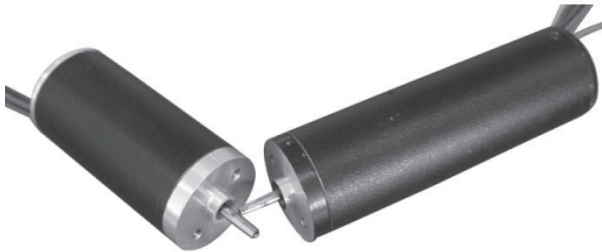


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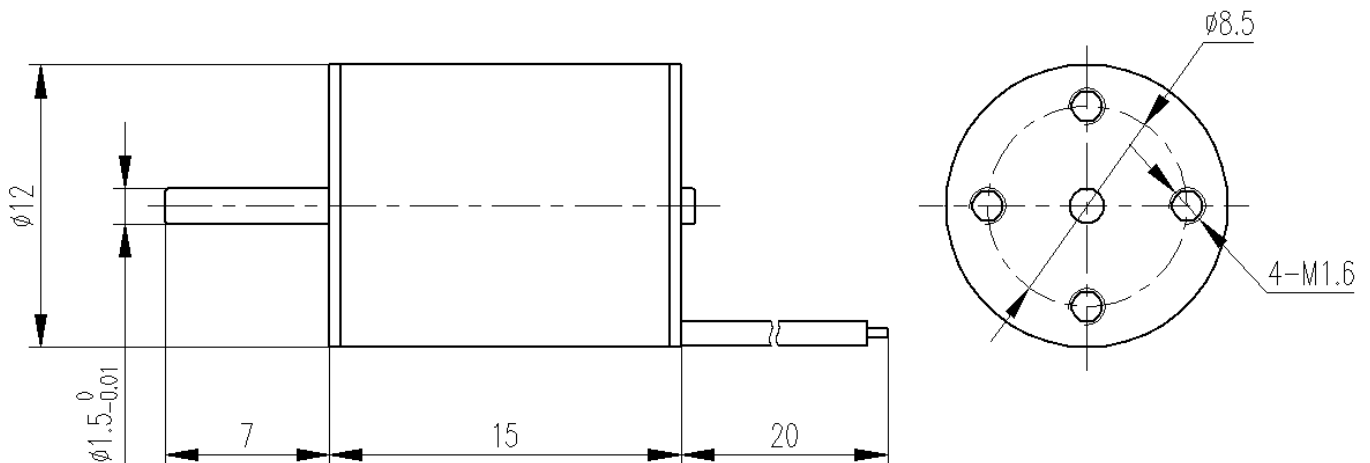
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3. Φ 22 系列	page5-6
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12mm R Series BLDC Motor



Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	F
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	360VAC for one second
Shaft Radial Play	max. 0.008 (450g-load)
Shaft Axial Play	max. 0.012 (450g-load)
Max. radial force	6.3N (3mm from the flange)
Max. axial force	1N

Dimensions



12mm R Series BLDC Motor

Specification

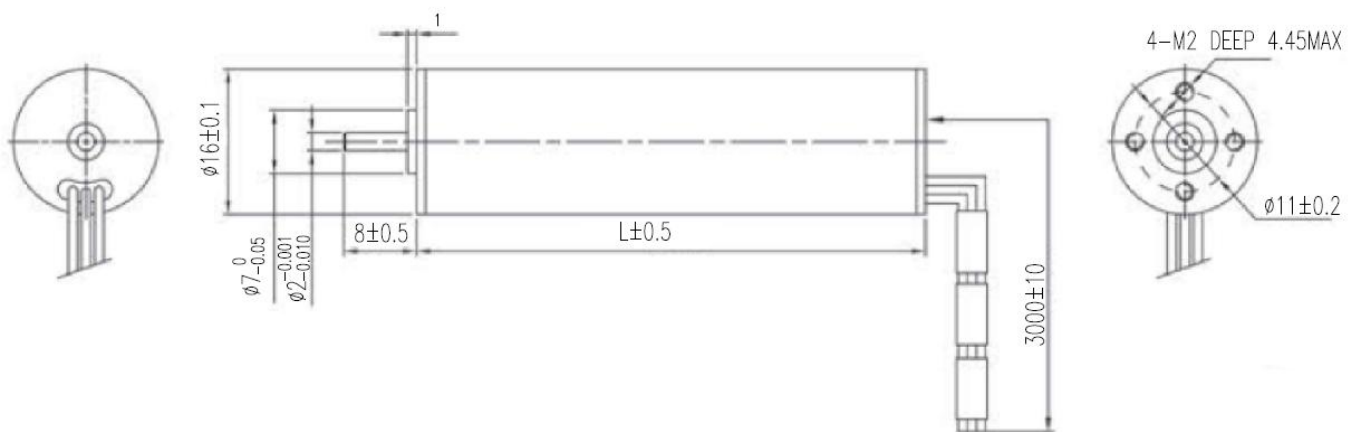
Type	M004BI0001-12-15	M005BI0001-12-15	M007BI0001-12-15
Number of Poles	2	2	2
Number of Phases	3	3	3
Nominal Voltage (VDC)	3.6	4.5	7.4
No-load Speed (RPM)	35000	14500	42500
No-load Current (A)	0.3	0.1	0.2
Rated Speed (RPM)	28200	4400	38000
Rated Current (A)	1.1	0.5	0.4
Rated Torque (mN·m)	0.7	1.0	0.3
Max. Output Power (W)	4.3	0.8	4.6
Max. Efficiency (%)	58	44	54
Resistance (ohms)	0.67	5.2	2.6
Torque Constant (mN·m/A)	0.93	2.62	1.55
Back EMF (V/KRPM)	0.10	0.27	0.16
Rotor Inertia (g·cm ²)	0.14	0.14	0.14
Body Length (mm)	15	15	15
Weight (kg)	0.007	0.007	0.007

16mm R Series BLDC Motor



Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	F
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	360VAC for one second
Shaft Radial Play	max. 0.025 (3N-load)
Shaft Axial Play	max. 0.3 (10N-load)
Max. radial force	15N
Max. axial force	5N

Dimensions

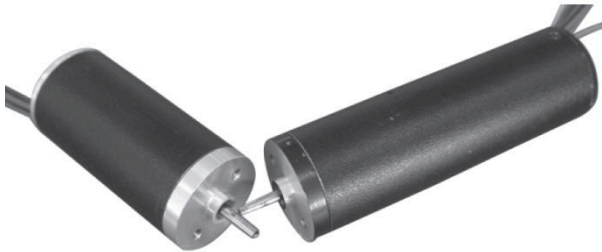


Specification

16mm R Series BLDC Motor

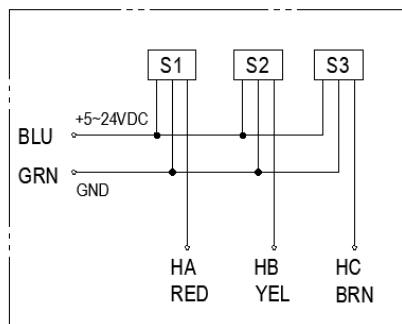
Type	M012BI0016-16-28	M024BI0040-16-40	M024BI0090-16-56
Number of Poles	2	2	2
Number of Phases	3	3	3
Nominal Voltage (VDC)	12	24	24
No-load Speed (RPM)	27300	30800	30800
Rated Speed (RPM)	22000	25000	25000
Rated Torque (mN·m)	1.6	4	9
Rated Power (W)	3.7	10	24
Peak Torque (mN·m)	4.8	12	27
Peak Current (A)	1.2	1.7	3.7
Resistance (ohms)	5.4	6.6	3.15
Inductance (mH)	0.17	0.21	0.15
Torque Constant (mN·m/A)	4.18	7.42	7.42
Back EMF (V/KRPM)	0.31	0.55	0.55
Rotor Inertia (g·cm ²)	0.4	0.66	1.02
Body Length (mm) L	28	40	56
Weight (kg)	0.029	0.042	0.064

22mm R Series BLDC Motor

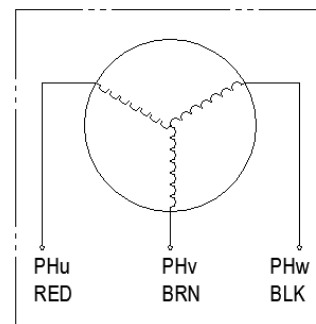


Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	360VAC for one second
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	10N (10mm from the flange)
Max. axial force	2N

Wiring Diagram

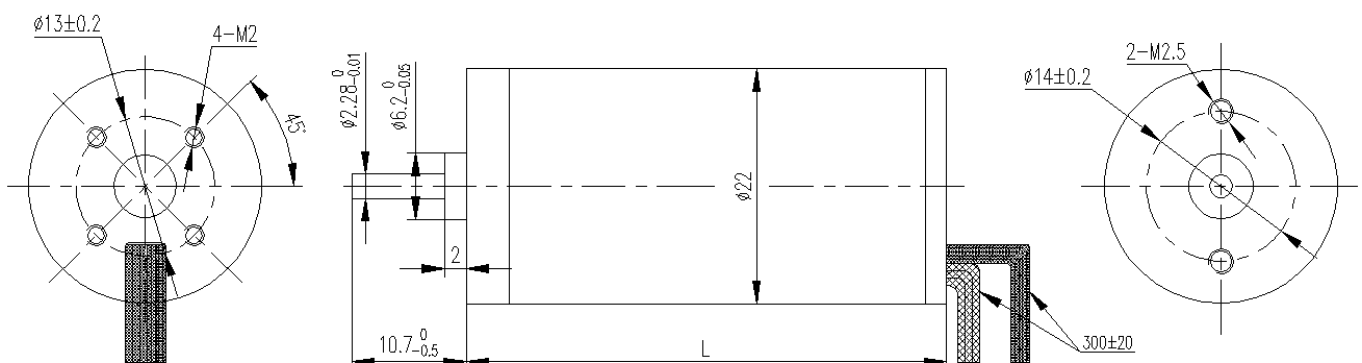


Hall sensor cable
Note: hall sensor power supply voltage +5~24VDC



Motor wiring cable

Dimensions



22mm R Series BLDC Motor



Specification

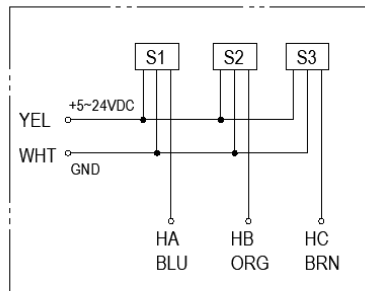
Type	M024BI0008-22R-45	M024BI0020-22R-68
Number of Poles	8	8
Number of Phases	3	3
Nominal Voltage (VDC)	24	24
Rated Speed (RPM)	4600	3800
Continuous Stall Torque (mN·m)	9.6	24
Rated Torque (mN·m)	8.0	20
Output Power (W)	3.8	8
Peak Torque (mN·m)	24	60
Peak Current (A)	1.1	2
Resistance (ohms)	23	11.6
Inductance (mH)	6.2	4.3
Torque Constant (mN·m/A)	29.7	35.8
Back EMF (V/KRPM)	2.2	2.65
Rotor Inertia (g·cm ²)	0.66	1.32
Body Length (mm)	45	68
Weight (kg)	0.07	0.12

28mm R Series BLDC Motor

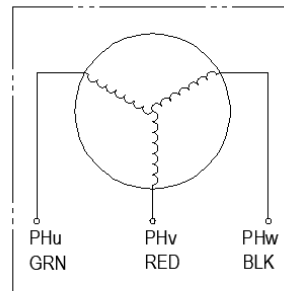


Item	General Specifications
Winding type	Star
Hall Effect Angle	120°Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	360VAC for one second
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	10N (10mm from the flange)
Max. axial force	2N

Wiring Diagram

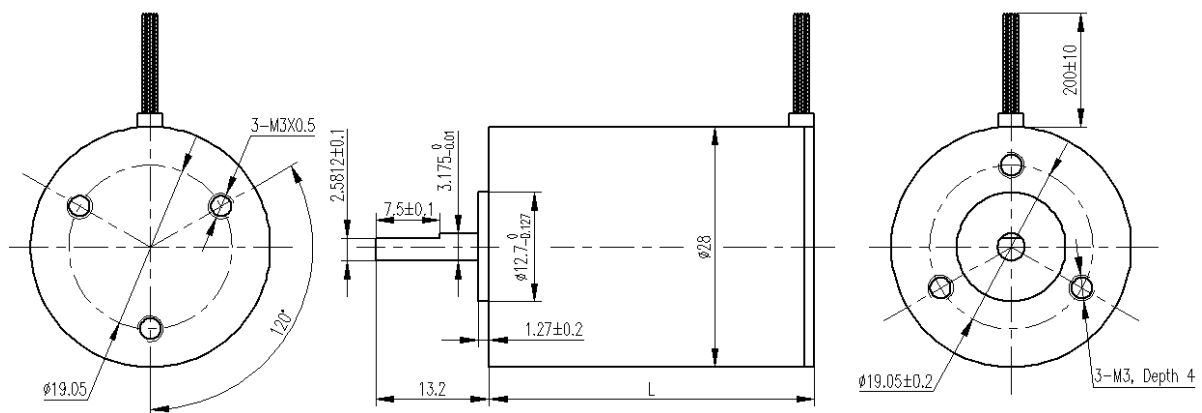


Hall sensor cable
Note: hall sensor power supply voltage +5-24VDC



Motor wiring cable

Dimensions



28mm R Series BLDC Motor

Specification

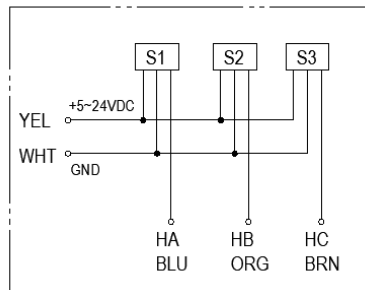
Type	M015BI0005-28- 26	M024BI0014-28- 38	M024BI0050-28-77
Number of Poles	4	4	4
Number of Phases	3	3	3
Nominal Voltage (VDC)	15	24	24
Rated Speed (RPM)	8000	10000	4000
Continuous Stall Torque (mN·m)	6	17	60
Rated Torque (mN·m)	5	14	50
Output Power (W)	4	14.78	16
Peak Torque (mN·m)	15	42	150
Peak Current (A)	1.3	2.7	4.2
Resistance (ohms)	8.2	4.2	4.2
Inductance (mH)	2.3	1.69	2.3
Torque Constant (mN·m/A)	14.3	16.9	37.4
Back EMF (V/KRPM)	1.06	1.25	2.77
Rotor Inertia (g·cm ²)	2.35	3.69	10.98
Body Length (mm)	26	38	77
Weight (kg)	0.060	0.082	0.280

33mm R Series BLDC Motor

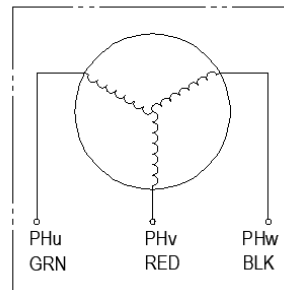


Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	600VAC for one second
Shaft Radial Play	max. 0.025
Shaft Axial Play	max. 0.08
Max. radial force	10N (10mm from the flange)
Max. axial force	2N

Wiring Diagram

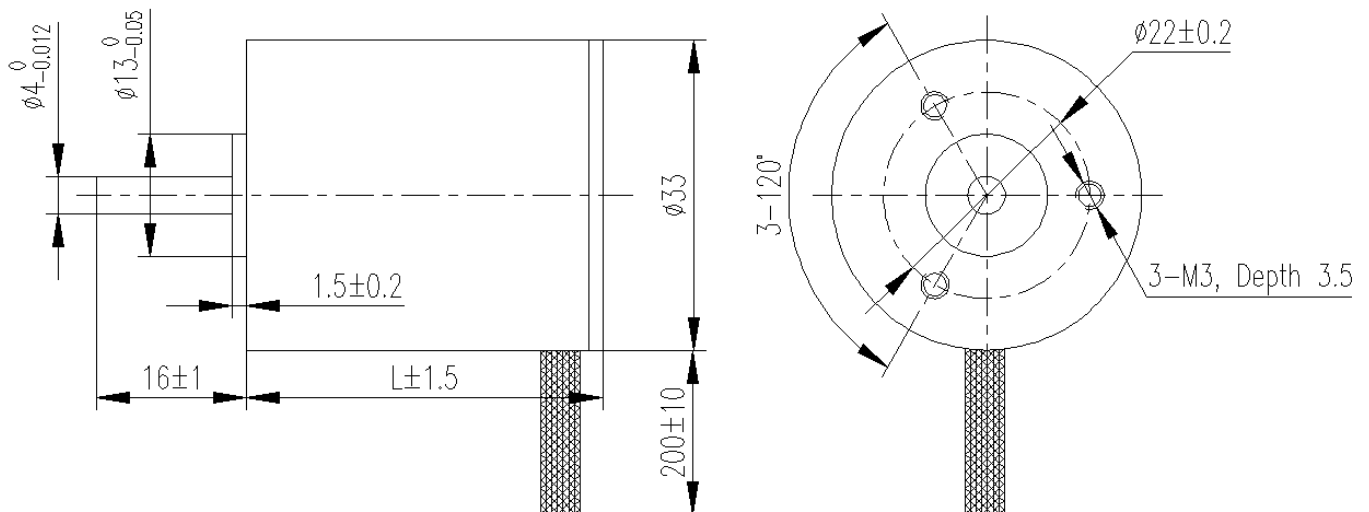


Hall sensor cable
Note: hall sensor power supply voltage +5-24VDC



Motor wiring cable

Dimensions



33mm R Series BLDC Motor



Specification

Type	M024BI0022-33-38	M048BI0040-33-80	M024BI0050-33-80
Number of Poles	4	4	4
Number of Phases	3	3	3
Nominal Voltage (VDC)	24	48	24
Rated Speed (RPM)	3000	10000	7800
Continuous Stall Torque (mN · m)	26	48	60
Rated Torque (mN · m)	22	40	50
Output Power (W)	7	40	40
Peak Torque (mN · m)	66	120	120
Peak Current (A)	1.7	3.2	4.8
Resistance (ohms)	14.2	2.3	0.86
Inductance (mH)	7	1.45	0.55
Torque Constant (mN · m/A)	46.3	41.8	27
Back EMF (V/KRPM)	3.43	3.1	2.0
Rotor Inertia (g · cm ²)	7.95	23.55	23.55
Body Length (mm)	38	80	80
Weight (kg)	0.085	0.2	0.2

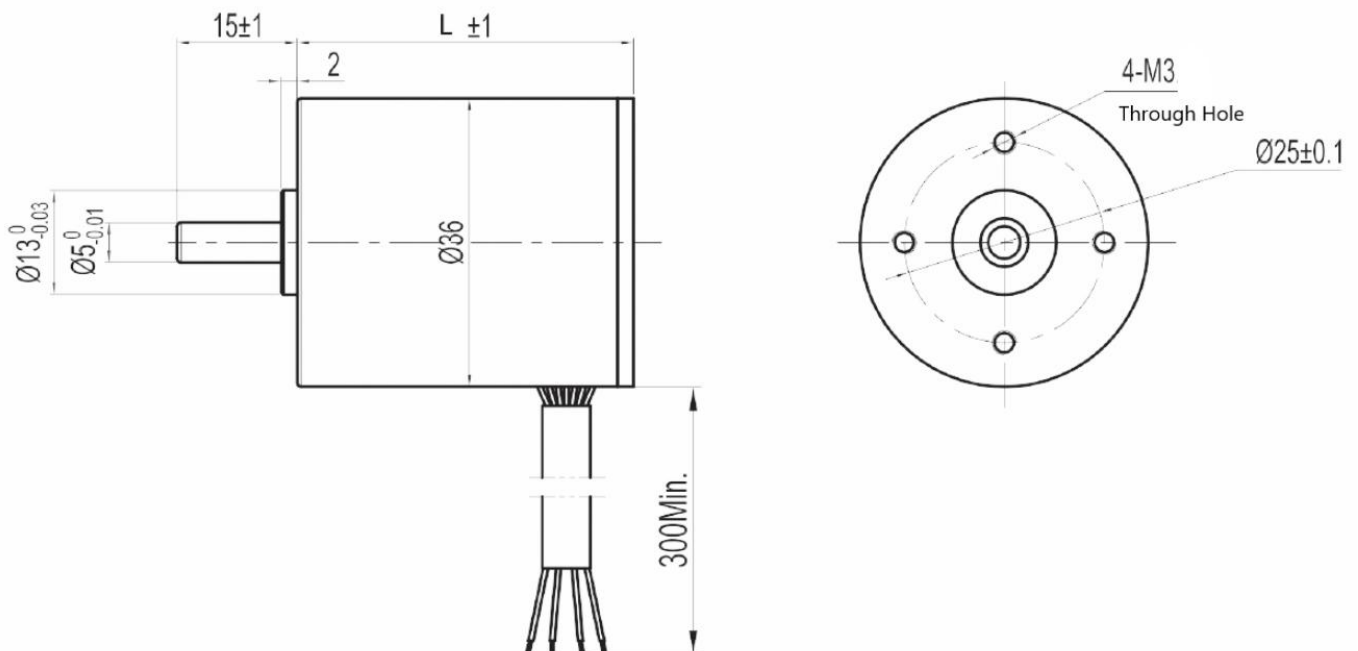
36mm R Series BLDC Motor

General Specifications



Item	Specifications
Winding Type	Star
Hall effect angle	120° Electrical angle
Insulation Class	B
Ambient Temperature	-20° C~+50° C
Insulation Resistance	100MΩ Min.500VC DC
Dielectric Strength	600VAC 1minute
Max Radial Force	15N(10mm from front flange)
Max Axial Force	10N

Dimensions



36mm R Series BLDC Motor



Technical Specifications

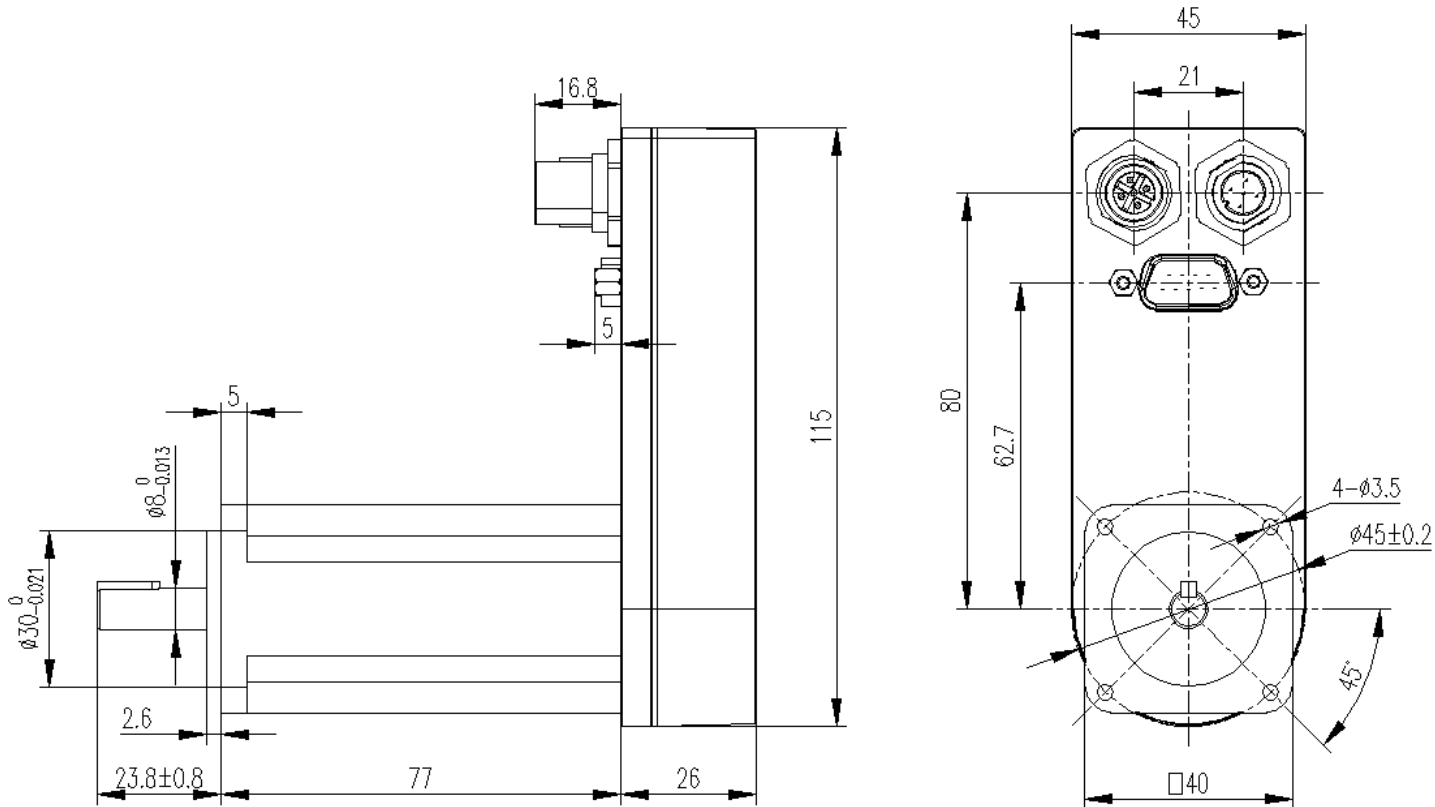
Item	M024BI0030-36-42
Number of Poles	4
Nominal Voltage (VDC)	24
Rated Torque (N·m)	0.03
Rated Speed (RPM)	3000
Rated Current (A)	2.0
Output Power (W)	9.4
Peak torque (N·m)	0.09
Peak current (A)	6
Torque Constant (N·m/A)	0.015
Back EMF (V/KRPM)	1.6
Body Length-L (mm)	42
Weight (kg)	0.16

40 mm D Series BLDC Motor



- 1. Compact EC motor units for speed, position and interpolation applications
- 2. Sinusoidal commutation with field-oriented control (FOC)
- 3. CANopen fieldbus, electrically insulated
- 4. Integrated brake chopper
- 5. Integrated single-turn absolute encoder
- 6. Optional multi-turn absolute encoder
- 7. High accuracy of speed and position control loops
- 8. Full torque at 0 speed
- 9. Emergency Stop
- 10. CAN-connectors in T-configuration
- 11. High quality planetary gear as an option (gears can be mounted directly on gear shaft)
- 12. Separate power supplies for logic and power unit

Dimensions



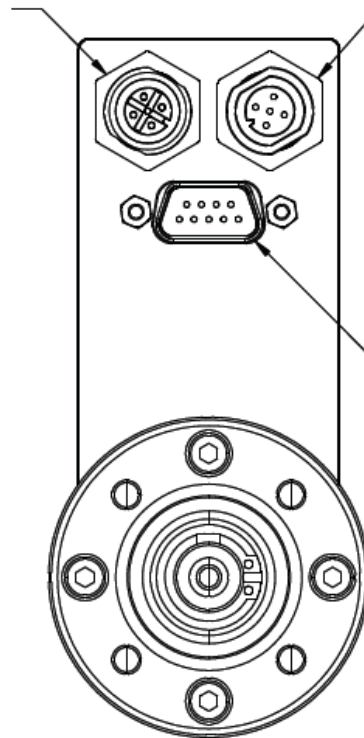
40 mm D Series BLDC Motor

Busstecker CAN
Rundsteckverbinder M12x1
5 polig Buchse

*Bus connector CAN
5 pin female M12x1*

Busstecker CAN
Rundsteckverbinder M12x1
5 polig Stift

*Bus connector CAN
5 pin male M12x1*



Versorgung
I/O Schnittstelle
D-Sub 9 polig Stift

*Power
I/O interface connector
9 pin male D-Sub*

Pin Assignment

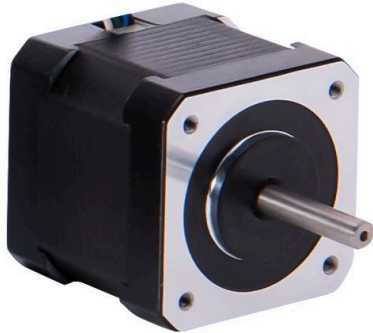
Power supply	Bus Interface(X1,X2)
1. Reference Input	1. Shield
2. STO-A (Safety stop 1)	2. -
3. POS-L (jog input, limit switch)	3. CAN-GND
4. POS-R (jog input, limit switch)	4. CAN-H
5. STO-B (Safety stop 2)*	5. CAN-L
6. Ground (GND)	
7. U-Bat (AME)*	
8. +24V Logic	
9. +24V DC-Link	

40 mm D Series BLDC Motor

Specification

Type	M048BI0402-40D-60
Number of Poles	4
Commutation	Sinus(FOC)/Sinusoidal(FOC)
Voltage Logic (VDC)	24
Voltage DC-link (VDC)	48
Rated Current (A)	4.2
Rated Power (W)	126
Rated Velocity (rpm)	3000
Maximum Current (A)	8.5
Maximum Velocity (rpm)	3500
Rated torque (N·cm)	40.2
Maximum torque (N·cm)	88.4
Torque Constant (N·cm/A)	9.1
Rotor Inertia (g·cm ²)	59
Encoder Resolution (Inkr./360°)	4.096
Digital Input/Output	3/0
CANopen profile	CiA301/Cia402
Operating Temperature Range (°C)	-5~+60
Weight (kg)	0.76
Protection Class	IP54

42mm S Series BLDC Motor

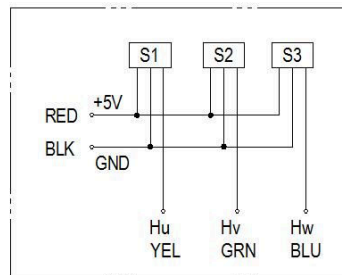


Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N

Configuration

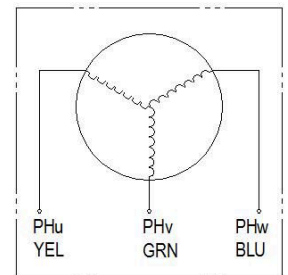
- Encoder
- Brakes
- Shaft Modification and double shaft
- Other winding voltage possible
- Other Types available with special length

Wiring Diagram



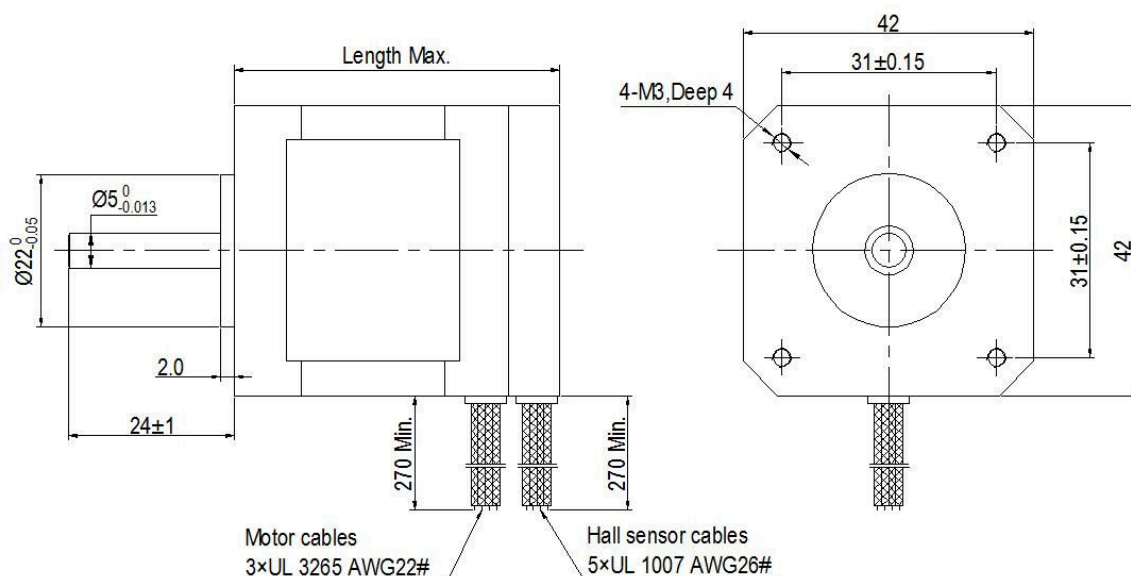
Hall sensor cable

Note: hall sensor power supply voltage +5~+20VDC



Motor wiring cable

Dimensions



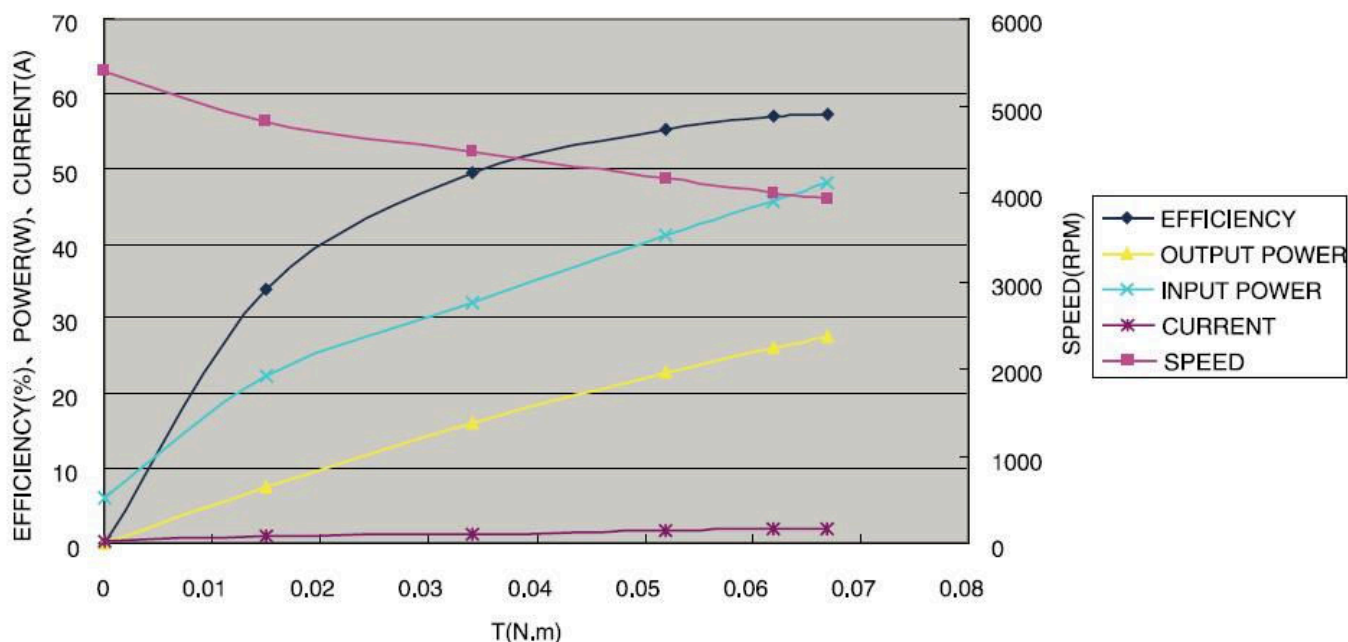
42mm S Series BLDC Motor

Specification

Type	M024BI0063-42-47	M024BI0125-42-63	M024BI0188-42-79
Number of Poles	8	8	8
Number of Phases	3	3	3
Nominal Voltage (VDC)	24	24	24
Rated Speed (RPM)	4000	4000	4000
Continuous Torque (N · m)	0.063	0.125	0.188
Rated Current (A)	1.9	3.4	5.7
Output Power (W)	26	52	78
Peak Torque (N · m)	0.18	0.38	0.75
Peak Current (A)	5.7	10.2	18
Torque Constant (N · m/A)	0.035	0.036	0.036
Back EMF (V/KRPM)	3.7	3.8	3.8
Rotor Inertia (g · cm ²)	24	48	72
Body Length (mm)	47	63	79
Weight (kg)	0.29	0.38	0.58

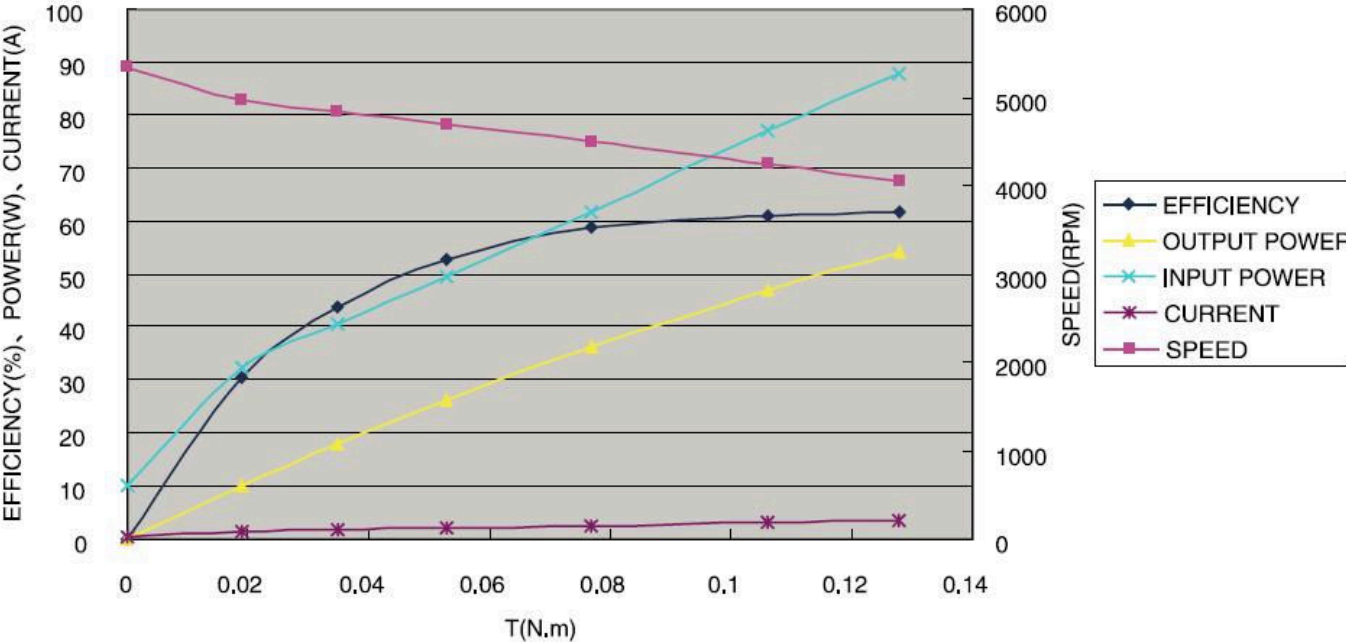
Performance Curve

M024BI0063-42-47, 24VDC, 26W

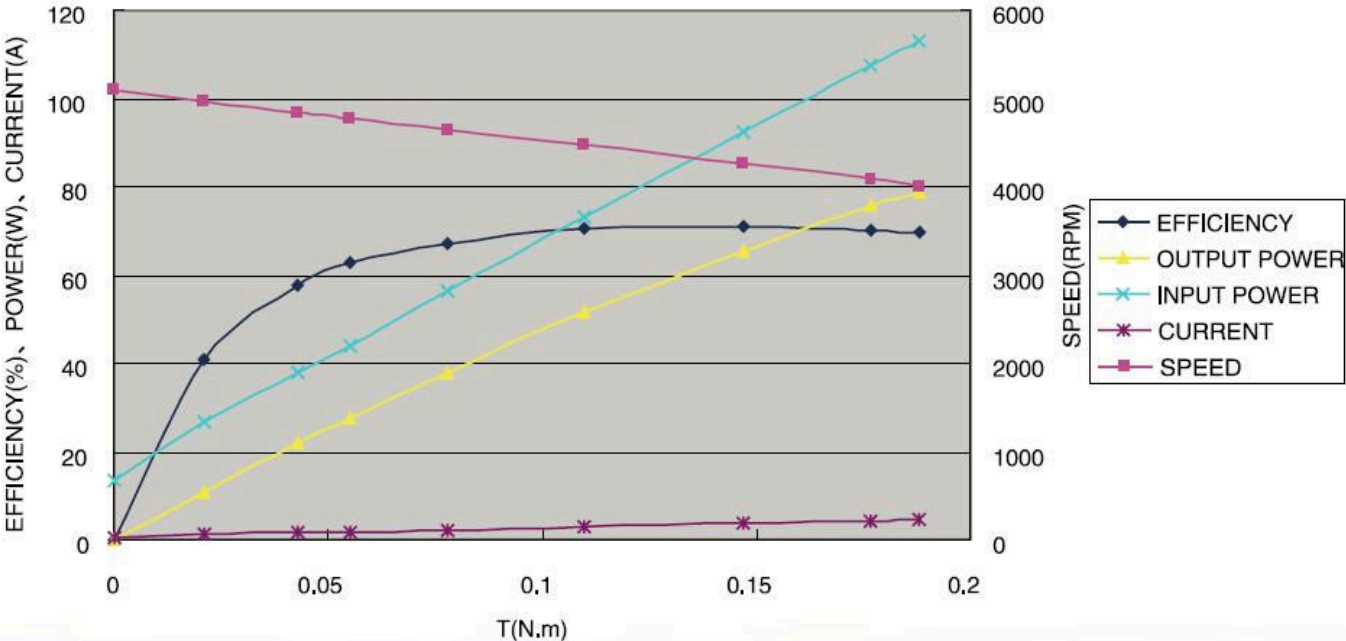


42mm S Series BLDC Motor

M024BI0125-42-63, 24VDC, 52W



M024BI0188-42-79, 24VDC, 78W

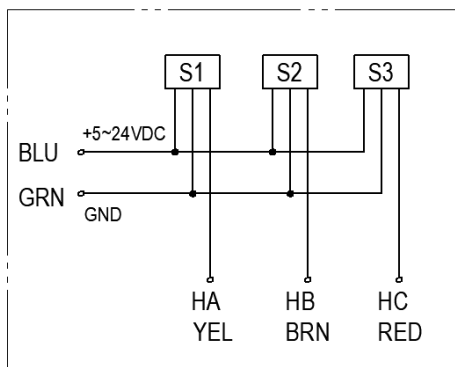


42 mm R Series BLDC Motor

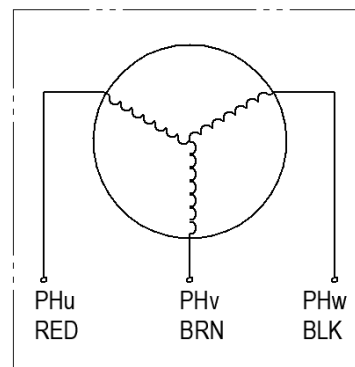


Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	15N (10mm from the flange)
Max. axial force	10N

Wiring Diagram

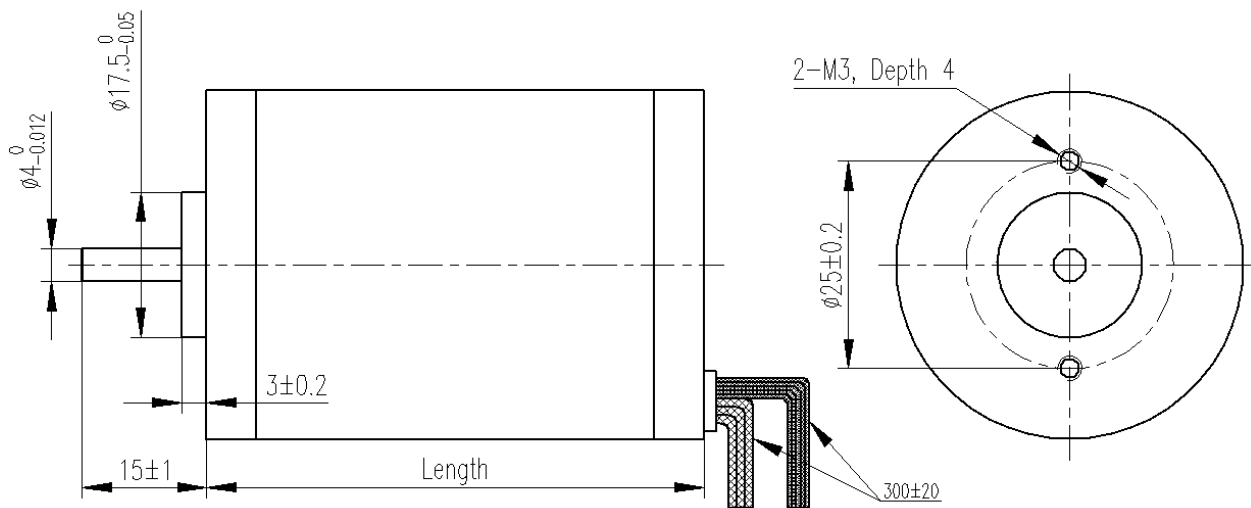


Hall sensor cable
Note: hall sensor power supply voltage +5~24VDC



Motor wiring cable

Dimensions



42 mm R Series BLDC Motor

Specification

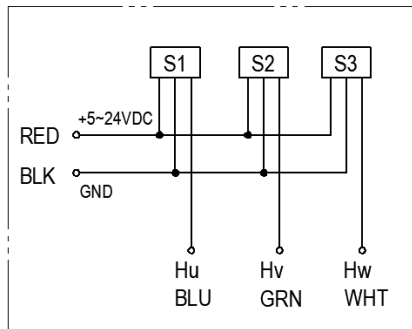
Type	M024BI0020-42-30	M024BI0056-42-60	M024BI0150-42-85	M024BI0115-42-93
Number of Poles	8	8	8	8
Number of Phases	3	3	3	3
Nominal Voltage (VDC)	24	24	24	24
Rated Speed (RPM)	4000	4200	4000	6300
Rated Torque (mN · m)	20	56	150	115
Rated Power (W)	8.4	25	62	76
Peak Torque (mN · m)	60	170	450	350
Peak Current (A)	1.7	4.4	11.4	11.8
Resistance (ohms)	5.9	1.6	0.71	0.325
Inductance (mH)	5.1	1.94	0.86	0.36
Torque Constant (mN · m/A)	39.4	40.6	40.1	30.3
Back EMF (V/KRPM)	2.95	3.04	3.0	2.27
Rotor Inertia (g · cm ²)	15.6	33	84	94
Body Length (mm)	30	60	85	93
Weight (kg)	0.25	0.4	0.7	0.8

42 mm S Series BLDC Motor

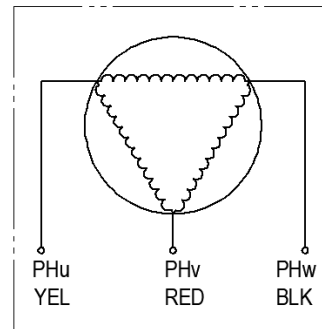


Item	General Specifications
Winding type	Delta
Hall Effect Angle	120° Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	28N (20mm from the flange)
Max. axial force	10N

Wiring Diagram

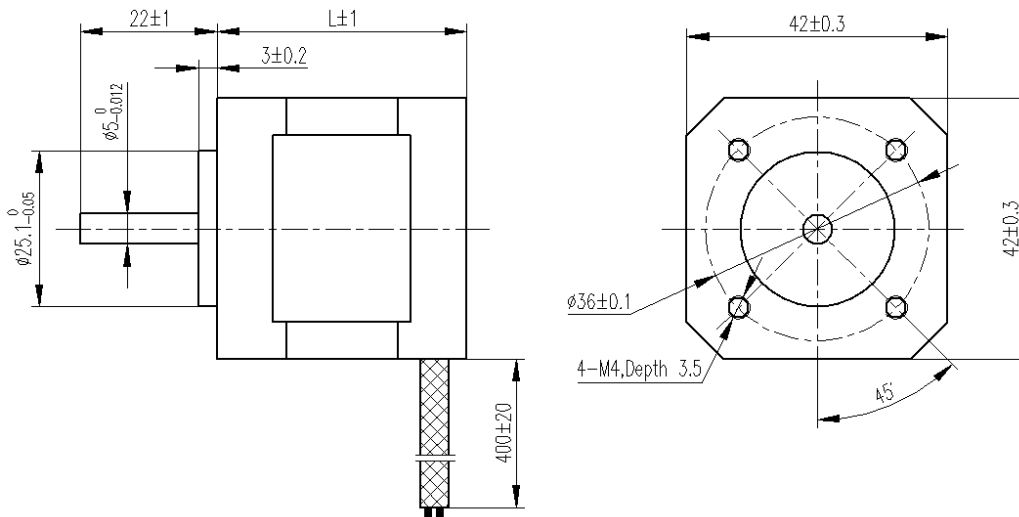


Hall sensor cable
Note: hall sensor power supply voltage +5~24VDC



Motor wiring cable

Dimensions



42 mm S Series BLDC Motor

Specification

Type	M024BI0075-42-41	M024BI0150-42-61	M024BI0220-42-81	M024BI0300-42-101
Number of Poles	8	8	8	8
Number of Phases	3	3	3	3
Nominal Voltage (VDC)	24	24	24	24
Rated Speed (RPM)	4000	4000	4000	4000
Rated Torque (mN · m)	75	150	220	300
Rated Power (W)	26	52.5	77.5	105
Peak Torque (mN · m)	190	380	560	750
Peak Current (A)	6	10.8	15.5	21.7
Resistance (ohms)	1.5	0.8	0.43	0.3
Inductance (mH)	2.1	1.2	0.71	0.5
Torque Constant (mN · m/A)	33	36	37	35
Back EMF (V/KRPM)	2.45	2.71	2.74	2.62
Rotor Inertia (g · cm ²)	24	48	72	96
Body Length (mm)	40.3	60.3	80.3	100.3
Weight (kg)	0.3	0.45	0.65	0.8

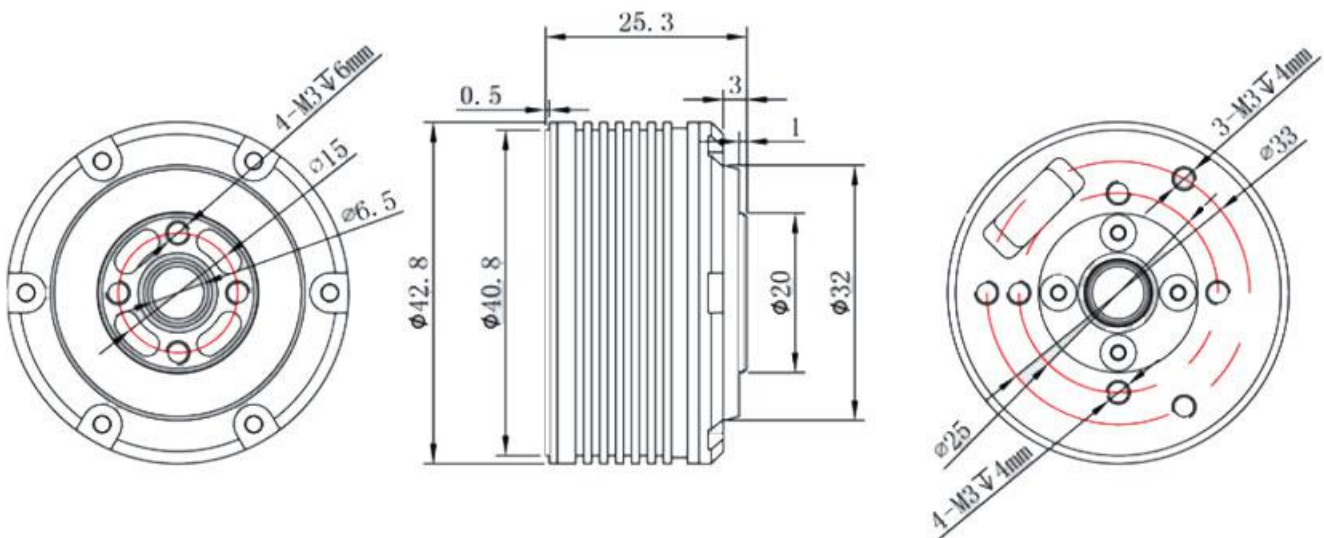
42mm Series BLDC Motor

General Specifications



Item	Specifications
Resistance/Line	1.53 Ω
Inductance/Line	0.33 μH
Speed constant	290 rpm/V
Torque constant	0.33 Nm/A
Rotor inertia	24.2 g/cm ²

Dimensions



42mm Series BLDC Motor

Technical Specifications

Item	M012BI0080-42-25
Number of Poles	7
Voltage (VDC)	12
Rated Current (A)	2.3
Rated Torque (N·m)	0.08
Rated speed (rpm)	2200
Max. no-load speed(rpm)	3480
Peak Torque (N·m)	0.28
Peak Current (A)	8.5
Body Length (mm)	25
Weight (g)	83

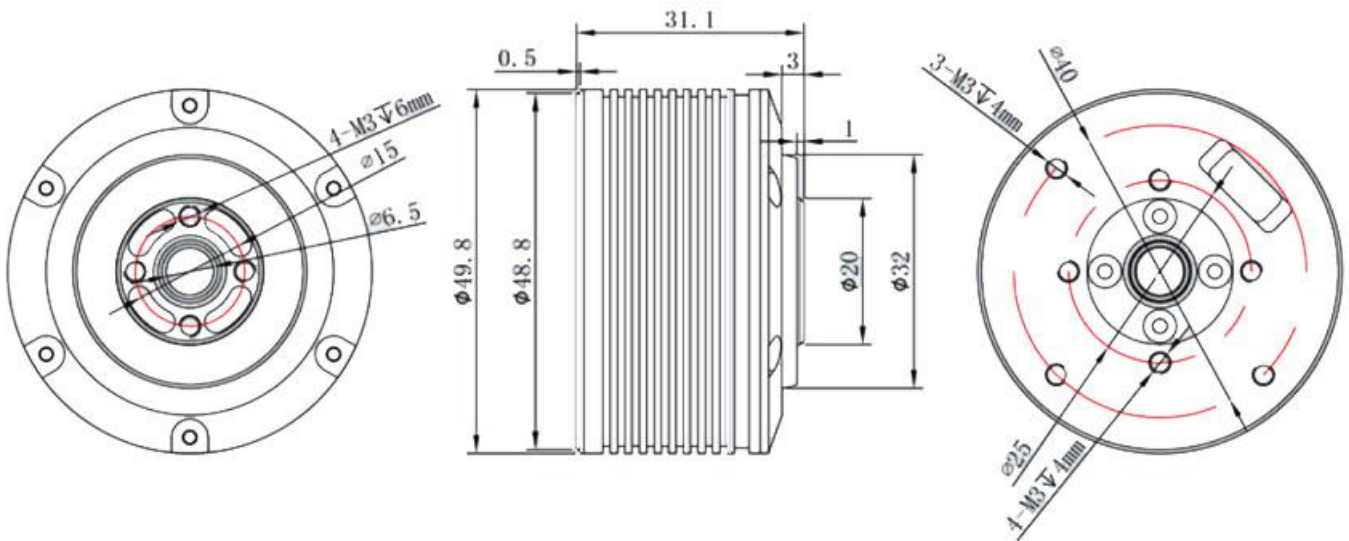
49mm Series BLDC Motor

General Specifications



Item	Specifications
Resistance/Line	1.53 Ω
Inductance/Line	2.1 μH
Speed constant	100 rpm/V
Torque constant	0.1 Nm/A
Rotor inertia	61 g/cm ²

Dimensions



49mm Series BLDC Motor

Technical Specifications

Item	M016BI0150-49-31
Number of Poles	7
Voltage (VDC)	16
Rated Current (A)	1.45
Rated Torque (N·m)	0.15
Rated speed (rpm)	900
Max. no-load speed(rpm)	1500
Peak Torque (N·m)	0.46
Peak Current (A)	4.5
Body Length (mm)	31
Weight (g)	83

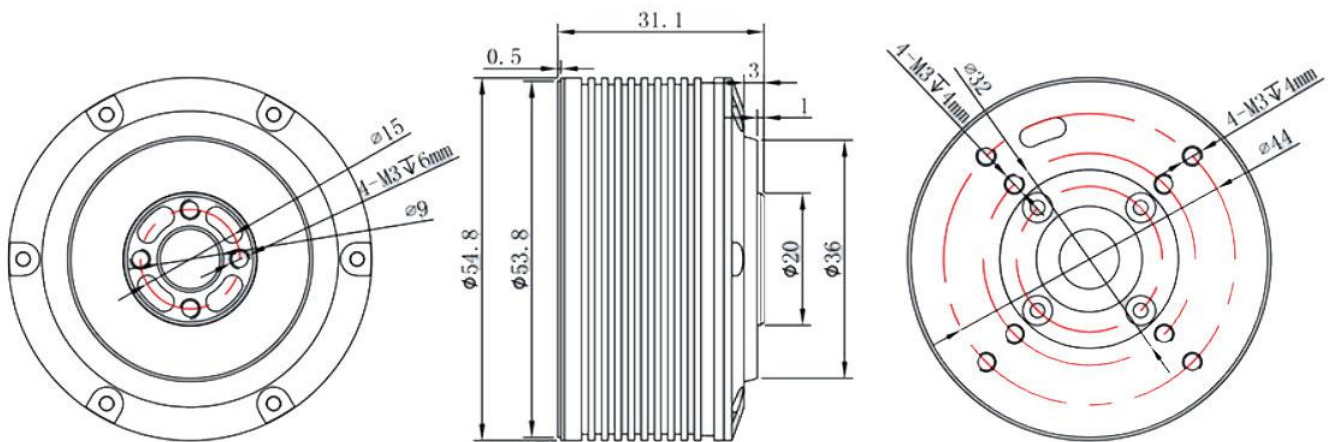
54mm Series BLDC Motor

General Specifications



Item	Specifications
Resistance/Line	3.6 Ω
Inductance/Line	1.8 μH
Speed constant	70 rpm/V
Torque constant	0.14 Nm/A
Rotor inertia	74 g/cm ²

Dimensions



54mm Series BLDC Motor

Technical Specifications

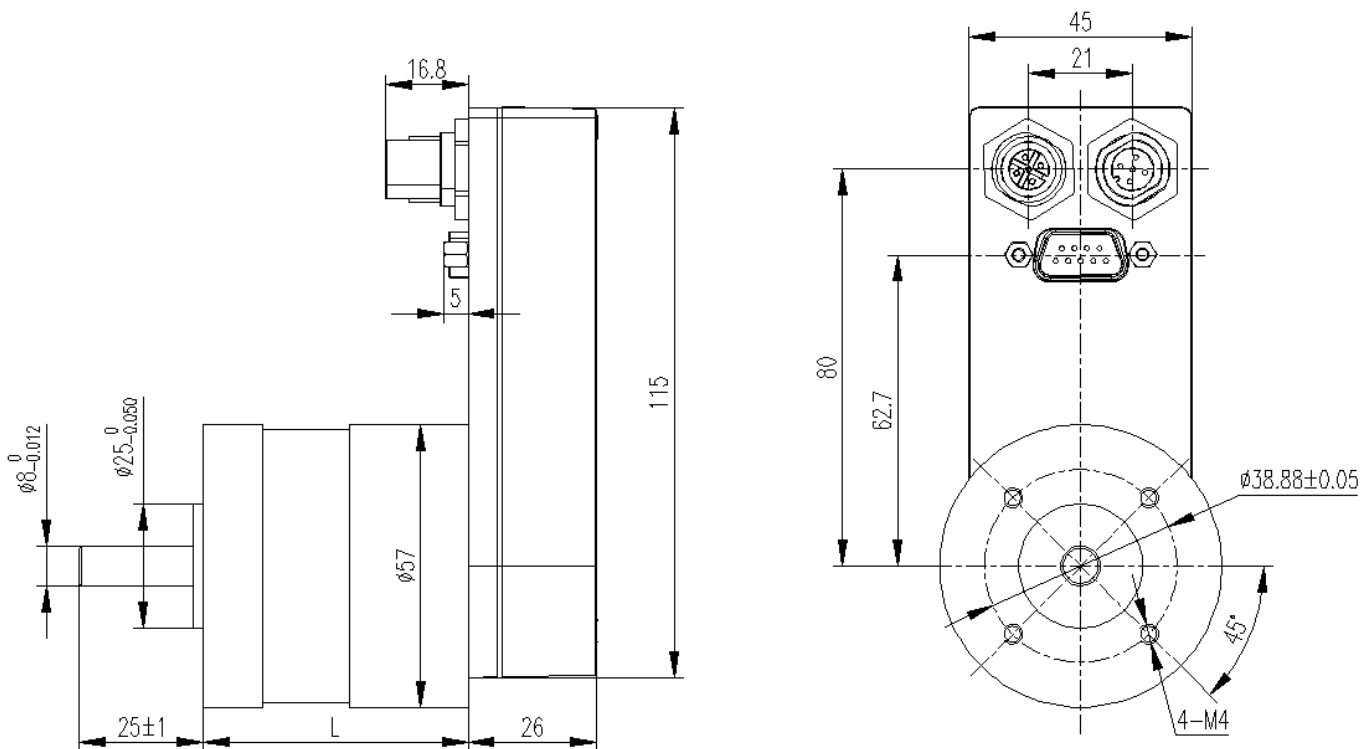
Item	M016BI0250-54-31
Number of Poles	14
Voltage (VDC)	16
Rated Current (A)	1.65
Rated Torque (N·m)	0.25
Rated speed (rpm)	600
Max. no-load speed(rpm)	1050
Peak Torque (N·m)	0.73
Peak Current (A)	5
Body Length (mm)	31
Weight (g)	183

57 mm D Series BLDC Motor



1. Compact EC motor units for speed, position and interpolation applications
2. Sinusoidal commutation with field-oriented control (FOC)
3. CANopen fieldbus, electrically insulated
4. Integrated brake chopper
5. Integrated single-turn absolute encoder
6. Optional multi-turn absolute encoder
7. High accuracy of speed and position control loops
8. Full torque at 0 speed
9. Emergency Stop
10. CAN-connectors in T-configuration
11. High quality planetary gear as an option (gears can be mounted directly on gear shaft)
12. Separate power supplies for logic and power unit

Dimensions



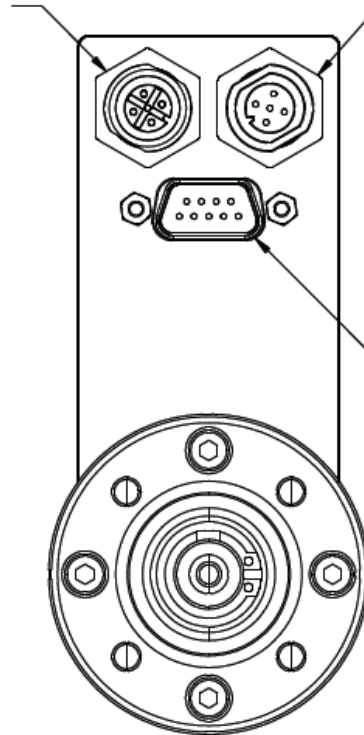
57 mm D Series BLDC Motor

Busstecker CAN
Rundsteckverbinder M12x1
5 polig Buchse

*Bus connector CAN
5 pin female M12x1*

Busstecker CAN
Rundsteckverbinder M12x1
5 polig Stift

*Bus connector CAN
5 pin male M12x1*



Versorgung
I/O Schnittstelle
D-Sub 9 polig Stift

*Power
I/O interface connector
9 pin male D-Sub*

Pin Assignment

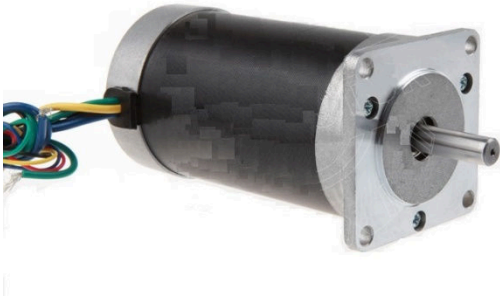
Power supply	Bus Interface(X1,X2)
1. Reference Input	1. Shield
2. STO-A (Safety stop 1)	2. -
3. POS-L (jog input, limit switch)	3. CAN-GND
4. POS-R (jog input, limit switch)	4. CAN-H
5. STO-B (Safety stop 2)*	5. CAN-L
6. Ground (GND)	
7. U-Bat (AME)*	
8. +24V Logic	
9. +24V DC-Link	

57 mm D Series BLDC Motor

Specification

Type	M024BI0200-57D-80	M024BI0400-57D-100
Number of Poles	6	6
Commutation	Sinus(FOC)/Sinusoidal(FOC)	Sinus(FOC)/Sinusoidal(FOC)
Voltage Logic (VDC)	24	24
Voltage DC-link (VDC)	24	24
Rated Current (A)	4.4	8.3
Rated Power (W)	83	167
Rated Velocity (rpm)	4000	4000
Maximum Current (A)	8.6	10.0*
Maximum Velocity (rpm)	4500	4500
Rated torque (N·cm)	20.0	40.0
Maximum torque (N·cm)	60.0	120.0
Torque Constant (N·cm/A)	7.4	7.7
Rotor Inertia (g·cm ²)	100	200
Encoder Resolution (Inkr./360°)	4.096	4.096
Digital Input/Output	3/0	3/0
CANopen profile	CiA301/Cia402	CiA301/Cia402
Operating Temperature Range (°C)	-5~+60	-5~+60
Motor Body Length (mm)	53.6	73.6
Weight (kg)	0.7	0.9
Protection Class	IP54	IP54

57mm R Series BLDC Motor

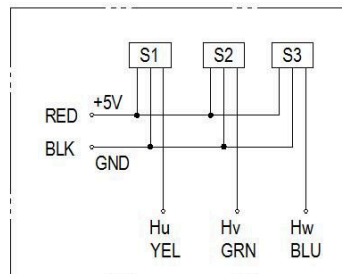


Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	700VAC for one minute
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N

Configuration

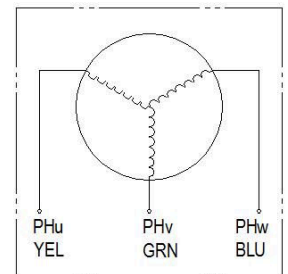
- Encoder
- Brakes
- Shaft Modification and double shaft
- Other winding voltage possible
- Other Types available with special length

Wiring Diagram



Hall sensor cable

Note: hall sensor power supply voltage +5~+20VDC



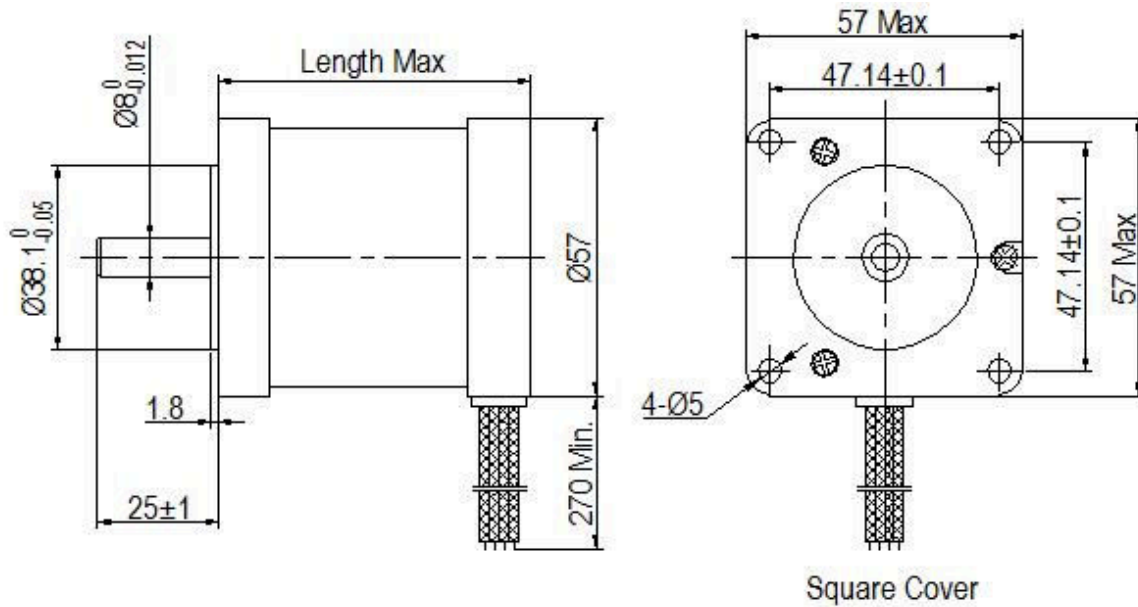
Motor wiring cable

Specification

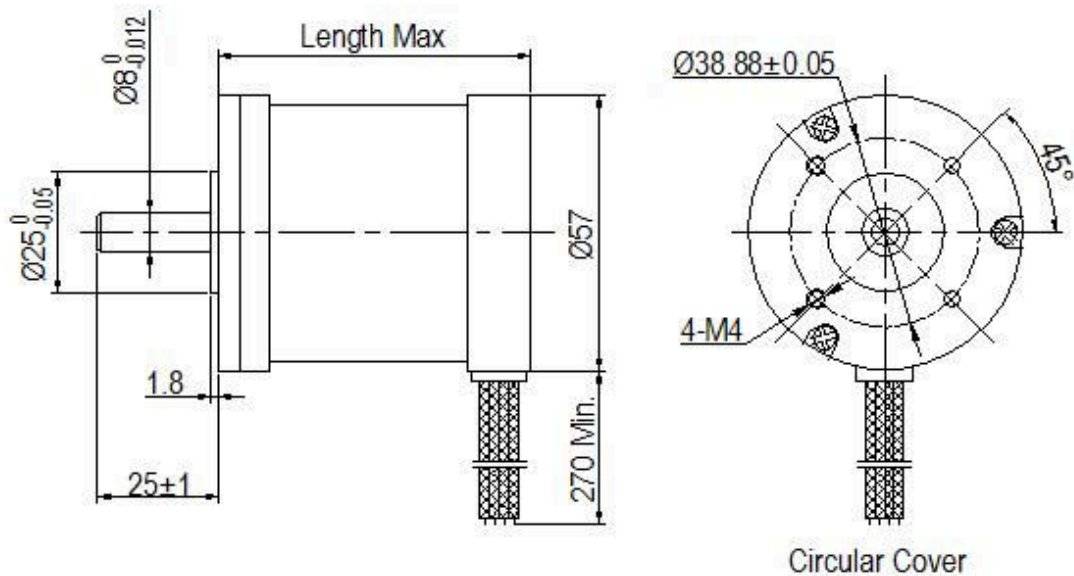
Model	M024BI0057 -57R-42	M024BI0110 -57R-47	M024BI0165 -57R-57	M024BI0220 -57R-67	M024BI0330 -57R-87	M024BI0440 -57R-107
Number of Poles	4	4	4	4	4	4
Number of Phases	3	3	3	3	3	3
Nominal Voltage (VDC)	24	24	24	24	24	24
Rated Speed (RPM)	2500	3000	3000	3000	3000	3000
Continuous Torque (N·m)	0.057	0.11	0.165	0.22	0.33	0.44
Rated Current (A)	1.2	2.3	3.0	4.4	6.6	8.6
Output Power (W)	15	34	52	69	103	138
Peak Torque (N·m)	0.18	0.38	0.58	0.8	1.2	1.6
Peak Current (A)	3.6	6.8	9.0	13.2	19.8	25.8
Torque Constant (N·m/A)	0.074	0.06	0.061	0.062	0.062	0.063
Back EMF (V/KRPM)	7.75	6.3	6.4	6.5	6.5	6.6
Rotor Inertia (g·cm ²)	32	42	58	72	106	140
Body Length (mm)	41.5	46.5	56.5	66.5	86.5	106.5
Weight (kg)	0.34	0.42	0.55	0.66	0.89	1.15

57mm R Series BLDC Motor

Dimensions



Square Cover

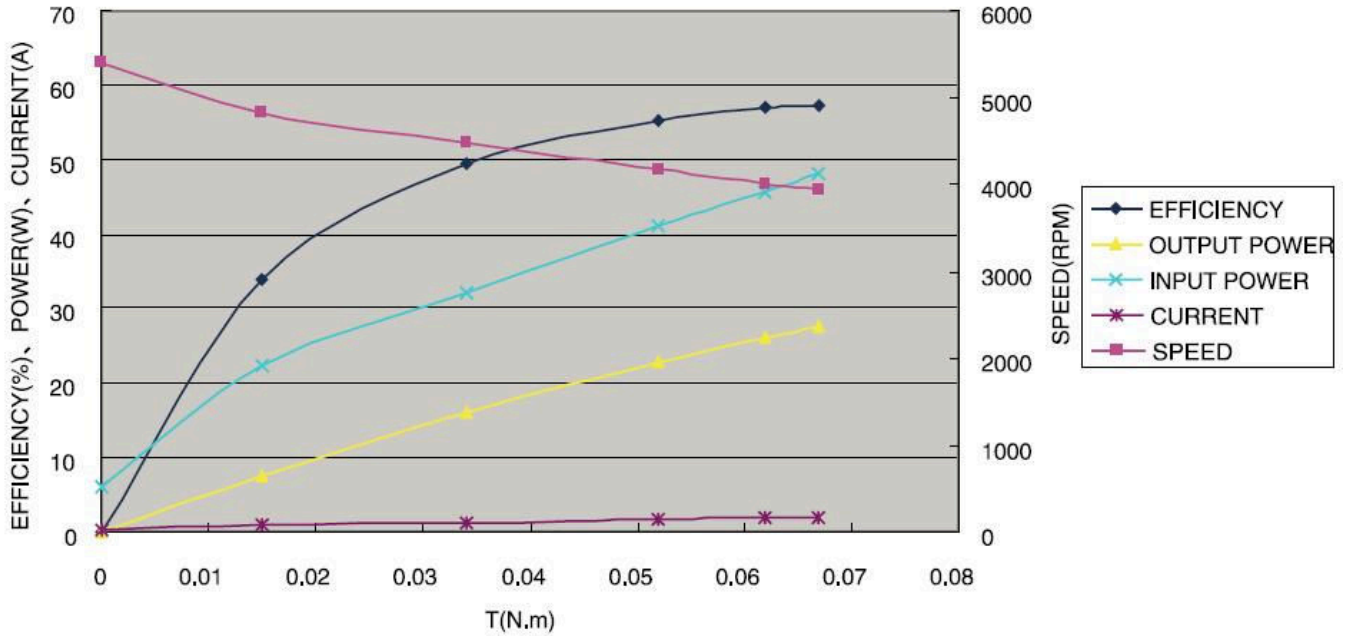


Circular Cover

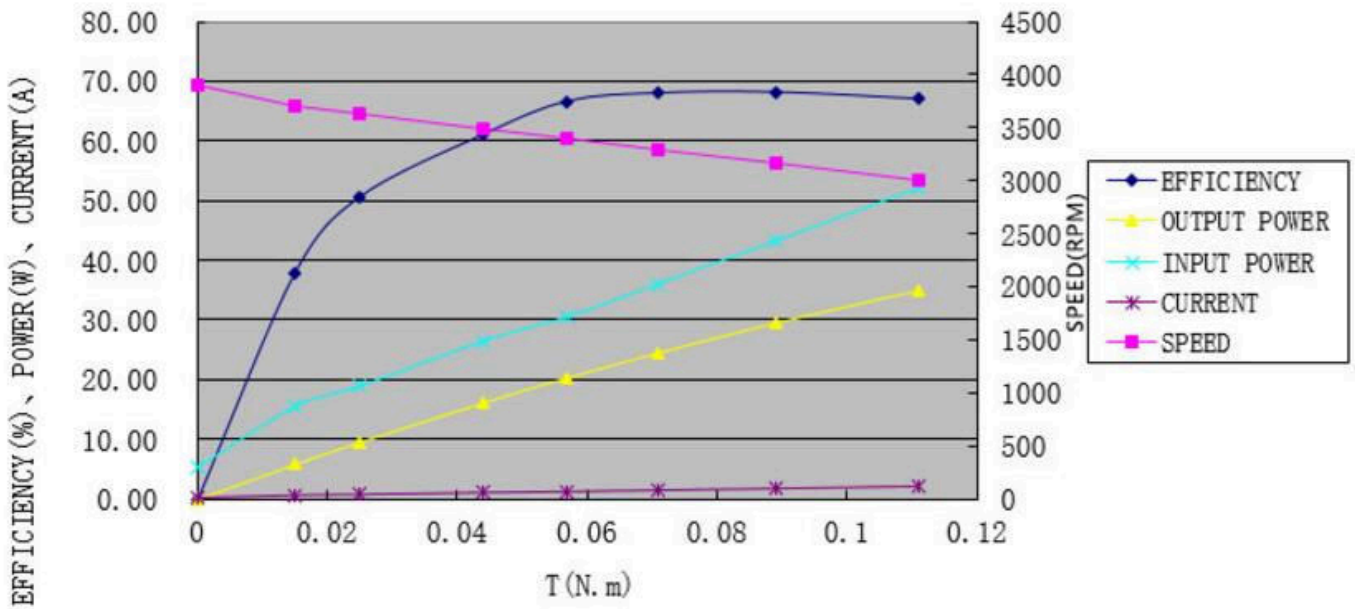
57mm R Series BLDC Motor

Performance Curve

M024BI0057-57R-42, 24VDC, 15W

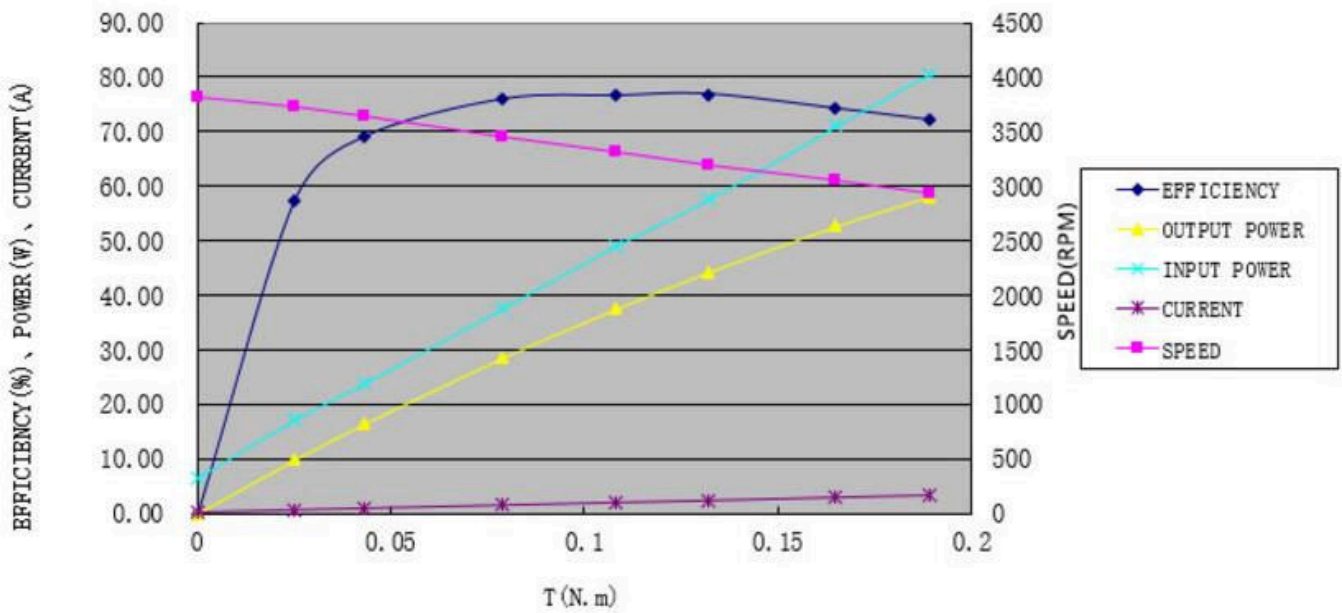


M024BI0110-57R-47, 24VDC, 34W

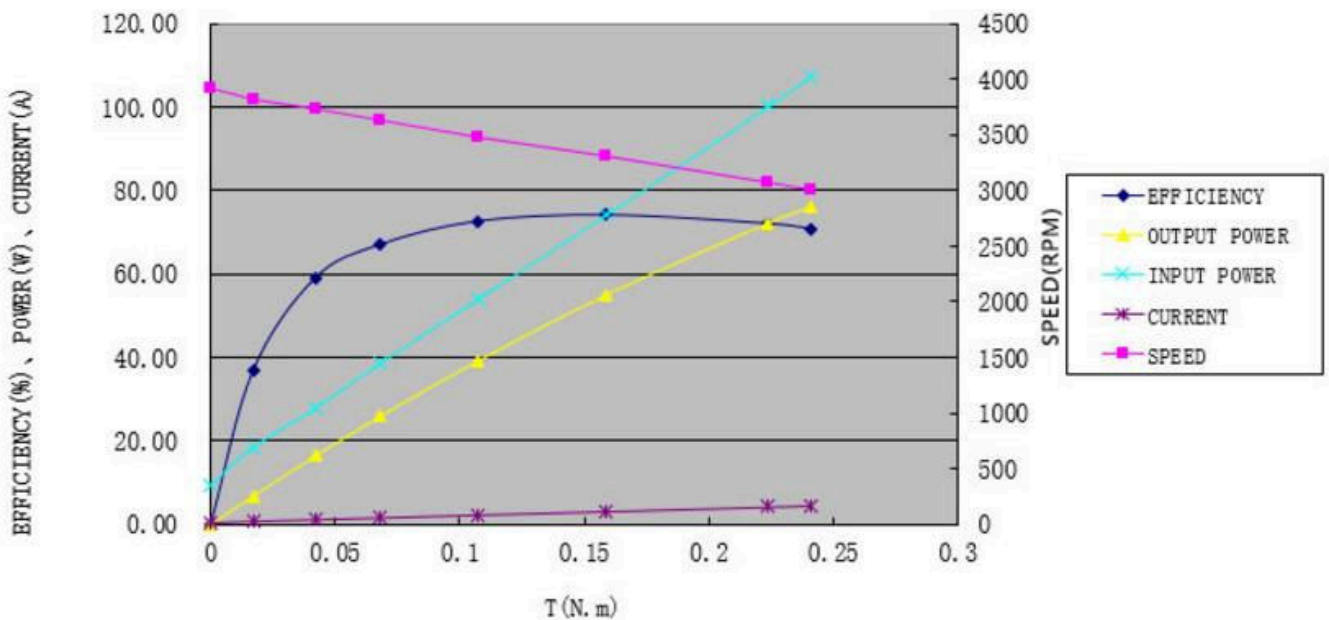


57mm R Series BLDC Motor

M024BI0165-57R-57, 24VDC, 52W

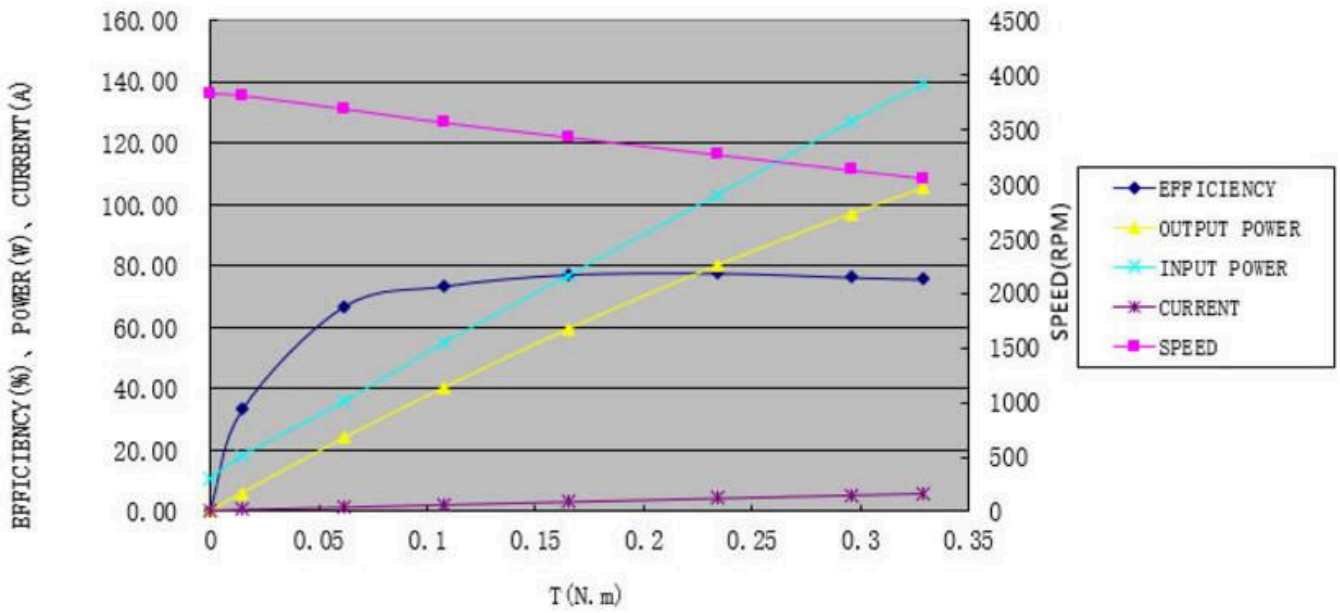


M024BI0220-57R-67, 24VDC, 69W

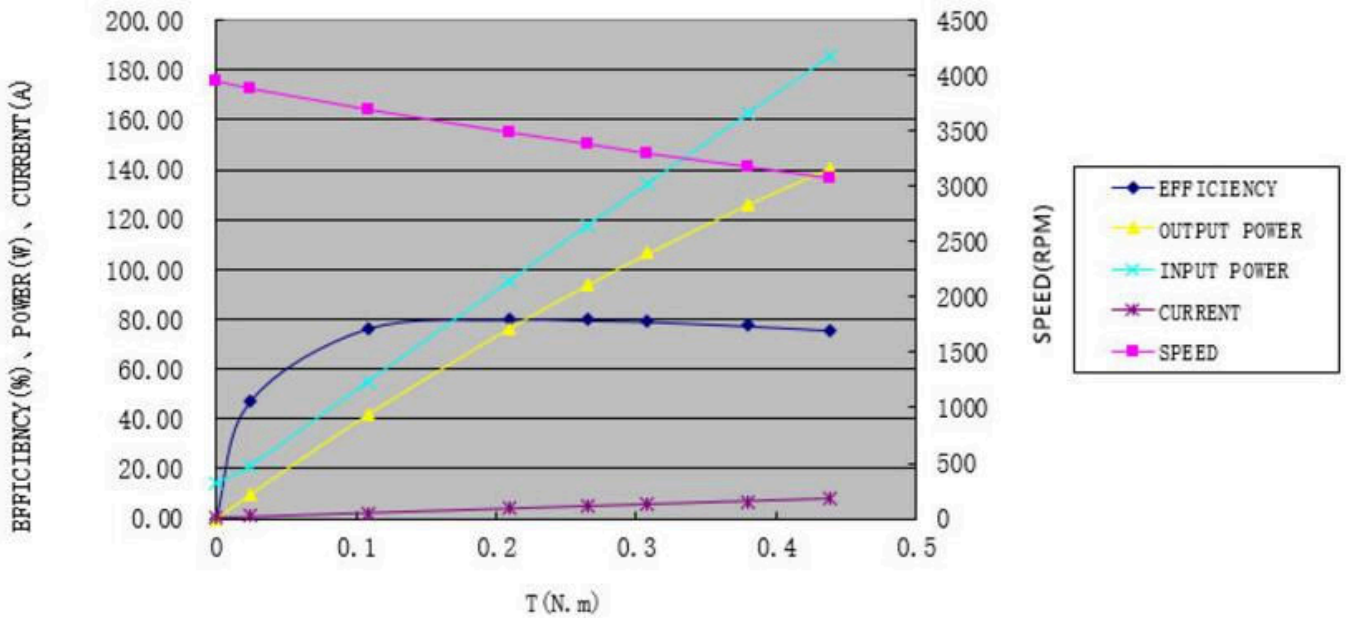


57mm R Series BLDC Motor

M024BI0330-57R-87, 24VDC, 103W



M024BI0440-57R-107, 24VDC, 138W

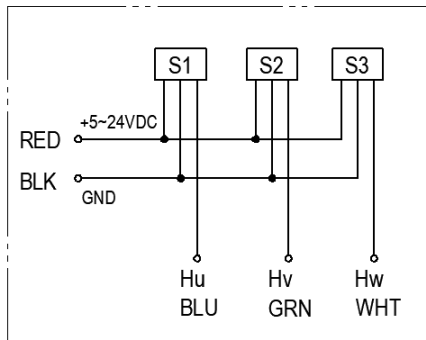


57 mm R Series BLDC Motor

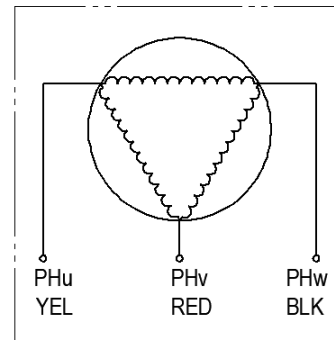


Item	General Specifications
Winding type	Delta
Hall Effect Angle	120° Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	max. 0.025 (460g-load)
Shaft Axial Play	max. 0.025 (4000g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N

Wiring Diagram

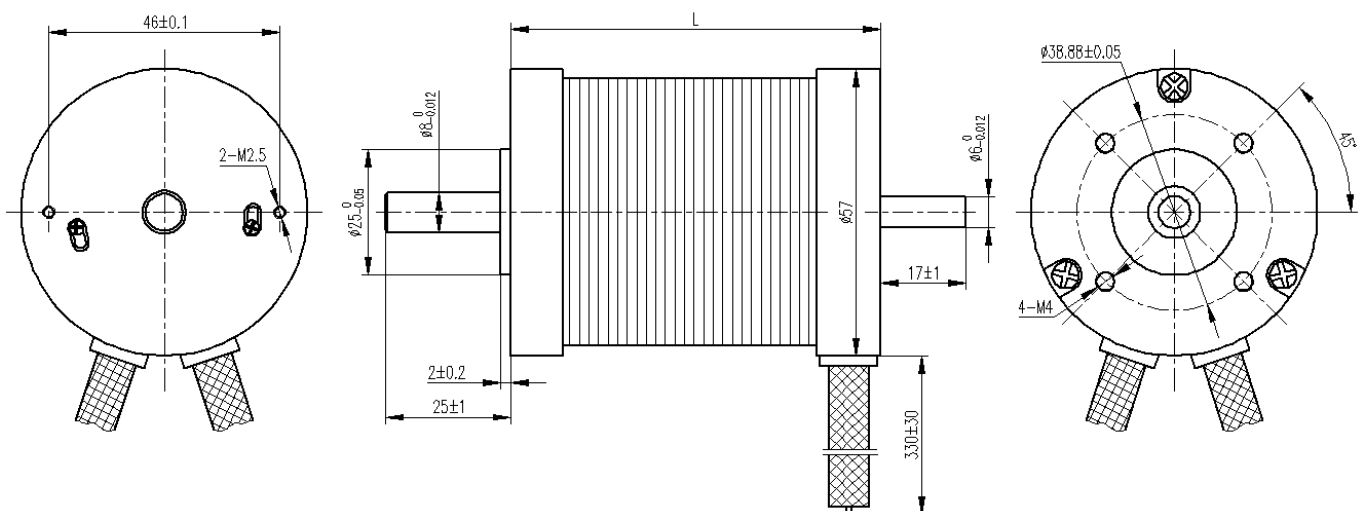


Hall sensor cable
Note: hall sensor power supply voltage +5~24VDC



Motor wiring cable

Dimensions



57 mm R Series BLDC Motor

Specification

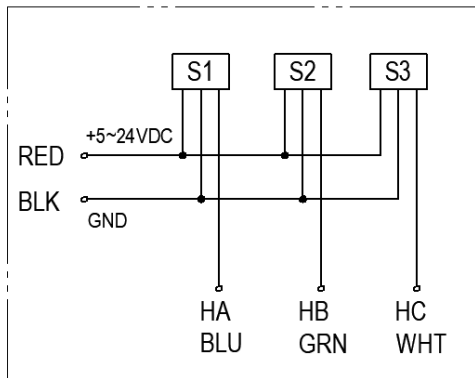
Type	M036BJ0055-57- 44	M036BJ0110-57- 54	M036BJ0220- 57-74	M036BJ0330-57- 94	M036BJ0440-57- 114
Number of Poles	4	4	4	4	4
Number of Phases	3	3	3	3	3
Nominal Voltage (VDC)	36	36	36	36	36
Rated Speed (RPM)	4000	4000	4000	4000	4000
Rated Torque (mN·m)	55	110	220	330	440
Rated Power (W)	23	46	99	138	184
Peak Torque (mN·m)	160	390	700	1000	1270
Peak Current (A)	3.5	6.8	12	16	21
Resistance (ohms)	4.3	1.63	0.64	0.45	0.33
Inductance (mH)	10	4.4	2.0	1.5	0.95
Torque Constant (mN·m/A)	52	61	60	65	62
Back EMF (V/KRPM)	3.8	4.5	4.45	4.8	4.6
Rotor Inertia (g·cm ²)	30	75	119	173	230
Body Length (mm)	43.6	53.6	73.6	93.6	113.6
Weight (kg)	0.33	0.44	0.72	0.95	1.2

57 mm R Series BLDC Motor



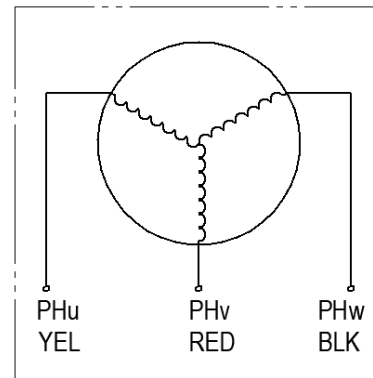
Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	max. 0.025 (460g-load)
Shaft Axial Play	max. 0.025 (4000g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N

Wiring Diagram



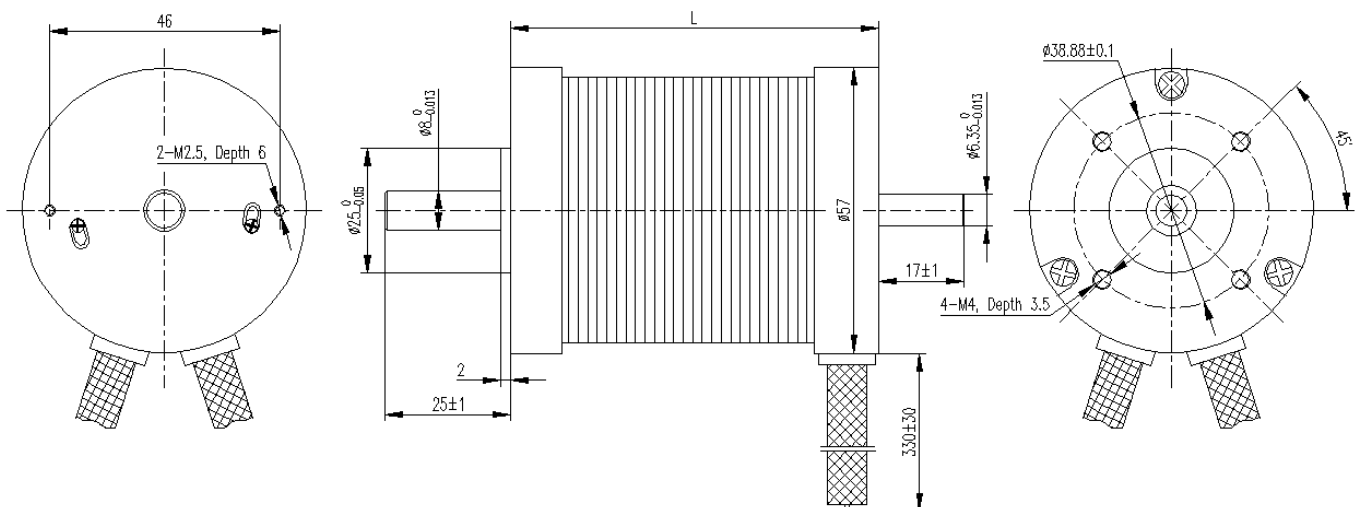
Hall sensor cable

Note: hall sensor power supply voltage +5~24VDC



Motor wiring cable

Dimensions



57 mm R Series BLDC Motor



Specification

Type	M036BI0200-57R-54
Number of Poles	6
Number of Phases	3
Nominal Voltage (VDC)	36
Rated Speed (RPM)	4000
Rated Torque (mN·m)	200
Rated Power (W)	90
Peak Torque (mN·m)	640
Peak Current (A)	11
Resistance (ohms)	0.87
Inductance (mH)	1.0
Torque Constant (mN·m/A)	57
Back EMF (V/KRPM)	4.9
Rotor Inertia (g·cm ²)	75
Body Length (mm)	53.6
Weight (kg)	0.72

57mm S Series BLDC Motor

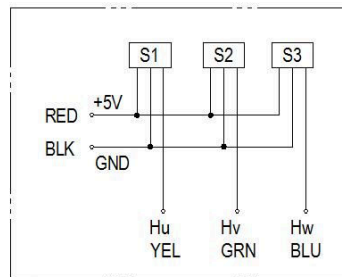


Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	700VAC for one minute
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N

Configuration

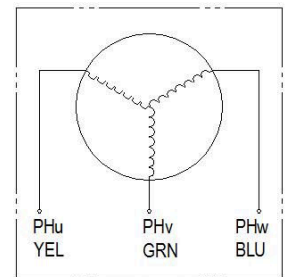
- Encoder
- Brakes
- Shaft Modification and double shaft
- Other winding voltage possible
- Other Types available with special length

Wiring Diagram



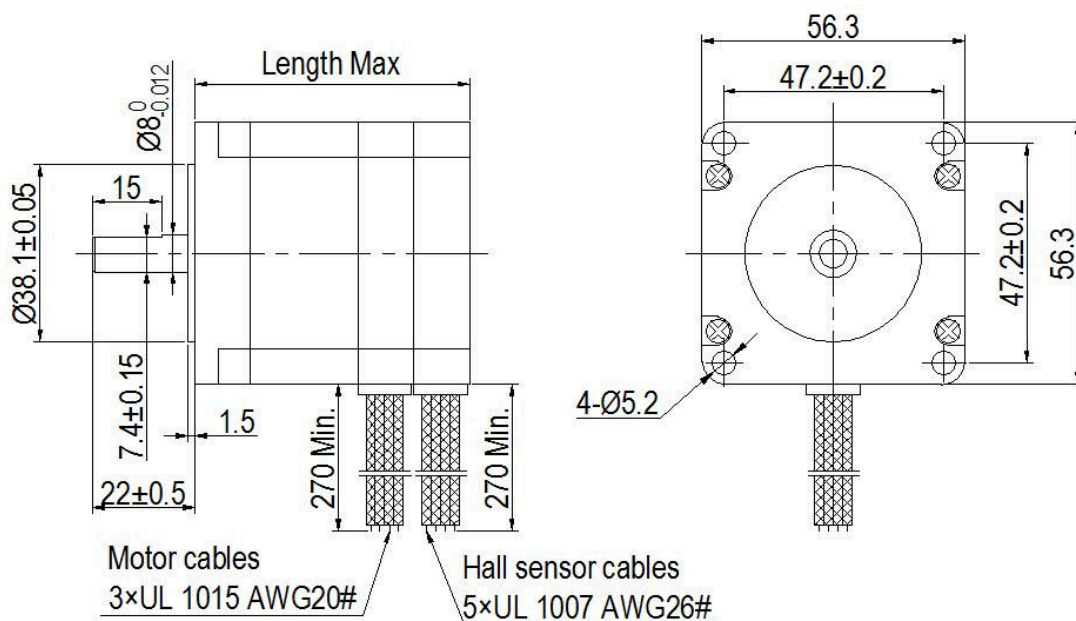
Hall sensor cable

Note: hall sensor power supply voltage +5~+20VDC



Motor wiring cable

Dimensions



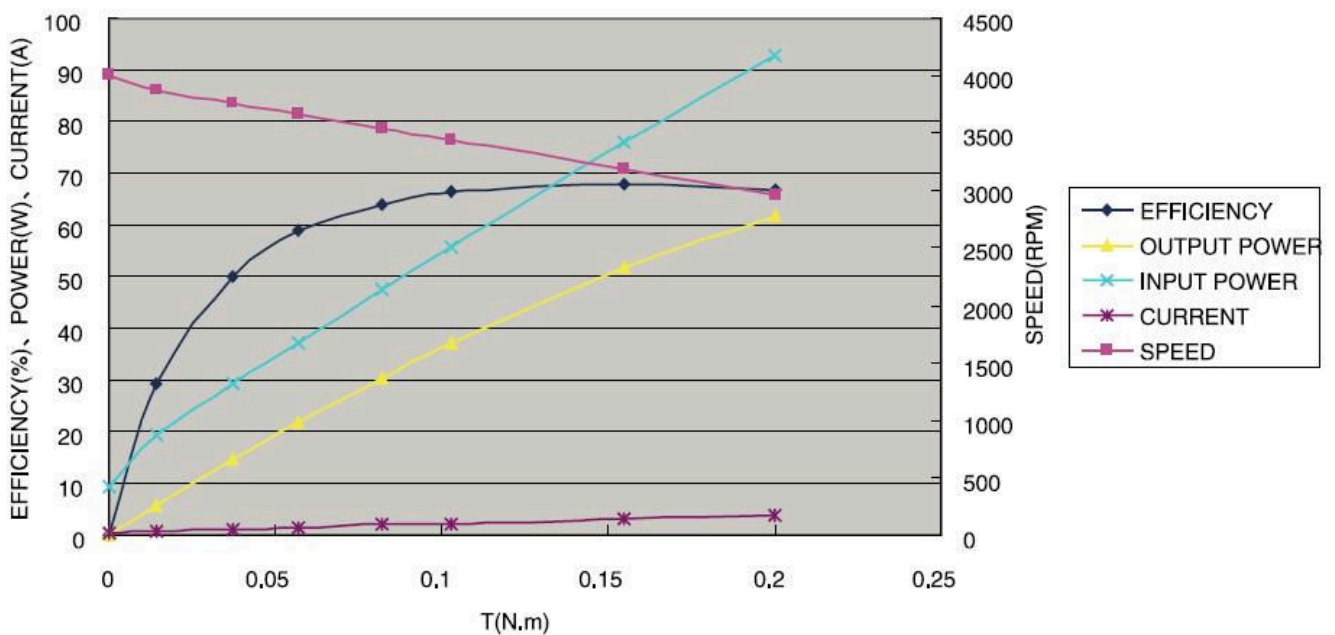
57mm S Series BLDC Motor

Specification

Model	M024BI0200-57S-59	M024BI0400-57S-80	M024BI0600-57S-101
Number of Poles	8	8	8
Number of Phases	3	3	3
Nominal Voltage (VDC)	24	24	24
Rated Speed (RPM)	3000	3000	3000
Continuous Torque (N · m)	0.2	0.4	0.6
Rated Current (A)	4.0	7.8	12.0
Output Power (W)	63	125	188
Peak Torque (N · m)	0.6	1.2	1.8
Peak Current (A)	12	23.5	36
Torque Constant (N · m/A)	0.065	0.066	0.066
Back EMF (V/KRPM)	6.23	6.3	6.3
Rotor Inertia (g · cm ²)	120	170	220
Body Length (mm)	59	80	101
Weight (kg)	0.59	0.92	1.24

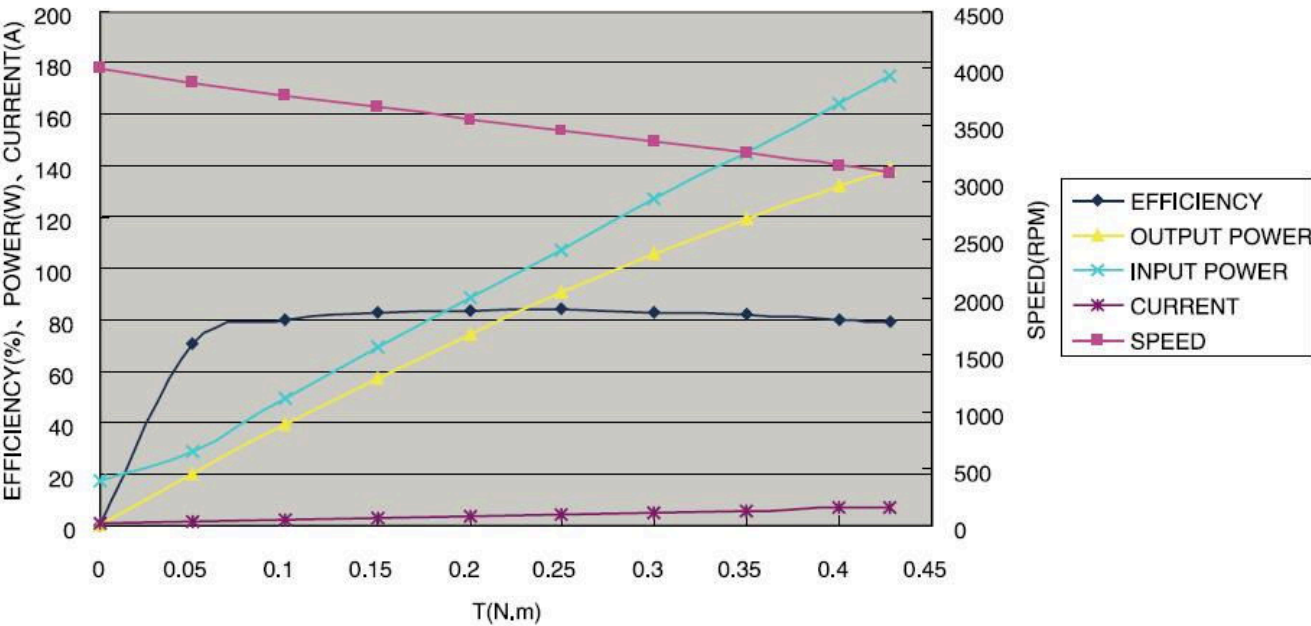
Performance Curve

M024BI0200-57S-59, 24VDC, 63W

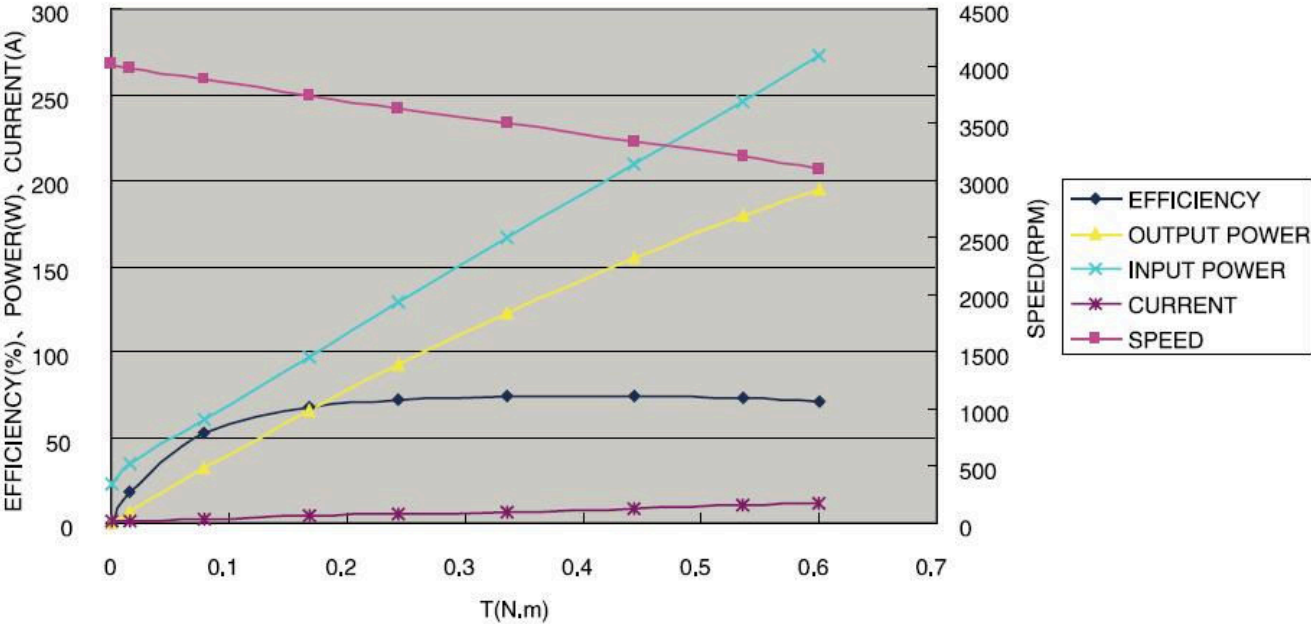


57mm S Series BLDC Motor

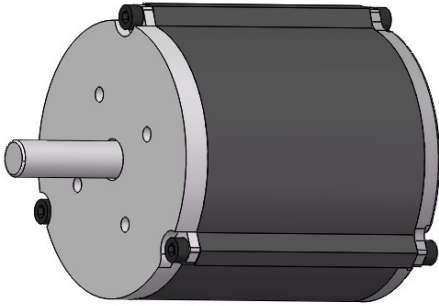
M024BI0400-57S-80, 24VDC, 125W



M024BI0600-57S-101, 24VDC, 188W

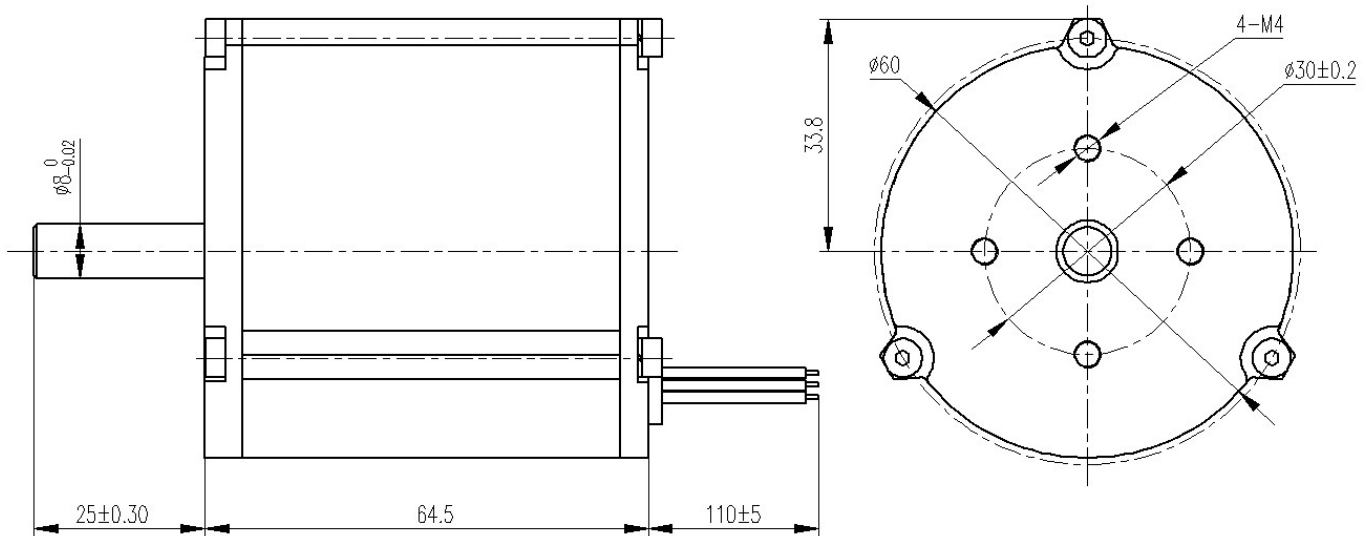


60 mm R Series BLDC Motor



Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	F
Ambient Temperature Range	-20°C ~ +50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	max. 0.025 (4N-load)
Shaft Axial Play	max. 0.025 (4N-load)
Max. radial force	75N (20mm from the flange)
Max. axial force	15N

Dimensions:



60 mm R Series BLDC Motor

Specification

Type	M024BI0200-60R-65
Number of Poles	10
Number of Phases	3
Nominal Voltage (VDC)	24
Rated Speed (RPM)	900
Rated Torque (mN · m)	550
Rated Power (W)	55
Peak Torque (mN · m)	1000
Peak Current (A)	7.1
Resistance (ohms)	0.8
Inductance (mH)	1.6
Back EMF (V/KRPM)	18.8
Body Length (mm)	64.5
Weight (kg)	0.8

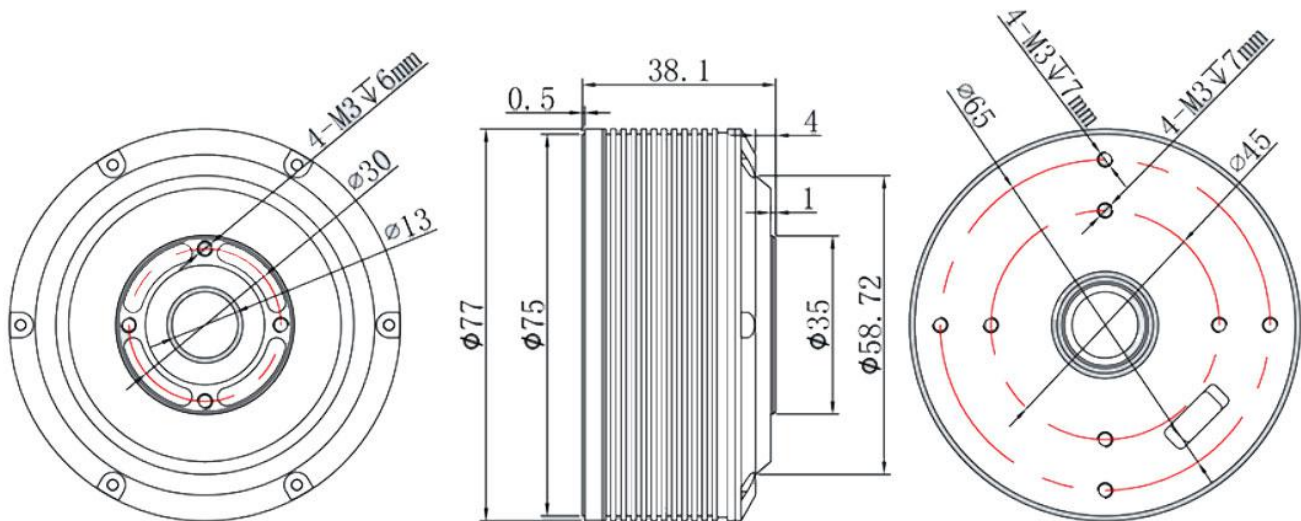
77mm Series BLDC Motor

General Specifications



Item	Specifications
Resistance/Line	1.1 Ω
Inductance/Line	0.9 μH
Speed constant	55 rpm/V
Torque constant	0.188 Nm/A
Rotor inertia	355 g/cm ²

Dimensions

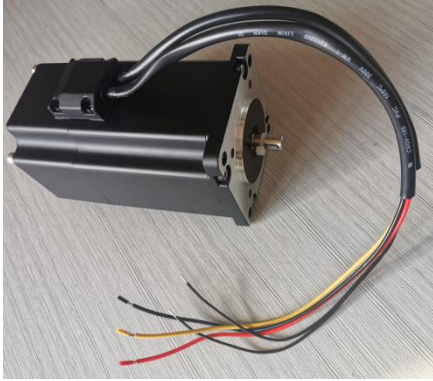


77mm Series BLDC Motor

Technical Specifications

Item	M024BI0600-77-38
Number of Poles	14
Voltage (VDC)	24
Rated Current (A)	3.1
Rated Torque (N·m)	0.6
Rated speed (rpm)	850
Max. no-load speed(rpm)	1150
Peak Torque (N·m)	1.75
Peak Current (A)	9.5
Body Length (mm)	38
Weight (g)	364

80mm S Series BLDC Motor

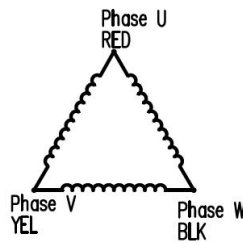


Item	General Specifications
Winding type	Delta
Hall Effect Angle	120° Electrical angle
Insulation Class	F
Ambient Temperature Range	-20°C~+40°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	1000VDC for one second
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	115N (10mm from the flange)
Max. axial force	45N

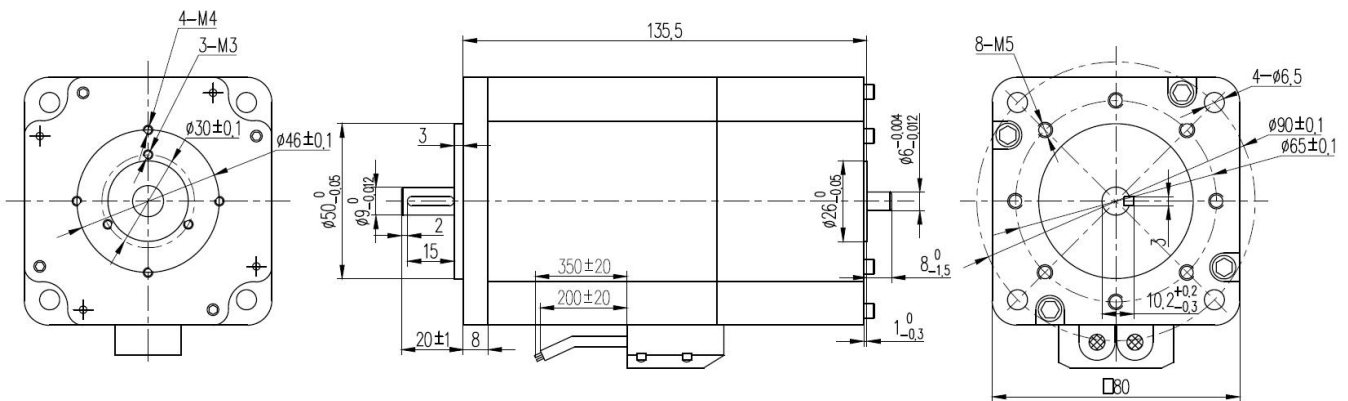
Configuration

- Encoder
- Brakes
- Shaft Modification and double shaft
- Other winding voltage possible
- Other Types available with special length

Wiring Diagram



Dimensions



80mm S Series BLDC Motor



Specification

Model	M048BI0700-80-136
Number of Poles	8
Number of Phases	3
Nominal Voltage (VDC)	48
Rated Speed (RPM)	4350
Continuous Torque (N · m)	0.7
Rated Current (A)	7
Output Power (W)	320
Peak Torque (N · m)	2.6
Peak Current (A)	26
Torque Constant (N · m/A)	0.1
Back EMF (V/KRPM)	6.1
Rotor Inertia (g · cm ²)	1000
Body Length (mm)	136
Weight (kg)	3.0

83mm S Series BLDC Motor

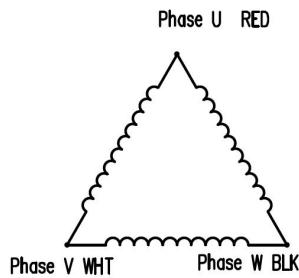


Item	General Specifications
Winding type	Delta
Hall Effect Angle	120° Electrical angle
Insulation Class	F
Ambient Temperature Range	-20°C~+40°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	600VDC for one second
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	392N (10mm from the flange)
Max. axial force	147N

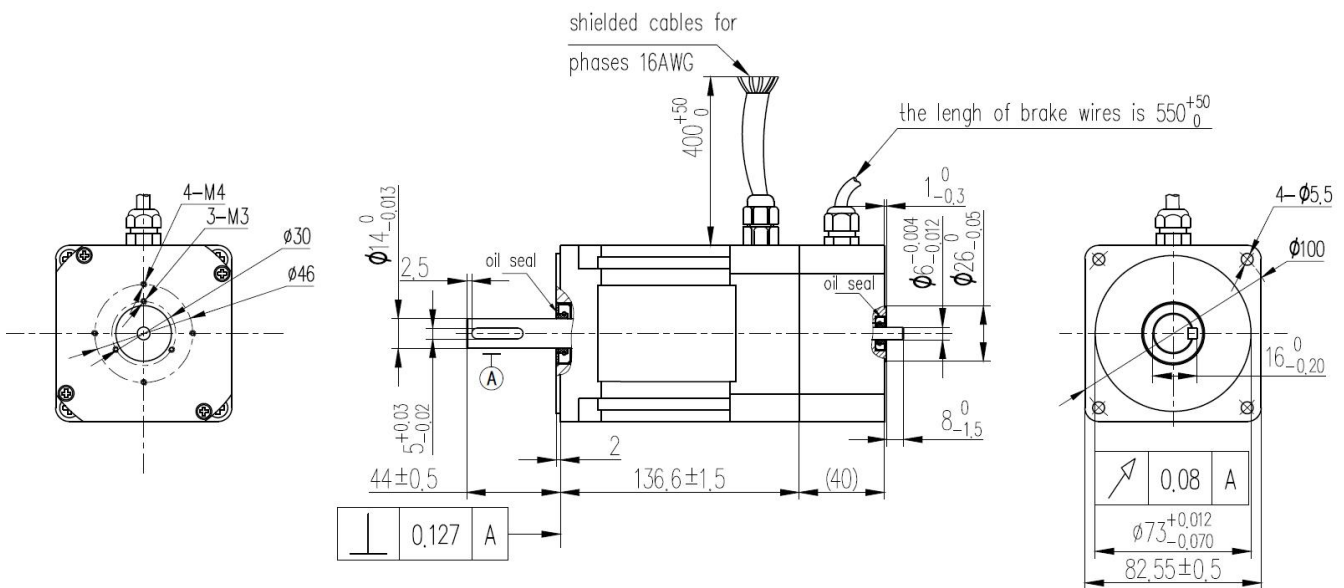
Configuration

- Encoder
- Brakes
- Shaft Modification and double shaft
- Other winding voltage possible
- Other Types available with special length

Wiring Diagram



Dimensions



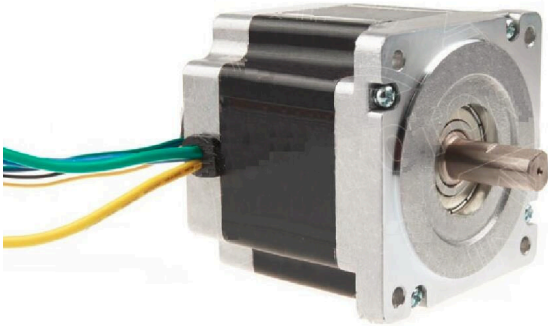
83mm S Series BLDC Motor



Specification

Model	M048BI2000-83-136
Number of Poles	8
Number of Phases	3
Nominal Voltage (VDC)	48
Rated Speed (RPM)	3000
Continuous Torque (N · m)	2.0
Rated Current (A)	17
Output Power (W)	630
Peak Torque (N · m)	6.0
Peak Current (A)	33
Torque Constant (N · m/A)	0.1
Back EMF (V/KRPM)	6.7
Body Length (mm)	136
IP class	IP53
Weight (kg)	5.0

86mm S Series BLDC Motor

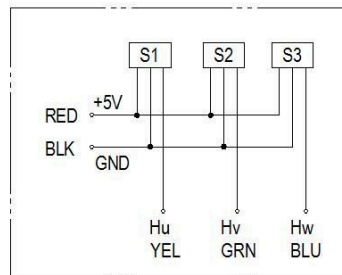


Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	B
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	700VAC for one minute
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N

Configuration

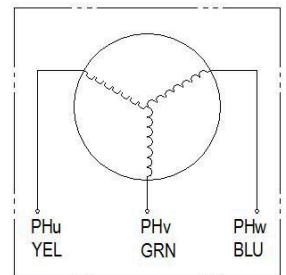
- Encoder
- Brakes
- Shaft Modification and double shaft
- Other winding voltage possible
- Other Types available with special length

Wiring Diagram



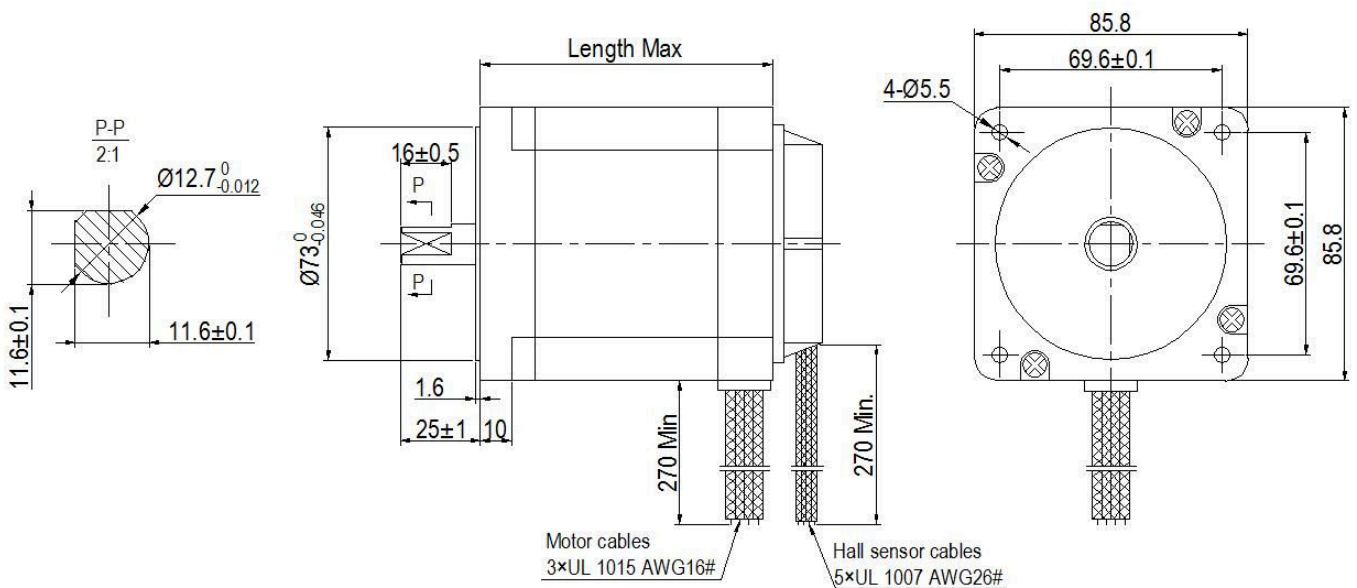
Hall sensor cable

Note: hall sensor power supply voltage +5~+20VDC



Motor wiring cable

Dimensions



86mm S Series BLDC Motor

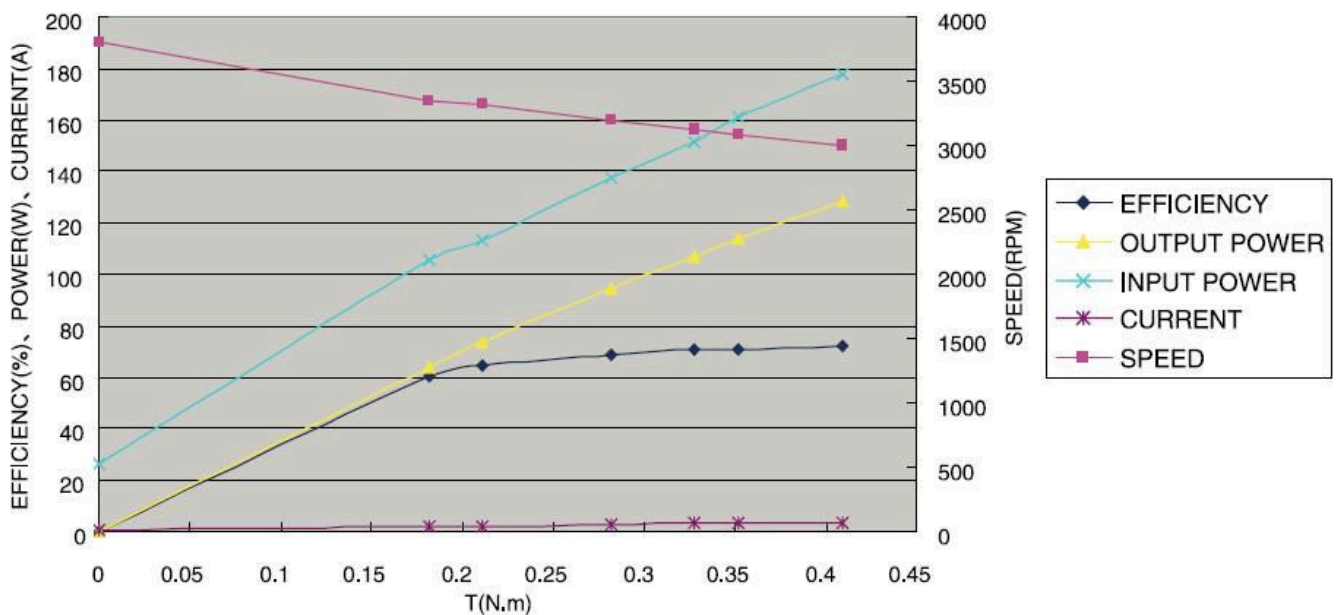


Specification

Model	M048BI0350-86S-57	M048BI0700-86S-67	M048BI1050-86S-81	M048BI1400-86S-94
Number of Poles	8	8	8	8
Number of Phases	3	3	3	3
Nominal Voltage (VDC)	48	48	48	48
Rated Speed (RPM)	3000	3000	3000	3000
Continuous Torque (N · m)	0.35	0.7	1.05	1.4
Rated Current (A)	3.9	6.6	9.6	14.0
Output Power (W)	110	220	330	440
Peak Torque (N · m)	1.05	2.1	3.2	4.2
Peak Current (A)	10.8	19.8	29.0	38.0
Torque Constant (N · m/A)	0.11	0.11	0.11	0.128
Back EMF (V/KRPM)	11.5	11.5	11.5	13.5
Rotor Inertia (g · cm ²)	350	650	950	1250
Body Length (mm)	57	67	81	94
Weight (kg)	1.1	1.75	2.2	2.75

Performance Curve

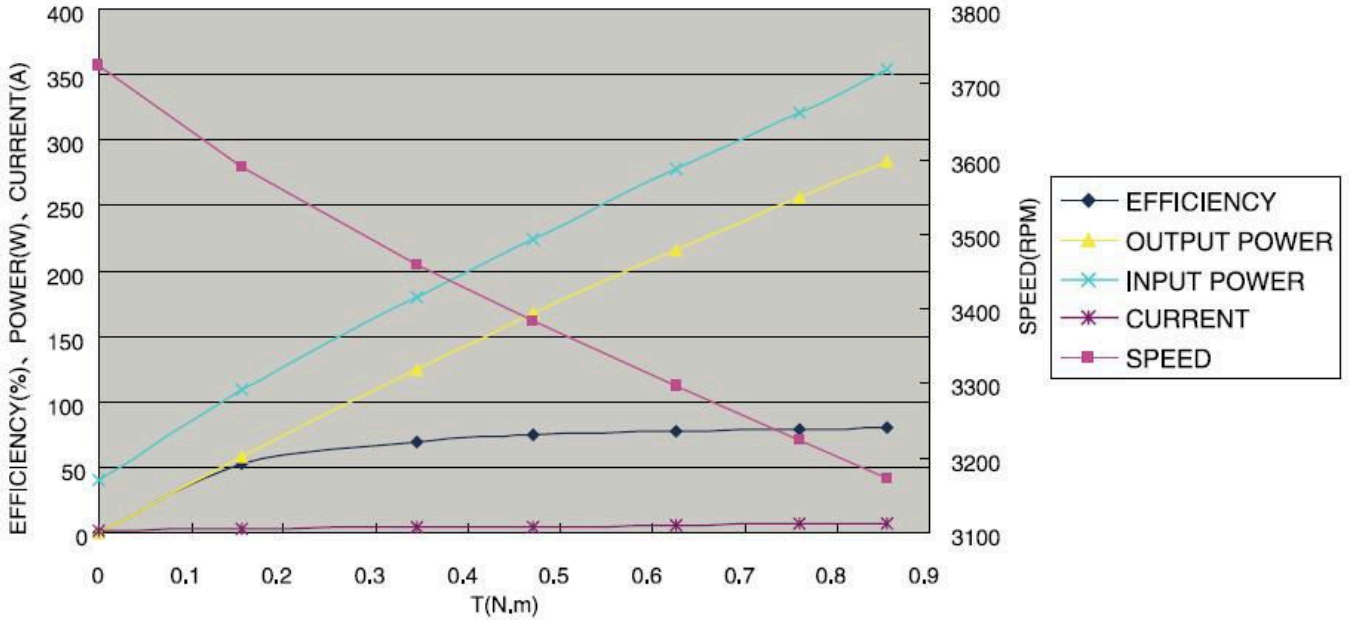
M048BI0350-86S-57, 48VDC, 110W



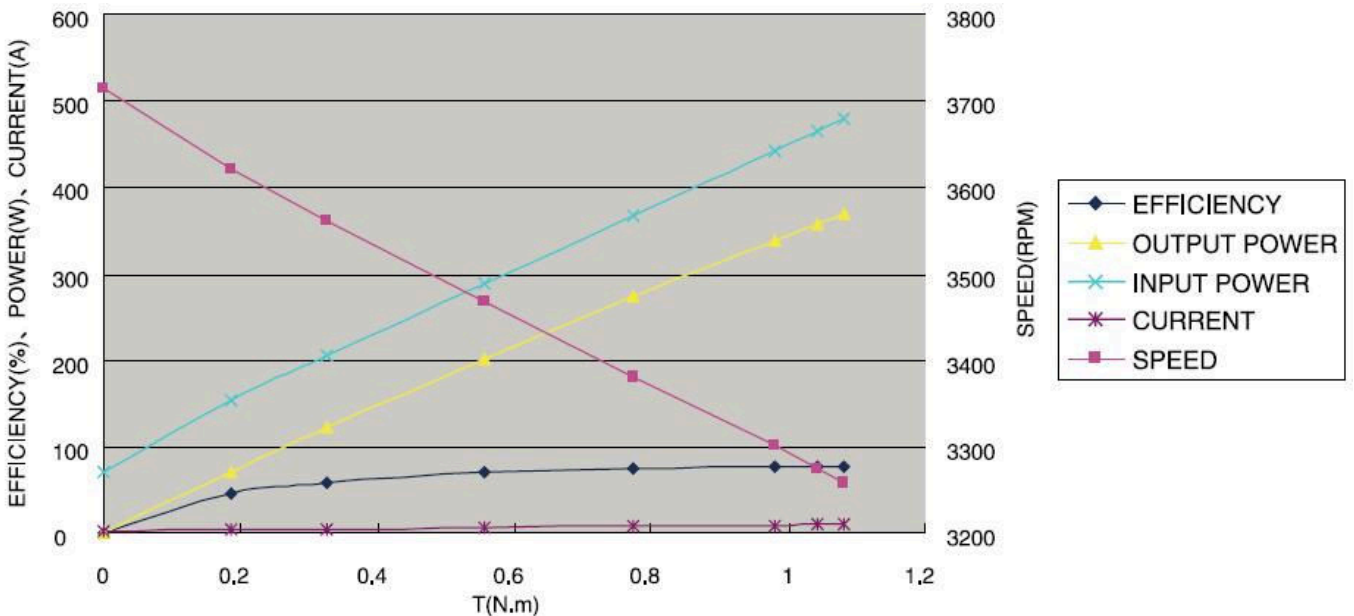
86mm S Series BLDC Motor



M048BI0700-86S-67, 48VDC, 220W



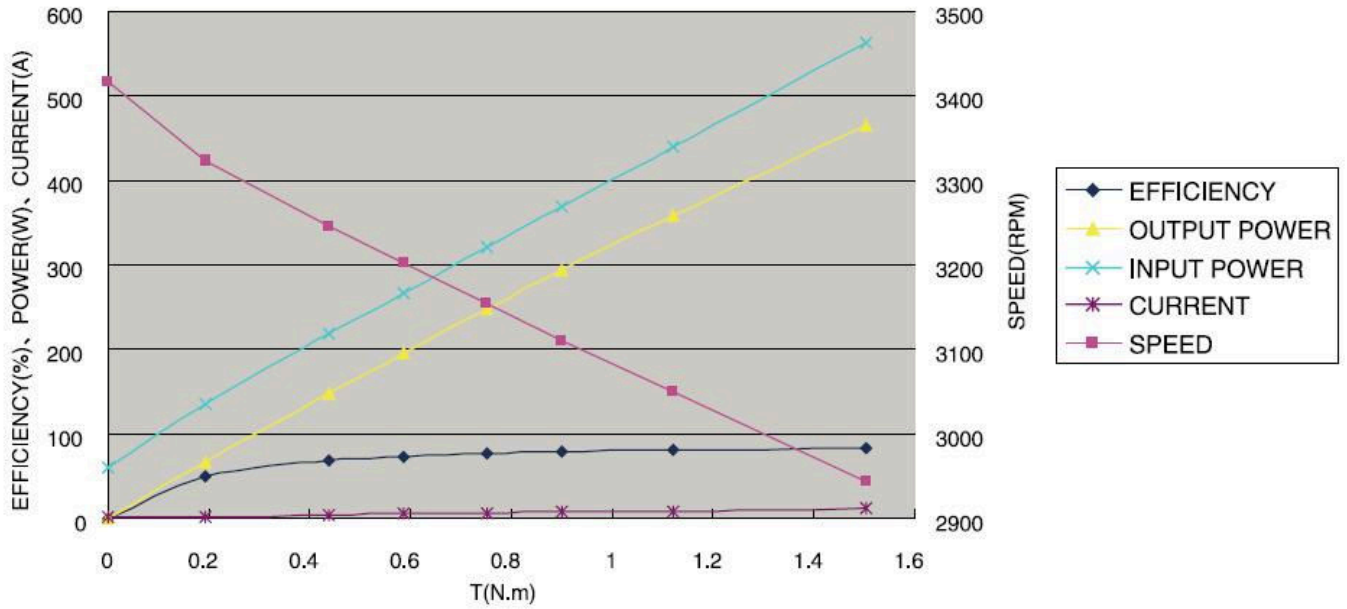
M048BI1050-86S-81, 48VDC, 330W



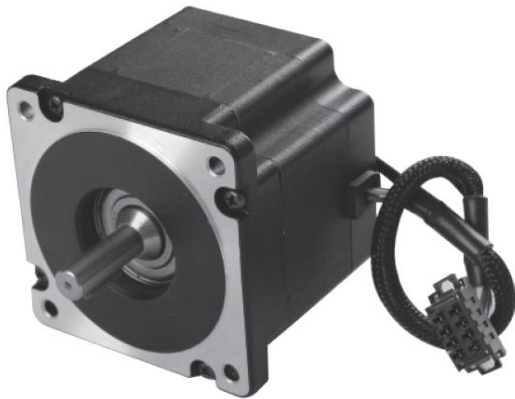
86mm S Series BLDC Motor



M048BI1400-86S-94, 48VDC, 440W

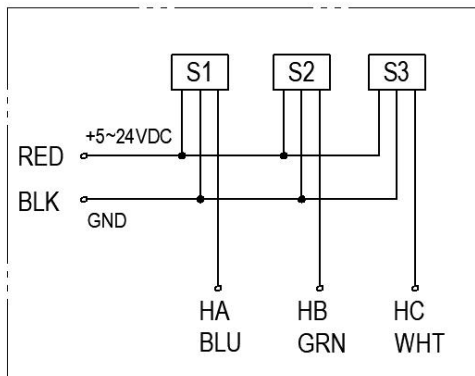


86 mm S-2 Series BLDC Motor



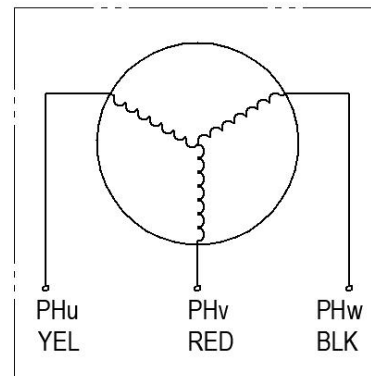
Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	F
Ambient Temperature Range	-20°C~+50°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	500VAC for one minute
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	220N (20mm from the flange)
Max. axial force	60N

Wiring Diagram



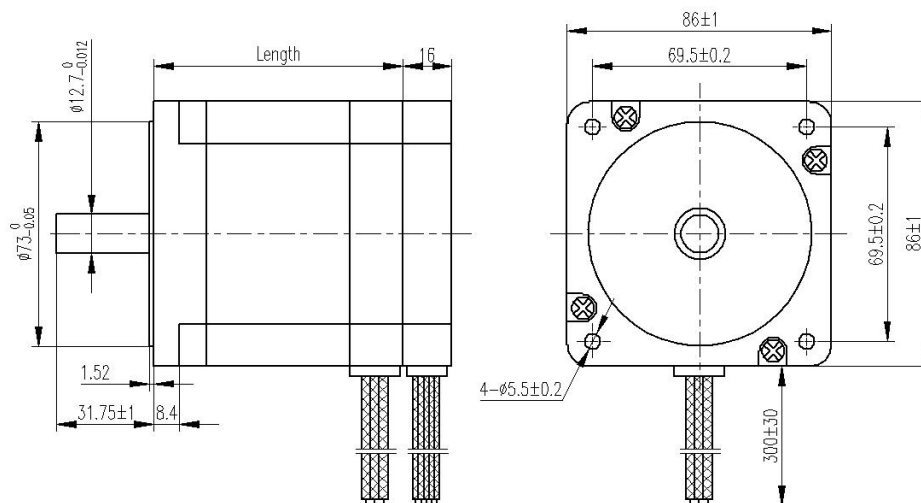
Hall sensor cable

Note: hall sensor power supply voltage +5~24VDC



Motor wiring cable

Dimensions

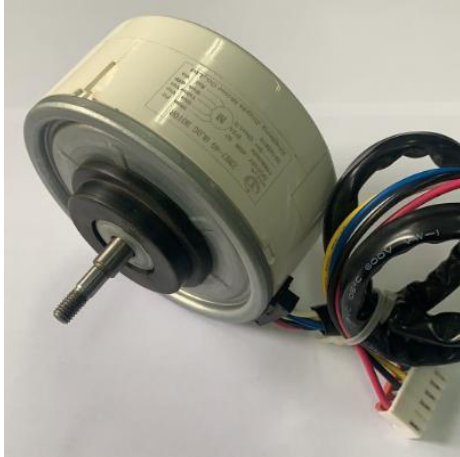


86 mm S-2 Series BLDC Motor

Specification

Type	M048BI0350-86-56	M048BI0700-86-70	M048BI1050-86-84	M048BI1400-86-96	M048BI2100-86-123
Number of Poles	8	8	8	8	8
Number of Phases	3	3	3	3	3
Nominal Voltage (VDC)	48	48	48	48	48
Rated Speed (RPM)	3000	3000	3000	3000	3000
Rated Torque (mN·m)	350	700	1050	1400	2100
Rated Power (W)	110	220	330	440	660
Peak Torque (mN·m)	1050	2100	3150	4200	6300
Peak Current (A)	9.5	20	24	33	56
Resistance (ohms)	0.9	0.34	0.2	0.16	0.10
Inductance (mH)	2.6	1	0.66	0.5	0.31
Torque Constant (mN·m/A)	116	124	127	127	128
Back EMF (V/KRPM)	8.6	9	9.4	9.4	9.5
Rotor Inertia (g·cm ²)	400	800	1200	1600	2400
Body Length (mm)	56	70	84	96	123
Weight (kg)	1.6	2.12	2.64	3.15	4.2

92mm R Series BLDC Motor



Item	General Specifications
Winding type	Star
Hall Effect Angle	120° Electrical angle
Insulation Class	E
Ambient Temperature Range	-20°C~+43°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	1800VAC for one sec.

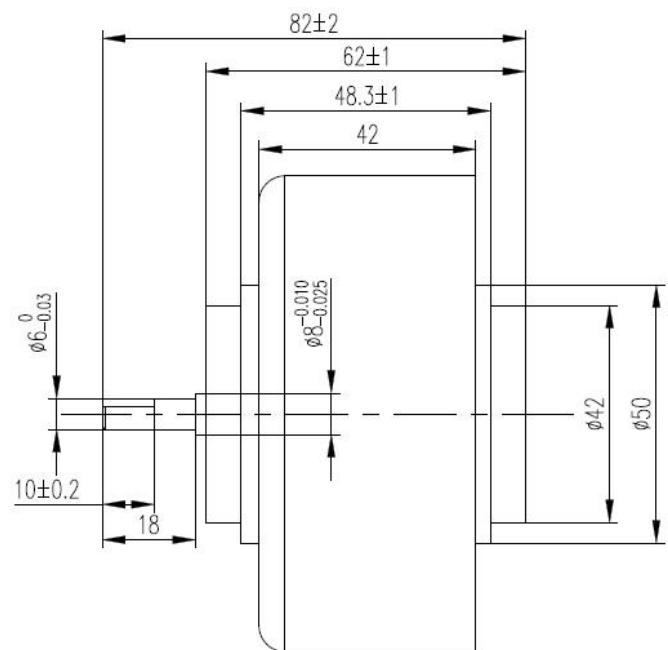
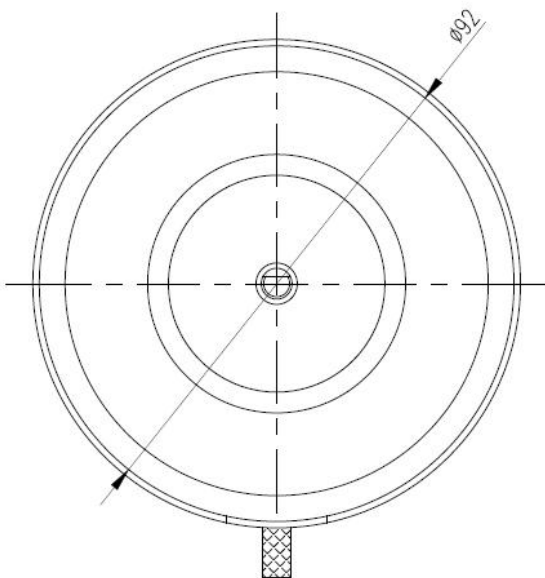
Application

- Air purifier

Configuration

- Shaft Modification and double shaft
- Other winding voltage possible
- Other Types available with special length

Dimensions



92mm R Series BLDC Motor

Specification

Model	M310BI0273-92-42
Number of Poles	8
Number of Phases	3
Nominal Voltage (VAC)	310
Rated Speed (RPM)	1050
Output Power (W)	30
Peak Torque (N • m)	0.273
Body Length (mm)	42
Outer diameter (mm)	92

95mm S Series BLDC Motor

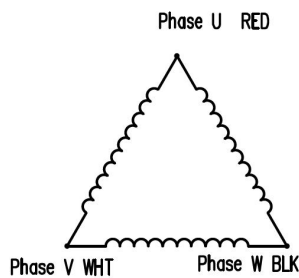


Item	General Specifications
Winding type	Delta
Hall Effect Angle	120° Electrical angle
Insulation Class	F
Ambient Temperature Range	-20°C~+40°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	600VDC for one second
Shaft Radial Play	max. 0.02 (450g-load)
Shaft Axial Play	max. 0.08 (450g-load)
Max. radial force	392N (10mm from the flange)
Max. axial force	147N

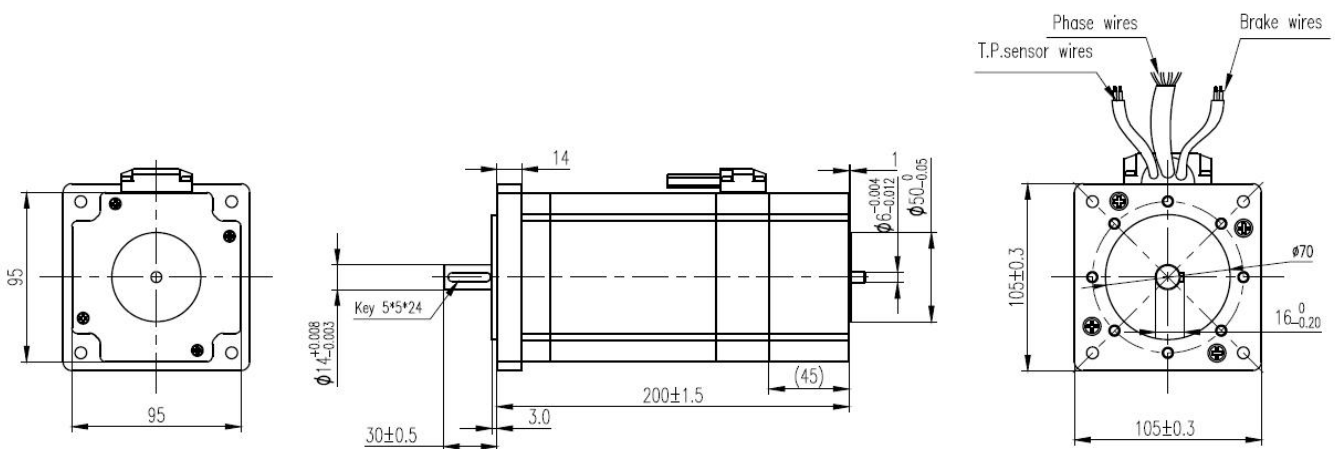
Configuration

- Encoder
- Brakes
- Shaft Modification and double shaft
- Other winding voltage possible
- Other Types available with special length

Wiring Diagram



Dimensions



95mm S Series BLDC Motor



Specification

Model	M048BI2000-95-155
Number of Poles	8
Number of Phases	3
Nominal Voltage (VDC)	48
Rated Speed (RPM)	3000
Continuous Torque (N · m)	2.0
Rated Current (A)	16.5
Output Power (W)	630
Peak Torque (N · m)	6.0
Peak Current (A)	33
Torque Constant (N · m/A)	0.1
Back EMF (V/KRPM)	6.7
Body Length (mm)	155
IP class	IP65
Weight (kg)	5.8

120mm S Series BLDC Motor

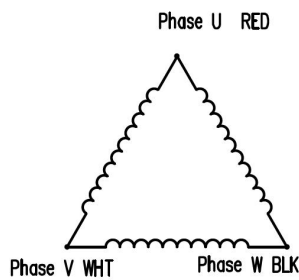


Item	General Specifications
Winding type	Delta
Hall Effect Angle	120° Electrical angle
Insulation Class	F
Ambient Temperature Range	-20°C~+40°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	600VDC for one second
Shaft Radial Play	max. 0.01 (450g-load)
Shaft Axial Play	max. 0.02 (450g-load)
Max. radial force	490N (20mm from the flange)
Max. axial force	196N

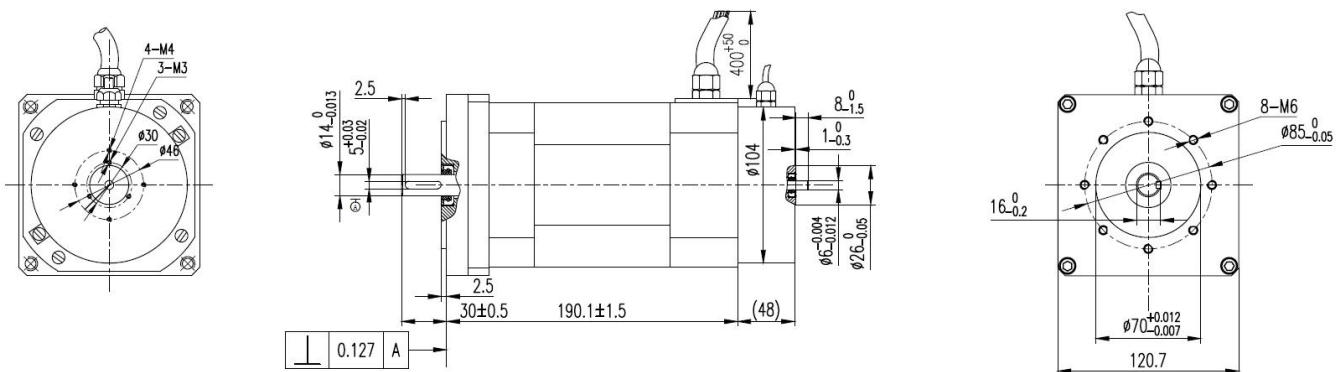
Configuration

- Encoder
- Brakes
- Shaft Modification and double shaft
- Other winding voltage possible
- Other Types available with special length

Wiring Diagram



Dimensions

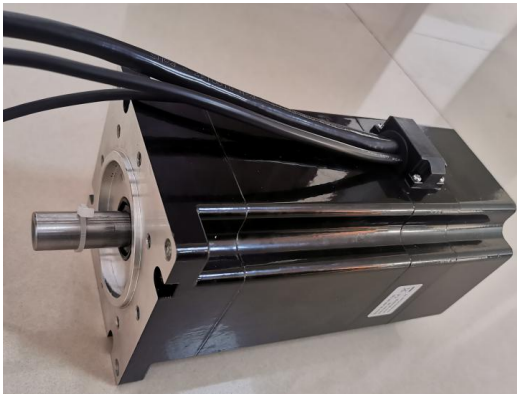


120mm S Series BLDC Motor

Specification

Model	M048BI2000-120-190	M048BI6000-120-175(with housing)
Number of Poles	8	8
Number of Phases	3	3
Nominal Voltage (VDC)	48	48
Rated Speed (RPM)	3000	4000
Continuous Torque (N · m)	2.0	6.0
Rated Current (A)	17	65
Output Power (W)	630	2510
Peak Torque (N · m)	8.0	20
Peak Current (A)	33	-
Torque Constant (N · m/A)	0.12	0.6
Back EMF (V/KRPM)	12.6	62.9
Body Length (mm)	190	175
IP class	IP53	IP53
Weight (kg)	10.9	20

120mm S-1 Series BLDC Motor

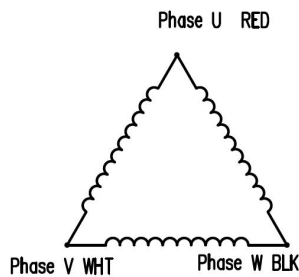


Item	General Specifications
Winding type	Delta
Hall Effect Angle	120° Electrical angle
Insulation Class	F
Ambient Temperature Range	-20°C~+40°C
Insulation Resistance	min. 100MΩ, 500VDC
Dielectric Strength	600VDC for one second
Shaft Radial Play	max. 0.01 (450g-load)
Shaft Axial Play	max. 0.02 (450g-load)
Max. radial force	490N (20mm from the flange)
Max. axial force	196N

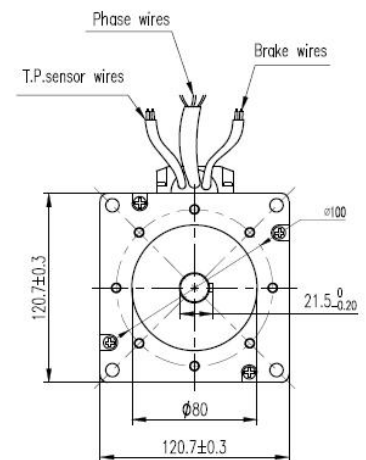
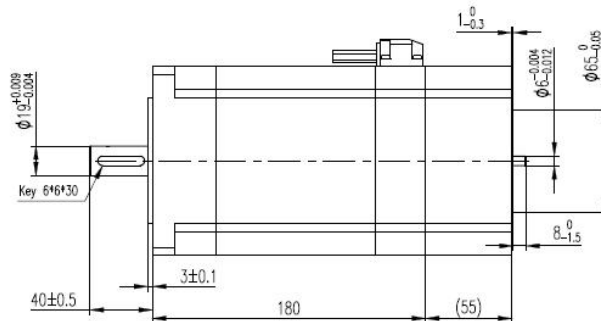
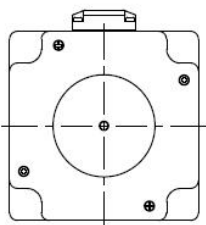
Configuration

- Encoder
- Brakes
- Shaft Modification and double shaft
- Other winding voltage possible
- Other Types available with special length

Wiring Diagram



Dimensions



120mm S-1 Series BLDC Motor

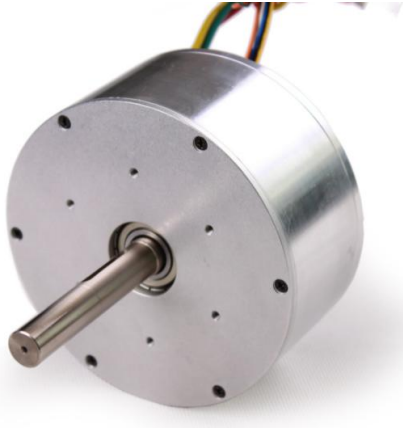
Specification

Model	M048BI2000-120-180	M048BI3500-120-180	M048BI4200-120-180
Number of Poles	8	8	8
Number of Phases	3	3	3
Nominal Voltage (VDC)	48	48	48
Rated Speed (RPM)	3300	3300	3300
Continuous Torque (N • m)	2.0	3.5	4.2
Rated Current (A)	17	27	30
Output Power (W)	690	1200	1450
Peak Torque (N • m)	8.0	8.0	8.0
Peak Current (A)	33		
Torque Constant (N • m/A)	0.12		
Back EMF (V/KRPM)	9.1		
Body Length (mm)	180	180	180
IP class	IP65	IP65	IP65
Weight (kg)	11.4	11.4	11.4

125mm Series BLDC Motor

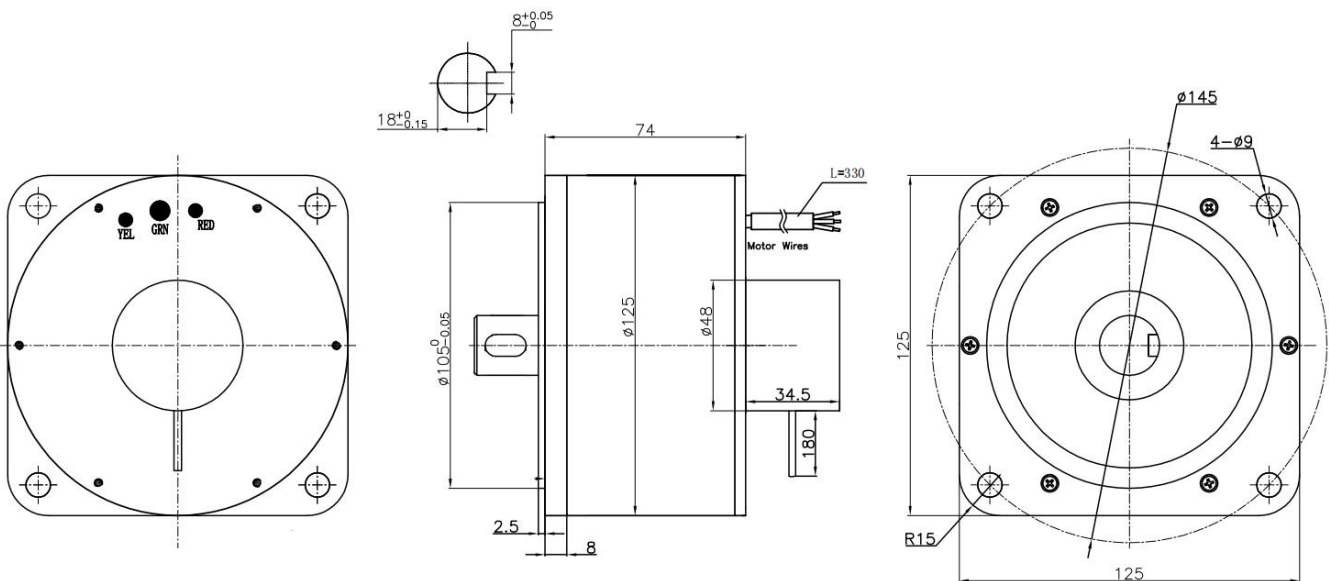
Description: This is a disk-type brushless motor with encoder (17-bit absolute optical encoding). It can be used in the field of AGV and robotics.

General Specifications



Item	Specifications
Back EMF	13 V/krpm
Torque constant	0.175 N.m/A
Insulation class	B 130° C
Ambient Temperature	-20° C~+50° C
Dielectric streng	600VAC 1SEC
Insulation resist	100MOhm@500VDC
Speed constant	100 rpm/V
Storage ambient	-20° C~+85° C

Dimensions



125mm Series BLDC Motor

Technical Specifications

Item	M024BI4000-125-74
Number of Poles	28
Voltage (VDC)	24
No load speed (rpm)	1300
No load current (A)	1
Rated Torque (N.m)	4
Rated speed (rpm)	1000
Rated Current (A)	23
Peak torque (N.m)	12
Peak current (A)	69
Length (mm)	74