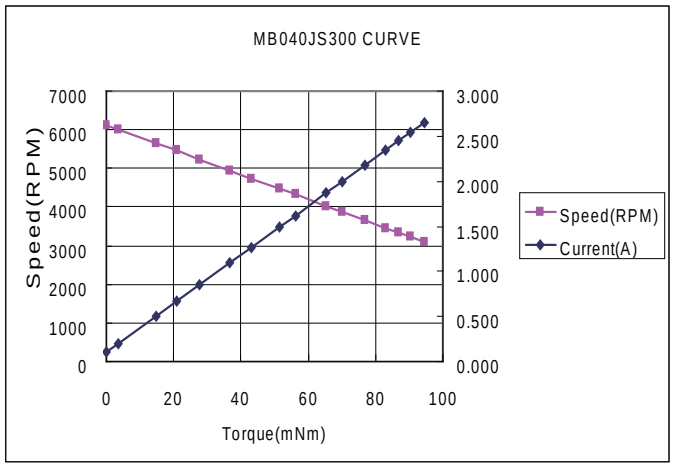
Specification	MB040JS100	MB040JS200	MB040JS300	MB040JS400	MB040JS500	MB040JS600
Rated Voltage (VDC)	24	24	24	24	24	24
No Load Speed (RPM)	6870	5880	6100	6320	4920	5230
No Load Current (A)	0.16	0.15	0.18	0.19	0.16	0.18
Nominal Speed (RPM)	5770	5410	5200	6000	4400	4850
Nominal Torque (Ncm)	1.7	3.3	4.3	4.9	6.7	8.1
Nominal Current (A)	0.88	1.35	1.35	2.08	2.14	2.77
Nominal Power (W)	10.3	18.7	23.4	30.8	30.9	41.1
Peak Torque (Ncm)	9.6	22.2	29	34.7	43.6	54.2
Peak Current (A)	3.25	6.09	8.1	10.1	9.64	13
Ke (V/KRPM)	3.25	3.9	3.82	3.65	4.8	4.44
Rotor Inertia ($Kg.m^2x10^{-7}$)	1.9	3.2	41.7	5.6	7.1	8.5
Resistance (ohms)	7.38	3.94	2.98	2.37	2.49	1.85
Insulation Class	B	B	B	B	B	B
Weight (Kg)	0.16	0.19	0.25	0.34	0.39	0.44
L (mm)	46.5	56	61	68	77.5	85

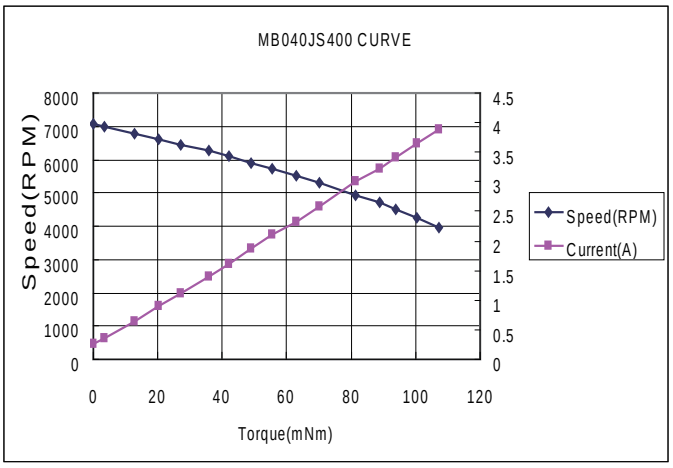
MB040JS PMDC Series Motor

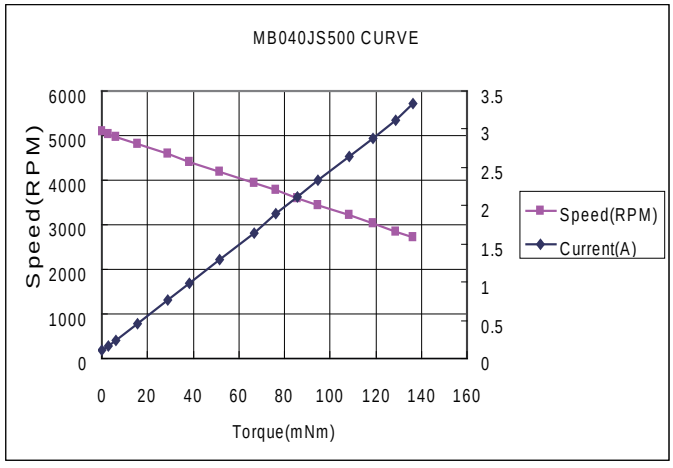
Characteristic diagram

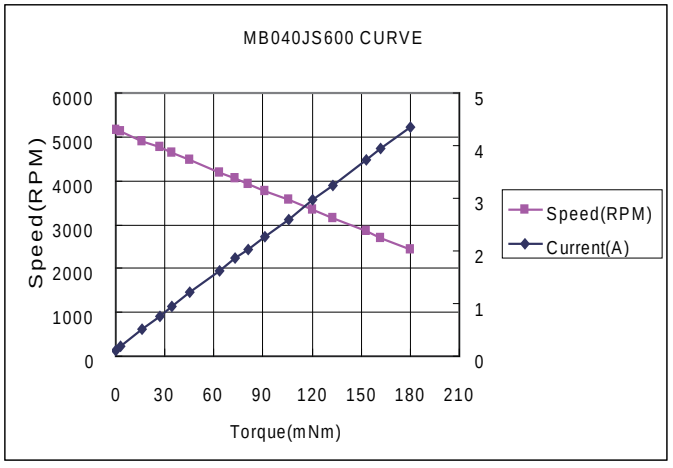










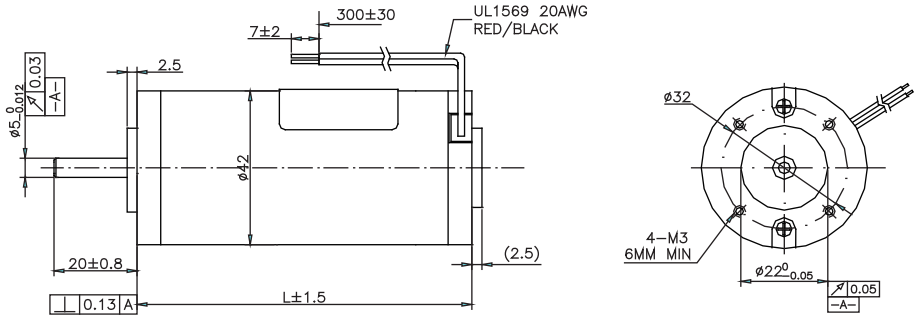


MB042DK PMDC Series Motor

General information

- Mounting holes to DIN standard 42016
- Graphit-copper brushes
- Encoder Brake and Planetary gearbox available
- Ball bearings

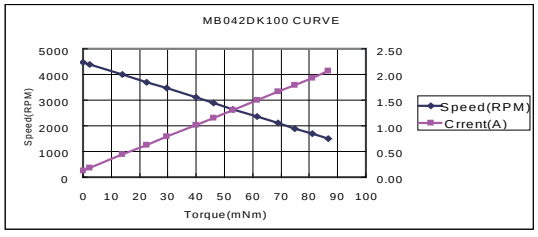
Mechanical

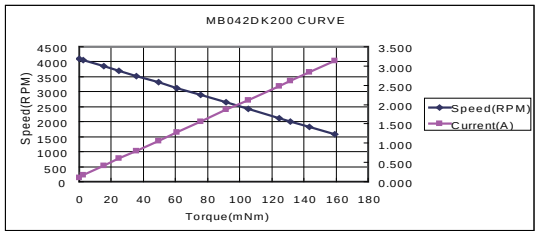


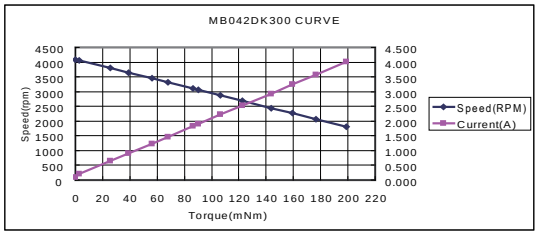
Specifications

Specification	MB042DK100	MB042DK200	MB042DK300
Voltage （VDC）	24	24	24
No Load Speed （RPM）	4250	4000	3750
No Load Current （A）	0.2	0.2	0.15
Nominal Speed （RPM）	3400	3000	3000
Nominal Torque （Ncm）	4	7.5	9
Nominal Current （A）	1	1.6	1.75
Nominal Power （W）	14.3	24	28.3
Peak Torque （Ncm）	15	30	37
Peak Current （A）	3.5	6	7.5
Ke （V/KRPM）	5.34	5.8	6.03
Rator Inertia （Kg.cm^2）	0.06	0.095	0.13
Resistance （OHMS）	5.31	4.15	3.72
Insulation Class	B	B	B
Weight （Kg）	0.48	0.6	0.64
L （mm）	75	85	95

Characteristic diagram





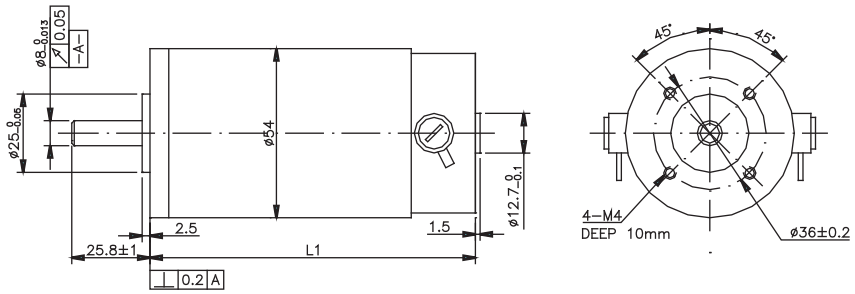


MB054TP PMDC Series Motor

General information

- Ball bearing
- Ceramic magnet
- 11 slot Armature
- Copper-Graphnite Brushes
- Encoder. Planetery gearbox available

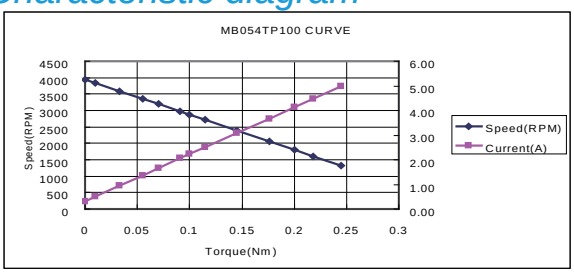
Mechanical

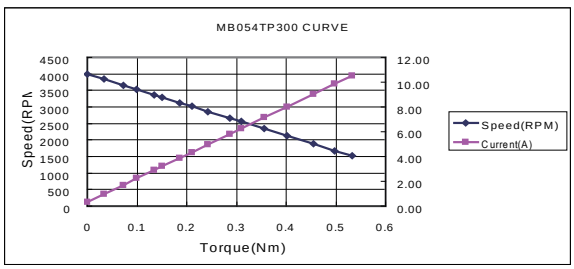


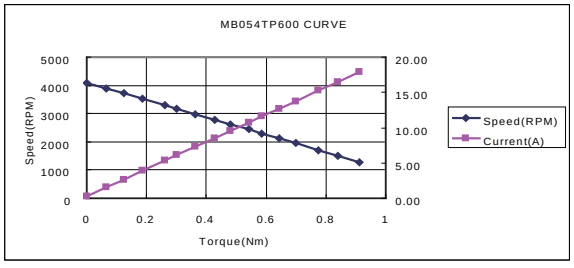
Specifications

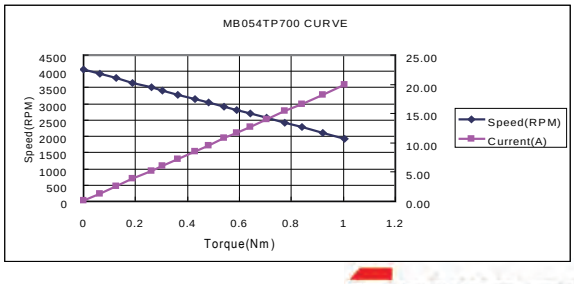
Specification	MB054TP100	MB054TP300	MB054TP600	MB054TP700
Voltage (V)	24	24	24	24
No Load Speed (rpm)	4000	4000	4000	4000
No Load Current (A)	0.32	0.34	0.3	0.15
Nominal Torque (Nm)	0.07	0.15	0.26	0.36
Nominal Speed (rpm)	3200	3300	3300	3300
Nominal Power (W)	23.5	51.8	90	124.4
Nominal Current (A)	1.65	3.2	5.3	7.2
Peak Torque (Nm)	0.35	0.76	1.4	1.8
Peak Current (A)	7	14.9	27.3	35.6
Rotor Inertia ($Kg.mm^2$)	115	215	370	480
Ke (V/krpm)	5.77	5.77	5.77	5.77
Resistance (ohms)	3.45	1.65	0.88	0.68
Insulation class	B	B	B	B
Weight (Kg)	0.6	0.9	1.3	1.6
L (mm)	75	94	126	145

Characteristic diagram









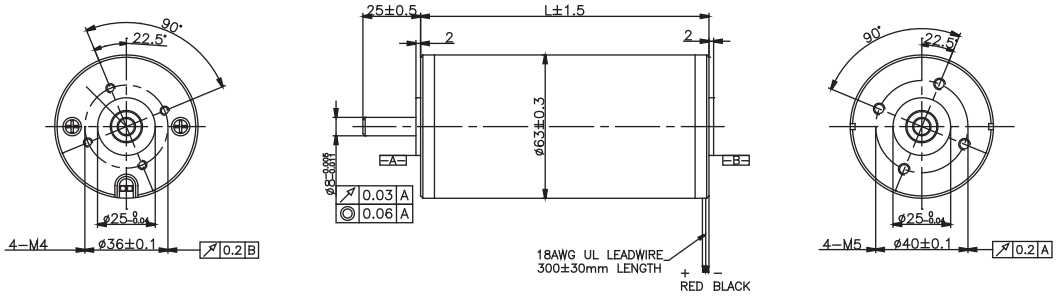
DC BRUSH MOTOR

MB063KG PMDC Series Motor

General information

- Ceramic Magnets
- 7-slot Armature
- Copper-graphite Brushes
- Encoder Brake and Planetary gearbox available

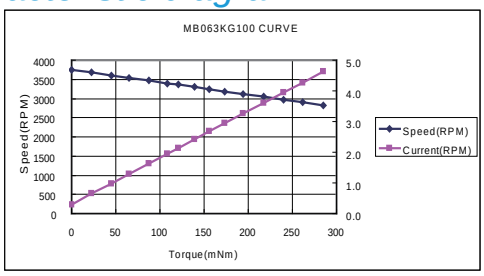
Mechanical

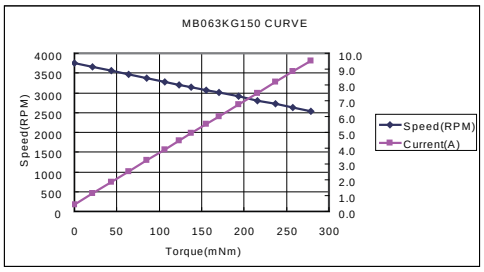


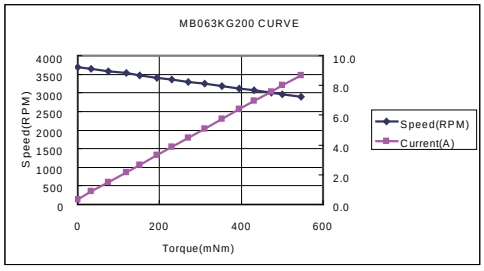
Specifications

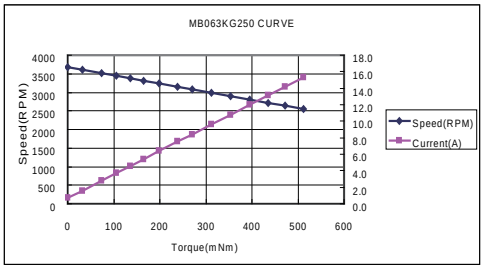
Specification	MB063KG100	MB063KG150	MB063KG200	MB063KG250
Rated Voltage (VDC)	24	12	24	12
No Load Speed (RPM)	3600	3600	3650	3500
No Load Current (A)	0.36	0.6	0.4	0.8
Nominal Speed (RPM)	3300	3100	3350	3000
Nominal Torque (Ncm)	14	13.7	27	24
Nominal Current (A)	2.7	5.2	4.9	8.7
Nominal Power (W)	50	50	100	100
Peak Torque (Ncm)	108	82	211	202
Peak Current (A)	18	27	40	64
Rotor Intertia ($g.cm^2$)	400	400	750	750
Insulation Class	B	B	B	B
Weight (Kg)	1.2	1.2	1.7	1.7
L (mm)	95	95	125	125

Characteristic diagram









MB080FG PMDC Series Motor

General information

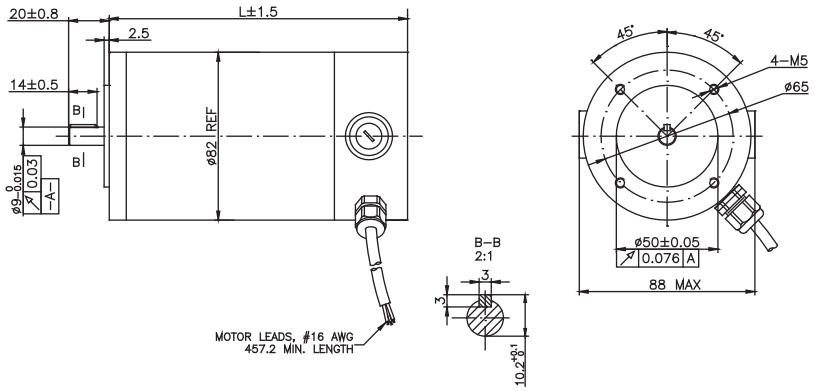
- Nema 34 IEC 56/B14 Mounting Flange.
- Used for Servo/Drive application
- Voltage 90V and Max. Speed 6000rpm
- Insulation Class: F With UL certificate per request
- Continuous Torque from 0.5Nm to 1.58Nm
- 2Pole Ceramic Magnet Structure with Low Cogging
- High Quality ball bearings in both front and rear endcap
- Continuous Duty
- Externally Replaceable Brush Structure

Specifications

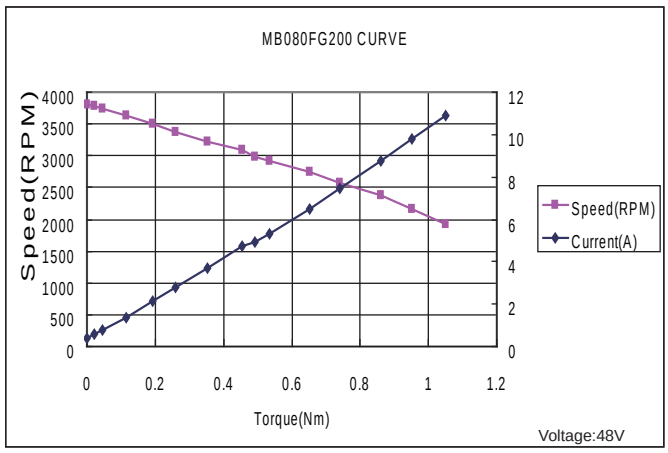
Specification	MB080FG200	MB080FG400	MB080FG500	MB080FG600	MB080FG450
Max.Voltage (VDC)	90	90	90	90	90
Continuous Stall Torque (Nm)	0.52	0.84	1.2	1.58	0.84
Peak Stall Torque (Nm)	2.64	4.23	6	7.97	4.23
Max. Speed (RPM)	6000	4400	4800	3700	6000
Terminal Resistance (OHMS)	1.43	1.83	1.05	1.14	0.91
Inductance (mH)	3.9	5.42	2.93	3.51	2.31
Ke (V/KRPM)	12.5	20	18.4	23.8	13.36
Torque Constant (Nm/Amps)	0.12	0.19	0.17	0.23	0.13
Rotor Intertia ($Kg.cm^2$)	1.34	2.33	3.39	4.45	2.33
Friction Torque (Ncm)	3.53	4.24	4.94	5.64	4.23
Damping Torque (Ncm/KRPM)	0.56	0.71	0.85	0.99	0.71
Weight (Kg)	2.54	3.27	3.99	4.77	3.27
L (mm)	121.4	146.8	172.2	197.6	146.8

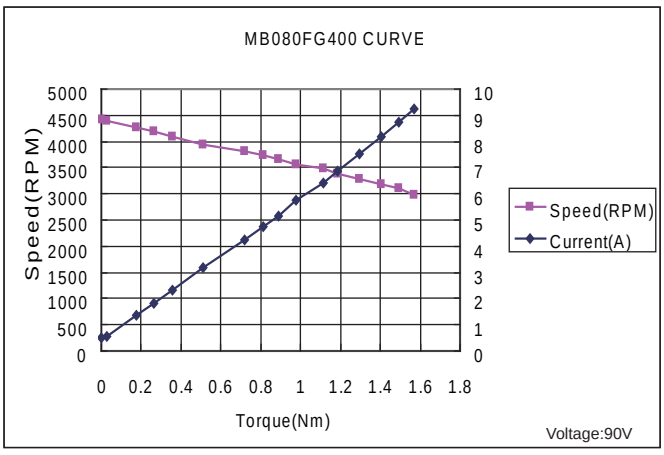
MB080FG PMDC Series Motor

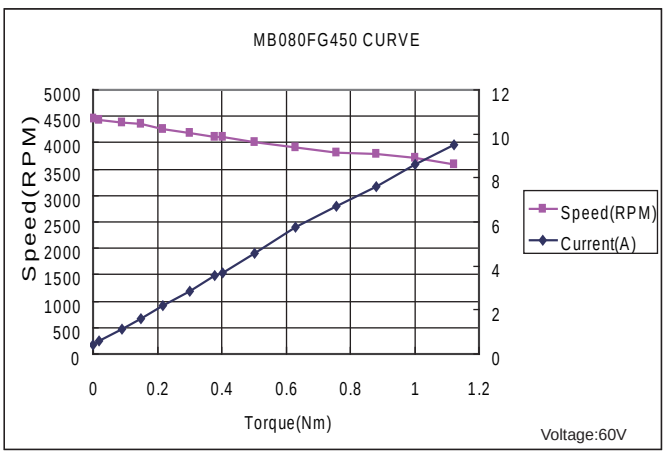
Mechanical

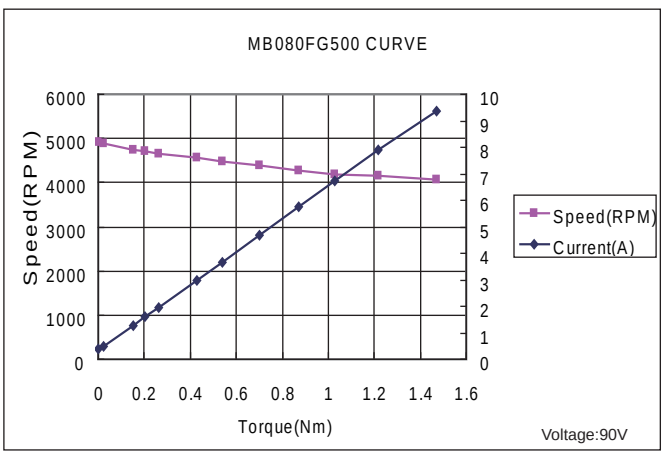


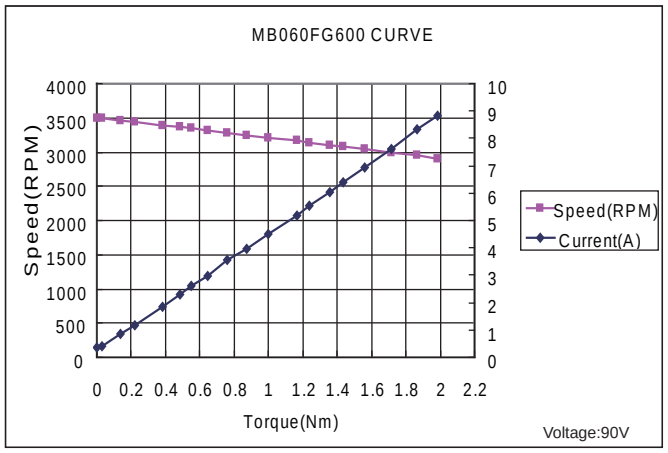
Characteristic diagram









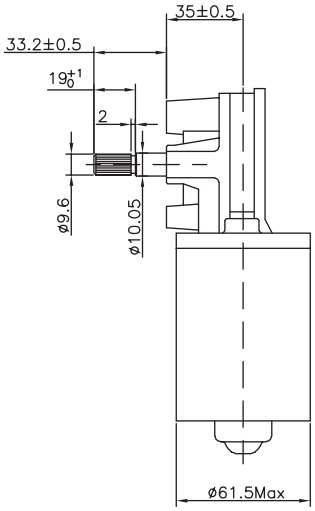


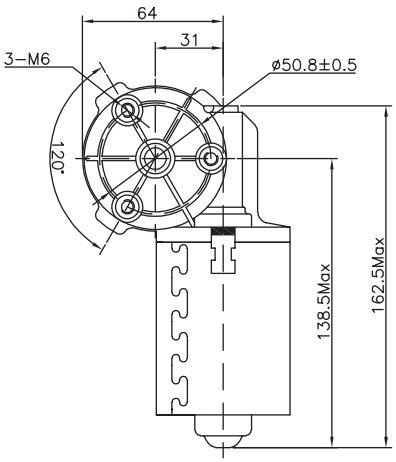
WD series gearmotor

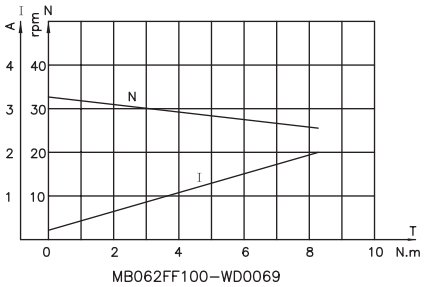
General information

- Aluminum Diecasting Gearbox
- Rolled Steel Housing Construction
- Built-in EMC Components
- Hall Sensor Feedback Available
- Various Output Shaft Extension

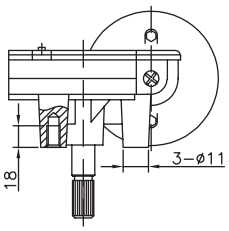
Mechanical







MB062FF100−WD0069



Specifications

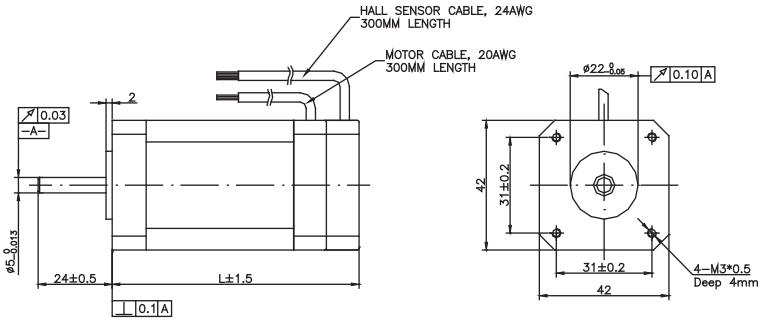
Part No.	No-Load Speed (rpm)	Rated				PeakTorque (N.m)
		Voltage (V)	Speed (rpm)	Current (A)	Torque (N.m)	
MB062FF100-WD0069	33	24	28	2.5	6	10
MB062FF105-WD0069	62	12	52	12	3	10
MB062FF100-WD0055	77	24	70	3.5	4	14

ME042AS BLDC Series Motor

General information

- 8 poles with three phase
- NEMA 17 flange winding
- Insulation class B , higher insulation on request
- Sintered Neo Magnet power range:31.4 ~94.2W

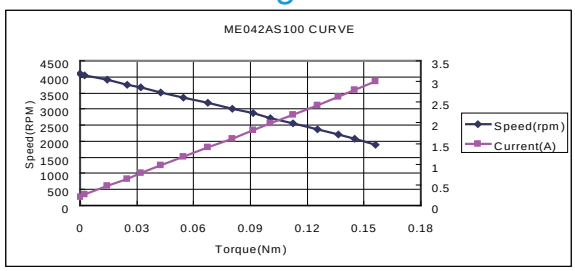
Mechanical

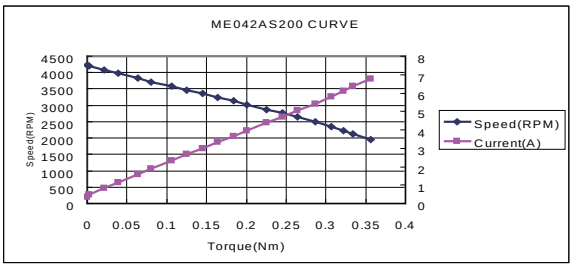


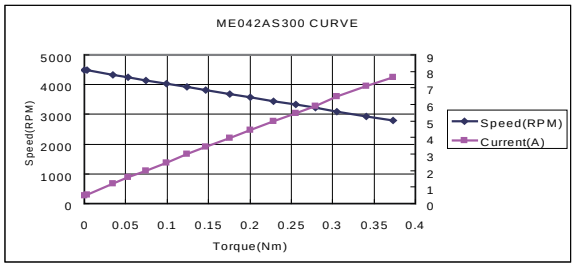
Specifications

Specification	ME042AS100	ME042AS200	ME042AS300
Voltage (VDC)	24	24	24
Resistance (OHMS)	2.40	0.85	0.61
Inductance (mH)	1.7	0.63	0.38
Nominal Speed (RPM)	3000	3000	3000
Nominal Torque (Nm)	0.1	0.2	0.3
Nominal Current (A)	2.5	4.4	5.2
Nominal Power (W)	31.4	62.7	94.2
Peak Torque (Nm)	0.3	0.6	0.9
Peak Current (A)	7.5	13.2	15.6
Ke (V/KRPM)	5.6	5.5	5.1
Rotor Inertia (Kgcm^2)	0.029	0.059	0.089
Weight (kg)	0.3	0.4	0.6
L (mm)	50	68	88

Characteristic diagram



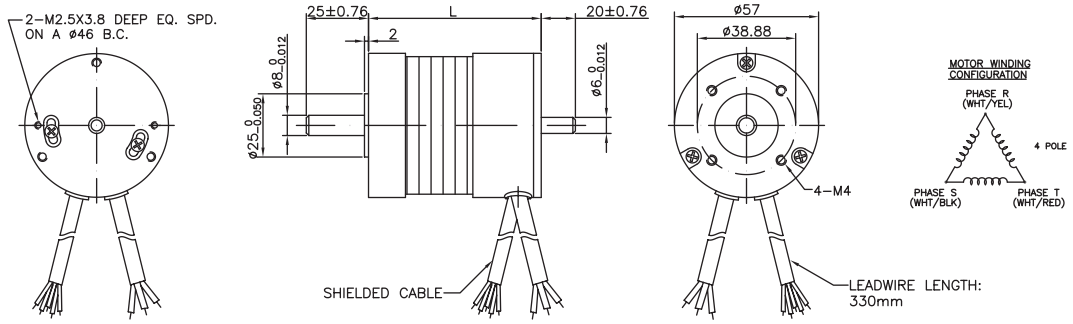




BRUSHLESS DC MOTOR

MB057GE BLDC Series Motor

Mechanical



Standard Features:

- 4pole with 3phase winding.
- Continuous Torque from 0.14 to 0.48N.m
- Speed up to 6000rpm, High Dynamic performance
- Hall effect commutation (120°), very low cogging torque
- Ins. Class B, higher insulation and protection optional
- Flange Mounting According to IEC 34-7
- NEMA 23 flang available

Specifications

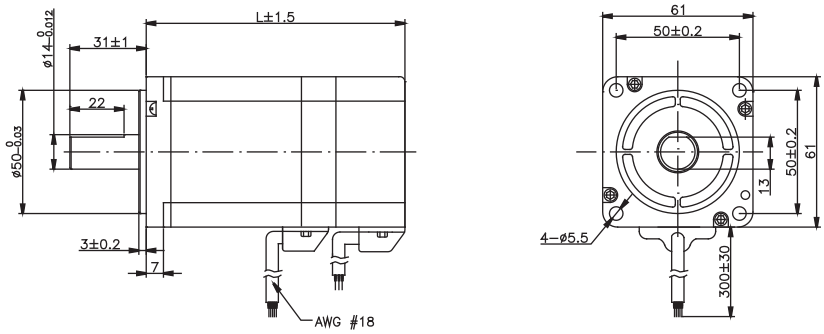
Part No.		MB057GE100	MB057GE200	MB057GE300	MB057GE400
Max Voltage(V)		60	60	60	60
Torque	Continuous(N.m)	0.14	0.27	0.39	0.48
	Peak(N.m)	0.42	0.81	1.17	1.37
Speed(rpm)		5000	5000	5000	5000
Current	Continuous(A)	2.0	3.5	5.1	6.21
	Peak(A)	5.9	10.6	15.4	18.6
Torque Constant(N.m/A)		0.080	0.084	0.084	0.078
Resistance (Ohms)		2.8	1.3	2.7	0.61
Inductance (mH)		8.6	4.2	2.7	1.63
Inertia(Kg.cm^2)		0.075	0.119	0.173	0.245
Weight(Kg)		0.5	0.8	1.2	1.4
Length(mm)		65	85	105	125

ME060AS BLDC Series Motor

General information

- 8 poles with three phase winding
- NEMA 26 Mounting flange
- Insulation class B/F
- Encoder available
- Sintered NEO magnet power range:70~240W

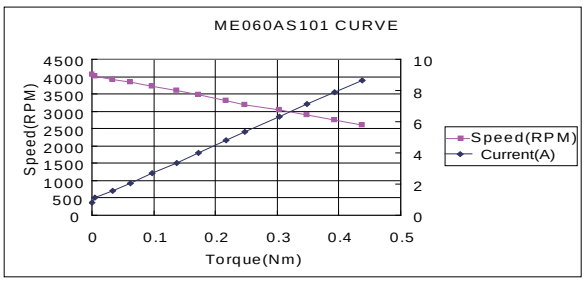
Mechanical

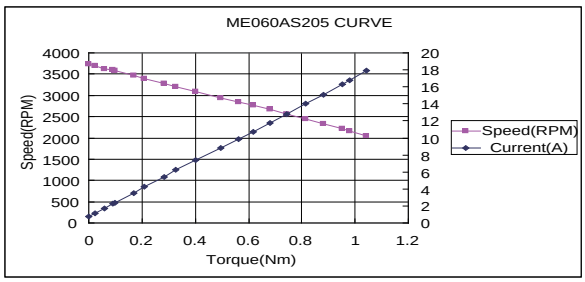


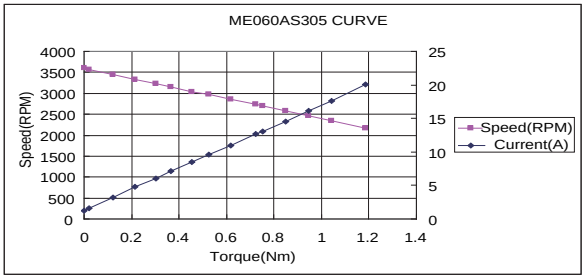
Specifications

Specification	ME060AS101	ME060AS205	ME060AS305
Voltage (VDC)	24	24	24
Resistance (OHMS)	0.45	0.22	0.16
Inductance (mH)	0.55	0.29	0.21
Nominal Speed (RPM)	3000	3000	3000
Nominal Torque (Nm)	0.25	0.5	0.75
Nominal Current (A)	4.2	8.8	14
Peak Torque (Nm)	0.75	1.5	2.25
Peak Current (A)	12.6	27	40
Ke (V/KRPM)	5.6	6.3	6.5
Rotor Inertia ($Kg.cm^2$)	0.45	0.85	1.35
Weight (Kg)	0.7	1.0	1.5
L (mm)	78.5	105	120.5

Characteristic diagram







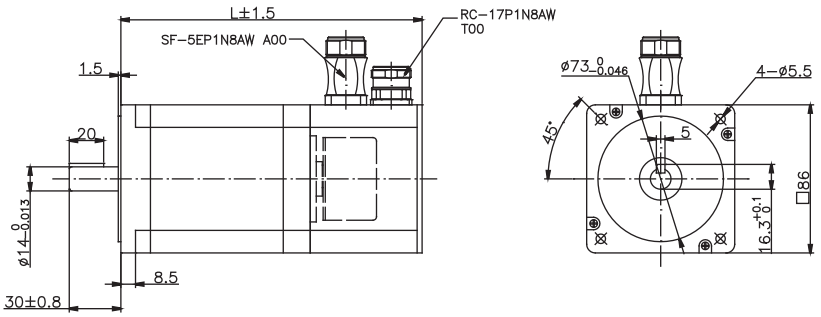
ME086AS BLDC Series Motor

General information

- Class F insulation
- UL Certified
- Servo application
- Mutiple Lines of Encoder available

Power range:200~600w

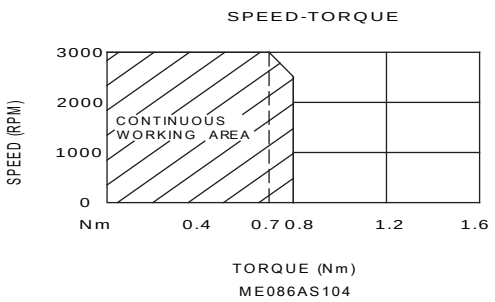
Mechanical

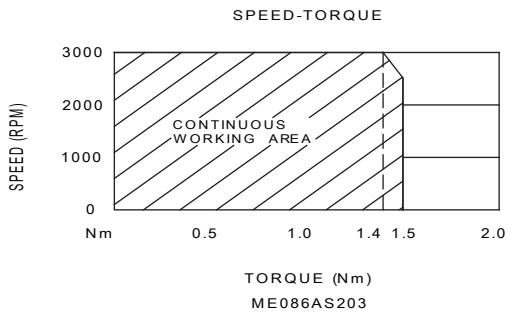


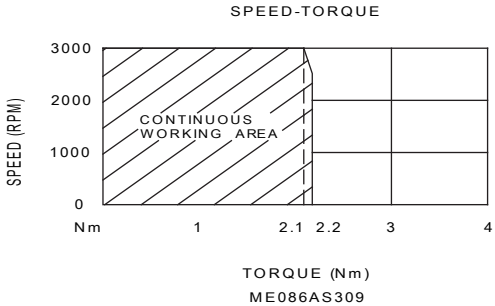
Specifications

Specification	ME086AS104	ME086AS203	ME060AS309
Voltage （VDC）	310	310	230
Resistance （OHMS）	8.3	5	2.5
Inductance （mH）	26	18	8
Nominal Speed （RPM）	3000	3000	3000
Nominal Torque （Nm）	0.7	1.4	2.1
Nominal Current （A）	0.935	1.65	2.66
Peak Torque (Nm)	2.1	4.2	6.3
Peak Current (A)	2.9	5.0	8.0
Ke （V/KRPM）	59.1	114.2	63.1
Weight （Kg）	1.85	2.6	3.95
L （mm）	135	160	190

Characteristic diagram







BRUSHLESS DC MOTOR

Stepper Motor General Information

1. Basic Parameters

Step Angle Accuracy: ±5%

Temperature Rise: 80°C Max

Ambient Temperature: -20°C~+50°C

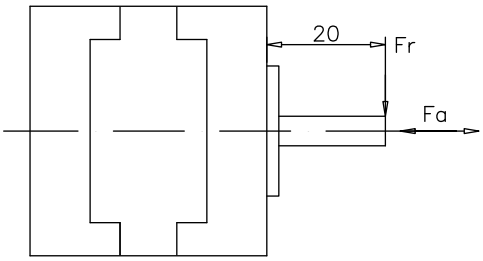
Insulation Resistance: 100M Ω Min.

Dielectric Strength: 500VAC ,1S,2mA

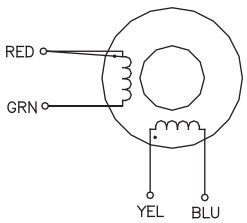
Insulation Class: B

2. Max. Axial Force And Radial Force

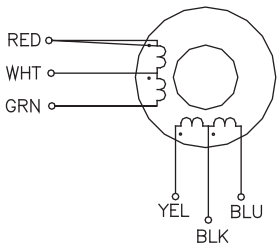
Item	Fr (N)	Fa (N)
Distance from the flange (mm)	20	
MP020 Shaft φ5mm	8	4
MP039;MP042 Shaft φ5mm	20	7
MP057 Shaft φ6.35mm	52	10
MP057 Shaft φ8mm	63	14
MP086 Shaft φ9.5mm	10	25
MP086 Shaft φ14mm	200	25
MP110 Shaft φ19.05mm	240	80



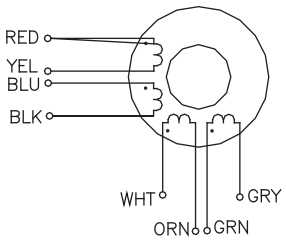
3. Mode Of Connection



4 LEAD WIRING DIAGRAM				
LEAD WIRE COLOR	RED	ORANGE	YELLOW	BLUE
BIPOLAR DRIVE	A	A/	B	B/



6 LEAD WIRING DIAGRAM							
LEAD WIRE COLOR		RED	WHITE	GREEN	YELLOW	BLACK	BLUE
BIPOLAR DRIVE	PARRALLEL CONNECTION	A	A/	N/C	B	B/	N/C
	SERIES CONNECTION	A	N/C	A/	B	N/C	B/
UNIPOLAR DRIVE		A	COM	B	C	COM	D

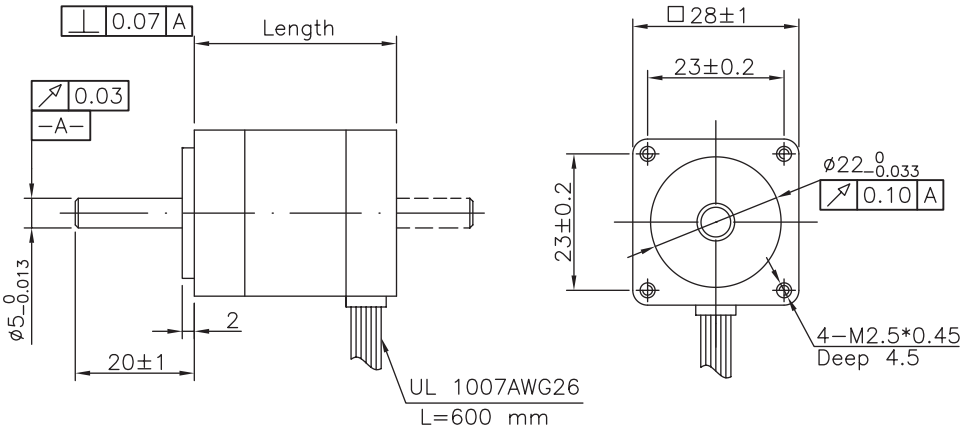


8 LEAD WIRING DIAGRAM								
LEAD WIRE COLOR		RED	BLUE	YELLOW	BLACK	WHITE	GREEN	ORANGE	GRAY
BIPOLAR DRIVE	PARRALLEL CONNECTION	A		A/		B		B/	
	SERIES CONNECTION	A			A/	B			B/
UNIPOLAR DRIVE		A	COM		B	C	COM		D

Exmek

28mm, 1.8Degree Enhanced Hybrid Stepper Motor

Mechanical

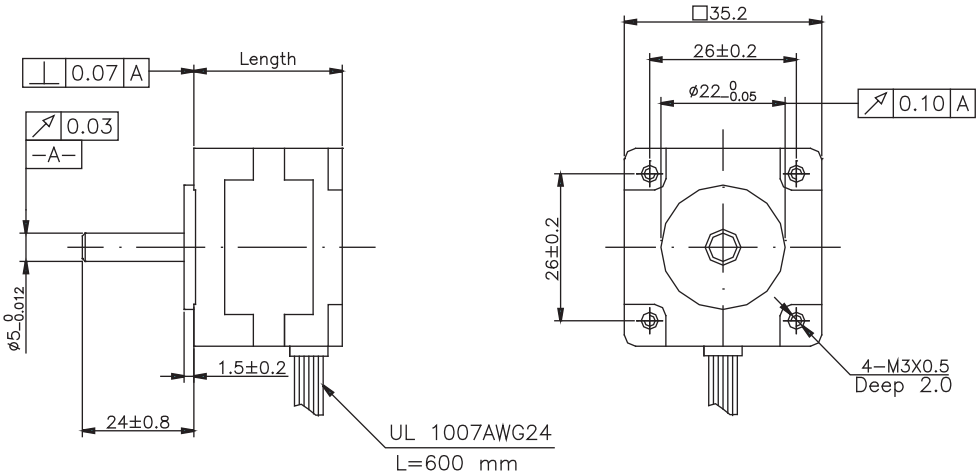


Specifications

Part No.	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Terque (Ncm)	No. of Wires	Rotor Inertia ($g.cm^2$)	Length (mm)	Weight (g)
MP028NB101	0.67	5.6	4.2	6	0.8	4	9.5	31.5	100
MP028NB102	0.47	2.8	1.0	4	0.8	6			
MP028NB103	1.30	1.4	1.1	6.5	0.8	4			
MP028NB201	0.67	6.8	4.9	9.5	1.2	4	12	44.5	180
MP028NB202	1.00	3.4	1.2	7.5	1.2	6			
MP028NB301	0.67	9.2	5.7	12	1.5	4	18	50.5	210
MP028NB302	0.96	4.6	1.8	9	1.5	6			
MP028NB303	1.00	4.3	2.0	9.5	1.5	6			

35mm, 1.8Degree Enhanced Hybrid Stepper Motor

Mechanical

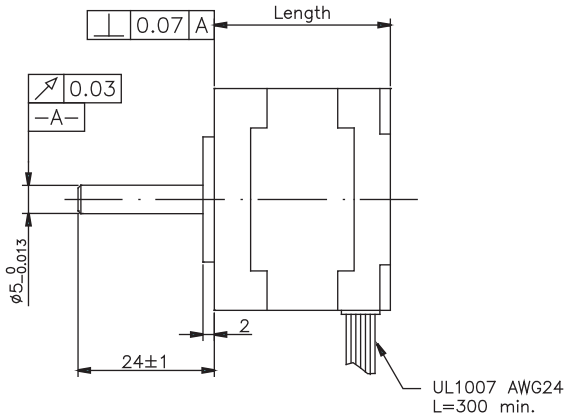


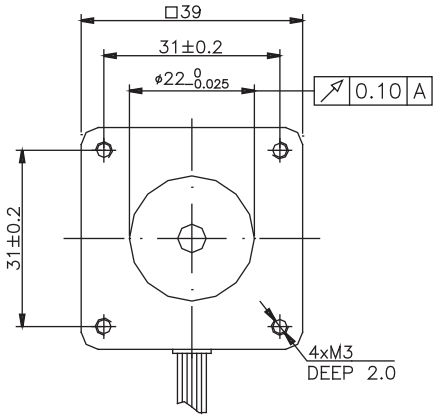
Specifications

Part No.	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Torque (Ncm)	No. of Wires	Rotor Inertia ($g.cm^2$)	Length (mm)	Weight (g)
MP035NB101	0.40	24	18.0	5	0.8	4	10	20	100
MP035NB102	0.40	22	10.0	5		6			
MP035NB201	0.75	4.3	4.0	7	1.5	4	12	26	120
MP035NB202	0.76	10.5	4.8	8		6			
MP035NB301	1.00	2.7	4.3	14	1.8	4	14	37	180
MP035NB302	1.00	3	2.5	16		6			
MP035NB401	1.00	3.5	5.8	30	2.0	6	20	53	300

39mm, 0.9Degree Hybrid Stepper Motor

Mechanical



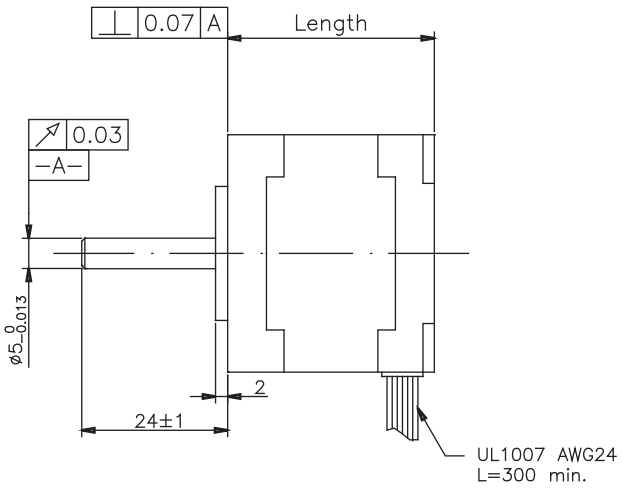


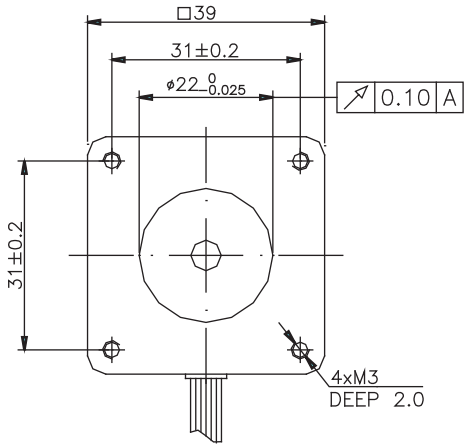
Specifications

Part No.	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Torque (Ncm)	No. of Wires	Rotor Inertia ($g.cm^2$)	Length (mm)	Weight (g)
MP039SB101	0.54	7.5	7	7.84	1.5	4	8	21	140
MP039SB102	0.4	14	6.4	5.89		6			
MP039SB201	0.3	30	40	11.9	1.8	4	12	27	160
MP039SB202	0.67	6	6.8	11.9		4			
MP039SB203	0.42	15	8.5	9.2		6			
MP039SB301	0.77	5	6.5	15.5	2.0	4	16	31	180
MP039SB302	0.47	13.6	9.8	12.7		6			
MP039SB303	0.57	15	44	25.6		4	24	37	200

39mm, 1.8Degree Hybrid Stepper Motor

Mechanical



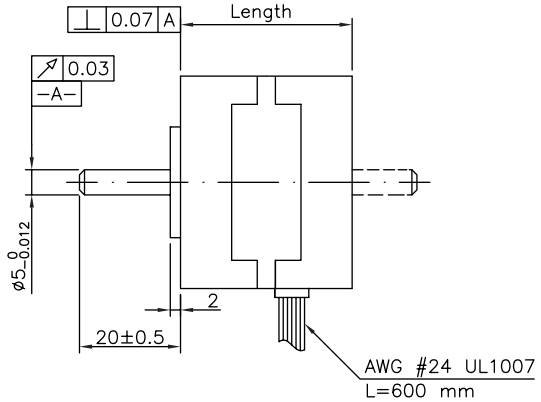


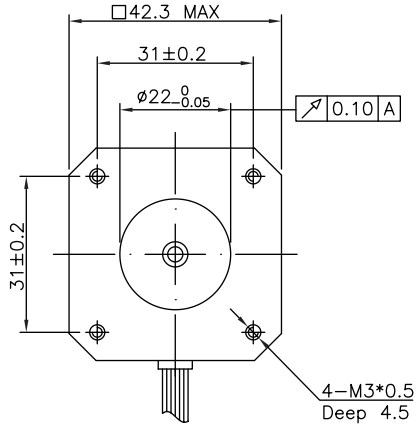
Specifications

Part No.	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Torque (Ncm)	No. of Wires	Rotor Inertia ($g.cm^2$)	Length (mm)	Weight (g)
MP039NA102	0.4	6.6	7.5	6.4	0.8	4	11	20	120
MP039NA103	0.28	13	7.5	4.6		6			
MP039NA201	0.4	30	32	20.6	1.8	4	20	34	180
MP039NA203	0.3	40	20	12.7		6			
MP039NA204	0.6	15	16	21.6		6			
MP039NA302	0.5	24	45	28.4	2.16	4	24	38	200
MP039NA303	0.8	7.5	6	19.6		6			
MP039NA401	0.8	40	100	27.4	2.5	4	40	44	250

42mm, 1.8Degree Enhanced Hybrid Stepper Motor

Mechanical



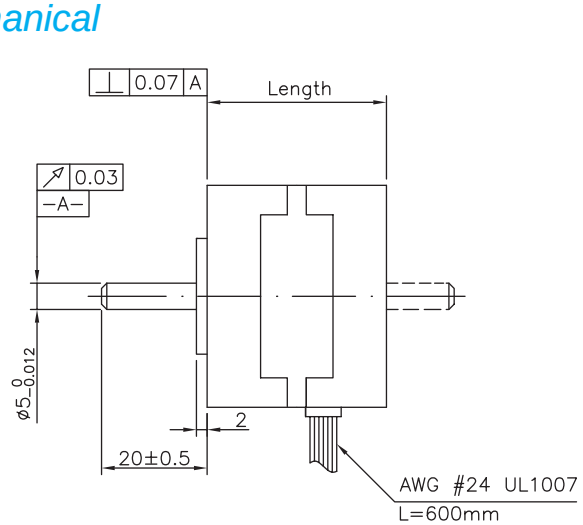


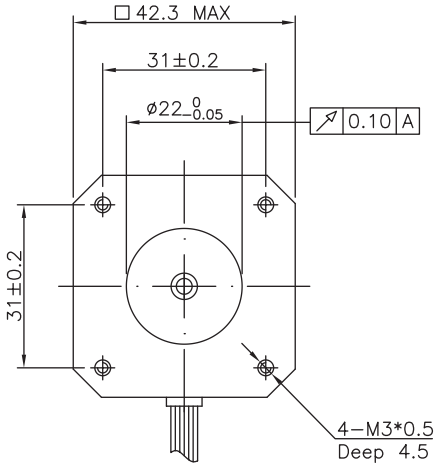
Specifications

Part No.	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Torque (Ncm)	No. of Wires	Rotor Inertia ($g.cm^2$)	Length (mm)	Weight (g)
MP042NB111	0.6	12	15	25.5	1.96	4	34	34	200
MP042NB123	0.4	30	40	24.5					
MP042NB136	0.28	44	38	16.7		6			
MP042NB140	1	3.6	3.0	19.6					
MP042NB302	1.2	3	3	26.5	2.16		54	40	240
MP042NB307	0.4	30	26	25.5					
MP042NB312	0.8	10	20	31.4		4			
MP042NB322	0.4	30	65	37.2					
MP042NB501	1.0	4.6	4	33.3	2.74	6	68	48	340
MP042NB502	0.4	30	28	37.2					

42mm, 0.9Degree Enhanced Hybrid Stepper Motor

Mechanical



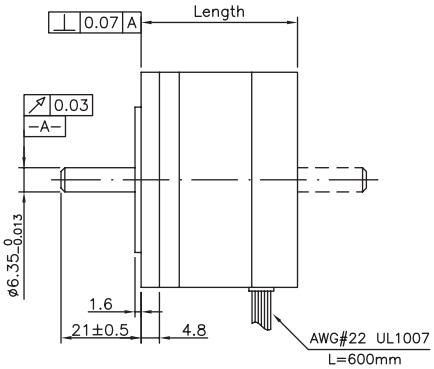


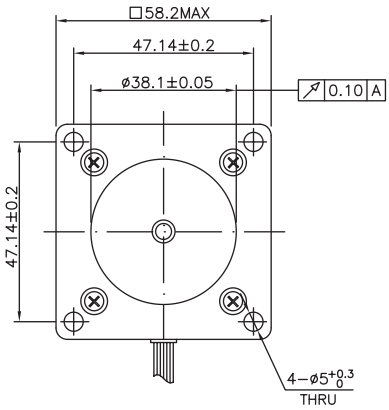
Specifications

Part No.	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Torque (Ncm)	No. of Wires	Rotor Inertia (g.cm^2)	Length (mm)	Weight (g)
MP042SB101	0.95	3.7	3.4	15.5	1.96	6	34	34	220
MP042SB102	0.6	10	6.1						
MP042SB103	0.3	35	48						
MP042SB104	1.2	2.1	4.9	20.6		4			
MP042SB105	0.5	20	35	18.6	2.16				
MP042SB301	1.2	3.0	4.0	29.4	2.45	6	54	40	280
MP042SB302	0.8	7.5	8.6	25.5					
MP042SB303	0.4	30	36						
MP042SB304	1.68	1.5	4.0	35.3		4			
MP042SB501	1.2	3.3	4.5	31.4	2.74	6	68	48	350
MP042SB502	0.8	7.5	6.3						
MP042SB503	0.4	30	31						
MP042SB504	1.68	1.54	3.5	41.2		4			

57mm, 1.8Degree Hybrid Stepper Motor

Mechanical



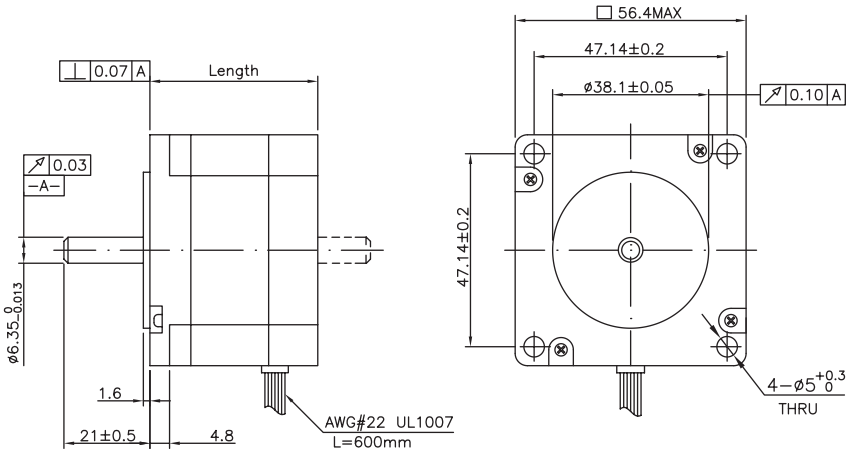


Specifications

Part No.	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Torque (Ncm)	No. of Wires	Rotor Inertia ($g.cm^2$)	Length (mm)	Weight (g)
MP057NA107	0.38	32	30	29.4	3.35	6	60	41	360
MP057NA111	0.5	20	18.8	38.2					
MP057NA161	0.5	12	34	33.3		4			
MP057NA208	1.3	3.1	4.4	49.0	5.88	6	120	51	520
MP057NA227	1.4	2.5	6.8						
MP057NA402	1.5	2.3	3.1	58.8	7.06		145	57	600
MP057NA404	1.2	2.5	8			4			
MP057NA409	2.4	1.0	1.7			6			
MP057NA501	1.6	2.6	4.7	87.0	9.8	8	200	66	700
MP057NA503	4.7	0.33	0.5						
MP057NA504	2.5	1.0	4.0	114		4			
MP057NA601	2	1.68	3.5	88.2	12	6	230	76	750
MP057NA603	1.5	3.6	6.2						
MP057NA602	5	0.9	2.8	117.6		4			
MP057NA604	2.9	1.2	2.4	113	12	8	330	102	1200
MP057NA605	4.6	0.5	0.9	111					

57mm, 1.8Degree Enhanced Hybrid Stepper Motor

Mechanical

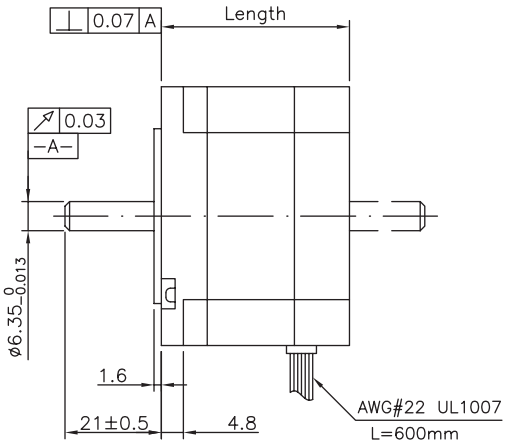


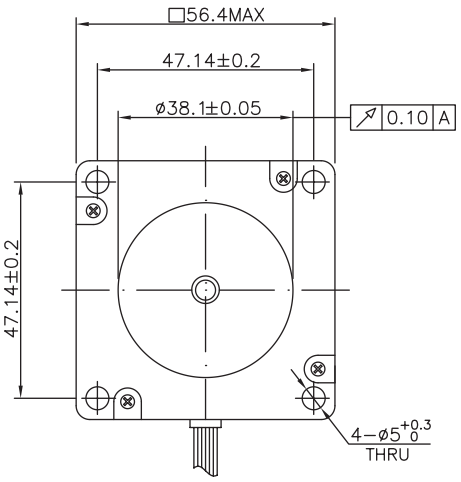
Specifications

Part No.	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Torque (Ncm)	No. of Wires	Rotor Inertia ($g.cm^2$)	Length (mm)	Weight (g)
MP057NB001	0.6	12	23	39.2	3.92	4	135	41	420
MP057NB002	1.0	4.9	6.0	34.3		8			
MP057NB003	1.0	5.7	5.7			6			
MP057NB004	1.0	5.2	8.7	39.2		4			
MP057NB201	1.0	6.6	9.0	70.6	5.88	6	220	50	550
MP057NB202	3.0	0.74	1.2						
MP057NB203	0.38	32	38	58.8					
MP057NB204	1.0	5.5	16.5	83.3		4			
MP057NB301	1.0	6.2	10.0	88.2	8.33	6	260	56	600
MP057NB303	2.0	1.8	2.5						
MP057NB305	1.8	2.6	4.2	90.2					
MP057NB401	3.0	1.1	3.8	137.2	10	4	460	78	1000
MP057NB404	4.0	1.0	2.3			6			
MP057NB501	4.2	1.0	2.3	215.6	12	8	620	115	1500

57mm, 0.9Degree Enhanced Hybrid Stepper Motor

Mechanical



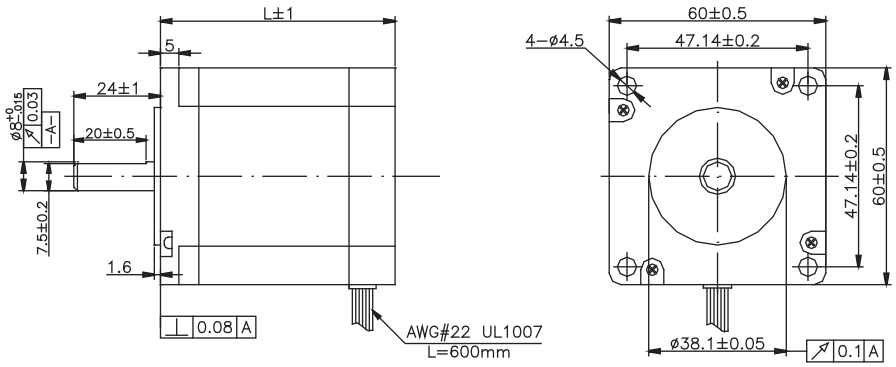


Specifications

Part No.	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Torque (Ncm)	No. of Wires	Rotor Inertia ($g.cm^2$)	Length (mm)	Weight (g)
MP057SB101	1.0	5.7	7.0	19.6	3.92	6	135	41	420
MP057SB102	2.0	1.4	2.0						
MP057SB103	3.0	0.73	0.86	24.5					
MP057SB104	2.8	0.8	1.9	29.4		4			
MP057SB201	1.0	7.4	17	78.4	5.8	6	260	56	600
MP057SB202	2.0	1.8	5.2	88.2					
MP057SB203	3.0	0.75	1.1						
MP057SB204	2.8	0.9	3.3	98.0		4			
MP057SB301	1.0	8.6	14	127.4	10	6	460	78	1000
MP057SB302	2.0	2.3	6.7	137.2					
MP057SB303	2.8	1.13	6.1	147.0		4			

60mm, 1.8Degree Enhanced Hybrid Stepper Motor

Mechanical

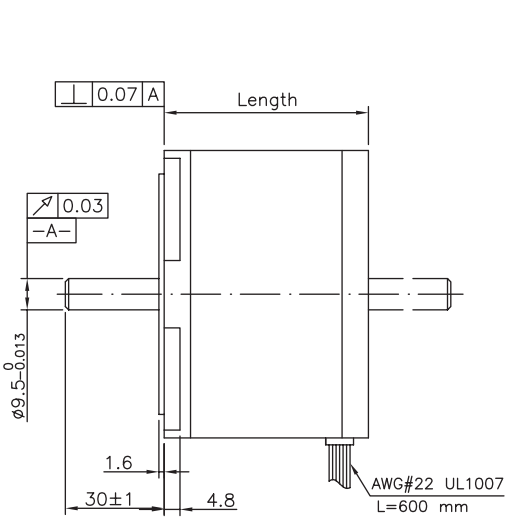


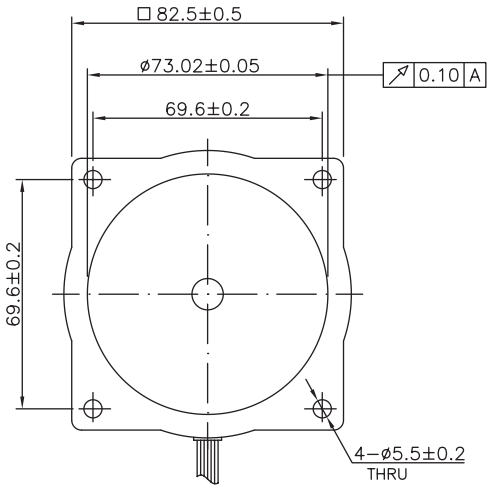
Specifications

Part No.	connection	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Torque (Ncm)	No.of Wires	Rotor Inertia (g.cm^2)	Length (mm)	Weight (Kg)
MP060NB100	Parallel	2.8	0.75	2	110	6	8	275	45	0.6
	Series	1.4	3	8	110					
	Unipolar	2	1.5	2	78					
MP060NB200	Parallel	2.8	0.9	3.6	165	9		300	56	0.77
	Series	1.4	3.6	14.4	165					
	Unipolar	2	1.8	3.6	117					
MP060NB300	Parallel	2.8	1.2	4.6	210	12		570	65	1
	Series	1.4	4.8	18.4	210					
	Unipolar	2	2.4	4.6	150					
MP060NB400	Parallel	2.8	1.2	5.6	270	15		579	77	1.2
	Series	1.4	4.8	22.4	270					
	Unipolar	2	2.4	5.6	190					
MP060NB500	Parallel	2.8	1.5	6.8	310	17		840	86	1.4
	Series	1.4	6	27.2	310					
	Unipolar	2	3	6.8	220					

86mm, 1.8Degree Hybrid Stepper Motor

Mechanical



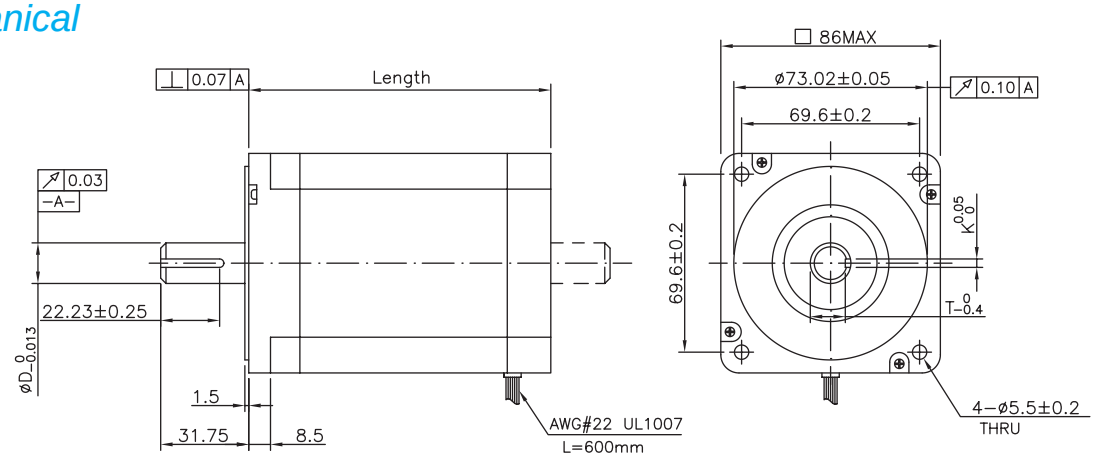


Specifications

Part No.	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Ncm)	Detent Torque (Ncm)	No. of Wires	Rotor Inertia ($kg.cm^2$)	Length (mm)	Weight (kg)
MP086NA101	1.7	1.7	7.3	137.2	7.84	8	0.64	62	1.6
MP086NA102	1.25	4.0	16						
MP086NA103	3.6	0.45	1.7						
MP086NA104	4.5	0.31	1.1						
MP086NA201	4.0	0.75	3.8	274.4	14.7		1.3	94	2.6
MP086NA202	4.6	0.55	2.5						
MP086NA203	2.5	1.7	7.8						
MP086NA204	2.0	2.7	11.0						
MP086NA301	7.0	0.29	2.0	392	24.5		1.9	127	3.6
MP086NA302	4.0	1.0	5.0						

86mm, 1.8Degree Enhanced Hybrid Stepper Motor

Mechanical



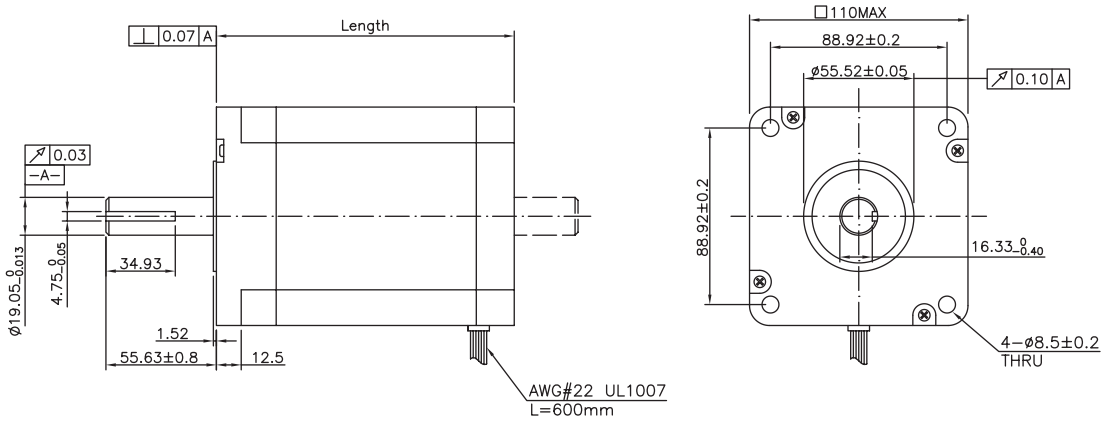
Part No.	D(mm)	Length(mm)	K(mm)	T(mm)
MP086YG100	12.7	67	3.175	10.92
MP086YG200	12.7	79.5	3.175	10.92
MP086YG300	12.7	118	3.175	10.92
MP086YG400	15.87	156.5	4.763	13.13

Specifications

Part No.	Connection	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Nm)	Detent Torque (Nm)	No. of Wires	Rotor Inertia (kg.cm ^{2})	Weight (kg)
MP086YG100	Parallel	6.1	0.25	2.1	2.8	0.20	8	0.66	1.6
	Series	3.0	1.0	8.4	2.8				
	Unipolar	4.3	0.5	2.1	2.3				
MP086YG200	Parallel	8.6	0.18	1.4	4.59	0.23		1.4	2.27
	Series	4.3	0.72	5.8	4.59				
	Unipolar	6.1	0.36	1.4	3.25				
MP086YG300	Parallel	10	0.18	1.8	8.58	0.25		2.7	3.81
	Series	5	0.7	7	8.58				
	Unipolar	7.1	0.35	1.8	6.07				
MP086YG400	Parallel	9.9	0.22	2.3	12.10	0.38		4.0	5.39
	Series	5	0.87	9	12.10				
	Unipolar	7	0.44	2.3	8.58				

110mm, 1.8Degree Enhanced Hybrid Stepper Motor

Mechanical



Specifications

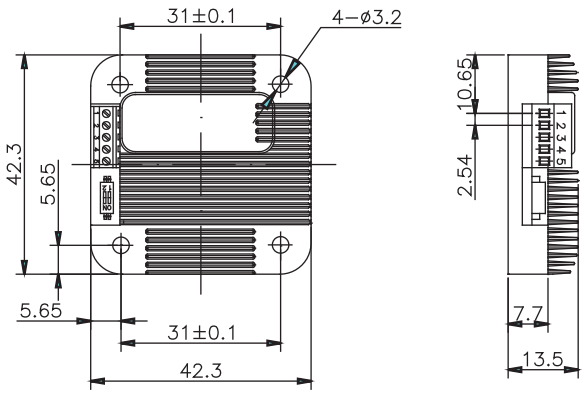
Part No.	Connection	Phase Current (A)	Phase Resistance (Ohms)	Phase Inductance (mH)	Holding Torque (Nm)	Detent Torque (Nm)	No. of Wires	Rotor Inertia ($kg.cm^2$)	Length (mm)	Weight (kg)
MP110YG100	Parallel	10.7	0.16	2.8	11.68	0.30	8	5.5	99	4.96
	Series	5.3	0.63	11.1	11.68					
	Unipolar	7.5	0.31	2.8	8.26					
MP110YG200	Parallel	15.8	0.1	2.1	22.09	0.59		10.9	150	8.34
	Series	7.9	0.41	8.4	22.09					
	Unipolar	11.2	0.21	2.1	15.63					
MP110YG300	Parallel	15.4	0.14	3.2	30.81	0.75		16.2	201	11.64
	Series	7.7	0.55	13	30.81					
	Unipolar	10.9	0.28	3.2	21.81					

MUI241XX Micro STEPPER MOTOR CONTROLLER

General information

MUI241XX are miniature stepper motor controllers with RS232 communication interface. User device can command these controllers through RS232 using ASCII coded instructions with minor or no knowledge about the stepper motor driving. Instructions are simple, intuitive and fault-tolerating. User is not required to have advance knowledge on stepper motor driving. This controllers can be mounted onto MP042/MP057/ MP086/MP110 series stepper motor seamlessly using flanges. Thickness of the controller is less than 14 millimeter.

Mechanical



Specifications

Characteristics

Supply Voltage	40VDC
Store Temperature	−20°C～+125°C
Working Temperature	−20°C～+125°C

Communication(Ambient Temperature 25°C)

Communication protocol	RS232
Wiring Method	3-wire:TX、RX、GND
Baud Rate	MAX 115200 bps

Electrical Characteristics(Ambient Temperature 25°C)

Supply Power Voltage	10V～40VDC
Motor Output Current	Max 2A/4A/8A per phase (Adjustable through RS232 instruction)
Driving Mode	PWM constant current
Stepping Resolution	full-step, half-step,quarter-step,and sixteenth-step
Insulation Resistance	＞100MΩ
Dielectric Strength	0.5KV in one minute

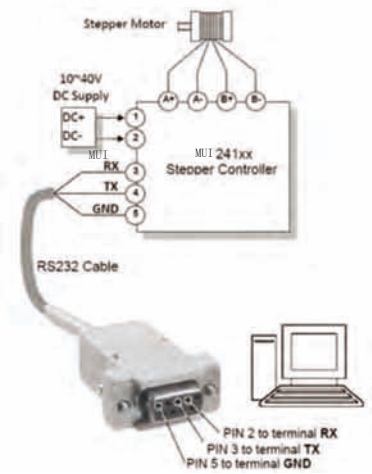
MUI241XX Micro Stepper Motor Conttrollor

Specifications

Environment Requirements

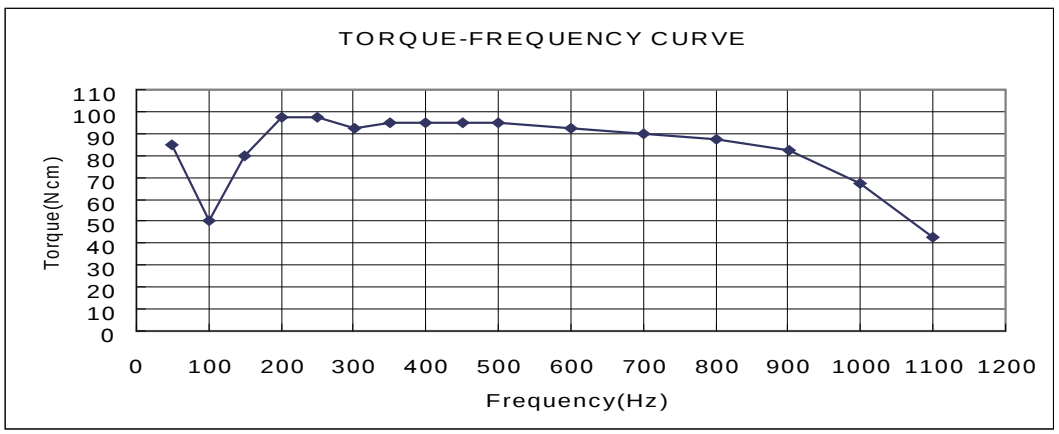
Cooling		Free Air
Working Environment	Environment	Avoid dust,oil mist and corrosive gases
	Temperature	–20°C～+85°C
	Humidity	＜80%RH, n condensation, no frosting
	Vibration	3G Max
Storage Temperature		–40°C～+125°C
Size		42.3mm×42.3mm×13.5
Weight		0.1Kg

Typital Application



Example

MOTOR PARAMETERS			
	Units	Tolerance	Value
Step Angle	°		1.8
Accuracy			±5%
Holding Torque	Ncm		90
Rated Current	A/ph		2
Phase Resistance	ohms	±10%	1.8
Phase Inductance	MH	±20%	2.5
Detent Torque	Ncm	Max	4
Rotor Inertia(Ja)	$g.cm^2$		300
Weight	g		600

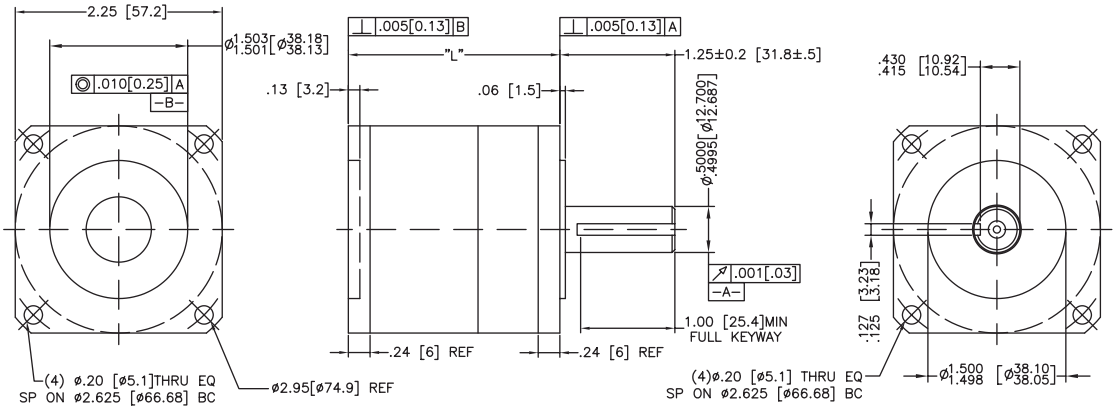


planetary gearbox

Standard Feature

- All powder metal gears except steel input gear
- Rigid construction for industrial use
- Operating Temperature Range: -17ºC To +120ºC
- Maximum Input Speed: 4000rpm
- Front and Rear end caps aligned to +/-1º
- Bond pinion to shaft using loctite 680
- Axial load 34kgs Max, Radial Load 34kgs max at 15mm from Shaft end

Mechanical

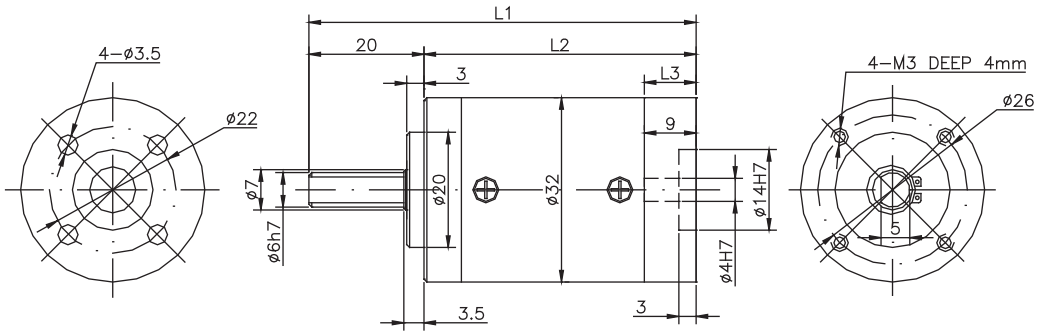


Specifications

Part No.	Ratio	Cont Torque (Nm)	Peak Torque (Nm)	Efficiency (%)	Stage	Weight (Kg)	Length L Max in(mm)	Pinion Part No
MGH23PI003-004	3:1	6.5	20	90	1	0.4	2.10(53.3)	MP000045
MGH23PI005-004	5:1	6.5	20	90	1	0.4	2.10(53.3)	MP000047
MGH23PI010-004	10:1	6.5	20	80	2	0.6	2.61(66.3)	MP000046
MGH23PI015-004	15:1	6.5	20	80	2	0.8	3.04(77.2)	MP000045
MGH23PI025-004	25:1	6.5	20	80	2	0.8	3.04(77.2)	MP000047
MGH23PI030-004	30:1	6.5	20	70	3	1.0	3.61(91.7)	MP000046
MGH23PI050-004	50:1	6.5	20	70	3	1.0	3.61(91.7)	MP000046
MGH23PI100-004	100:1	6.5	20	60	4	1.2	4.18(106.2)	MP000046

MGH032 Planetary Gearbox

Mechanical



Specifications

No. Of Stages	1 Stage Reduction	2 Stage Reduction	3 Stage Reduction
Gearing Efficiency	90%	81%	73%
Max. Radial Force	80N	115N	140N
Max. Axial Force	30N	40N	50N
Peak Torque	3 Times Rated Torque		
Working Temperature	-10°C～+80°C		
Lubrication Mode	Lifetime Lubrication		
Mounting Mode	Any Mounting		
Recommend Input Speed	3000RPM		
Input And Output	Same Direction		
Gearbox Length L1	46.5mm	56.3mm	66.1mm
Box Length L2	37.5mm	47.3mm	57.1mm
Rear Cover Length L3	9mm		

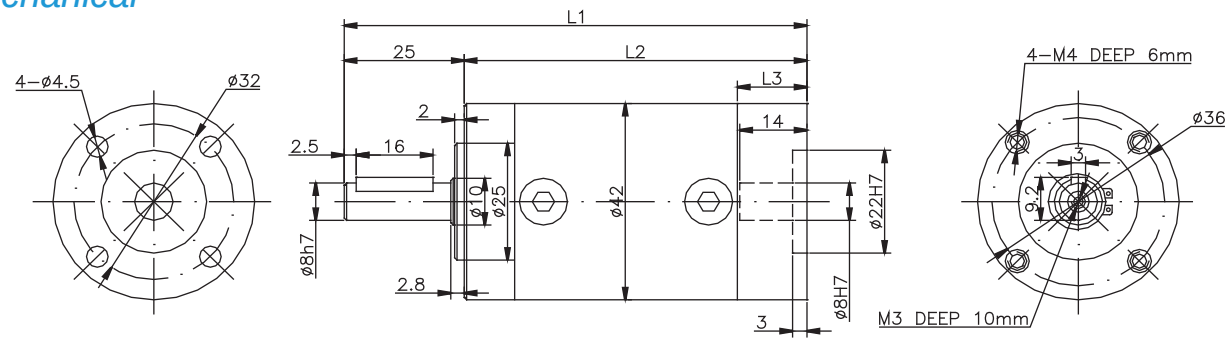
First Planetary Material		1 Stage Reduction	2 Stage Reduction	3 Stage Reduction
Transmission Torque	Plastic POM	0.4Nm	1.5Nm	4Nm
	Metal 40Cr	1Nm	2.25Nm	4Nm
Noise	Plastic POM	45dB(A)		
	Metal 40Cr	60dB(A)		

Gear Ratio

1 Stage Reduction	2 Stage Reduction	3 Stage Reduction	
3.7	14(13.8)	51(50.6)	168(168.5)
5.18	19(19.1)	71(70.9)	181(181.1)
6.75	25(24.9)	92(92.4)	236(236)
	27(26.8)	99(99.2)	307(307.5)
	35(34.9)	129(129.3)	
	45(45.5)	139(139)	

MGH042 Planetary Gearbox

Mechanical



Specifications

No. Of Stages	1 Stage Reduction	2 Stage Reduction	3 Stage Reduction
Gearing Efficiency	90%	81%	73%
Max. Radial Force	160N	230N	300N
Max. Axial Force	50N	80N	100N
Peak Torque	3 Times Rated Torque		
Working Temperature	-10°C～+80°C		
Lubrication Mode	Lifetime Lubrication		
Mounting Mode	Any Mounting		
Recommend Input Speed	3000RPM		
Input And Output	Same Direction		
Gearbox Length L1	78.1mm	96.4mm	114.7mm
Box Length L2	53.1mm	71.4mm	89.7mm
Rear Cover Length L3	14.5mm		

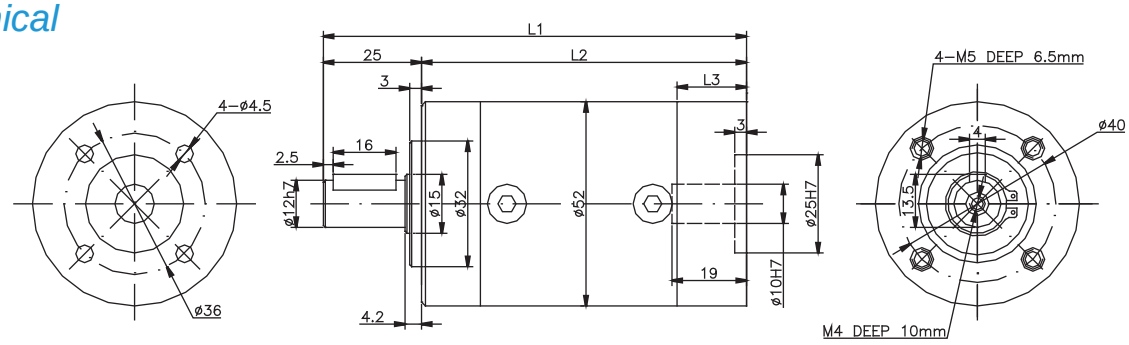
First Planetary Material		1 Stage Reduction	2 Stage Reduction	3 Stage Reduction
Transmission Torque	Plastic POM	0.7Nm	2.5Nm	15Nm
	Metal 40Cr	3Nm	7.5Nm	15Nm
Noise	Plastic POM	45dB(A)		
	Metal 40Cr	60dB(A)		

Gear Ratio

1 Stage Reduction	2 Stage Reduction	3 Stage Reduction	
3.65	13(13.3)	49(48.63)	188(188.2)
5.36	20(19.5)	71(71.4)	206(206.3)
6.55	24(23.9)	87(87.2)	248(247.9)
8.63	29(28.7)	105(104.8)	272(271.8)
	31(31.5)	115(114.9)	281(281)
	35(35.1)	128(128.1)	303(302.9)
	43(42.9)	154(154)	370(370.2)
	46(46.2)	157(156.6)	399(399.2)
	56(56.5)	169(168.8)	489(488.8)

MGH052 Planetary Gearbox

Mechanical



Specifications

No. Of Stages	1 Stage Reduction	2 Stage Reduction	3 Stage Reduction
Gearing Efficiency	90%	81%	73%
Max. Radial Force	200N	320N	450N
Max. Axial Force	60N	100N	150N
Peak Torque	3 Times Rated Torque		
Working Temperature	-10°C～+80°C		
Lubrication Mode	Lifetime Lubrication		
Mounting Mode	Any Mounting		
Recommend Input Speed	3000RPM		
Input And Output	Same Direction		
Gearbox Length L1	91.4mm	107.8mm	124.2mm
Box Length L2	66.4mm	82.8mm	99.2mm
Rear Cover Length L3	17.7mm		

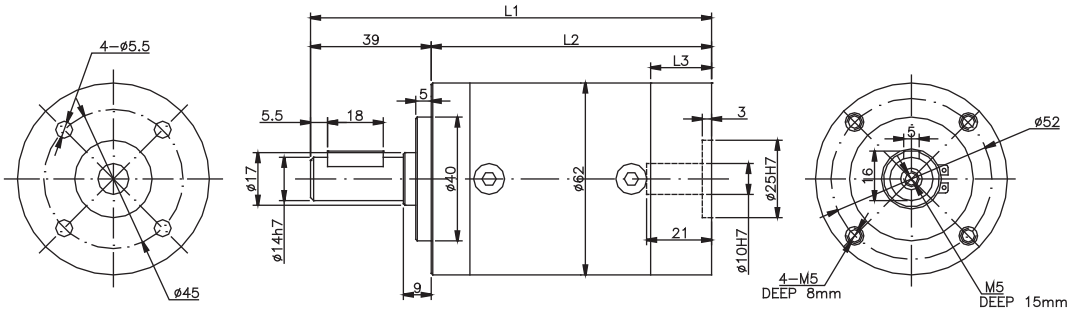
First Planetary Material		1 Stage Reduction	2 Stage Reduction	3 Stage Reduction
Transmission Torque	Plastic POM	1.2Nm	4Nm	25Nm
	Metal 40Cr	4Nm	12Nm	25Nm
Noise	Plastic POM	45dB(A)		
	Metal 40Cr	60dB(A)		

Gear Ratio

1 Stage Reduction	2 Stage Reduction	3 Stage Reduction	
3.65	13(13.3)	49(48.63)	188(188.2)
5.36	20(19.5)	71(71.4)	206(206.3)
6.55	24(23.9)	87(87.2)	248(247.9)
8.63	29(28.7)	105(104.8)	272(271.8)
	31(31.5)	115(114.9)	281(281)
	35(35.1)	128(128.1)	303(302.9)
	43(42.9)	154(154)	370(370.2)
	46(46.2)	157(156.6)	399(399.2)
	56(56.5)	169(168.8)	489(488.8)

MGH062 Planetary Gearbox

Mechanical



Specifications

No. Of Stages	1 Stage Reduction	2 Stage Reduction	3 Stage Reduction
Gearing Efficiency	90%	81%	73%
Max. Radial Force	240N	360N	520N
Max. Axial Force	70N	100N	150N
Peak Torque	3 Times Rated Torque		
Working Temperature	-10°C～+80°C		
Lubrication Mode	Lifetime Lubrication		
Mounting Mode	Any Mounting		
Recommend Input Speed	3000RPM		
Input And Output	Same Direction		
Gearbox Length L1	111.7mm	129.6mm	147.5mm
Box Length L2	72.7mm	90.6mm	108.5mm
Rear Cover Length L3	19.7mm		

First Planetary Material		1 Stage Reduction	2 Stage Reduction	3 Stage Reduction
Transmission Torque	Plastic POM	4.5Nm	15Nm	45Nm
	Metal 40Cr	8Nm	25Nm	45Nm
Noise	Plastic POM	45dB(A)		
	Metal 40Cr	60dB(A)		

Gear Ratio

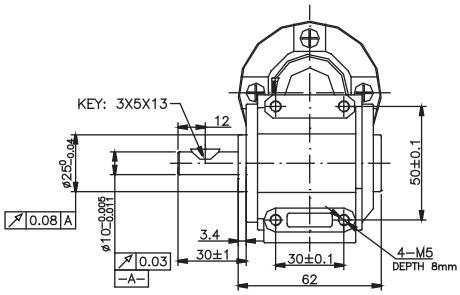
1 Stage Reduction	2 Stage Reduction	3 Stage Reduction	
3.65	13(13.3)	49(48.63)	188(188.2)
5.36	20(19.5)	71(71.4)	206(206.3)
6.55	24(23.9)	87(87.2)	248(247.9)
8.63	29(28.7)	105(104.8)	272(271.8)
	31(31.5)	115(114.9)	281(281)
	35(35.1)	128(128.1)	303(302.9)
	43(42.9)	154(154)	370(370.2)
	46(46.2)	157(156.6)	399(399.2)
	56(56.5)	169(168.8)	489(488.8)

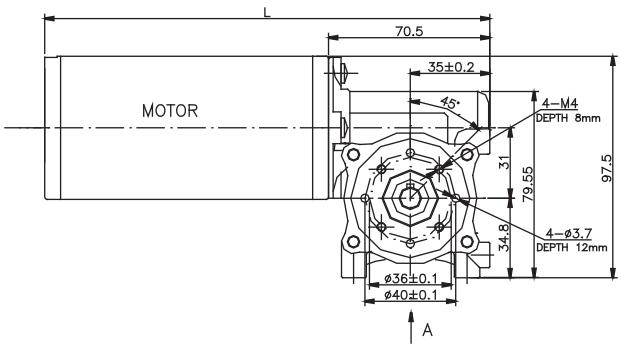
Gearbox

Standard Feature

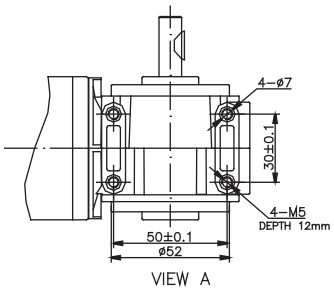
- Ball bearing on output shaft
- Low noise
- Other ratio on request
- Compatible for MB063KG PMDC and MB057GE BLDC motor
- Double output shaft available

Mechanical





Motor Part No.	Total Length (mm)
MB063KG100/MB063KG150	166
MB063KG200/MB063KG250	196



Specifications

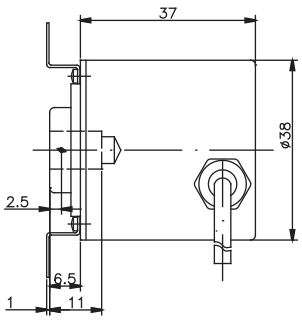
SG 80 GEARBOX PARAMETER					
Ratio		10	15	36	50
Efficiency		0.63	0.52	0.4	0.33
Continuous Torque	Ncm	400			
Weight	Kg	0.4			
Axial Load/ Radial Load	N	300/350			

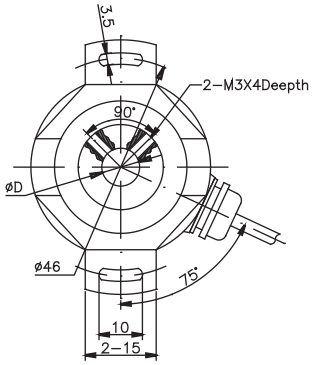
MEH 3808 Hollow Shaft Encode

General information

- High Stability
- Easy Installation
- Multiple shaft hub available
- Ball Bearing
- Application:texitle,embroidery and so on

Mechanical





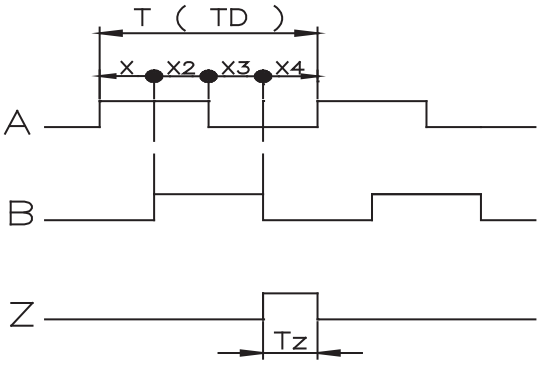
Specifications

ELECTRICAL SPECIFICATIONS	
Output wave	Square save
Output signals	A B Z (Line driver output A $\bar{A}$ B $\bar{B}$ Z $\bar{Z}$ phase)
Current consumption	≤ 120mA
Response Frequency	0～100KHz
Output phase difference	90°± 45°
Supply voltage	5V DC,5-12V DC,12-24V DC
Signal level	VH≥ 85%VCC,VL≤0.3V
Number of pulses	100 120 125 150 180 200 240 250 300 360 400 500 600 720 800 900 960 1000 2000 2048 2500(Other number of pulse available on request)
Output circuit	Open collector NPN, Push pull,Line driver, Voltage
MECHANICAL SPECIFICATIONS	
Speed without sealing	4500rpm
Rotor moment of inertia	Appr. 3.5x 10 $^{-}$ Kgm^{-}
Starting torque without sealing	≤5.0X10^{-4}10Nm(+25°C)
Maximum load permitted on shaft	Radial 20N,Axial 10N
Shock resistance	980m / s^{2} ,6ms,2times each on XYZ
Vibration proof	50m / s^{2} 10～200Hz,2 hours each on XYZ
Working life	MTBF≥ 25000h(+25°C 2000rpm)
Weight	Appr. 140g(with 1 meter cable)
ENVIRONMENTAL SPECIFICATIONS	
Working humidity	30～85%(No condensation)
Storage temperature	-30°C～85°C
Working temperature	-10°C～70°C
Protection class	IP54

MEH 3808 Hollow Shaft Encode

Output waveform

90°Output phase difference, CW rotation(CW rotation as seen from fit surface)



Square-wave accuracy: X1 + X2=1/2T+1/12T X3 + X4=1/2T+1/12T

Pitch error of period:±0.01T

Pitch error of phase position: 1/18T

Z phase: Tz=1/4T (1T, 1/2T, 1/4T…)

Period of pulses: T=360°/N(N: output pulses)

Signal accuracy: Xn =1/4T+1/12T (n=1, 2, 3, 4)

A leads B clockwise when viewing the encoder shaft end,

The position of Z phase against A, B phase is not specified.

Terminal assignment

Signal	+5V	0V	SIG A	SIG $\overline{A}$	SIG B	SIG $\overline{B}$	SIG Z	SIG $\overline{Z}$	Shield
Cable Color	Red	Black	Green	Brown	White	Grey	Yellow	Orange	N.C
Note: Shield is attached to connector housing, One meter cable lengths(other cable lengths on order)									

Ordering code

MEH3808	—	401	G	600	BZ1	12–24	C
Series		Sequence Number	Connection	Number of Pulses	Output Signals	Supply Voltage	Output Circuit

Series: MEH3808,Radial cable: G, Number of pulses: 600 p/r, Output signals: ABZ, Tz=1T,

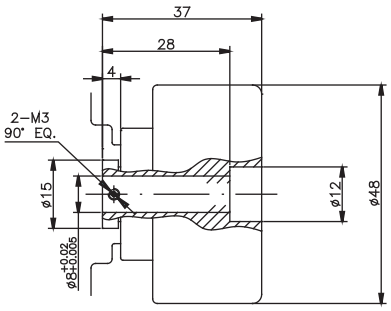
Supply voltage: 12-24V DC,Output circuit: Open collector NPN, Record: MEH3808-401G600BZ1-12-24C

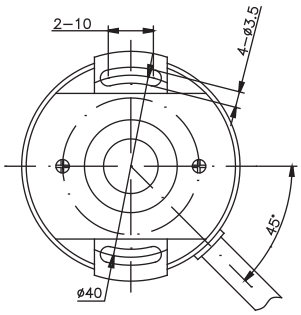
MEH 4808 Commutation Encoder

General information

- High Performance
- Easy Installation
- Multiple shaft hub available
- Application:Servo system , texitle machine

Mechanical





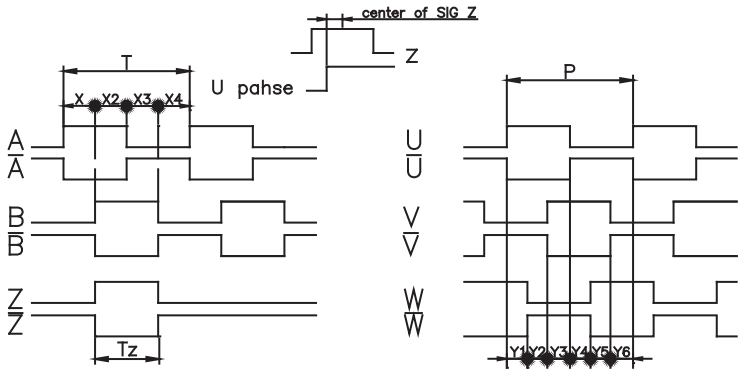
Specifications

ELECTRICAL SPECIFICATIONS	
Output wave	Square save
Output signals	A B Z U V W (Line driver output A $\overline{A}$ B $\overline{B}$ Z $\overline{Z}$ U $\overline{U}$ V $\overline{V}$ W $\overline{W}$ phase)
Current consumption	≤160mA
Response Frequency	0～120KHz
Output phase difference	90°± 45°
Supply voltage	5V DC
Signal level	VH ≥85%VCC,VL≤ 0.3V
Number of pulses	1000，1024，2048（2P，3P，4P）；2000（2P，3P，4P，6P）；2500（2P，3P，4P，5P，，6P)（Other number or pulse available on request）
Output circuit	Line driver
MECHANICAL SPECIFICATIONS	
Speed without sealing	6000rpm
Rotor moment of inertia	Appr. 4.0x 10^{-6} Kgm^2
Starting torque without sealing	2.5X 10^{-3}10Nm（+25°C）
Shock resistance	980m / s^2 ,6ms,2times each on XYZ
Vibration proof	50m / s^2 10～200Hz,2 hours each on XYZ
Working life	MTBF≥50000h(+25°C 2000rpm)
Weight	Appr. 140g(with 1 meter cable)
ENVIRONMENTAL SPECIFICATIONS	
Working humidity	30～85%(No condensation)
Storage temperature	-40°C～110°C
Working temperature	-25°C～100°C
Protection class	IP54

MEH 4808 Commutation Encoder

Output waveform

90°Output phase difference, CW rotation(CW rotation as seen from fit surface)



Square-wave accuracy: X1 + X2=1/2T+1/12T X3 + X4=1/2T+1/12T

Pitch error of period:±0.01T

Pitch error of phase position: 1/18T

Z phase: Tz=1/4T (1T, 1/2T, 1/4T…)

Period of pulses: T=360°/N(N: output pulses)

Signal accuracy: Xn =1/4T+1/12T (n=1, 2, 3, 4)

A leads B clockwise when viewing the encoder shaft end,

The position of Z phase against A, B phase is not specified.

Period of UVW phase : P=360°/ ±1.5°(=2P,3P,4P…)

Phase difference: =P/6 ±1.5°(n=1,2,3,4,5,6)

Difference of phase Z and phase U: C≤ ±1°

Positional relationship of A&B phase and U,V&W phases are not specified.

Terminal assignment

Signal	+5V	0V	SIGA	SIG$\bar{A}$	SIGB	SIG$\bar{B}$	SIGZ	SIG$\bar{Z}$	SIGU	SIG$\bar{U}$	SIGV	SIG$\bar{V}$	SIG$\bar{W}$	SIG$\bar{W}$	Shield
Cable Color	Red	BLK	GRN	BLK/GRN	WHT	BLK/WHT	YEL	BLK/YEL	BRN	BLK/BRN	GRY	BLK/GRY	ORG	BLK/ORG	N.C
Note: Shield is attached to connector housing, 0.35 meter cable lengths(other cable lengths on order)															

Ordering code

MEH4808	—	001	G	2500	BZ1	—	6P	5	L
Series		Sequence Number	Connection	Number of Pulses	Output Signals		Period of UVW Phase	Supply Voltage	Output Circuit

Series: MEH4808,Radial cable: G, Number of pulses: 2500 p/r, Output signals: AABBZZUUVVWW, Tz=1T, Period of UVW phase:6P,

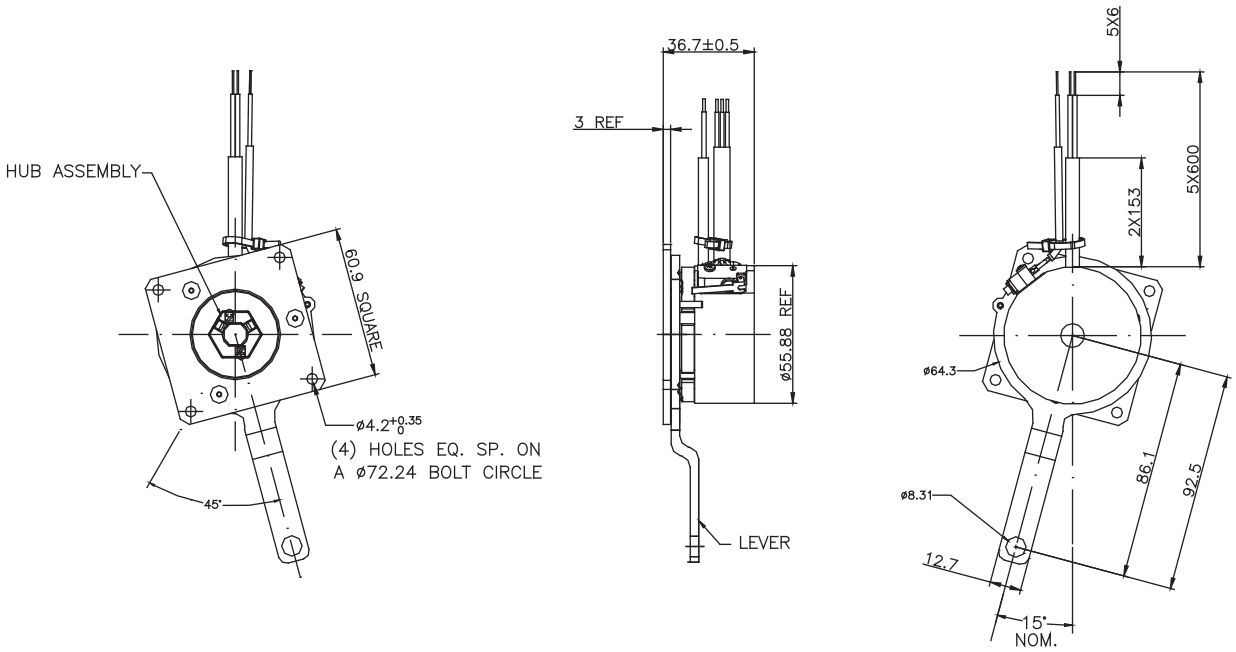
Supply voltage: 5V DC, Output circuit: Line driver, Record: MEH4808-001G2500BZ1-6P5L

MSRA061 Spring Applied Brake

General Information

- Insulation Class B
- Zinc plating housing
- Long life
- Special application on request

Mechanical



Specifications

Voltage	Resistance	Current	Static Torque	Inertia	Weight
(VDC)	(OHMS)	(A)	(Nm)	($g.cm^2$)	(g)
12	16.7	0.72	2.26	0.053	450
24	65	0.37	2.26	0.053	450
48	250	0.19	3.95	0.053	700

Implication For Name

MSRA 061- X X X X X

Model

DIGIT	VOLTS
1	12VDC
2	24VDC
3	48VDC

DIGIT	MOUNTING SHAFT DIA.
1	Φ6mm
2	Φ8mm
3	Φ10mm
4	OR DESIGNED FOR CUS.

DIGIT	DESCRIPTION
0	NO HANDLE
1	HANDLE

DIGIT	DESCRIPTION
0	NO SWITCH
1	SWITCH

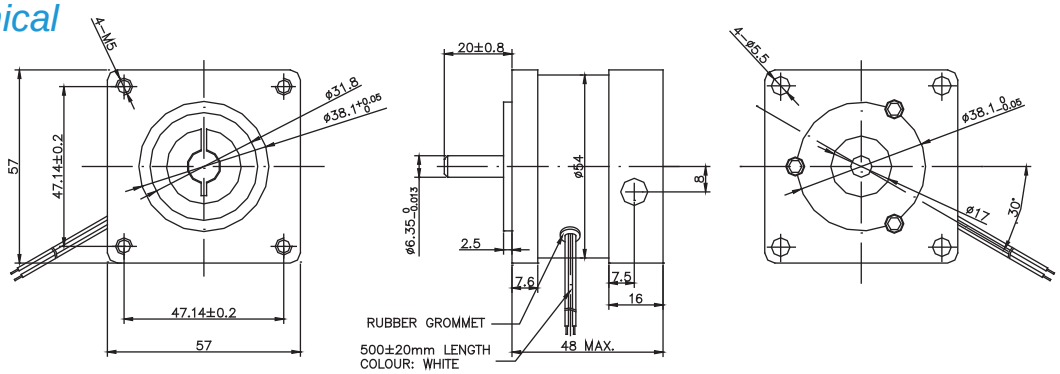
SPECIAL APPLICATION

MPC023/034 Spring Applied Brake

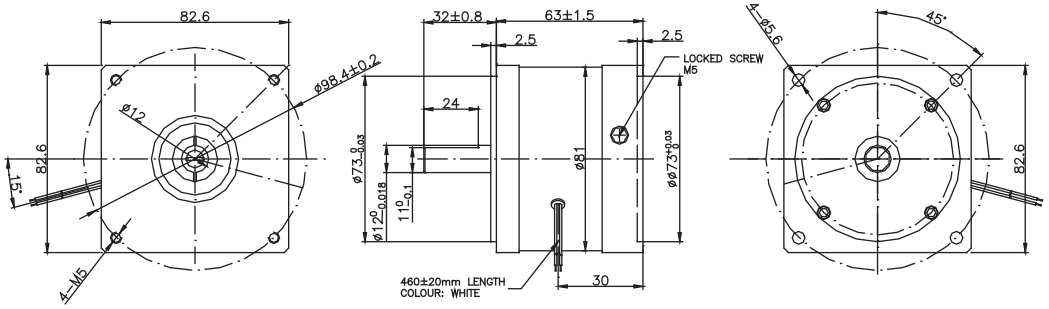
General Information

- Insulation Class B
- Zinc plating housing
- Long life
- Special application on request

Mechanical



MPC023-



MPC034-

Specifications

Model	Voltage	Resistance	Current	Static Torque	Power	Weight
	(VDC)	(OHMS)	(A)	(Nm)	(w)	(g)
MPC023-	24	88	0.27	0.34	6.4	400
MPC034-	24	96	0.25	1.68	6	500

Implication For Name

MPC 0X - X X X

DIGIT	MEDEL
1	023
2	034

DIGIT	VOLTS
1	12VDC
2	24VDC

DIGIT	MOUNTING SHAFT DIA.
1	Φ6mm
2	Φ9mm
3	Φ12mm
4	OR DESIGNED FOR CUS.

SPECIAL APPLICATION