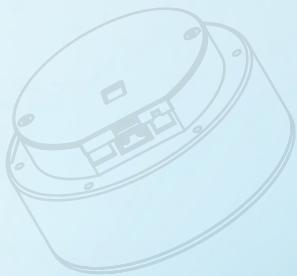




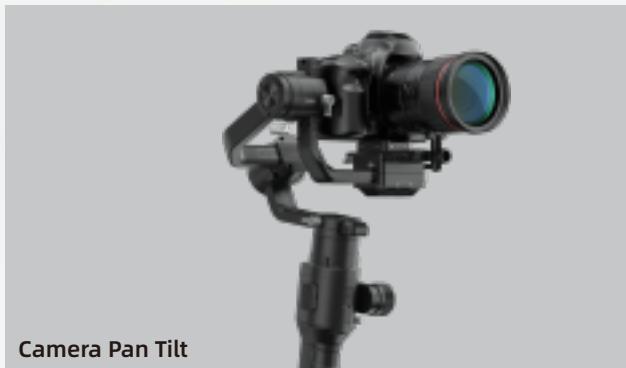
# PRODUCT MANUAL

PROFESSIONAL DC BRUSHLESS SERVO SYSTEM SUPPLIER



LINGKONG TECHNOLOGY CO., LTD.

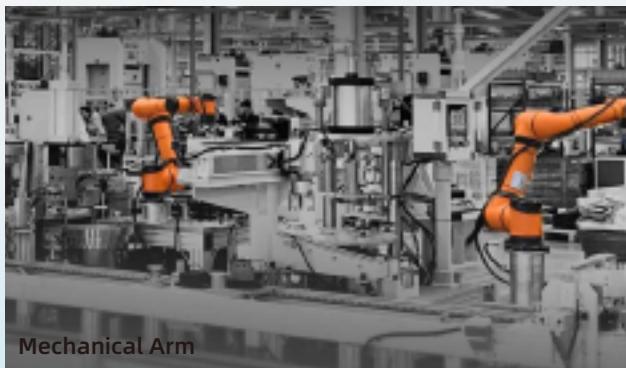
# APPLICATIONS >>



Camera Pan Tilt



Service Robot



Mechanical Arm



AGV Car



Exoskeleton robot



Inspection Robot



Foot Robot



Laser Lidar

# CATALOG >>

## THE PRODUCT OF BRUSHLESS MOTOR

### A MS SERIES

Low-speed smooth passable slip ring servo unit

A1	MS30V2
A3	MS40V3
A6	MS50V3
A9	MS60V3
A11	MS70V3
A14	MS90V3
A17	MS120V3

### C MG SERIES

Integrated planetary reducer servo unit

C1	MG40V2
C2	MG60V2
C3	MG80V2
C4	MG100V2
C5	MG60EV2
C6	MG80EV2
C7	MG100EV2
C8	MG8010-i36
C9	MG60V3
C10	MG60EV3
C11	MG80V3
C12	MG80EV3

### B MF SERIES

High performance FOC servo unit

B1	MF40V2
B4	MF50V2
B7	MF60V2
B9	MF70V2
B12	MF90V2
B15	MF120V2

### D MOP SERIES

Integrated harmonic reducer servo unit

D1	MOP4011V2
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### E ME SERIES

Economical BLDC motor

E1	ME1605
E2	ME2605
E3	ME3506
E4	ME4005
E5	ME4010
E6	ME5010
E7	ME5015
E8	ME6015
E9	ME6025
E10	ME7010
E11	ME7025

## F THE PRODUCT OF ELECTRIC DRIVER

F1	DS30
F2	DS40
F3	DS70
F4	DF40
F5	DF70
F6	DG80
F7	BC30
F8	BC40
F9	BC70

# MS SERIES

- High performance 32bit MCU
- Can switch open-loop mode,speed mode and position mode
- Adopt imported silicon steel sheet and high grade NdFeB permanent magnets
- Large diameter with more pole pairs design, providing higher torque and smaller space application
- Brushless structure with high performance ball bearing, rotate more smooth and has a longer life time
- High-precision, low-temperature bleached alloy resistor make current control more accurate
- 3-Phase gate driver with 6 N-channel MOSEFTs,low internal resistance,high current





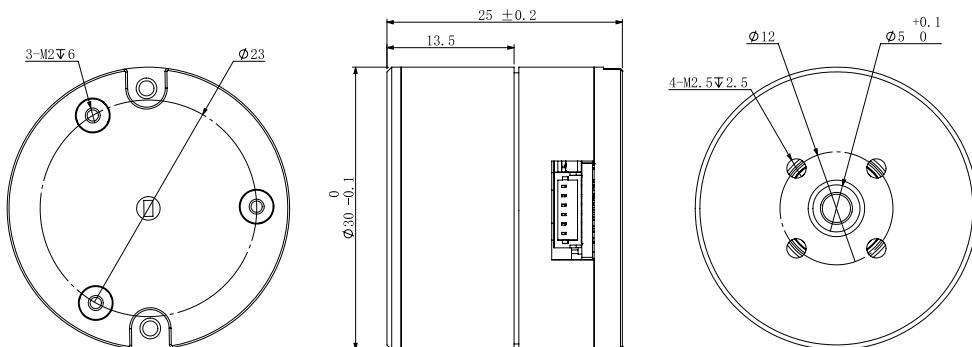
# MS SERIES

## PRODUCT PARAMETERS

MS3008V2

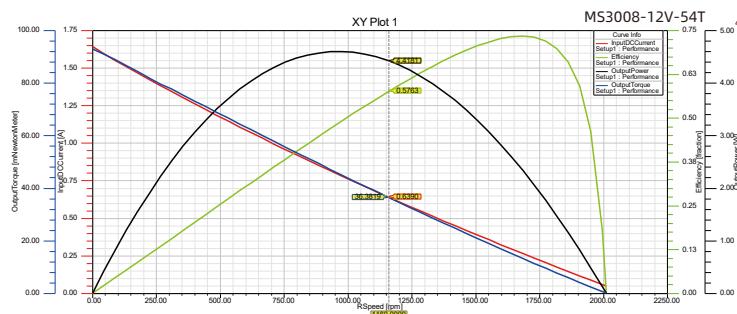
Item Name	MS3008v2
Turns	54
Rated Voltage (V)	12
Max Speed (rpm)	2000
Rated Torque (N.m)	0.04
Rated Speed (rpm)	1160
Rated Current (A)	0.64
Max Power (W)	4.6
Max Torque (N.m)	0.09
Speed Constant (rpm/V)	96
Torque Constant (N.m/A)	0.06
Winding Type	Y
Line Resistance ( $\Omega$ )	6
Phase Inductance (mH)	1.68
Motor Poles	14
Rotor Inertia ( $gcm^2$ )	35
Motor Temperature	YES
Bearing Rated Load (N)	67
Motor Weight (g)	49
Recommend Drive	DS30v2
Drive Input Voltage (V)	6~16
Communication	RS485
Communication Frequency (Hz)	RS485: 500Hz (115200bps)
Encoder	15 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Control Mode	Open Loop(24KHz) / Speed Loop(4KHz) / Position Loop(2KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





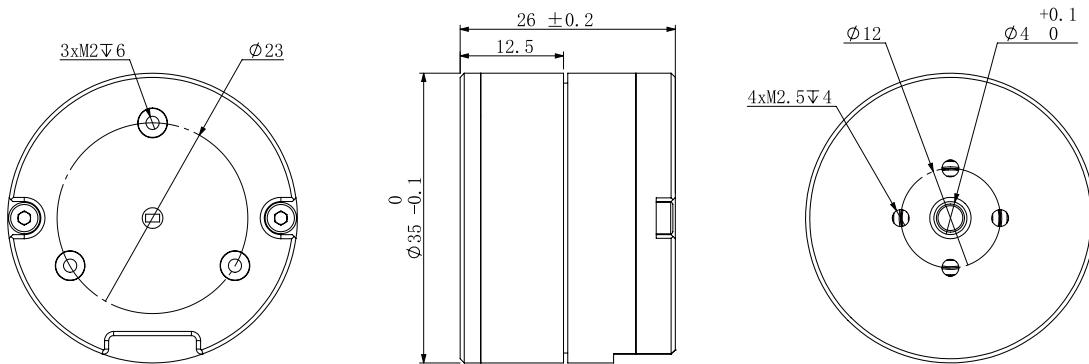
# MS SERIES

## PRODUCT PARAMETERS

MS3506V2

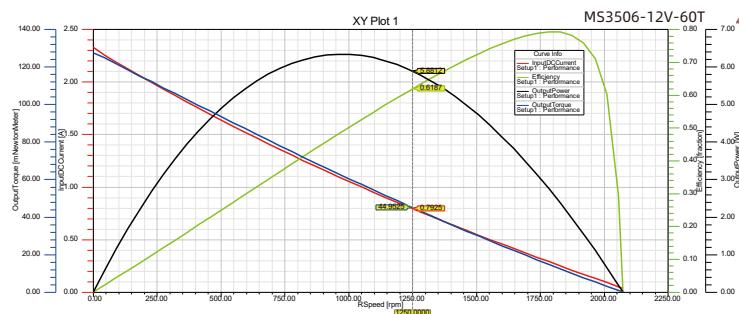
Item Name	MS3506v2
Turns	60
Rated Voltage (V)	12
Max Speed (rpm)	2100
Rated Torque (N.m)	0.05
Rated Speed (rpm)	1250
Rated Current (A)	0.79
Max Power (W)	6.4
Max Torque (N.m)	0.13
Speed Constant (rpm/V)	104
Torque Constant (N.m/A)	0.06
Winding Type	Y
Line Resistance ( $\Omega$ )	4.5
Phase Inductance (mH)	1.47
Motor Poles	14
Rotor Inertia (gcm <sup>2</sup> )	58
Motor Temperature	YES
Bearing Rated Load (N)	91
Motor Weight (g)	50
Recommend Drive	DS30v2
Drive Input Voltage (V)	6~16
Communication	RS485
Communication Frequency (Hz)	RS485: 500Hz (115200bps)
Encoder	15 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Control Mode	Open Loop(24KHz) / Speed Loop(4KHz) / Position Loop(2KHz)
Acceleration Curve	Trapeziod acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

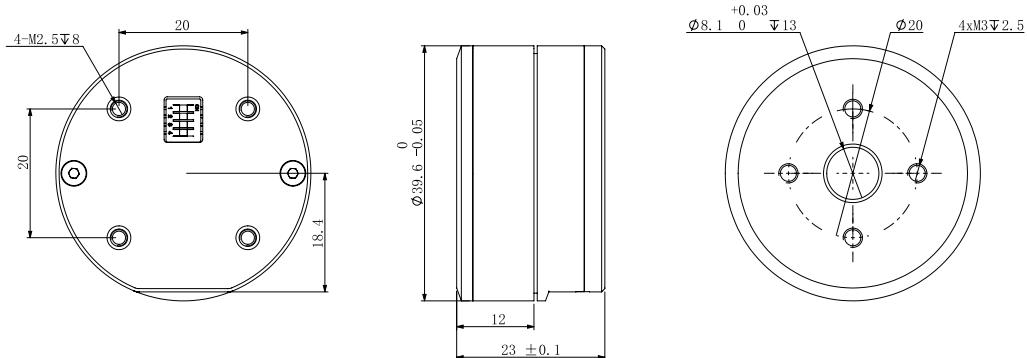


## PRODUCT PARAMETERS

MS4005V3

Item Name	MS4005v3
Turns	55
Rated Voltage (V)	12
Max Speed (rpm)	1090
Rated Torque (N.m)	0.07
Rated Speed (rpm)	450
Rated Current (A)	0.65
Max Power (W)	3.4
Max Torque (N.m)	0.1
Speed Constant (rpm/V)	37.5
Torque Constant (N.m/A)	0.1
Winding Type	Y
Line Resistance ( $\Omega$ )	8
Phase Inductance (mH)	2.35
Motor Poles	26
Rotor Inertia ( $gcm^2$ )	52
Motor Temperature	YES
Bearing Rated Load (N)	140
Motor Weight (g)	65
Recommend Drive	DS40v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE





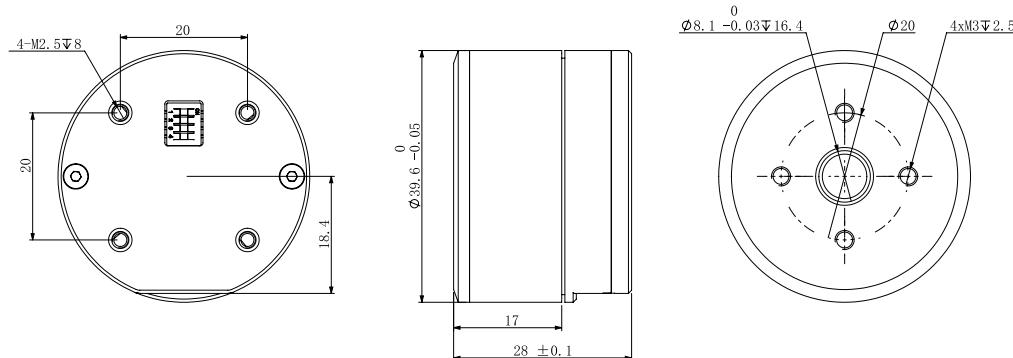
# MS SERIES

## PRODUCT PARAMETERS

MS4010V3

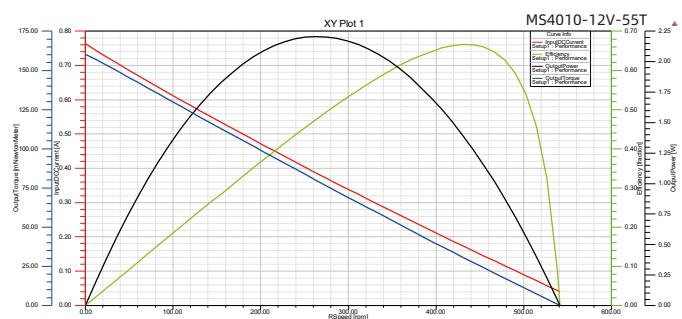
Item Name	MS4010v3
Turns	55
Rated Voltage (V)	12
Max Speed (rpm)	550
Rated Torque (N.m)	0.13
Rated Speed (rpm)	100
Rated Current (A)	0.61
Max Power (W)	2.2
Max Torque (N.m)	0.16
Speed Constant (rpm/V)	8.3
Torque Constant (N.m/A)	0.2
Winding Type	Y
Line Resistance ( $\Omega$ )	11.6
Phase Inductance (mH)	3.95
Motor Poles	26
Rotor Inertia ( $gcm^2$ )	81
Motor Temperature	YES
Bearing Rated Load (N)	140
Motor Weight (g)	91
Recommend Drive	DS40v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

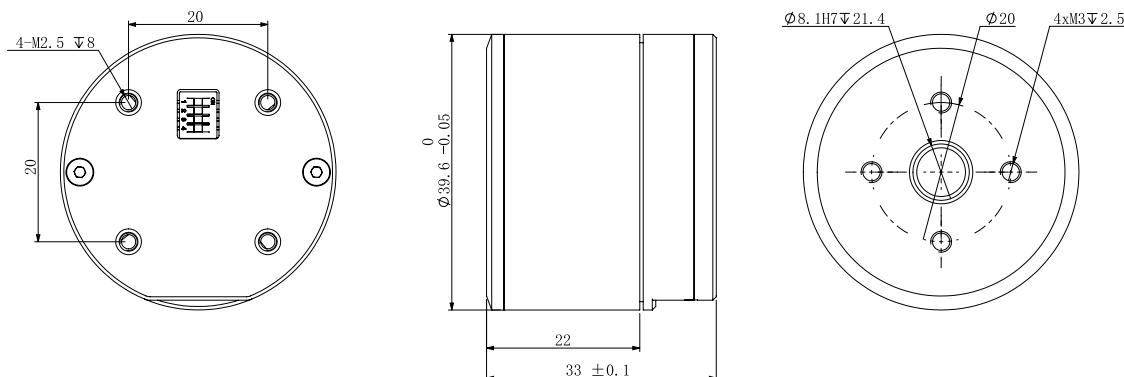


## PRODUCT PARAMETERS

MS4015V3

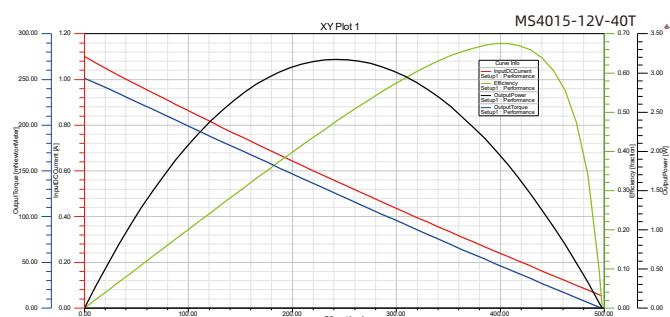
Item Name	MS4015V3
Turns	40
Rated Voltage (V)	16
Max Speed (rpm)	675
Rated Torque (N.m)	0.25
Rated Speed (rpm)	160
Rated Current (A)	1.1
Max Power (W)	5.5
Max Torque (N.m)	0.35
Speed Constant (rpm/V)	8.3
Torque Constant (N.m/A)	0.2
Winding Type	Y
Line Resistance ( $\Omega$ )	9.8
Phase Inductance (mH)	3.08
Motor Poles	26
Rotor Inertia ( $gcm^2$ )	105
Motor Temperature	YES
Bearing Rated Load (N)	140
Motor Weight (g)	112
Recommend Drive	DS40V3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapeziod acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





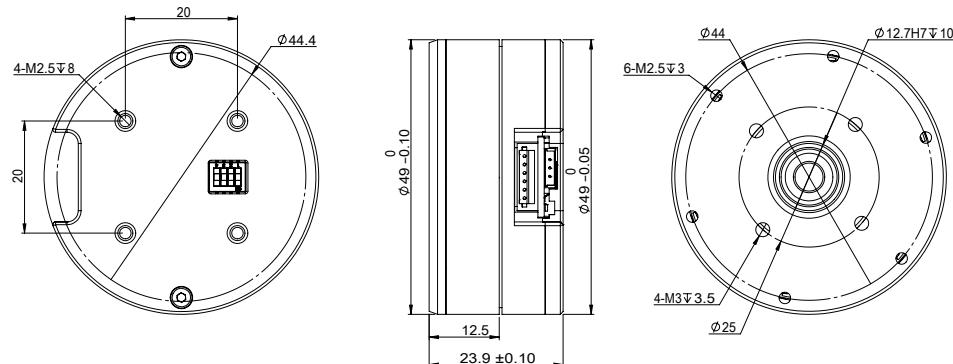
# MS SERIES

## PRODUCT PARAMETERS

MS5005V3

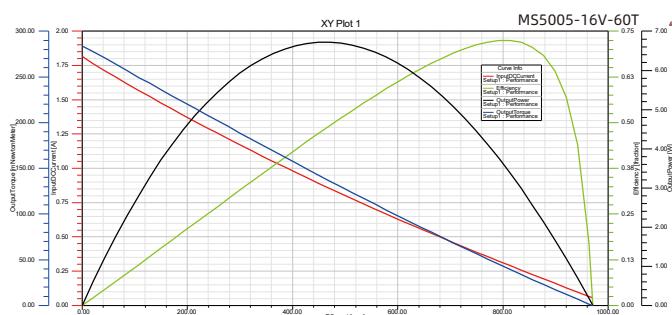
Item Name	MS5005v3
Turns	60
Rated Voltage (V)	16
Max Speed (rpm)	985
Rated Torque (N.m)	0.18
Rated Speed (rpm)	500
Rated Current (A)	0.8
Max Power (W)	6.7
Max Torque (N.m)	0.28
Speed Constant (rpm/V)	31.3
Torque Constant (N.m/A)	0.2
Winding Type	Y
Line Resistance ( $\Omega$ )	6.6
Phase Inductance (mH)	2.83
Motor Poles	28
Rotor Inertia (gcm <sup>2</sup> )	136
Motor Temperature	YES
Bearing Rated Load (N)	153
Motor Weight (g)	99
Recommend Drive	DS40v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

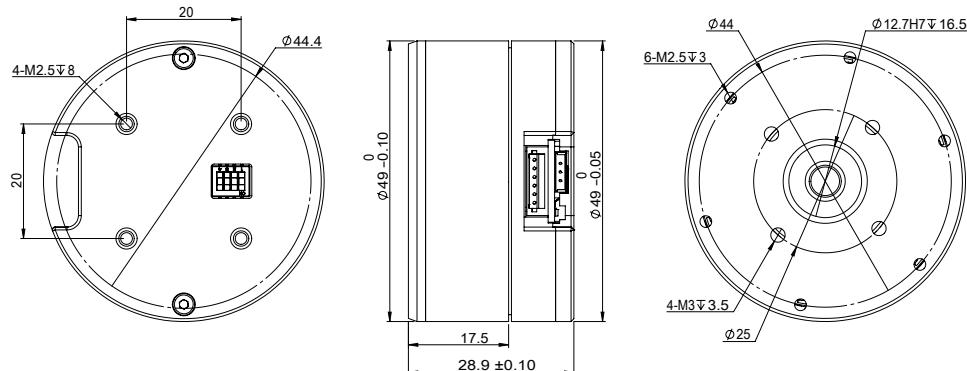


## PRODUCT PARAMETERS

MS5010V3

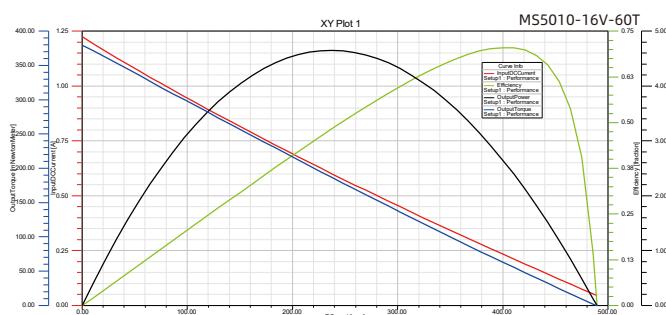
Item Name	MS5010V3
Turns	60
Rated Voltage (V)	16
Max Speed (rpm)	505
Rated Torque (N.m)	0.25
Rated Speed (rpm)	150
Rated Current (A)	0.82
Max Power (W)	4.7
Max Torque (N.m)	0.37
Speed Constant (rpm/V)	9.3
Torque Constant (N.m/A)	0.3
Winding Type	Y
Line Resistance ( $\Omega$ )	10.8
Phase Inductance (mH)	4.74
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	192
Motor Temperature	YES
Bearing Rated Load (N)	153
Motor Weight (g)	135
Recommend Drive	DS40v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、409600、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





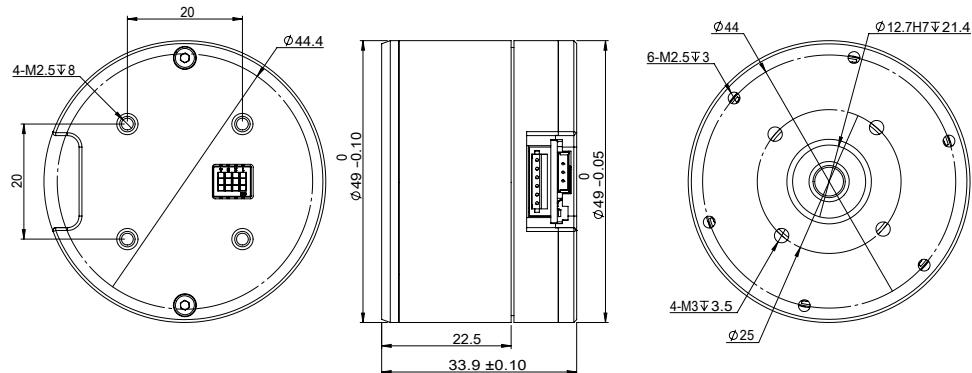
# MS SERIES

## PRODUCT PARAMETERS

**MS5015V3**

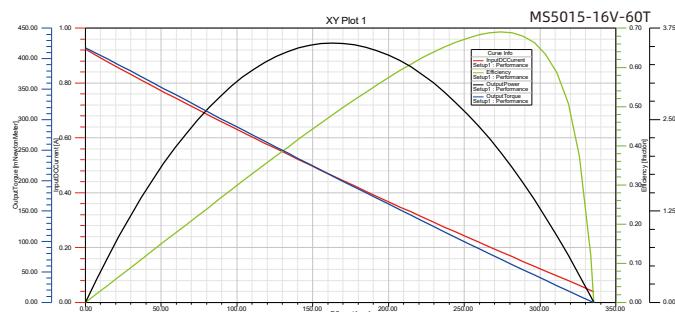
Item Name	MS5015V3
Turns	60
Rated Voltage (V)	16
Max Speed (rpm)	340
Rated Torque (N.m)	0.32
Rated Speed (rpm)	80
Rated Current (A)	0.69
Max Power (W)	3.5
Max Torque (N.m)	0.41
Speed Constant (rpm/V)	21.3
Torque Constant (N.m/A)	0.46
Winding Type	Y
Line Resistance ( $\Omega$ )	13.5
Phase Inductance (mH)	6.56
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	268
Motor Temperature	YES
Bearing Rated Load (N)	153
Motor Weight (g)	177
Recommend Drive	DS40v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

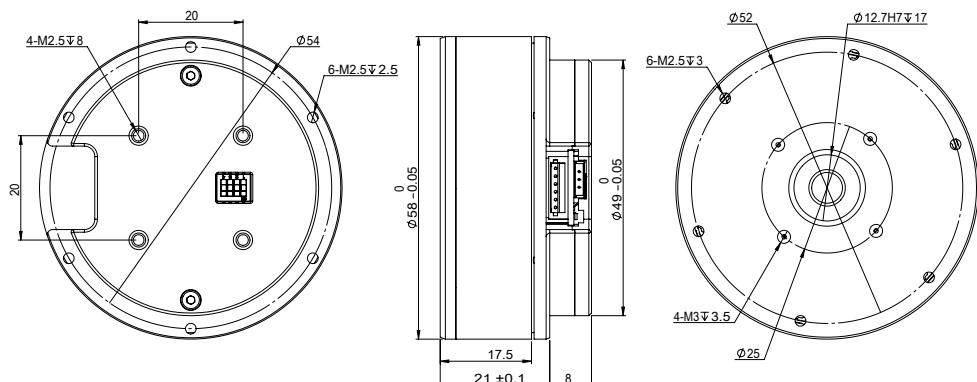


## PRODUCT PARAMETERS

MS6010V3

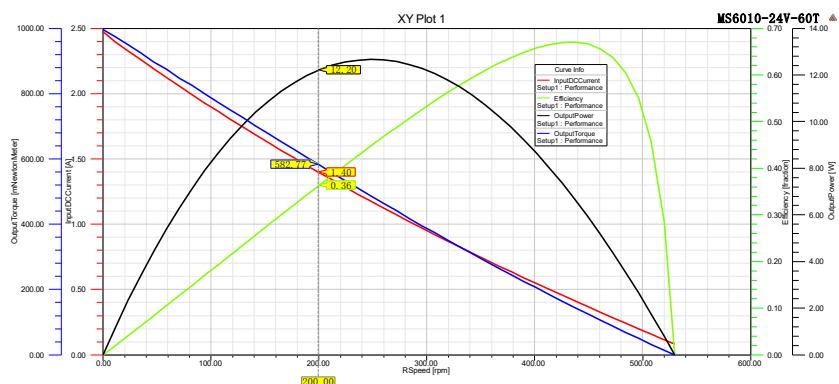
Item Name	MS6010V3
Turns	60
Rated Voltage (V)	24
Max Speed (rpm)	530
Rated Torque (N.m)	0.58
Rated Speed (rpm)	200
Rated Current (A)	1.4
Max Power (W)	12.6
Max Torque (N.m)	1.4
Speed Constant (rpm/V)	22.08
Torque Constant (N.m/A)	0.41
Winding Type	Y
Line Resistance ( $\Omega$ )	13.86
Phase Inductance (mH)	6.04
Motor Poles	28
Rotor Inertia (gcm <sup>2</sup> )	394
Motor Temperature	YES
Bearing Rated Load (N)	330
Motor Weight (g)	185
Recommend Drive	DS70v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit OR 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(4KHz) /Position Loop(2KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





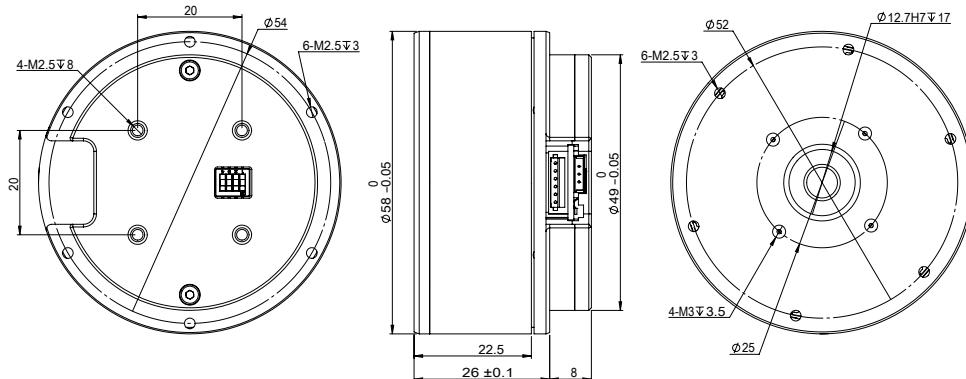
# MS SERIES

## PRODUCT PARAMETERS

MS6015V3

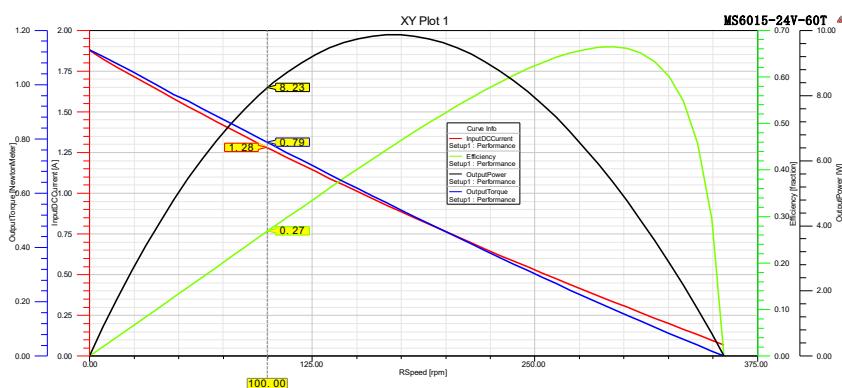
Item Name	MS6015v3
Turns	60
Rated Voltage (V)	24
Max Speed (rpm)	360
Rated Torque (N.m)	0.79
Rated Speed (rpm)	100
Rated Current (A)	1.28
Max Power (W)	9.8
Max Torque (N.m)	1.12
Speed Constant (rpm/V)	15
Torque Constant (N.m/A)	0.62
Winding Type	Y
Line Resistance ( $\Omega$ )	18.9
Phase Inductance (mH)	8.82
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	515
Motor Temperature	YES
Bearing Rated Load (N)	280
Motor Weight (g)	242
Recommend Drive	DS70v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit OR 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(4KHz) /Position Loop(2KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

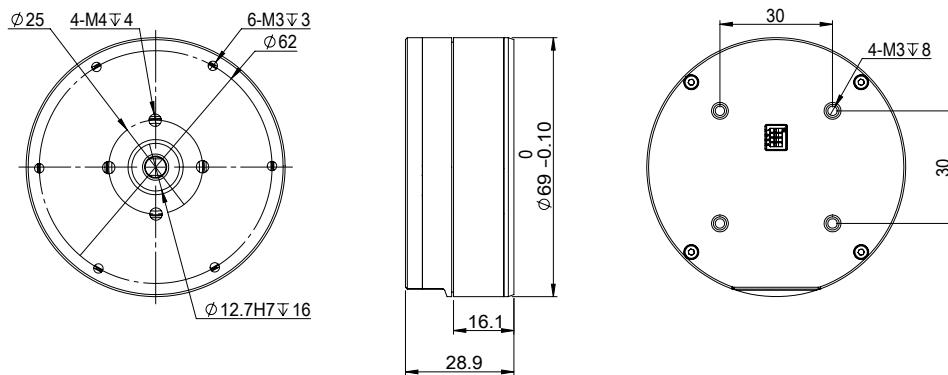


## PRODUCT PARAMETERS

MS7010V3

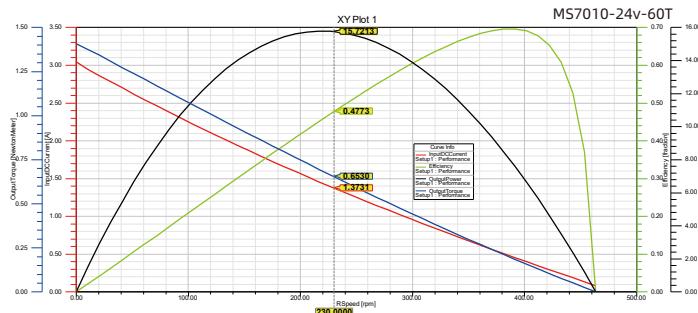
Item Name	MS7010V3
Turns	60
Rated Voltage (V)	24
Max Speed (rpm)	460
Rated Torque (N.m)	0.65
Rated Speed (rpm)	230
Rated Current (A)	1.4
Max Power (W)	16
Max Torque (N.m)	1.4
Speed Constant (rpm/V)	9.6
Torque Constant (N.m/A)	0.46
Winding Type	Y
Line Resistance ( $\Omega$ )	5.9
Phase Inductance (mH)	13.03
Motor Poles	28
Rotor Inertia ( $g\text{cm}^2$ )	748
Motor Temperature	YES
Bearing Rated Load (N)	330
Motor Weight (g)	270
Recommend Drive	DS70v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) / Speed Loop(8KHz) / Position Loop(8KHz)
Acceleration Curve	Trapeziod acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





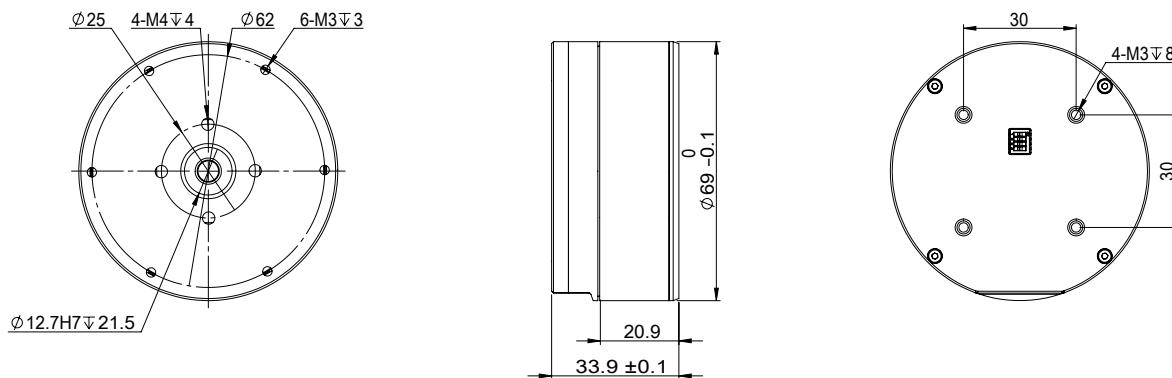
# MS SERIES

## PRODUCT PARAMETERS

MS7015V3

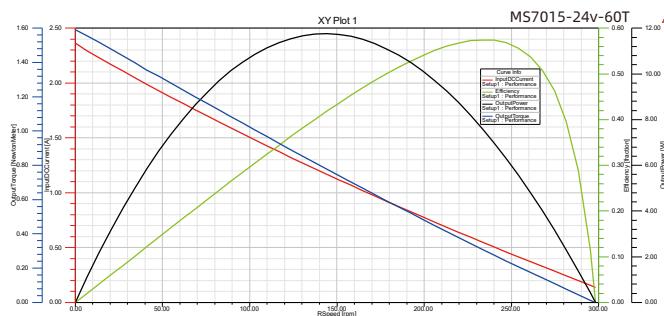
Item Name	MS7015V3
Turns	60
Rated Voltage (V)	24
Max Speed (rpm)	300
Rated Torque (N.m)	0.8
Rated Speed (rpm)	140
Rated Current (A)	1.2
Max Power (W)	11.8
Max Torque (N.m)	1.6
Speed Constant (rpm/V)	5.8
Torque Constant (N.m/A)	0.67
Winding Type	Y
Line Resistance ( $\Omega$ )	7.5
Phase Inductance (mH)	3.7
Motor Poles	28
Rotor Inertia ( $\text{gcm}^2$ )	933
Motor Temperature	YES
Bearing Rated Load (N)	330
Motor Weight (g)	356
Recommend Drive	DS70V3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、409600、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque



## PRODUCT PARAMETERS

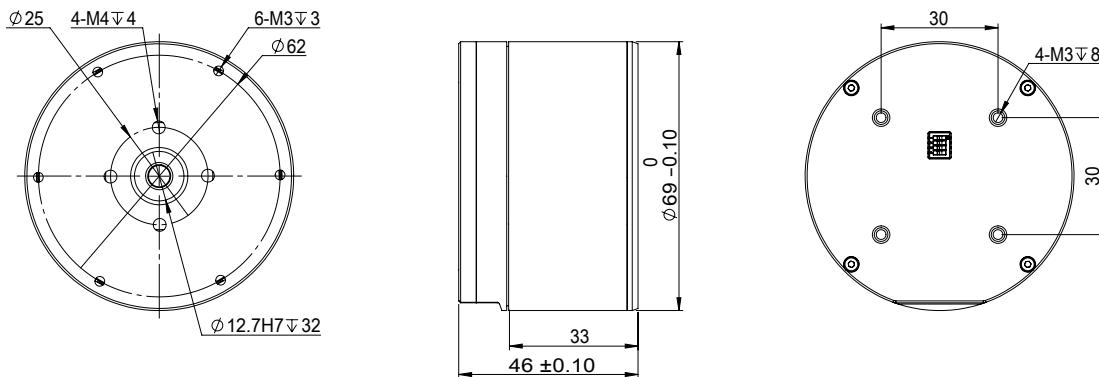
MS7025V3

Item Name	MS7025V3
Turns	60
Rated Voltage (V)	24
Max Speed (rpm)	215
Rated Torque (N.m)	1.3
Rated Speed (rpm)	40
Rated Current (A)	1.29
Max Power (W)	8.7
Max Torque (N.m)	1.75
Speed Constant (rpm/V)	1.7
Torque Constant (N.m/A)	1.01
Winding Type	Y
Line Resistance ( $\Omega$ )	7
Phase Inductance (mH)	3.7
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	1040
Motor Temperature	YES
Bearing Rated Load (N)	330
Motor Weight (g)	525

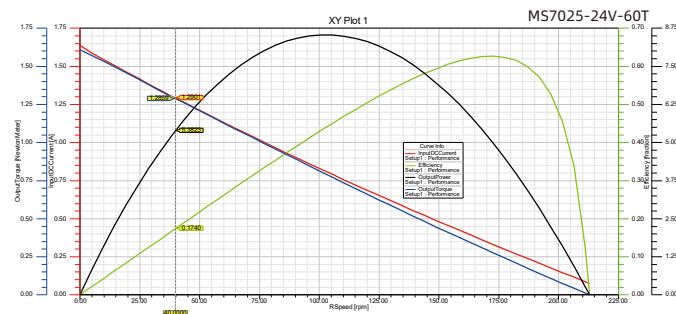
Recommend Drive	DS70v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





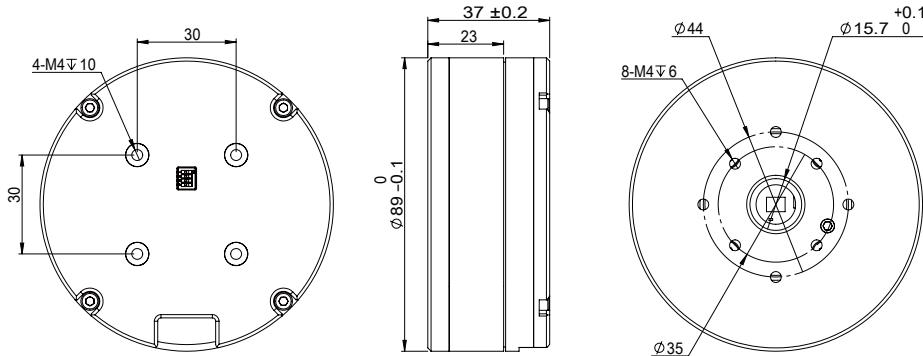
# MS SERIES

## PRODUCT PARAMETERS

MS9010V3

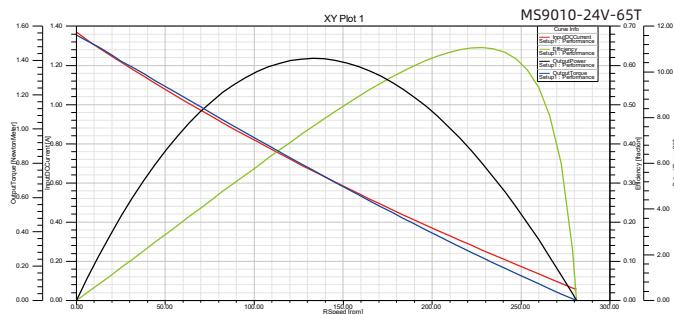
Item Name	MS9010V3
Turns	65
Rated Voltage (V)	24
Max Speed (rpm)	370
Rated Torque (N.m)	1
Rated Speed (rpm)	160
Rated Current (A)	1.85
Max Power (W)	18
Max Torque (N.m)	2.2
Speed Constant (rpm/V)	6.7
Torque Constant (N.m/A)	0.54
Winding Type	Y
Line Resistance ( $\Omega$ )	8.2
Phase Inductance (mH)	30
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	2860
Motor Temperature	YES
Bearing Rated Load (N)	650
Motor Weight (g)	510
Recommend Drive	DS70v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapeziod acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque



## PRODUCT PARAMETERS

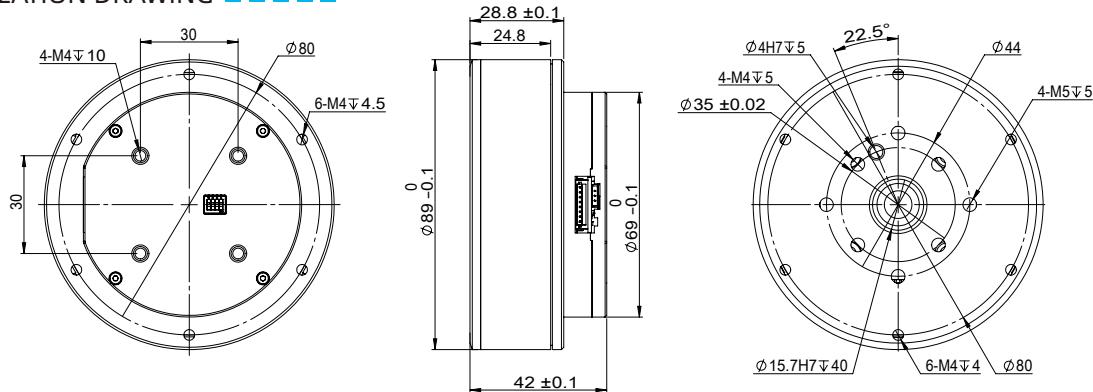
MS9015V3

Item Name	MS9015V3
Turns	65
Rated Voltage (V)	24
Max Speed (rpm)	260
Rated Torque (N.m)	1.55
Rated Speed (rpm)	100
Rated Current (A)	1.72
Max Power (W)	17
Max Torque (N.m)	2.7
Speed Constant (rpm/V)	4.2
Torque Constant (N.m/A)	0.90
Winding Type	Y
Line Resistance ( $\Omega$ )	5.8
Phase Inductance (mH)	33
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	3100
Motor Temperature	YES
Bearing Rated Load (N)	650
Motor Weight (g)	650

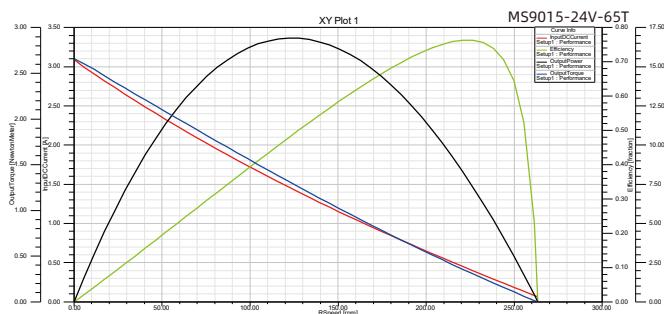
Recommend Drive	DS70v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapeziod acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





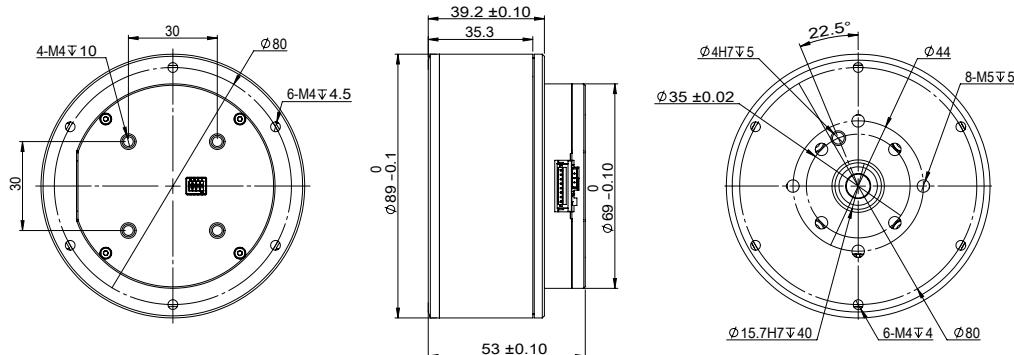
# MS SERIES

## PRODUCT PARAMETERS

**MS9025V3**

Item Name	MS9025V3
Turns	65
Rated Voltage (V)	24
Max Speed (rpm)	150
Rated Torque (N.m)	2.5
Rated Speed (rpm)	20
Rated Current (A)	1.78
Max Power (W)	10
Max Torque (N.m)	3.4
Speed Constant (rpm/V)	0.8
Torque Constant (N.m/A)	1.40
Winding Type	Y
Line Resistance ( $\Omega$ )	9
Phase Inductance (mH)	35
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	4656
Motor Temperature	YES
Bearing Rated Load (N)	650
Motor Weight (g)	945
Recommend Drive	DS70V3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

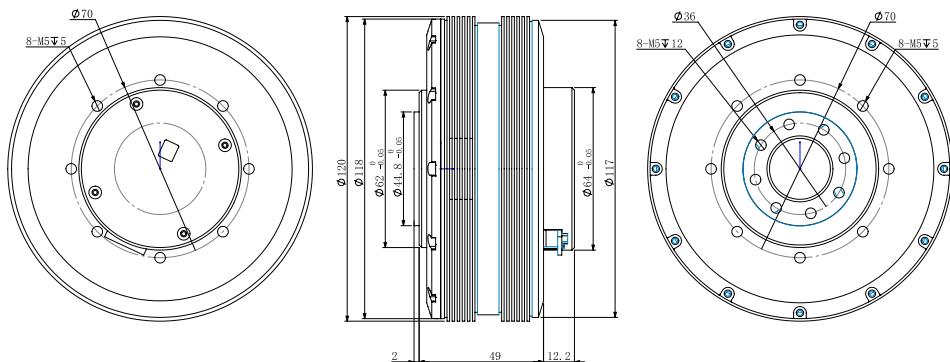


## PRODUCT PARAMETERS

MS12025V3

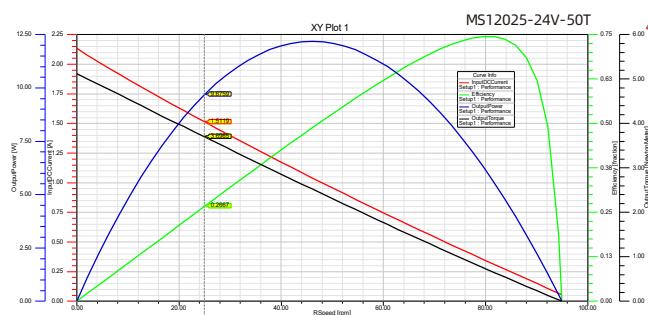
Item Name	MS12025v3
Turns	50
Rated Voltage (V)	24
Max Speed (rpm)	96
Rated Torque (N.m)	3.5
Rated Speed (rpm)	25
Rated Current (A)	1.5
Max Power (W)	10
Max Torque (N.m)	5
Speed Constant (rpm/V)	1.1
Torque Constant (N.m/A)	2.33
Winding Type	Y
Line Resistance ( $\Omega$ )	10.5
Phase Inductance (mH)	4.8
Motor Poles	42
Rotor Inertia ( $gcm^2$ )	5500
Motor Temperature	YES
Bearing Rated Load (N)	1650
Motor Weight (g)	1173
Recommend Drive	DS70v3
Drive Input Voltage (V)	7~30
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)
Encoder	15 bit Or 18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





# **MF SERIES**

Integrated design with motor and driver

18bit absolute value magnetic encoder

Flat design with aviation aluminum

Outer rotor installed with NdFeB



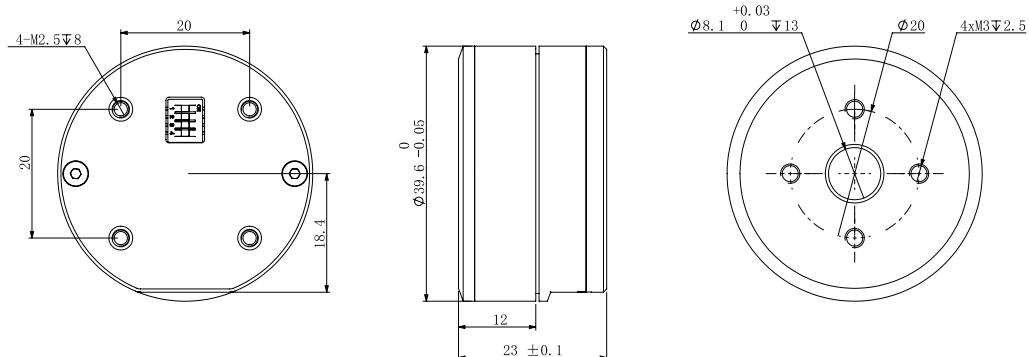
# MF SERIES

## PRODUCT PARAMETERS

MF4005V2

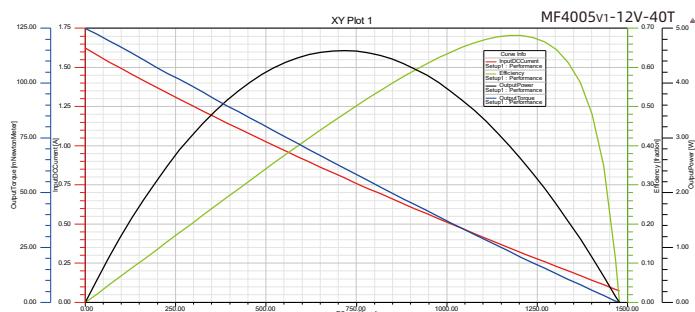
Item Name	MF4005V2	
Turns	25	40
Rated Voltage (V)	12	12
Max Speed (rpm)	2390	1300
Rated Torque (N.m)	0.07	0.06
Rated Speed (rpm)	1600	700
Rated Current (A)	1.44	0.81
Max Power (W)	14	4.6
Max Torque (N.m)	0.25	0.12
Speed Constant (rpm/V)	133	58
Torque Constant (N.m/A)	0.05	0.07
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	1.9	4.3
Phase Inductance (mH)	0.5	1.2
Motor Poles	26	
Rotor Inertia ( $\text{gcm}^2$ )	56	
Motor Temperature	YES	
Bearing Rated Load (N)	140	
Motor Weight (g)	65	
Recommend Drive	DF40V2	
Drive Input Voltage (V)	7.4~32	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18bit Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)	
Acceleration Curve	Trapeziod acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





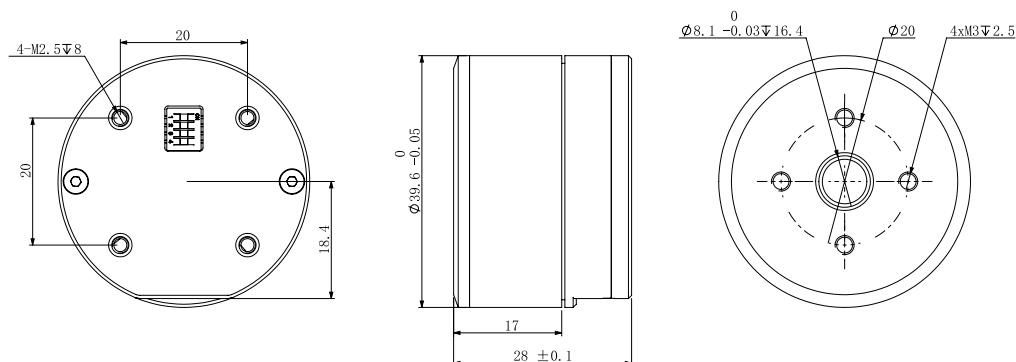
# MF SERIES

## PRODUCT PARAMETERS

MF4010V2

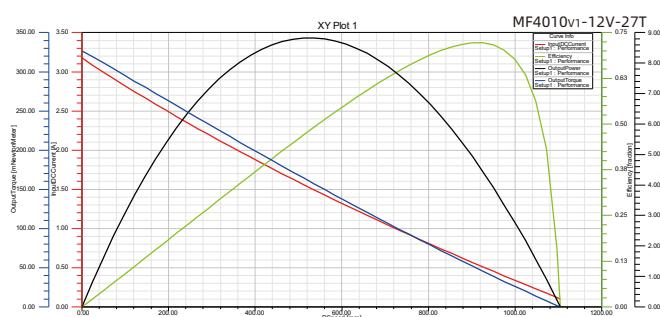
Item Name	MF4010v2
Turns	27
Rated Voltage (V)	12
Max Speed (rpm)	1120
Rated Torque (N.m)	0.15
Rated Speed (rpm)	560
Rated Current (A)	1.43
Max Power (W)	8.9
Max Torque (N.m)	0.33
Speed Constant (rpm/V)	46.7
Torque Constant (N.m/A)	0.1
Winding Type	Y
Line Resistance ( $\Omega$ )	3
Phase Inductance (mH)	1
Motor Poles	26
Rotor Inertia ( $g\text{cm}^2$ )	81
Motor Temperature	YES
Bearing Rated Load (N)	140
Motor Weight (g)	90
Recommend Drive	DF40v2
Drive Input Voltage (V)	7.4~32
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

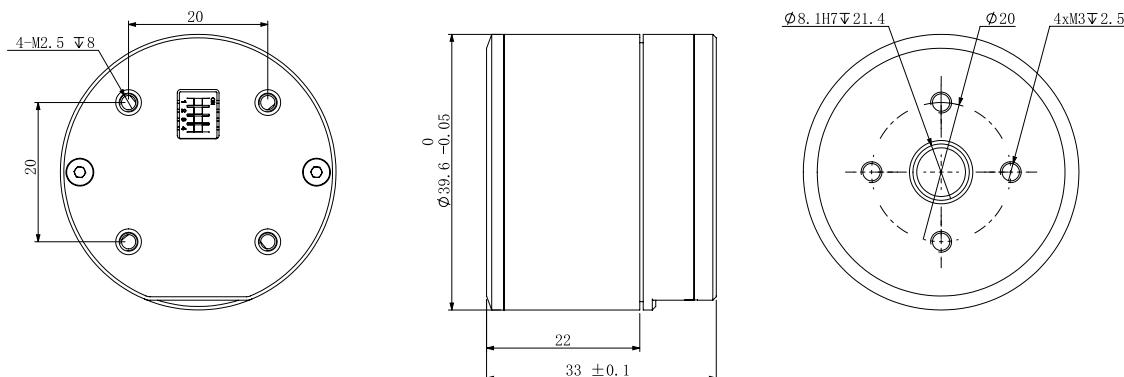


## PRODUCT PARAMETERS

MF4015V2

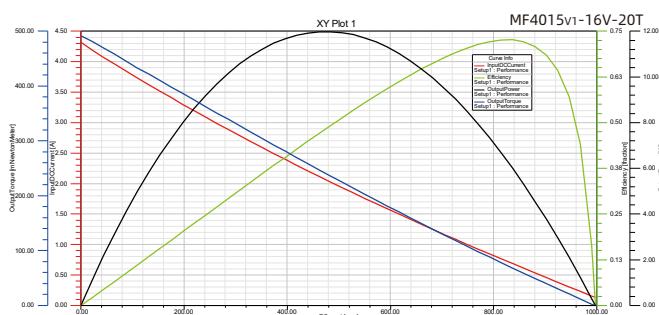
Item Name	MF4015V2
Turns	20
Rated Voltage (V)	16
Max Speed (rpm)	1350
Rated Torque (N.m)	0.25
Rated Speed (rpm)	750
Rated Current (A)	2.2
Max Power (W)	22
Max Torque (N.m)	0.65
Speed Constant (rpm/V)	46.9
Torque Constant (N.m/A)	0.11
Winding Type	Y
Line Resistance ( $\Omega$ )	3
Phase Inductance (mH)	1
Motor Poles	26
Rotor Inertia (gcm <sup>2</sup> )	81
Motor Temperature	YES
Bearing Rated Load (N)	140
Motor Weight (g)	116
Recommend Drive	DF40v2
Drive Input Voltage (V)	7.4~32
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque



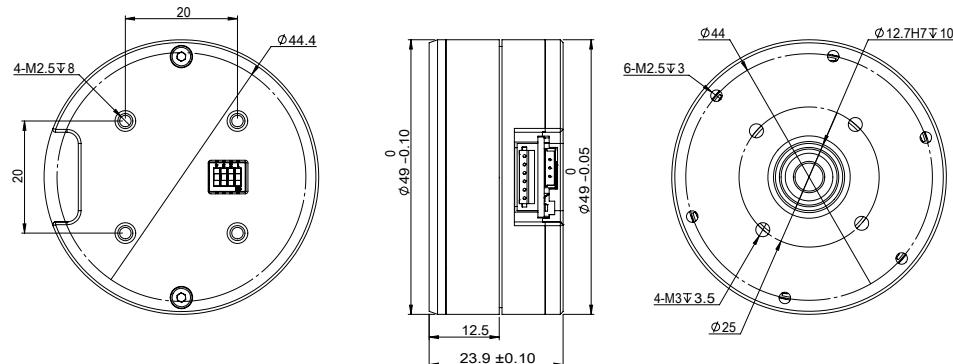
# MF SERIES

## PRODUCT PARAMETERS

MF5005V2

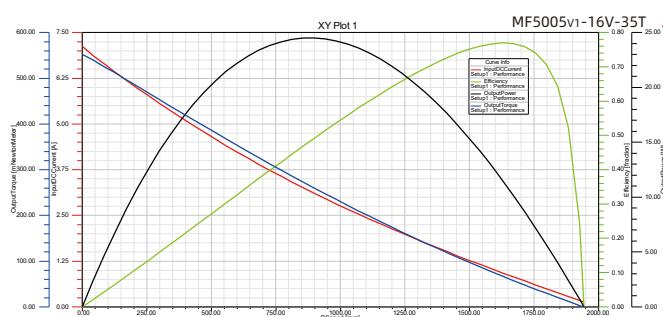
Item Name	MF5005V2
Turns	35
Rated Voltage (V)	16
Max Speed (rpm)	1700
Rated Torque (N.m)	0.12
Rated Speed (rpm)	1100
Rated Current (A)	1.3
Max Power (W)	15
Max Torque (N.m)	0.4
Speed Constant (rpm/V)	85
Torque Constant (N.m/A)	0.08
Winding Type	Y
Line Resistance ( $\Omega$ )	2
Phase Inductance (mH)	0.65
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	136
Motor Temperature	YES
Bearing Rated Load (N)	153
Motor Weight (g)	104
Recommend Drive	DF40v2
Drive Input Voltage (V)	7.4~32
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

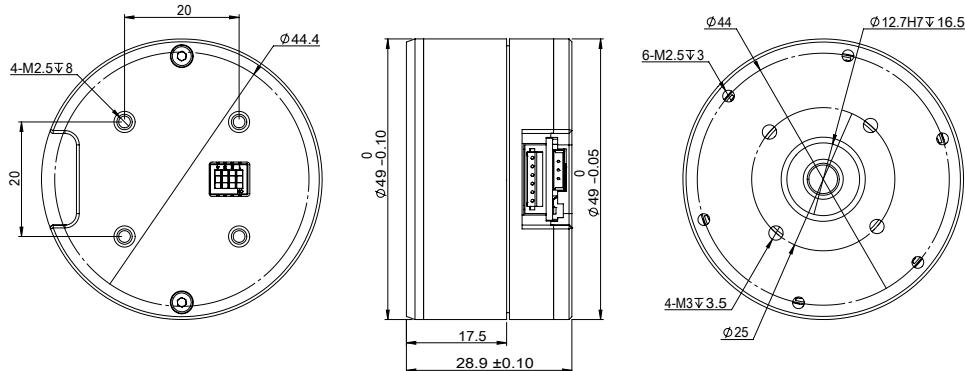


## PRODUCT PARAMETERS

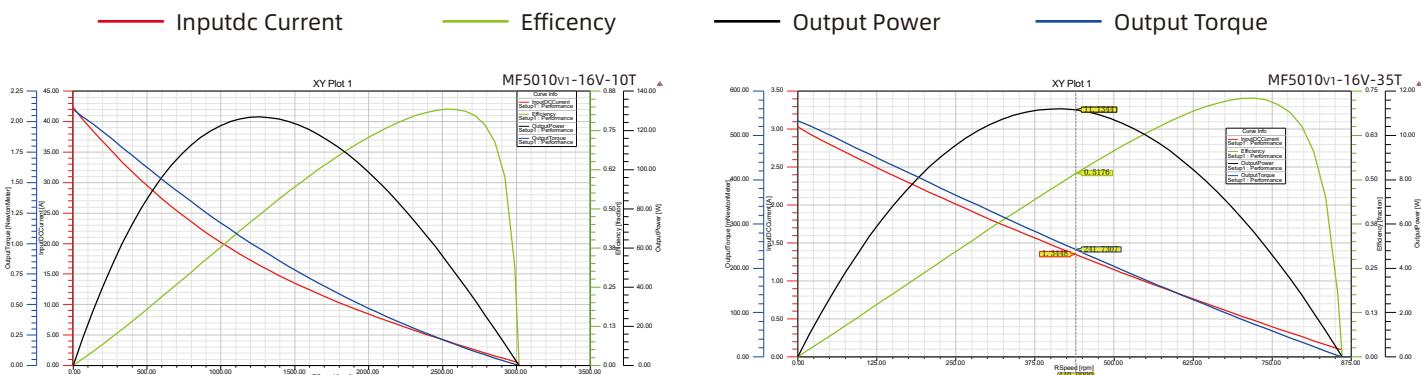
MF5010V2

Item Name	MF5010V2	
Turns	10	35
Rated Voltage (V)	16	16
Max Speed (rpm)	3050	870
Rated Torque (N.m)	0.26	0.24
Rated Speed (rpm)	2400	440
Rated Current (A)	5.06	1.35
Max Power (W)	128	12
Max Torque (N.m)	0.4	0.53
Speed Constant (rpm/V)	150	27.5
Torque Constant (N.m/A)	0.05	0.18
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.33	3.2
Phase Inductance (mH)	0.13	1.2
Motor Poles	28	
Rotor Inertia ( $gcm^2$ )	202	
Motor Temperature	YES	
Bearing Rated Load (N)	153	
Motor Weight (g)	137	
Recommend Drive	DF40v2	
Drive Input Voltage (V)	7.4~32	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18bit Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)	
Acceleration Curve	Trapezoid acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE





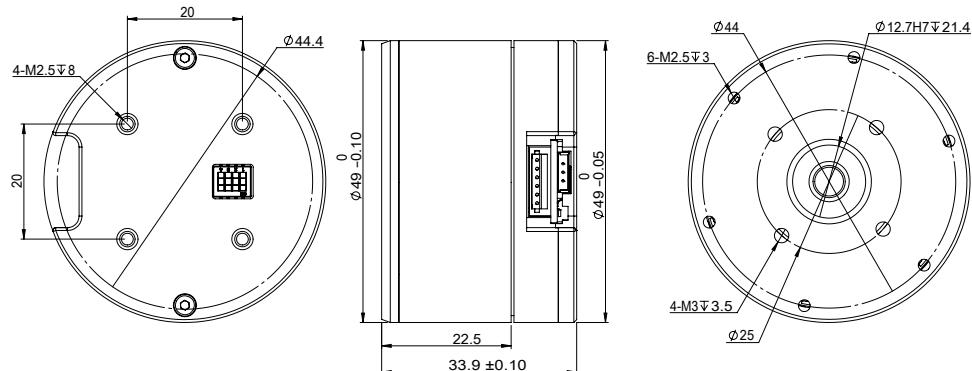
# MF SERIES

## PRODUCT PARAMETERS

**MF5015V2**

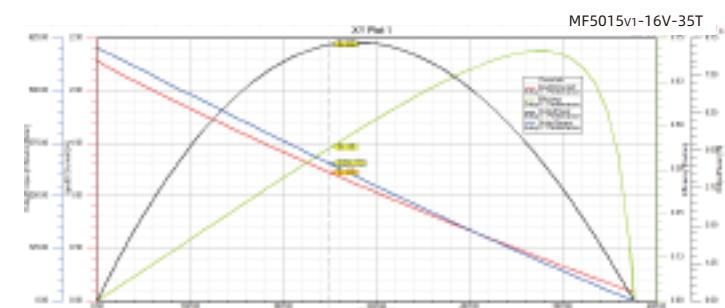
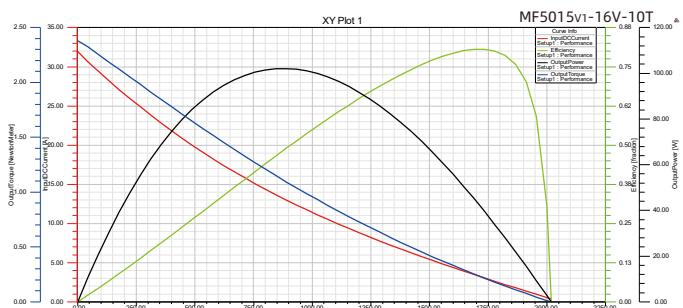
Item Name	MF5015v2	
Turns	10	35
Rated Voltage (V)	16	16
Max Speed (rpm)	2040	580
Rated Torque (N.m)	0.38	0.32
Rated Speed (rpm)	1550	250
Rated Current (A)	4.9	1.22
Max Power (W)	104	8.8
Max Torque (N.m)	0.7	0.82
Speed Constant (rpm/V)	97	15.6
Torque Constant (N.m/A)	0.08	0.26
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.48	4
Phase Inductance (mH)	0.19	1.76
Motor Poles	28	
Rotor Inertia ( $gcm^2$ )	202	
Motor Temperature	YES	
Bearing Rated Load (N)	153	
Motor Weight (g)	175	
Recommend Drive	DF40v2	
Drive Input Voltage (V)	7.4~32	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18bit Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)	
Acceleration Curve	Trapezoid acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

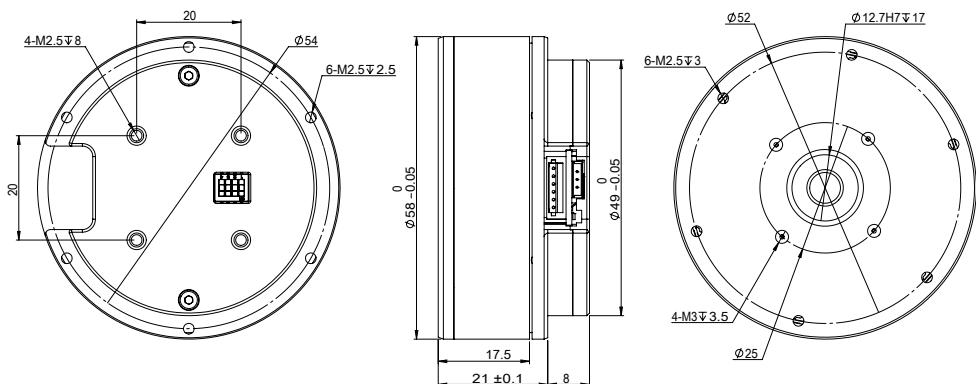


## PRODUCT PARAMETERS

MF6010V2

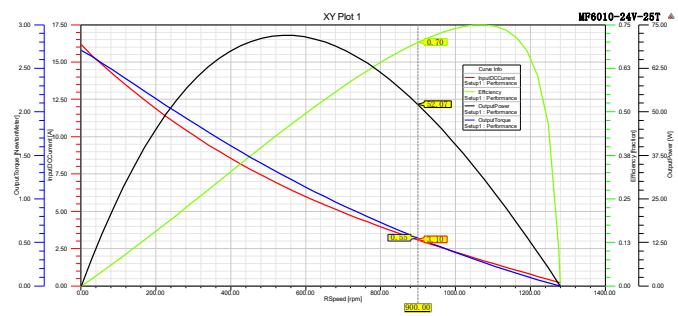
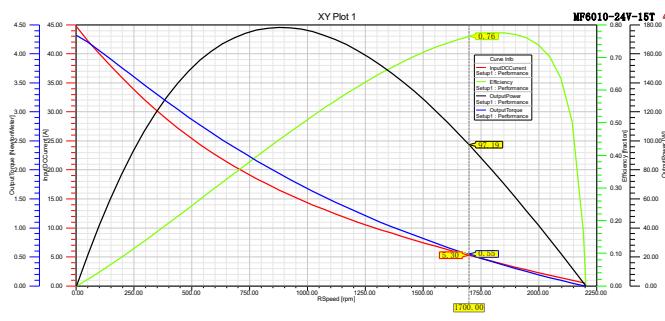
Item Name	MF6010V2	
Turns	15	25
Rated Voltage (V)	24	24
Max Speed (rpm)	2200	1280
Rated Torque (N.m)	0.55	0.55
Rated Speed (rpm)	1700	900
Rated Current (A)	3.1	5.3
Max Power (W)	175	70
Max Torque (N.m)	4	2.7
Speed Constant (rpm/V)	71	37.5
Torque Constant (N.m/A)	0.18	0.10
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.65	1.59
Phase Inductance (mH)	0.34	0.99
Motor Poles	28	
Rotor Inertia ( $gcm^2$ )	394	
Motor Temperature	YES	
Bearing Rated Load (N)	280	
Motor Weight (g)	193	
Recommend Drive	DF40V2	
Drive Input Voltage (V)	7.4~32	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18bit Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(4KHz)	
Acceleration Curve	Trapezoid acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





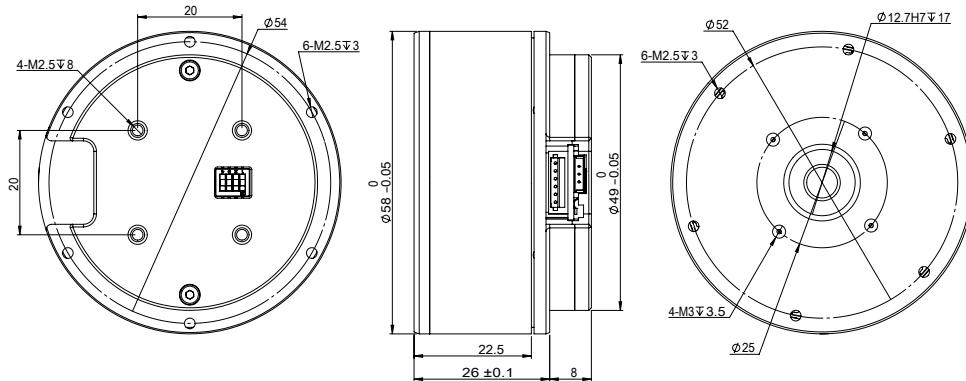
# MF SERIES

## PRODUCT PARAMETERS

**MF6015V2**

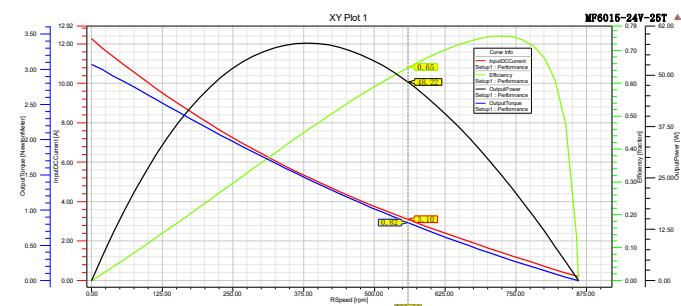
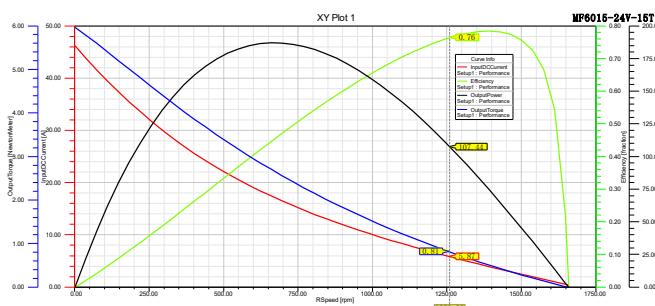
Item Name	MF6015v2	
Turns	15	25
Rated Voltage (V)	24	24
Max Speed (rpm)	1650	872
Rated Torque (N.m)	0.81	0.82
Rated Speed (rpm)	1260	560
Rated Current (A)	5.87	3.1
Max Power (W)	185	57
Max Torque (N.m)	5.5	3
Speed Constant (rpm/V)	53	23.3
Torque Constant (N.m/A)	0.14	0.26
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.89	2.17
Phase Inductance (mH)	0.49	1.44
Motor Poles	28	
Rotor Inertia ( $gcm^2$ )	515	
Motor Temperature	YES	
Bearing Rated Load (N)	280	
Motor Weight (g)	251	
Recommend Drive	DF40v2	
Drive Input Voltage (V)	7.4~32	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18bit Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(4KHz)	
Acceleration Curve	Trapezoid acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

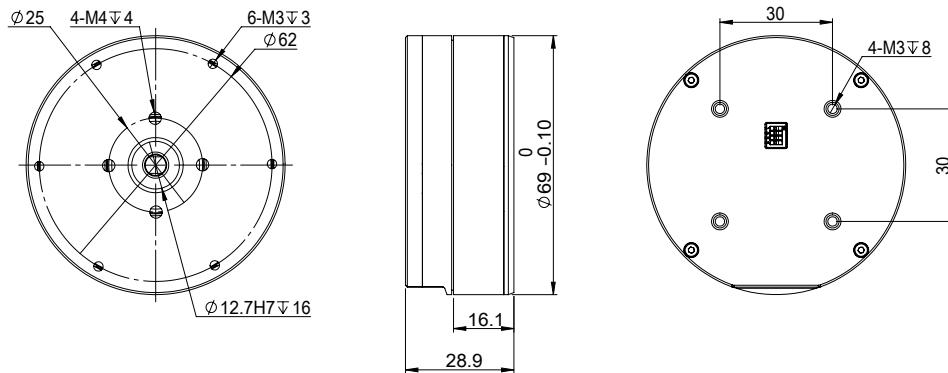


## PRODUCT PARAMETERS

MF7010V2

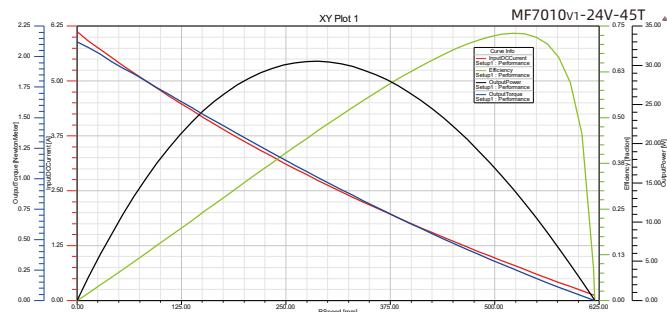
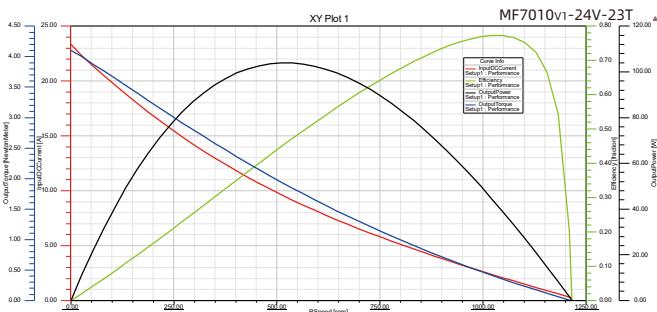
Item Name	MF7010V2	
Turns	23	45
Rated Voltage (V)	24	24
Max Speed (rpm)	1230	620
Rated Torque (N.m)	0.61	0.63
Rated Speed (rpm)	940	400
Rated Current (A)	3.3	1.75
Max Power (W)	104	31
Max Torque (N.m)	2	2.1
Speed Constant (rpm/V)	39	16.7
Torque Constant (N.m/A)	0.18	0.36
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.71	2.73
Phase Inductance (mH)	0.86	3.3
Motor Poles	28	
Rotor Inertia ( $gcm^2$ )	748	
Motor Temperature	YES	
Bearing Rated Load (N)	330	
Motor Weight (g)	278	
Recommend Drive	DF70v2	
Drive Input Voltage (V)	7.4~32	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18bit Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)	
Acceleration Curve	Trapezoid acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque



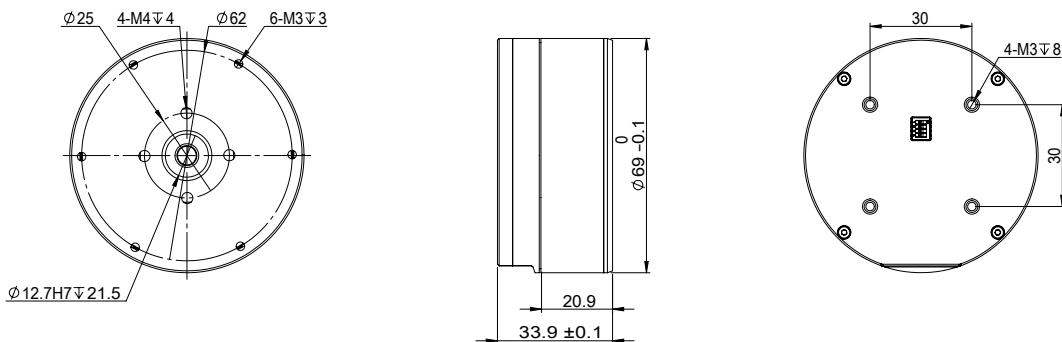
# MF SERIES

## PRODUCT PARAMETERS

MF7015V2

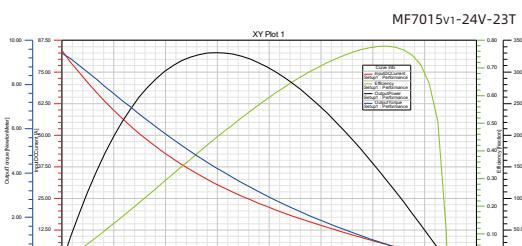
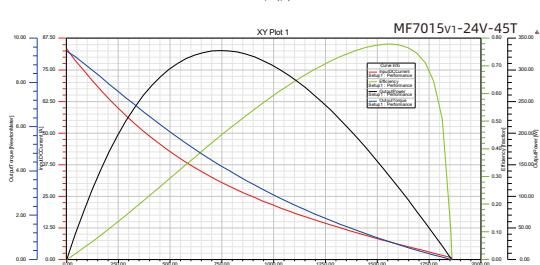
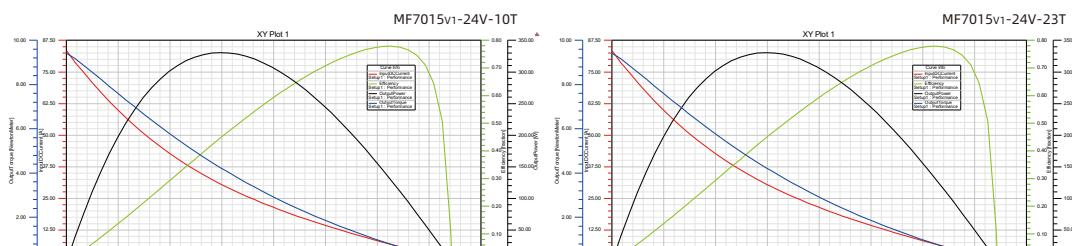
Item Name	MF7015v2		
Turns	10	23	45
Rated Voltage (V)	24	24	24
Max Speed (rpm)	1890	805	410
Rated Torque (N.m)	1	1	0.99
Rated Speed (rpm)	1500	580	220
Rated Current (A)	8.3	3.62	1.93
Max Power (W)	330	75	24.5
Max Torque (N.m)	2	3.8	2.42
Speed Constant (rpm/V)	63	24.2	9.2
Torque Constant (N.m/A)	0.12	0.28	0.51
Winding Type	Y	Y	Y
Line Resistance ( $\Omega$ )	0.28	1.14	3.9
Phase Inductance (mH)	0.24	1.25	4.83
Motor Poles	28		
Rotor Inertia ( $gcm^2$ )	933		
Motor Temperature	YES		
Bearing Rated Load (N)	330		
Motor Weight (g)	352		
Recommand Drive	DF70v2		
Drive Input Voltage (V)	7.4~32		
Communication	RS485 Or CAN		
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)		
Encoder	18bit Magnetic Encoder		
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M		
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M		
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)		
Acceleration Curve	Trapezoid acceleration		

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque

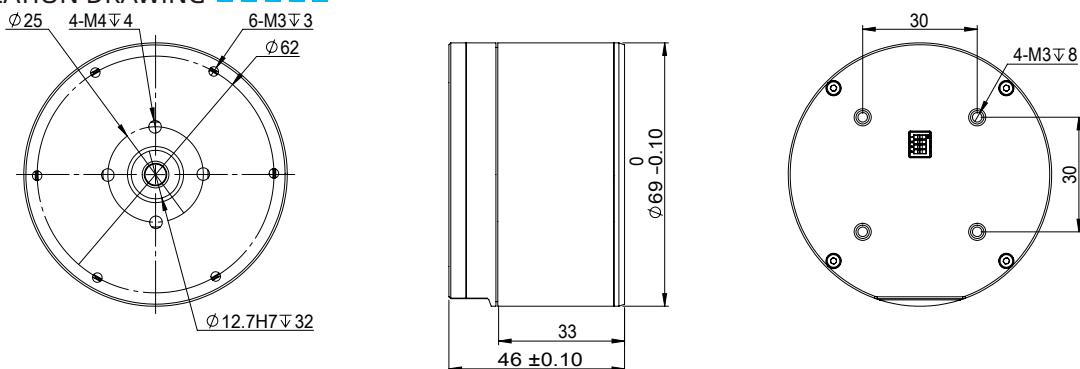


## PRODUCT PARAMETERS

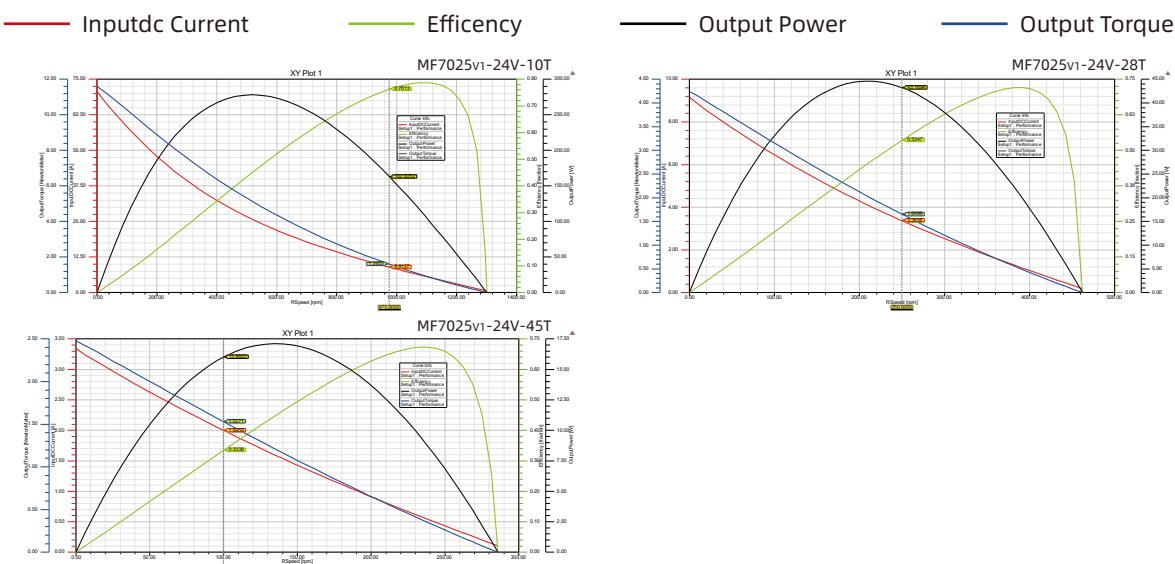
MF7025V2

Item Name	MF7025V2		
Turns	10	28	45
Rated Voltage (V)	24	24	24
Max Speed (rpm)	1350	462	285
Rated Torque (N.m)	1.6	1.6	1.5
Rated Speed (rpm)	970	250	100
Rated Current (A)	8.9	3.36	2
Max Power (W)	278	44	17.5
Max Torque (N.m)	2.1	2.9	2.7
Speed Constant (rpm/V)	40	10.4	4.2
Torque Constant (N.m/A)	0.18	0.48	0.75
Winding Type	Y	Y	Y
Line Resistance ( $\Omega$ )	0.28	2.2	5.5
Phase Inductance (mH)	0.24	2.95	7.6
Motor Poles	28		
Rotor Inertia ( $gcm^2$ )	1040		
Motor Temperature	YES		
Bearing Rated Load (N)	330		
Motor Weight (g)	526		
Recommend Drive	DF70v2		
Drive Input Voltage (V)	7.4~32		
Communication	RS485 Or CAN		
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)		
Encoder	18bit Magnetic Encoder		
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M		
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M		
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)		
Acceleration Curve	Trapeziod acceleration		

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE



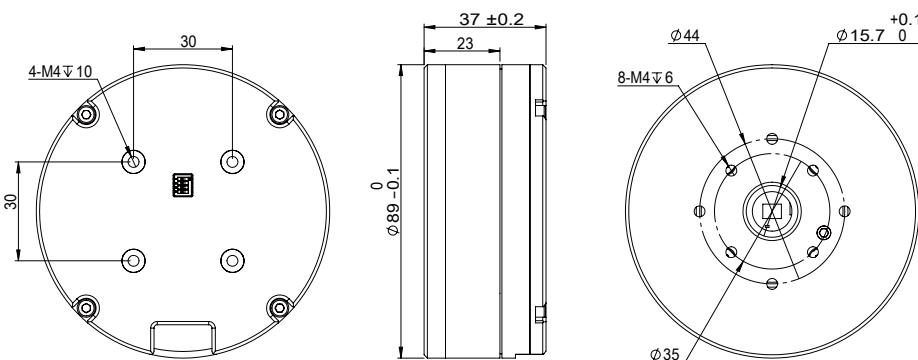
# MF SERIES

## PRODUCT PARAMETERS

MF9010V2

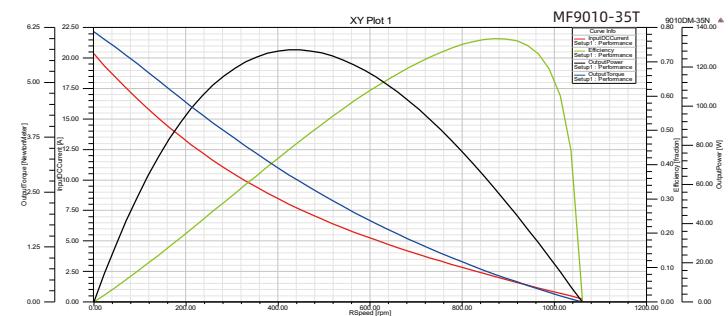
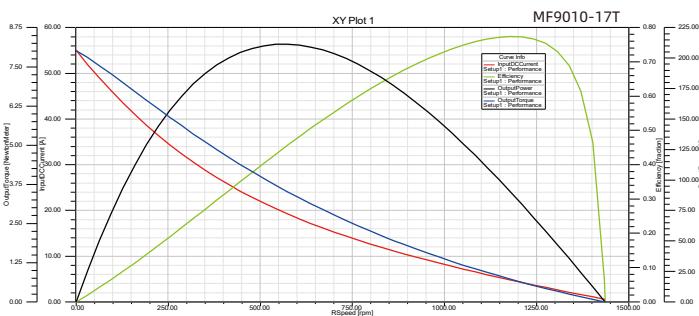
Item Name	MF9010V2	
Turns	17	35
Rated Voltage (V)	24	24
Max Speed (rpm)	1465	690
Rated Torque (N.m)	1.09	1.07
Rated Speed (rpm)	1080	450
Rated Current (A)	6.66	3.27
Max Power (W)	215	128
Max Torque (N.m)	2.2	4.1
Speed Constant (rpm/V)	45	18.8
Torque Constant (N.m/A)	0.16	0.33
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.29	1.15
Phase Inductance (mH)	0.53	3
Motor Poles	28	
Rotor Inertia ( $gcm^2$ )	2860	
Motor Temperature	YES	
Bearing Rated Load (N)	650	
Motor Weight (g)	525	
Recommend Drive	DF70v2	
Drive Input Voltage (V)	7.4~32	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18bit Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	1M	
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)	
Acceleration Curve	Trapezoid acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque



## PRODUCT PARAMETERS

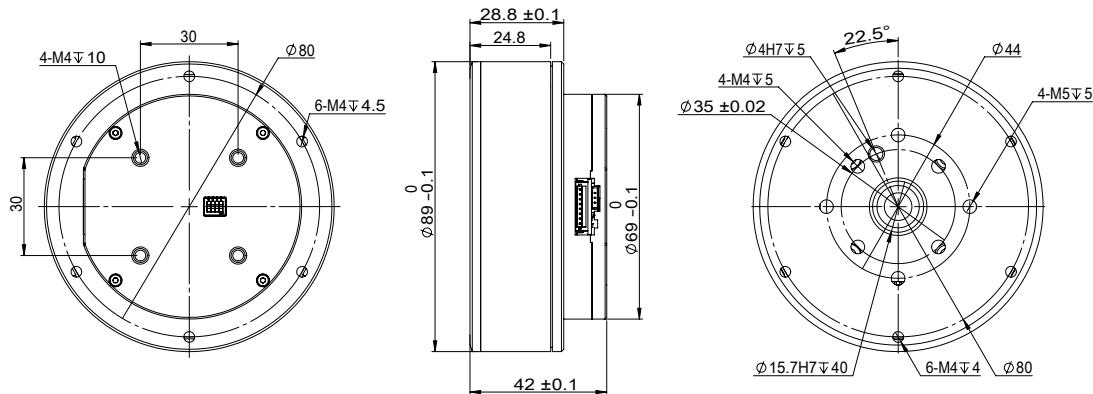
MF9015V2

Item Name	MF9015V2	
Turns	16	35
Rated Voltage (V)	24	24
Max Speed (rpm)	1085	500
Rated Torque (N.m)	1.63	1.67
Rated Speed (rpm)	780	290
Rated Current (A)	7.03	3.34
Max Power (W)	120	55
Max Torque (N.m)	3.4	5
Speed Constant (rpm/V)	33	12.1
Torque Constant (N.m/A)	0.23	0.50
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.35	1.51
Phase Inductance (mH)	0.65	1.05
Motor Poles	28	
Rotor Inertia ( $gcm^2$ )	3271	
Motor Temperature	YES	
Bearing Rated Load (N)	650	
Motor Weight (g)	660	

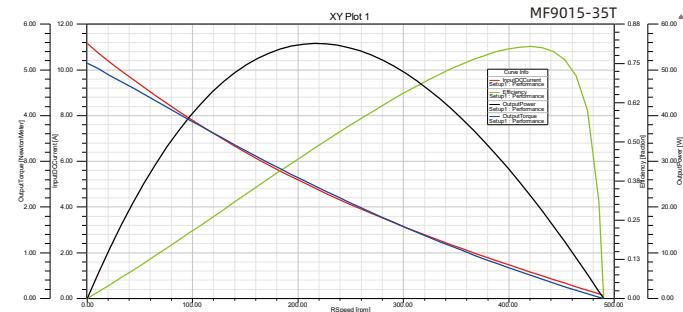
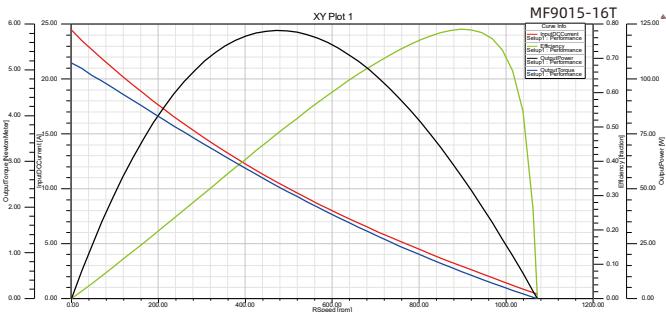
Recommend Drive	DF70v2
Drive Input Voltage (V)	7.4~32
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	1M
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapeziod acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





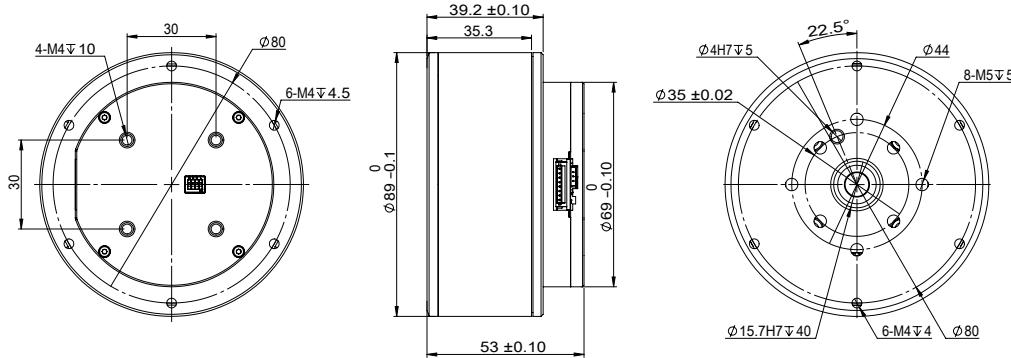
# MF SERIES

## PRODUCT PARAMETERS

MF9025V2

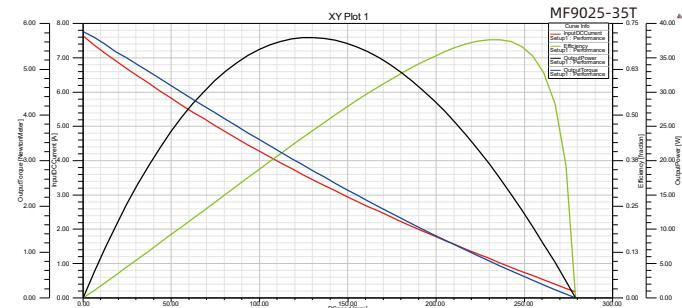
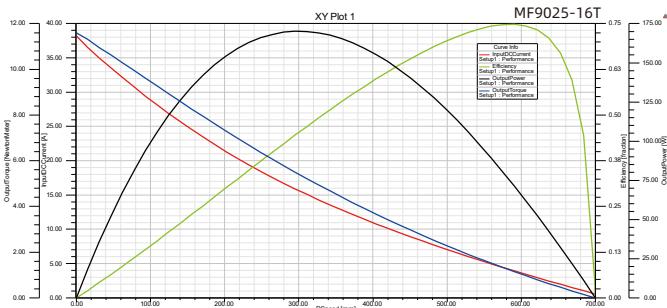
Item Name	MF9025V2	
Turns	16	35
Rated Voltage (V)	24	24
Max Speed (rpm)	710	280
Rated Torque (N.m)	2.42	2.79
Rated Speed (rpm)	490	130
Rated Current (A)	7.45	3.46
Max Power (W)	170	38
Max Torque (N.m)	4.5	5.8
Speed Constant (rpm/V)	20	5.4
Torque Constant (N.m/A)	0.32	0.81
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.5	1.9
Phase Inductance (mH)	0.96	4.71
Motor Poles	28	
Rotor Inertia ( $gcm^2$ )	4656	
Motor Temperature	YES	
Bearing Rated Load (N)	650	
Motor Weight (g)	963	
Recommend Drive	DF70v2	
Drive Input Voltage (V)	7.4~32	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18bit Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)	
Acceleration Curve	Trapeziod acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque

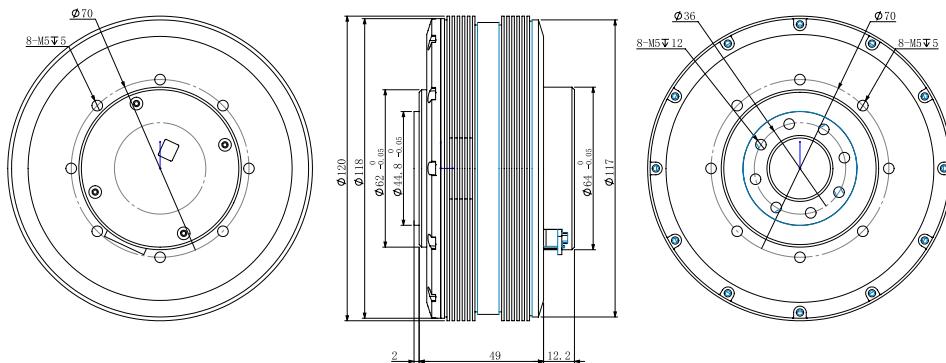


## PRODUCT PARAMETERS

MF12025V2

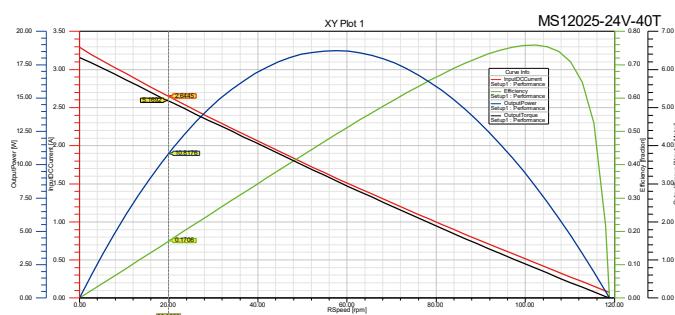
Item Name	MF12025v2
Turns	20
Rated Voltage (V)	24
Max Speed (rpm)	250
Rated Torque (N.m)	5
Rated Speed (rpm)	115
Rated Current (A)	4
Max Power (W)	60
Max Torque (N.m)	10
Speed Constant (rpm/V)	4.8
Torque Constant (N.m/A)	1.25
Winding Type	Y
Line Resistance ( $\Omega$ )	2.4
Phase Inductance (mH)	5
Motor Poles	42
Rotor Inertia ( $g\text{cm}^2$ )	5500
Motor Temperature	YES
Bearing Rated Load (N)	1560
Motor Weight (g)	1147
Recommend Drive	DF70v2
Drive Input Voltage (V)	7.4~32
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque



# REDUCER EQUIPPED MOTORS

## DUAL PLANETARY REDUCER MOTOR



MG8010- i36 v2

## HARMONIC MOTOR



MOP4011v2

### Name rule

MG 80 16 E-i6

① ② ③ ④ ⑤

- ① Series Name(MG for Planetary Reducer, MOP for Harmonic)
- ② Stator Dimension
- ③ Stator Height
- ④ E:Dual Encoder(None:Single Encoder)
- ⑤ i:Reduce Ratio

## PLANETARY REDUCER+SINGLE ENCODER SERIES



MG4005-i10 v2



MG6012-i8 v2



MG8016-i6 v2



MG10015-i10 v2



## PLANETARY REDUCER+DUAL ENCODER SERIES



MG6012E-i8 v2



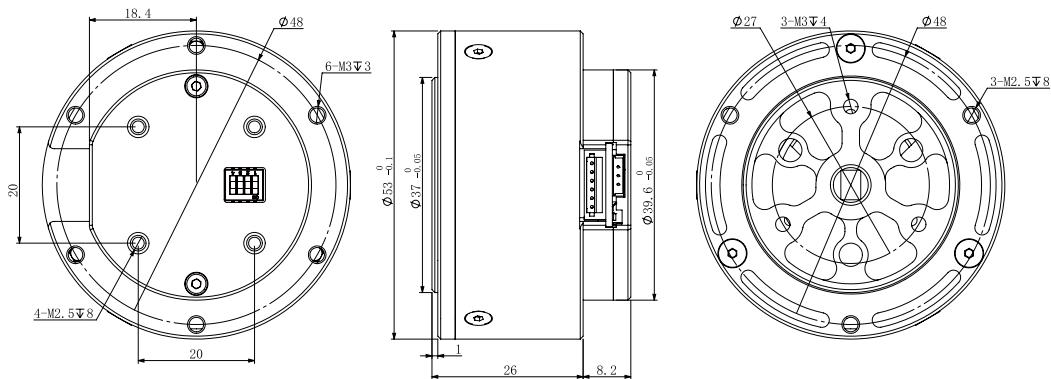
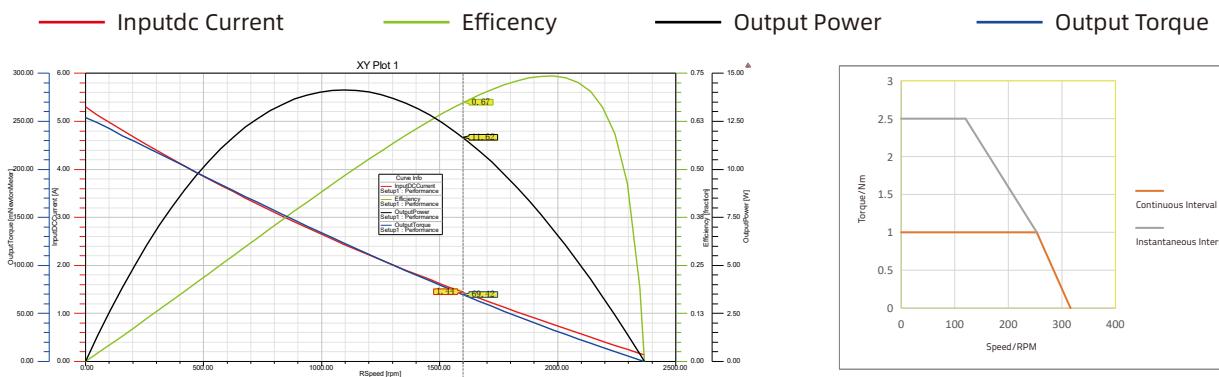
MG8016E-i6 v2



MG10015E-i10 v2

**PRODUCT PARAMETERS**
**MG4005-i10 v2**

<b>Item Name</b>	<b>MG4005-i10 v2</b>
Rated Voltage (V)	24
Max Speed (rpm)	316
Rated Torque (N.m)	1
Rated Speed (rpm)	253
Rated Current (A)	1.6
Max Power (W)	14
Max Torque (N.m)	2.5
Speed Constant (rpm/V)	105
Torque Constant (N.m/A)	0.06
Turns	25
Winding Type	Y
Line Resistance ( $\Omega$ )	1.4
Phase Inductance (mH)	0.5
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	140
Motor Temperature	YES
<b>Reducer Type</b>	<b>PG4210</b>
Gear Ratio	1:10
Backlash (arcmin)	$\leq 10$
Bearing Rated Load (N)	1000
Motor Weight (g)	155
<b>Recommend Drive</b>	<b>DF40v2</b>
Drive Input Voltage (V)	7.4~32
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(4KHz)
Acceleration Curve	Trapezoid acceleration

**INSTALLATION DRAWING**

**MOTOR CHARACTERISTIC CURVE**




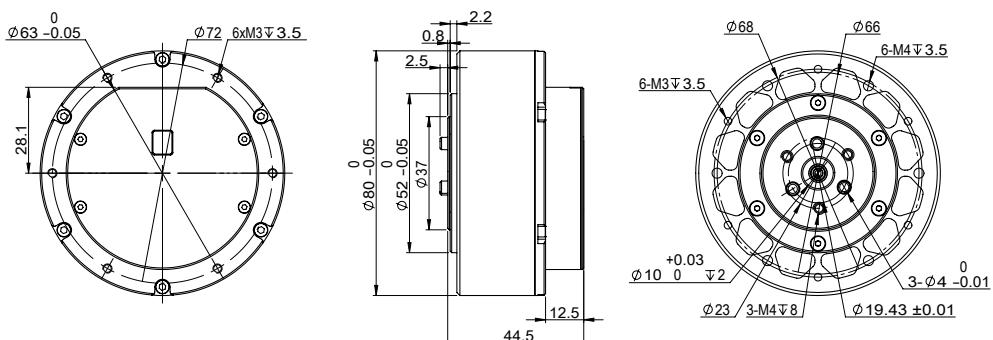
# MG SERIES

## PRODUCT PARAMETERS

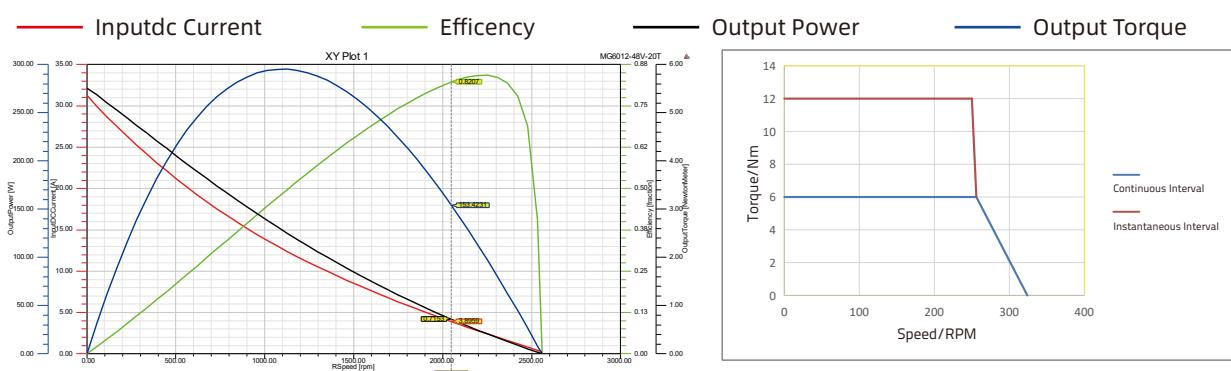
**MG6012-i8 v2**

Item Name	MG6012-i8 v2
Rated Voltage (V)	48
Max Speed (rpm)	310
Rated Torque (N.m)	6
Rated Speed (rpm)	256
Rated Current (A)	3.5
Max Power (W)	294
Max Torque (N.m)	16
Speed Constant (rpm/V)	42.7
Torque Constant (N.m/A )	0.7
Turns	20
Winding Type	Y
Line Resistance ( $\Omega$ )	1.3
Phase Inductance (mH)	0.55
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	930
Motor Temperature	YES
Reducer Type	PG4108
Gear Ratio	1:8
Backlash (arcmin)	$\leq 6$
Bearing Rated Load (N)	906
Motor Weight (g)	430
Recommend Drive	DG60v2
Drive Input Voltage (V)	12~60
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	1M
Control Mode	Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

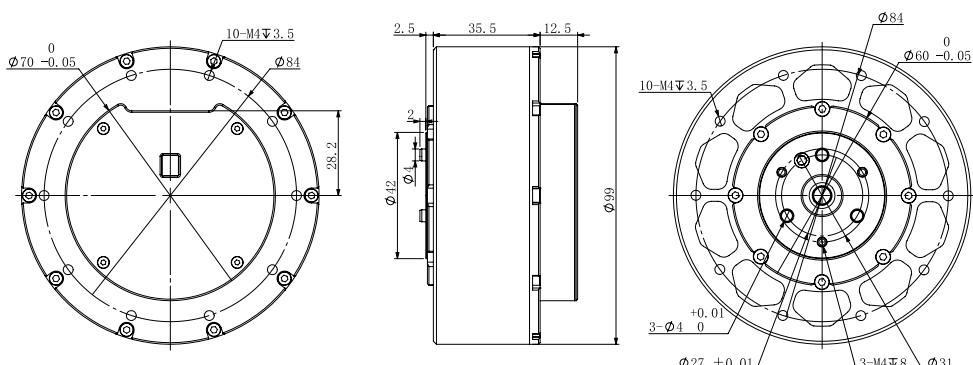


## PRODUCT PARAMETERS

MG8016-i6 v2

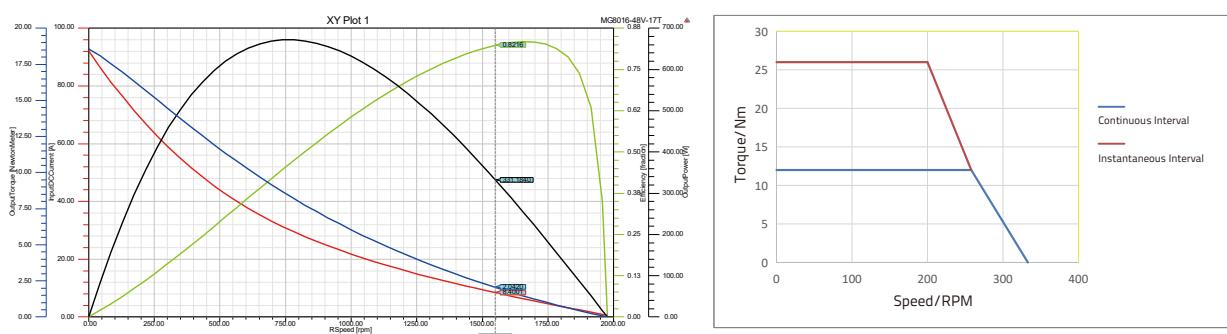
Item Name	MG8016-i6 v2
Rated Voltage (V)	48
Max Speed (rpm)	300
Rated Torque (N.m)	12
Rated Speed (rpm)	258
Rated Current (A)	8.4
Max Power (W)	670
Max Torque (N.m)	37
Speed Constant (rpm/V)	41.7
Torque Constant (N.m/A )	0.24
Turns	17
Winding Type	△
Line Resistance ( $\Omega$ )	0.6
Phase Inductance (mH)	0.6
Motor Poles	40
Rotor Inertia ( $gcm^2$ )	2570
Motor Temperature	YES
Reducer Type	PG5506
Gear Ratio	1:6
Backlash (arcmin)	$\leq 6$
Bearing Rated Load (N)	1120
Motor Weight (g)	759
Recommend Drive	DG80v2
Drive Input Voltage (V)	12~60
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	1M
Control Mode	Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





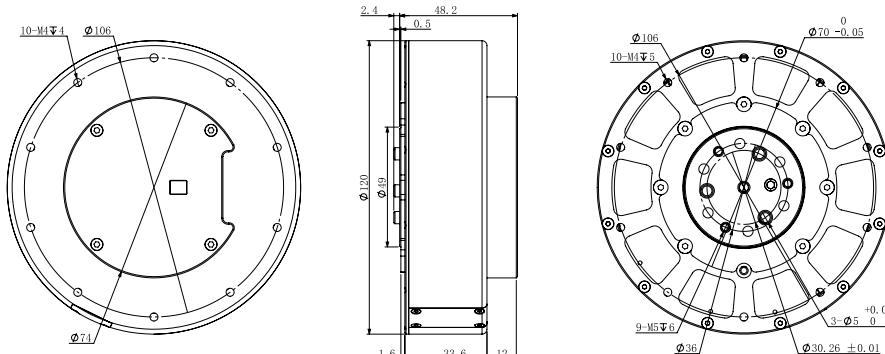
# MG SERIES

## PRODUCT PARAMETERS

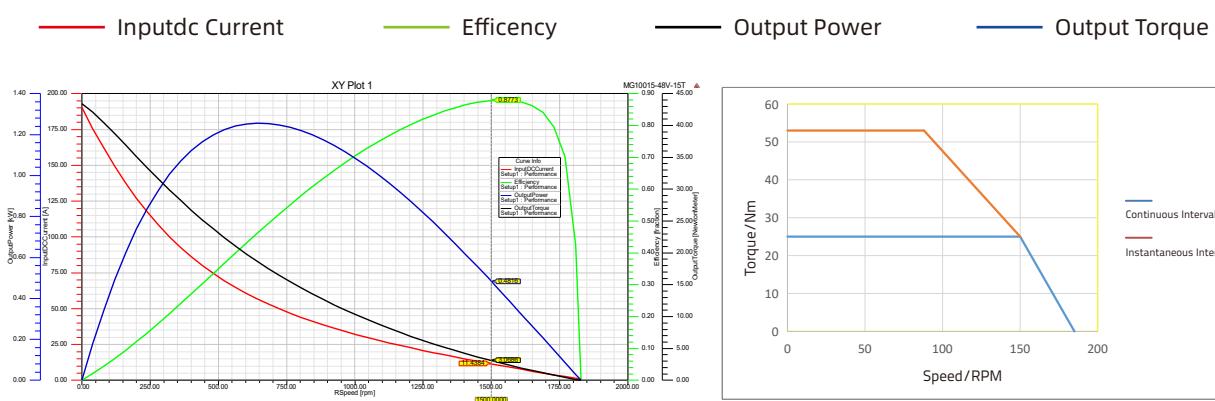
**MG10015-i10 v2**

Item Name	MG10015-i10 v2
Rated Voltage (V)	48
Max Speed (rpm)	185
Rated Torque (N.m)	25
Rated Speed (rpm)	150
Rated Current (A)	11.5
Max Power (W)	1200
Max Torque (N.m)	53
Speed Constant (rpm/V)	38.0
Torque Constant (N.m/A )	1.4
Turns	15
Winding Type	△
Line Resistance ( $\Omega$ )	0.38
Phase Inductance (mH)	0.45
Motor Poles	42
Rotor Inertia ( $gcm^2$ )	5668
Motor Temperature	YES
Reducer Type	PG7407
Gear Ratio	1:10
Backlash (arcmin)	$\leq 8$
Bearing Rated Load (N)	1430
Motor Weight (g)	1213
Recommend Drive	DG60v2
Drive Input Voltage (V)	12~60
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	1M
Control Mode	Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

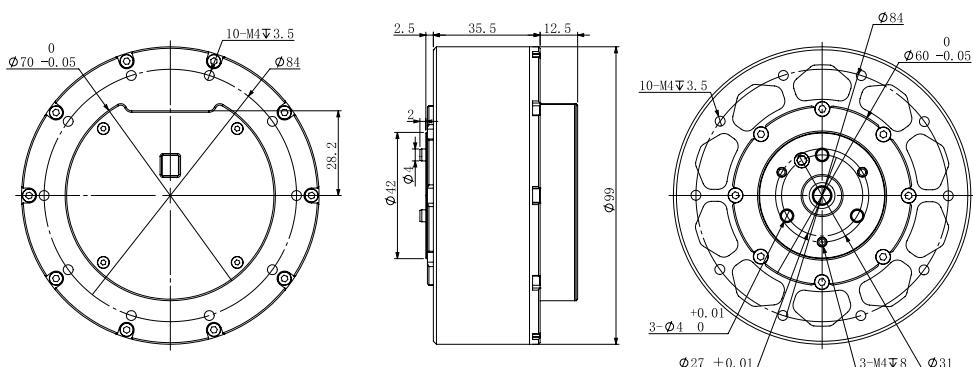


## PRODUCT PARAMETERS

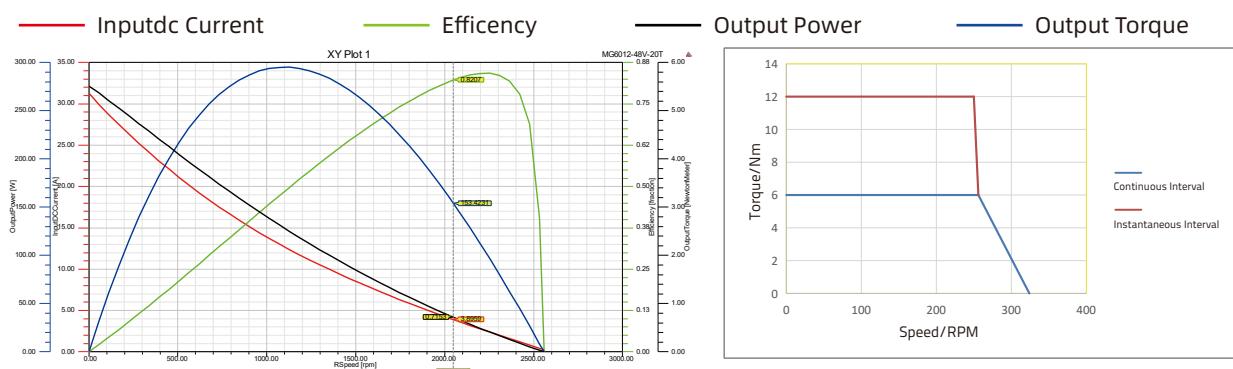
MG6012E-i8 v2

Item Name	MG6012E-i8 v2
Rated Voltage (V)	48
Max Speed (rpm)	324
Rated Torque (N.m)	6
Rated Speed (rpm)	256
Rated Current (A)	3.5
Max Power (W)	294
Max Torque (N.m)	16
Speed Constant (rpm/V)	42.7
Torque Constant (N.m/A)	0.2
Turns	20
Winding Type	Y
Line Resistance ( $\Omega$ )	1.3
Phase Inductance (mH)	0.55
Motor Poles	28
Rotor Inertia ( $gcm^2$ )	930
Motor Temperature	YES
Reducer Type	PG4108
Gear Ratio	1:8
Backlash (arcmin)	$\leq 6$
Bearing Rated Load (N)	906
Motor Weight (g)	430
Recommend Drive	DG60Ev2
Drive Input Voltage (V)	12~60
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18 bit(Motor) & 14 bit(Reducer) Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	1M
Control Mode	Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz)
Acceleration Curve	Trapeziod acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE





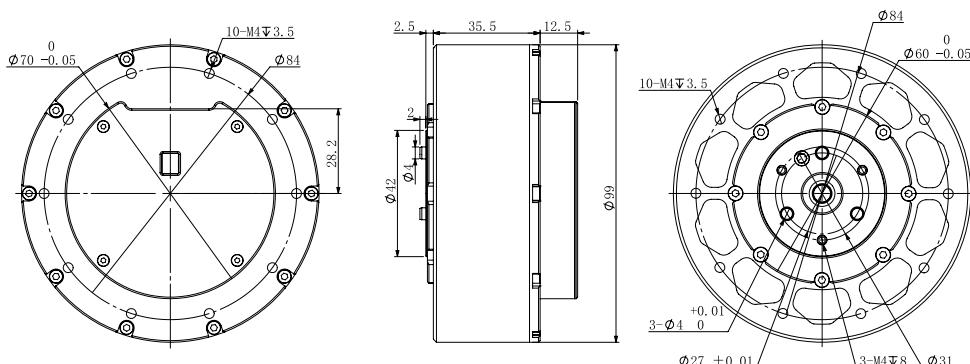
# MG SERIES

## PRODUCT PARAMETERS

**MG8016E-i6 v2**

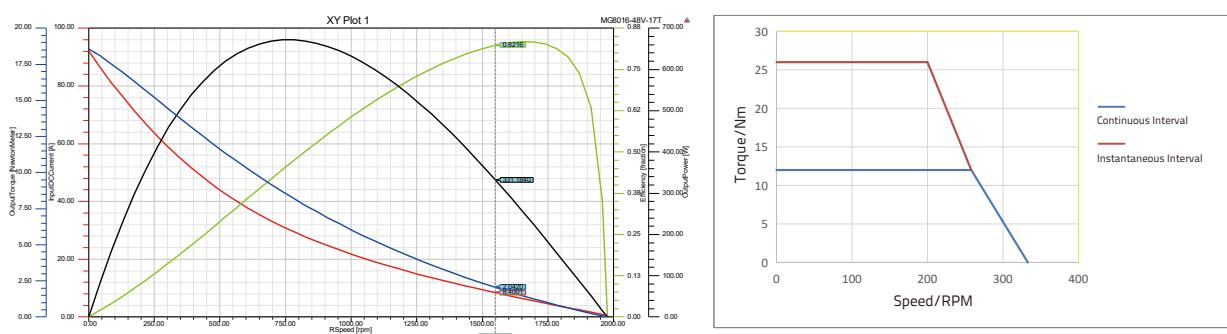
Item Name	MG8016E-i6 v2
Rated Voltage (V)	48
Max Speed (rpm)	300
Rated Torque (N.m)	12
Rated Speed (rpm)	258
Rated Current (A)	8.4
Max Power (W)	670
Max Torque (N.m)	37
Speed Constant (rpm/V)	41.7
Torque Constant (N.m/A )	0.24
Turns	17
Winding Type	△
Line Resistance ( $\Omega$ )	0.6
Phase Inductance (mH)	0.6
Motor Poles	40
Rotor Inertia ( $gcm^2$ )	2570
Motor Temperature	YES
Reducer Type	PG5506
Gear Ratio	1:6
Backlash (arcmin)	$\leq 6$
Bearing Rated Load (N)	1120
Motor Weight (g)	763
Recommend Drive	DG80Ev2
Drive Input Voltage (V)	12~60
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18 bit(Motor) & 14 bit(Reducer) Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	1M
Control Mode	Torque Loop(32KHz) / Speed Loop(8KHz) / Position Loop(4KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque

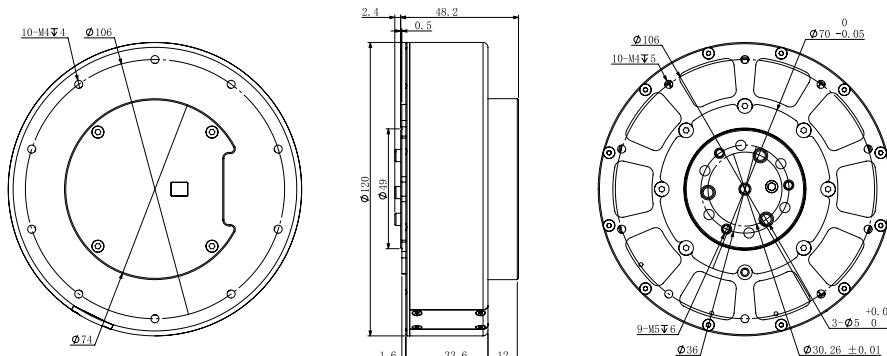


## PRODUCT PARAMETERS

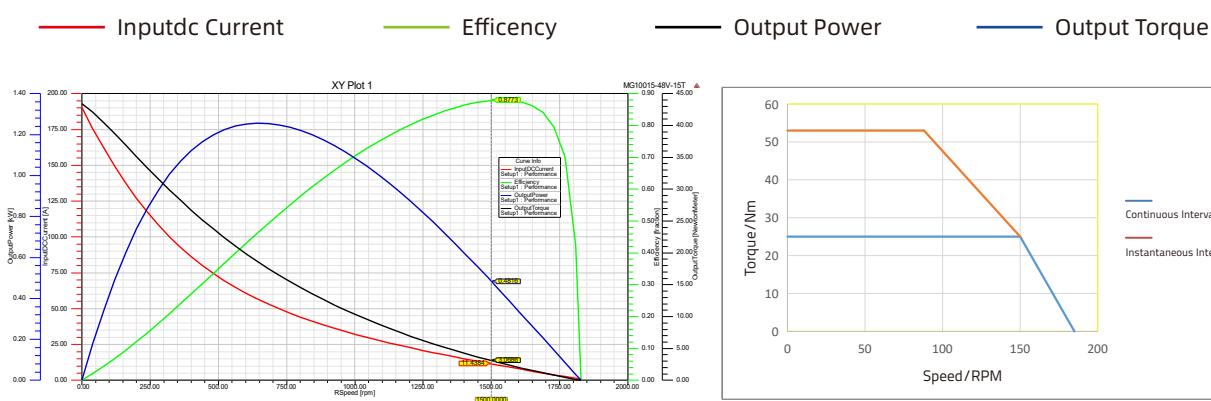
MG10015E-i10v2

Item Name	MG10015E-i10 v2
Rated Voltage (V)	48
Max Speed (rpm)	185
Rated Torque (N.m)	25
Rated Speed (rpm)	150
Rated Current (A)	11.5
Max Power (W)	1200
Max Torque (N.m)	53
Speed Constant (rpm/V)	38.0
Torque Constant (N.m/A)	1.4
Turns	15
Winding Type	△
Line Resistance ( $\Omega$ )	0.38
Phase Inductance (mH)	0.45
Motor Poles	42
Rotor Inertia ( $gcm^2$ )	5668
Motor Temperature	YES
Reducer Type	PG7407
Gear Ratio	1:10
Backlash (arcmin)	$\leq 8$
Bearing Rated Load (N)	1430
Motor Weight (g)	1217
Recommend Drive	DG60Ev2
Drive Input Voltage (V)	12~60
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18 bit(Motor) & 14 bit(Reducer) Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	1M
Control Mode	Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE





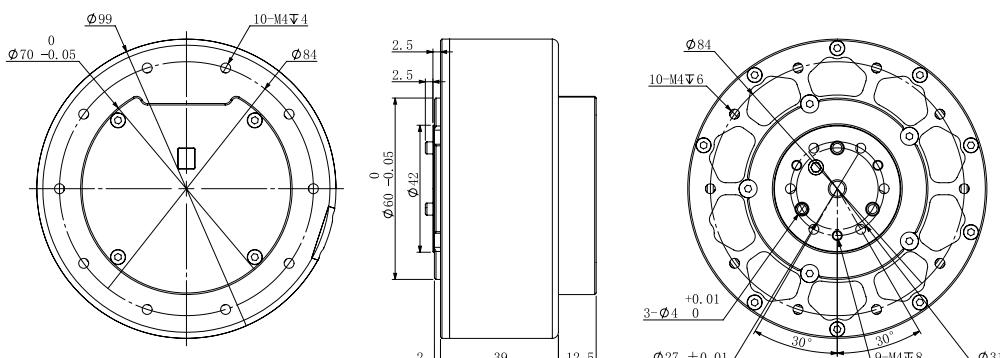
# MG SERIES

## PRODUCT PARAMETERS

**MG8010-i36 v2**

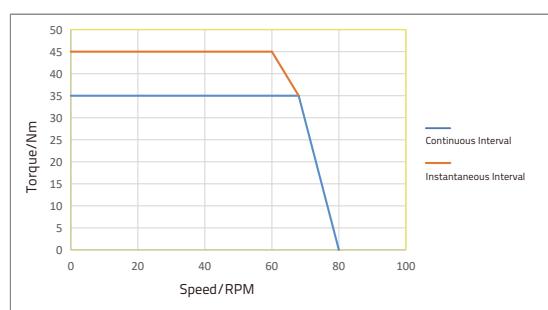
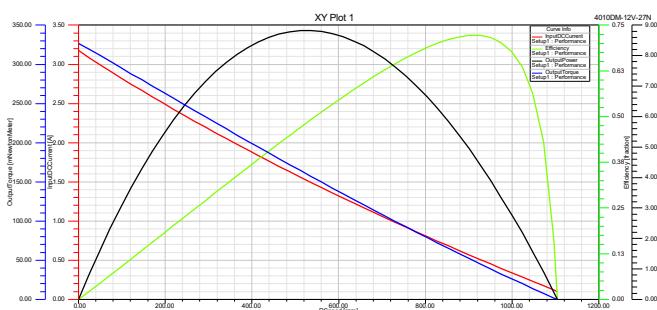
Item Name	MG8010-i36 v2
Rated Voltage (V)	48
Max Speed (rpm)	80
Rated Torque (N.m)	35
Rated Speed (rpm)	68
Rated Current (A)	6.9
Max Power (W)	800
Max Torque (N.m)	45
Speed Constant (rpm/V)	51.0
Torque Constant (N.m/A)	0.15
Turns	17
Winding Type	△
Line Resistance ( $\Omega$ )	0.27
Phase Inductance (mH)	0.23
Motor Poles	40
Rotor Inertia ( $gcm^2$ )	2670
Motor Temperature	YES
Reducer Type	PG5536
Gear Ratio	1:36
Backlash (arcmin)	$\leq 8$
Bearing Rated Load (N)	1770
Motor Weight (g)	860
Recommend Drive	DG80v2
Drive Input Voltage (V)	12~60
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque

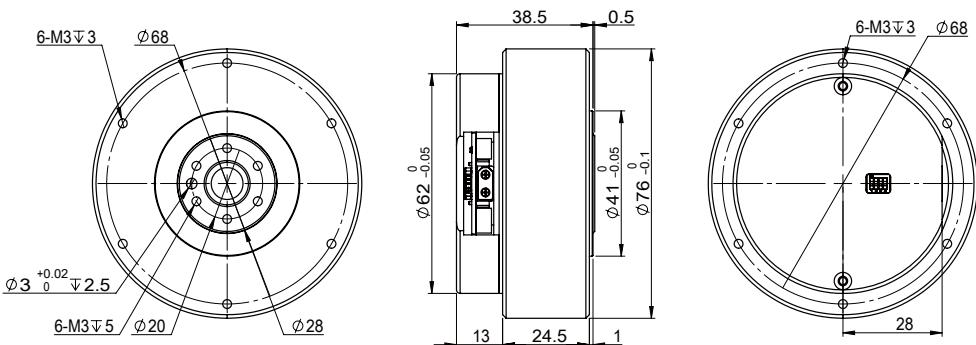


## PRODUCT PARAMETERS

MG6010-i6 v3

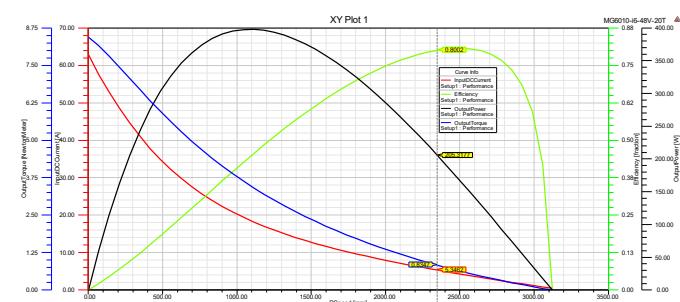
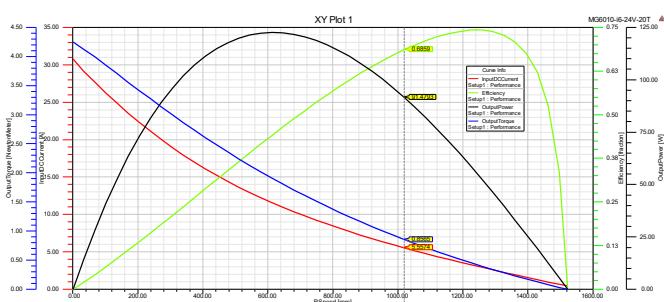
Item Name	MG6010-i6 v3	
Rated Voltage (V)	24	48
Max Speed (rpm)	251	505
Rated Torque (N.m)	5	5
Rated Speed (rpm)	170	391
Rated Current (A)	5.5	5.3
Max Power (W)	120	400
Max Torque (N.m)	10	10
Speed Constant (rpm/V)	62.9	62.9
Torque Constant (N.m/A)	0.16	0.16
Turns	20	20
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.56	0.56
Phase Inductance (mH)	0.57	0.57
Motor Poles	28	28
Rotor Inertia ( $gcm^2$ )	805	805
Motor Temperature	YES	YES
Reducer Type	PG4106	
Gear Ratio	1:6	
Backlash (arcmin)	$\leq 6$	
Bearing Rated Load (N)	900	
Motor Weight (g)	343	
Recommend Drive	DG60V2	
Drive Input Voltage (V)	12~60	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18 bit Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz)	
Acceleration Curve	Trapezoid acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque





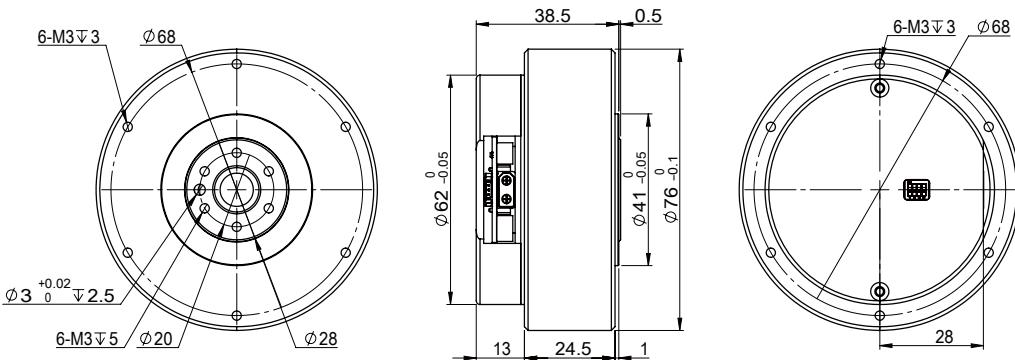
# MG SERIES

## PRODUCT PARAMETERS

**MG6010E-i6 v3**

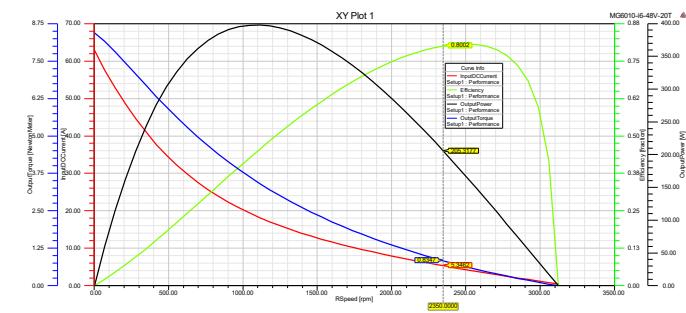
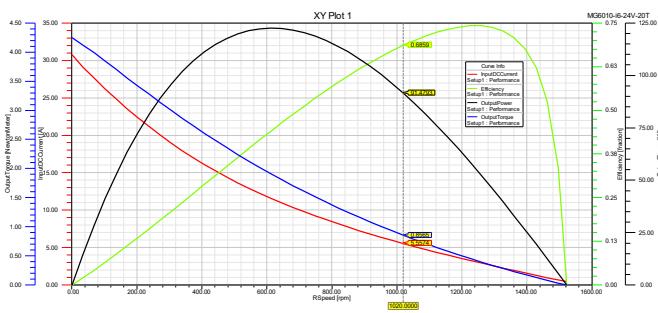
Item Name	MG6010E-i6 v3	
Rated Voltage (V)	24	48
Max Speed (rpm)	251	505
Rated Torque (N.m)	5	5
Rated Speed (rpm)	170	391
Rated Current (A)	5.5	5.3
Max Power (W)	120	400
Max Torque (N.m)	10	10
Speed Constant (rpm/V)	62.9	62.9
Torque Constant (N.m/A)	0.16	0.16
Turns	20	20
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.56	0.56
Phase Inductance (mH)	0.57	0.57
Motor Poles	28	28
Rotor Inertia ( $gcm^2$ )	805	805
Motor Temperature	YES	YES
Reducer Type	PG4106	
Gear Ratio	1:6	
Backlash (arcmin)	$\leq 6$	
Bearing Rated Load (N)	900	
Motor Weight (g)	343	
Recommend Drive	DG60Ev2	
Drive Input Voltage (V)	12~60	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18 bit(Motor) & 14 bit(Reducer) Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz)	
Acceleration Curve	Trapezoid acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque

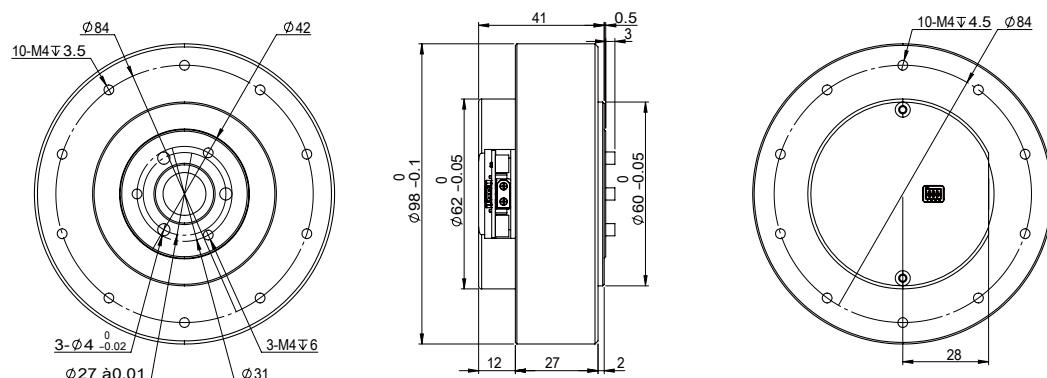


## PRODUCT PARAMETERS

MG808-i9 V3

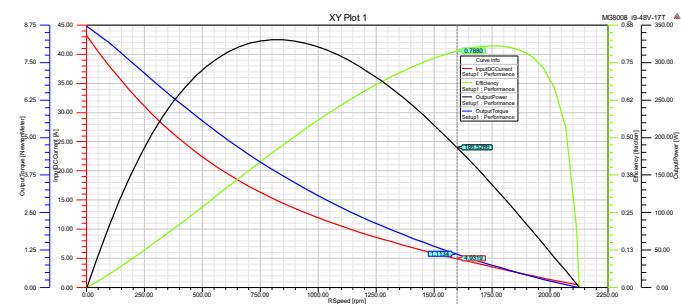
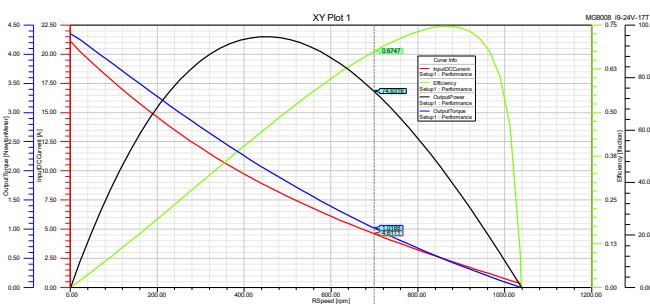
Item Name	MG808-i9 V3	
Rated Voltage (V)	24	48
Max Speed (rpm)	112	220
Rated Torque (N.m)	9	10
Rated Speed (rpm)	78	178
Rated Current (A)	4.6	4.9
Max Power (W)	96	330
Max Torque (N.m)	20	20
Speed Constant (rpm/V)	42	41.4
Torque Constant (N.m/A)	0.22	0.23
Turns	17	17
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.74	0.74
Phase Inductance (mH)	0.59	0.59
Motor Poles	40	40
Rotor Inertia ( $gcm^2$ )	1550	1550
Motor Temperature	YES	YES
Reducer Type	PG5509	
Gear Ratio	1:9	
Backlash (arcmin)	$\leq 6$	
Bearing Rated Load (N)	1120	
Motor Weight (g)	570	
Recommend Drive	DG80V2	
Drive Input Voltage (V)	12~60	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18 bit Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz)	
Acceleration Curve	Trapezoid acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque





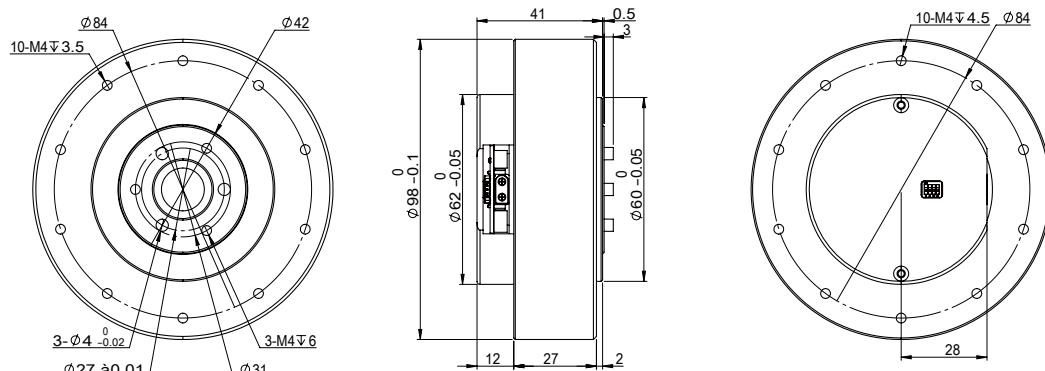
# MG SERIES

## PRODUCT PARAMETERS

**MG8008E-i9 v3**

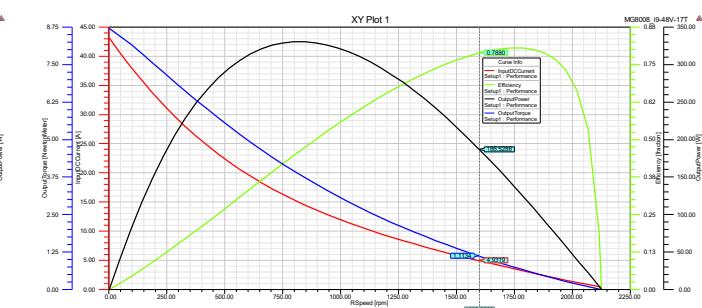
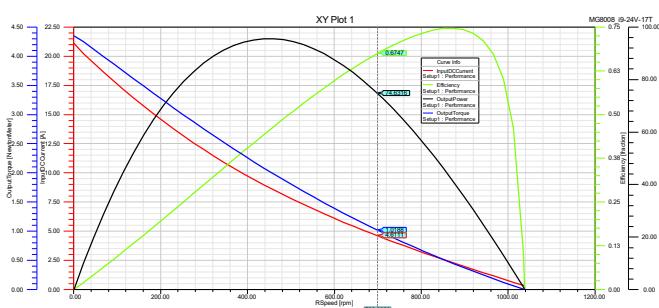
Item Name	MG8008E-i9 v3	
Rated Voltage (V)	24	48
Max Speed (rpm)	112	220
Rated Torque (N.m)	9	10
Rated Speed (rpm)	78	178
Rated Current (A)	4.6	4.9
Max Power (W)	96	330
Max Torque (N.m)	20	20
Speed Constant (rpm/V)	42	41.4
Torque Constant (N.m/A)	0.22	0.23
Turns	17	17
Winding Type	Y	Y
Line Resistance ( $\Omega$ )	0.74	0.74
Phase Inductance (mH)	0.59	0.59
Motor Poles	40	40
Rotor Inertia ( $gcm^2$ )	1550	1550
Motor Temperature	YES	YES
Reducer Type	PG5509	
Gear Ratio	1:9	
Backlash (arcmin)	$\leq 6$	
Bearing Rated Load (N)	1120	
Motor Weight (g)	570	
Recommend Drive	DG80Ev2	
Drive Input Voltage (V)	12~60	
Communication	RS485 Or CAN	
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)	
Encoder	18 bit(Motor) & 14 bit(Reducer) Magnetic Encoder	
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M	
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M	
Control Mode	Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz)	
Acceleration Curve	Trapezoid acceleration	

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque





# MOP SERIES

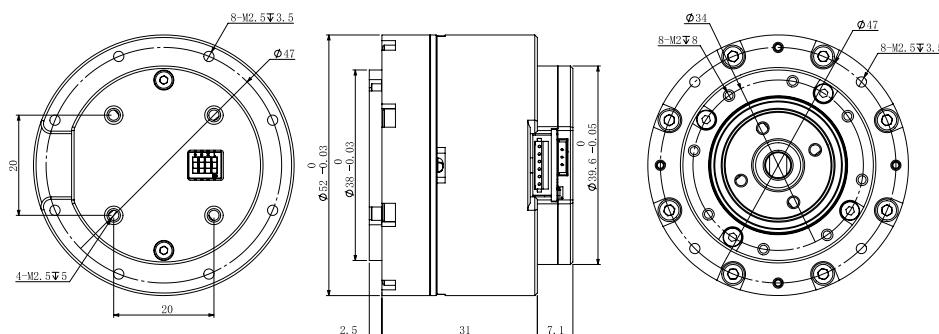
Integrated harmonic reducer servo unit

## PRODUCT PARAMETERS

MOP4011 v2

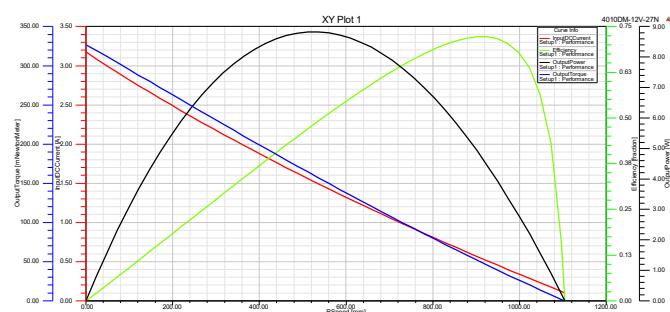
Item Name	MOP4011v2
Rated Voltage (V)	12
Max Speed (rpm)	23
Rated Torque (N.m)	4.2
Rated Speed (rpm)	12
Rated Current (A)	1.43
Max Power (W)	8.9
Max Torque (N.m)	6.6
Speed Constant (rpm/V)	46.7
Torque Constant (N.m/A)	0.1
Turns	27
Winding Type	Y
Line Resistance ( $\Omega$ )	3
Phase Inductance (mH)	1
Motor Poles	26
Rotor Inertia (gcm <sup>2</sup> )	81
Motor Temperature	YES
Reducer Type	HD11-50
Gear Ratio	1:50
Backlash (arcmin)	$\leq 20$
Bearing Rated Load (N)	140
Motor Weight (g)	250
Recommend Drive	DF40v2
Drive Input Voltage (V)	7.4~32
Communication	RS485 Or CAN
Communication Frequency (Hz)	RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)
Encoder	18 bit Magnetic Encoder
Baudrate (RS485) (bps)	9600、19200、57600、115200、230400、406800、1M、2M
Baudrate (CAN) (bps)	100K、125K、250K、500K、1M
Control Mode	Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(4KHz)
Acceleration Curve	Trapezoid acceleration

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque



# **ME** SERIES

Small structure, light and thin, rotate smoothly, can pass slip ring

Equipped with 12bit and 14bit encoder

Widely used in gimbal, UAV camera



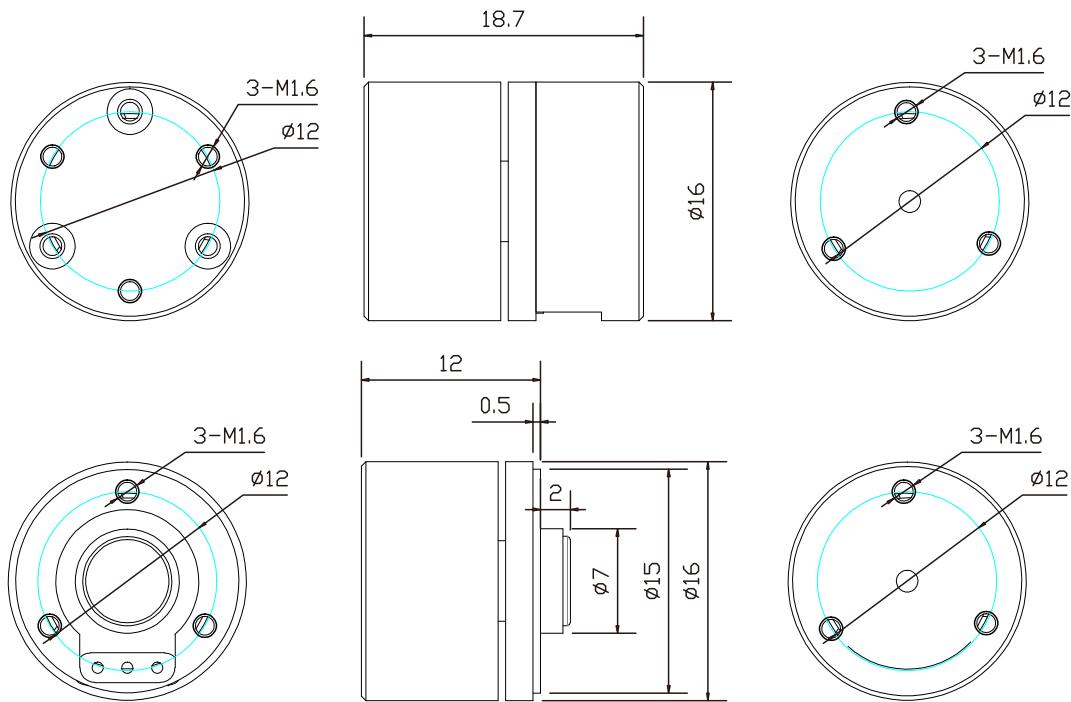
## PRODUCT PARAMETERS



ME1605

Item Name	ME1605
Rated Voltage (V)	12
Rated Current (A)	0.59
Rated Torque (N.m)	0.01
Rated Speed (rpm)	850
Max Speed (rpm)	1214
Max Torque (N.m)	0.01
Turns	50
Line Resistance ( $\Omega$ )	12.5
Phase Inductance (mH)	1.15
Speed Constant (rpm/v)	108
Torque Constant (N.M/A)	0.01
Rotor Inertia ( $gcm^2$ )	15
Number Of Pole Pairs	6
Motor Weight (g)	/
Working Temperature ( $^{\circ}C$ )	-20/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING





# ME SERIES

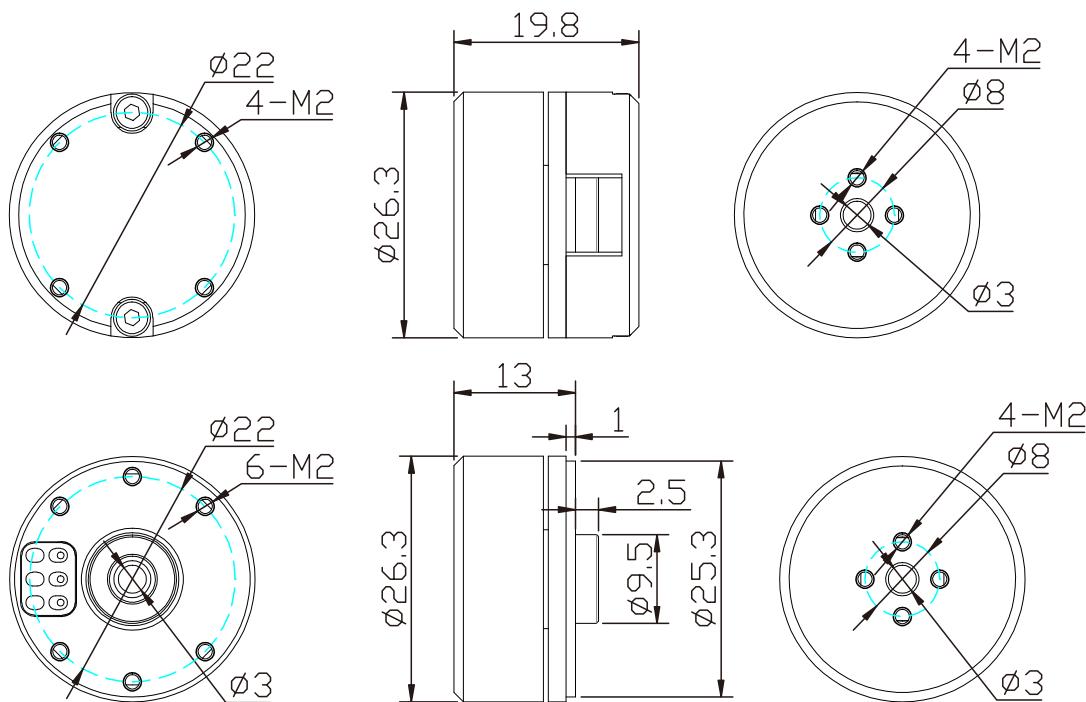
## PRODUCT PARAMETERS



ME2605

Item Name	ME2605
Rated Voltage (V)	12
Rated Current (A)	0.66
Rated Torque (N.m)	0.04
Rated Speed (rpm)	792
Max Speed (rpm)	1200
Max Torque (N.m)	0.06
Turns	65
Line Resistance ( $\Omega$ )	8
Phase Inductance (mH)	1.45
Speed Constant (rpm/v)	100
Torque Constant (N.M/A)	0.06
Rotor Inertia ( $gcm^2$ )	42
Number Of Pole Pairs	7
Motor Weight (g)	20
Working Temperature (°C)	-35/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING

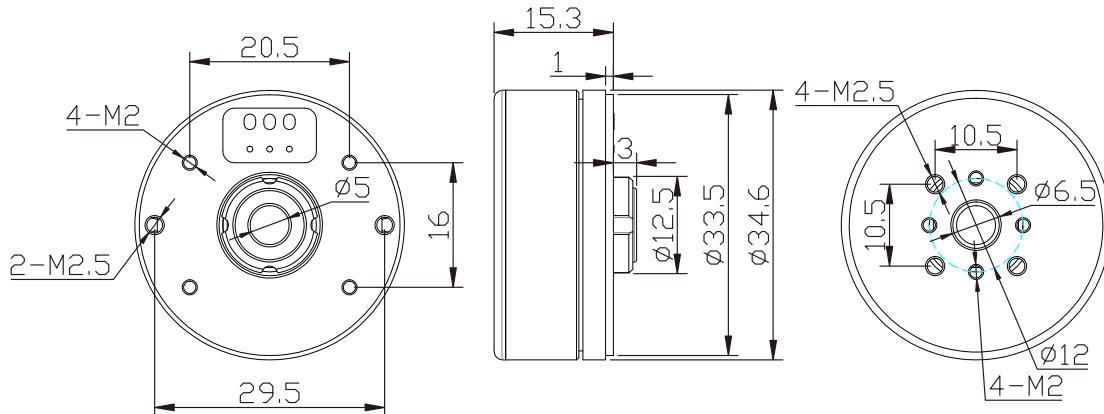


## PRODUCT PARAMETERS

ME3506

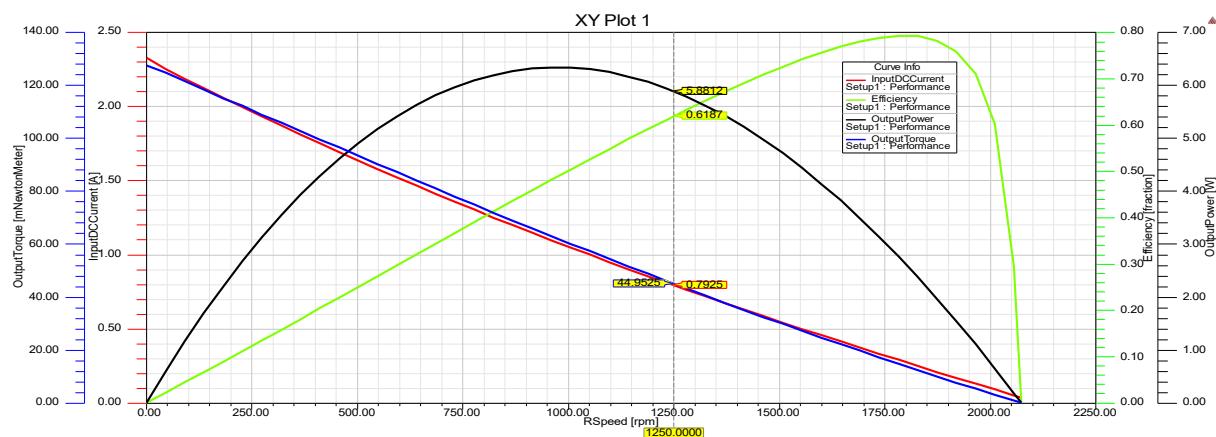
Item Name	ME3506
Rated Voltage (V)	12
Rated Current (A)	0.81
Rated Torque (N.m)	0.06
Rated Speed (rpm)	950
Max Speed (rpm)	1452
Max Torque (N.m)	0.09
Turns	60
Line Resistance ( $\Omega$ )	5
Phase Inductance (mH)	1.51
Speed Constant (rpm/v)	121
Torque Constant (N.M/A)	0.07
Rotor Inertia (gcm $^2$ )	51
Number Of Pole Pairs	7
Motor Weight (g)	45
Working Temperature (°C)	-35/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque





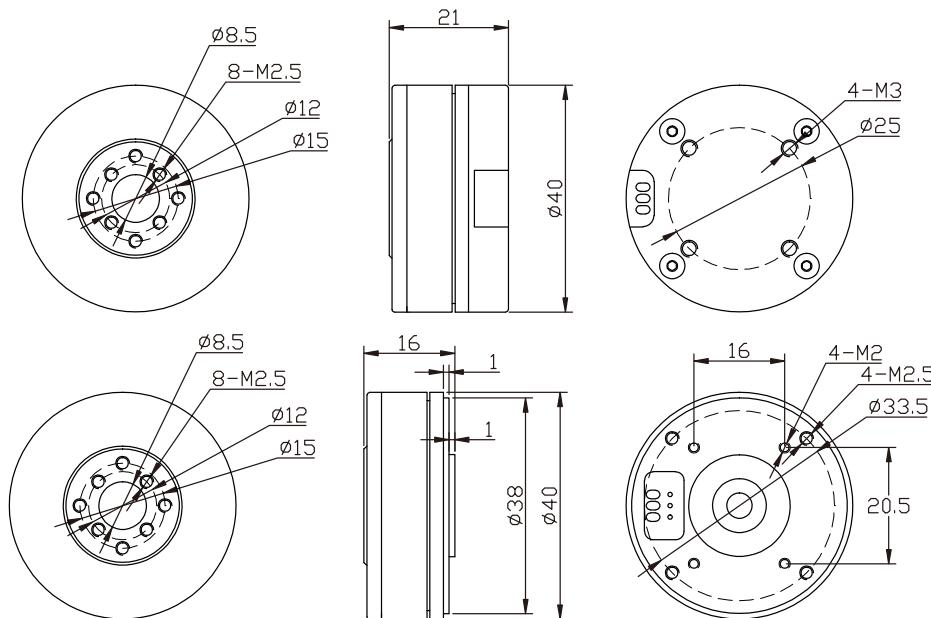
# ME SERIES

## PRODUCT PARAMETERS

ME4005

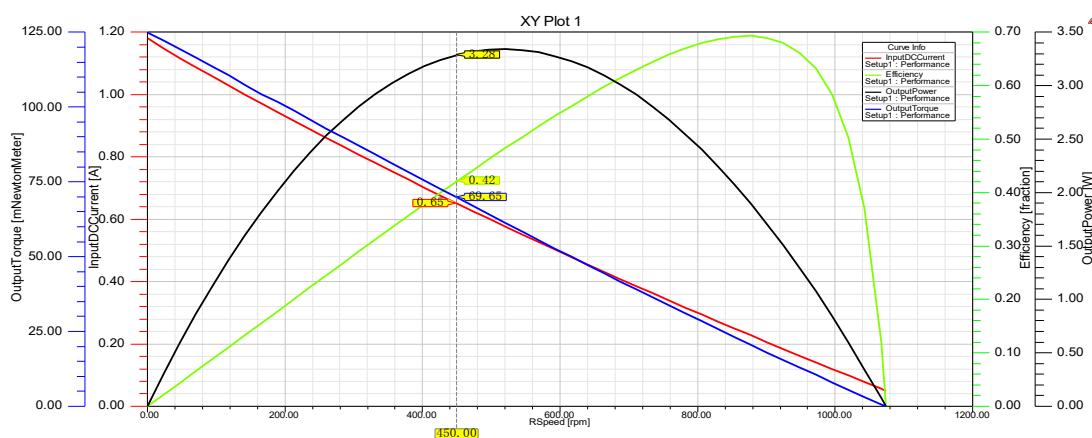
Item Name	ME4005
Rated Voltage (V)	12
Rated Current (A)	0.79
Rated Torque (N.m)	0.07
Rated Speed (rpm)	587
Max Speed (rpm)	890
Max Torque (N.m)	0.11
Turns	40
Line Resistance ( $\Omega$ )	6.5
Phase Inductance (mH)	2.35
Speed Constant (rpm/v)	74
Torque Constant (N.M/A)	0.09
Rotor Inertia ( $gcm^2$ )	56
Number Of Pole Pairs	11
Motor Weight (g)	42
Working Temperature (°C)	-35/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque

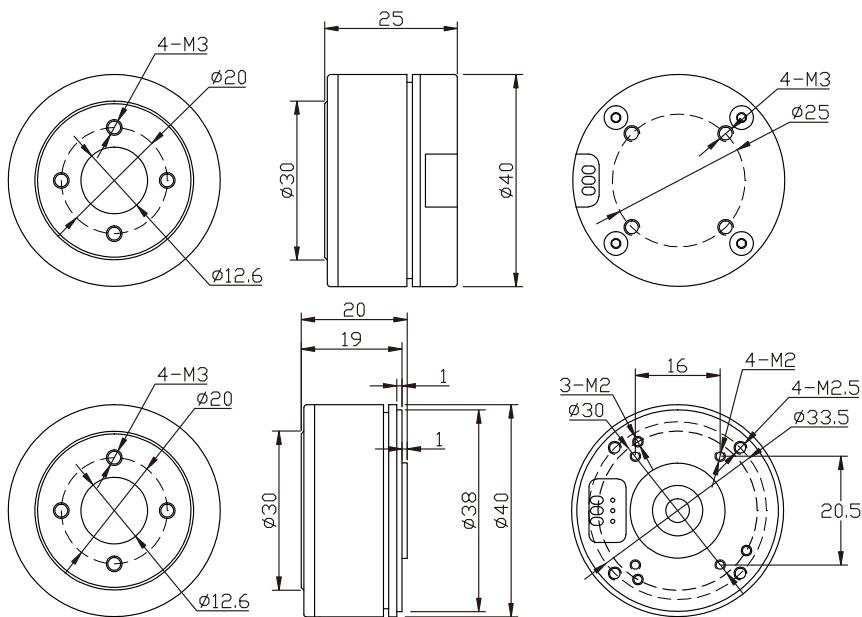


## PRODUCT PARAMETERS

ME4010

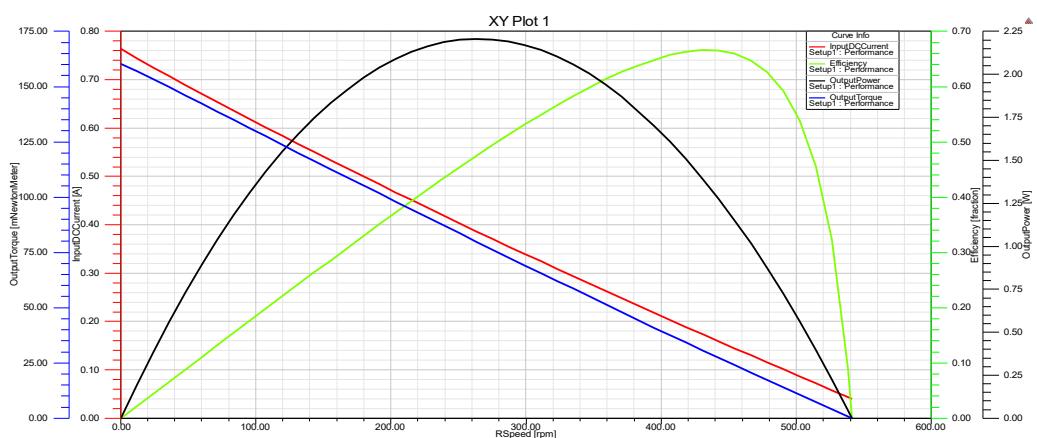
Item Name	ME4010
Rated Voltage (V)	12
Rated Current (A)	0.53
Rated Torque (N.m)	0.11
Rated Speed (rpm)	363
Max Speed (rpm)	550
Max Torque (N.m)	0.16
Turns	40
Line Resistance ( $\Omega$ )	9.5
Phase Inductance (mH)	3.95
Speed Constant (rpm/v)	45
Torque Constant (N.M/A)	0.2
Rotor Inertia (gcm <sup>2</sup> )	81
Number Of Pole Pairs	11
Motor Weight (g)	73
Working Temperature (°C)	-35/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque





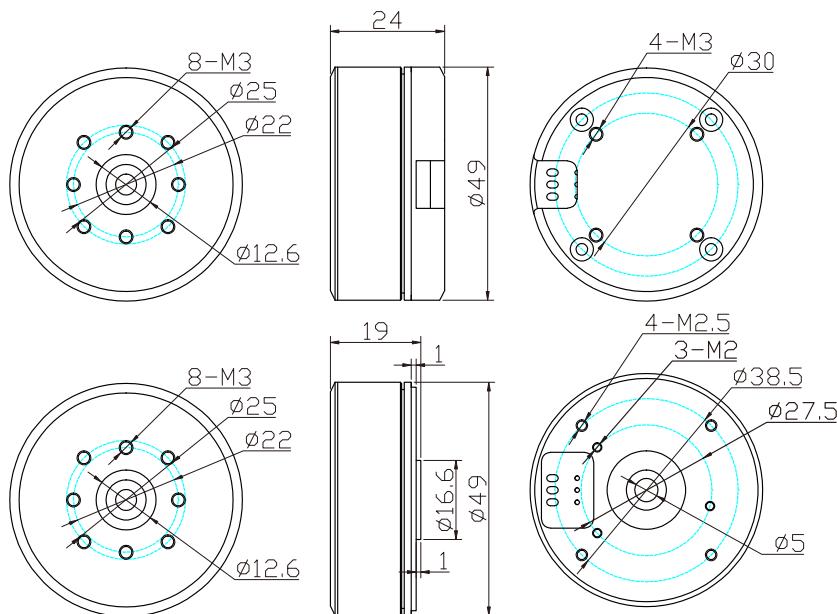
# ME SERIES

## PRODUCT PARAMETERS

ME5010

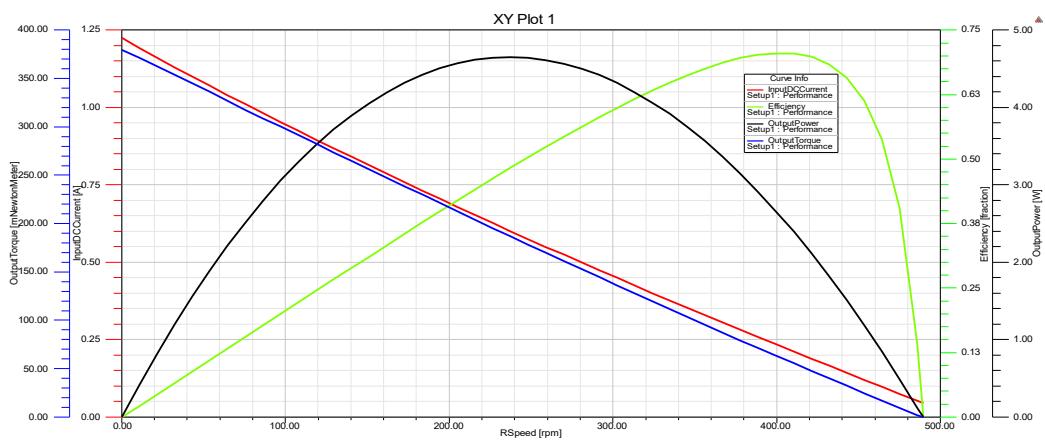
Item Name	ME5010
Rated Voltage (V)	16
Rated Current (A)	0.79
Rated Torque (N.m)	0.21
Rated Speed (rpm)	343
Max Speed (rpm)	520
Max Torque (N.m)	0.32
Turns	60
Line Resistance ( $\Omega$ )	10.9
Phase Inductance (mH)	4.74
Speed Constant (rpm/v)	33
Torque Constant (N.M/A)	0.27
Rotor Inertia (gcm <sup>2</sup> )	202
Number Of Pole Pairs	14
Motor Weight (g)	113
Working Temperature (°C)	-35/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque

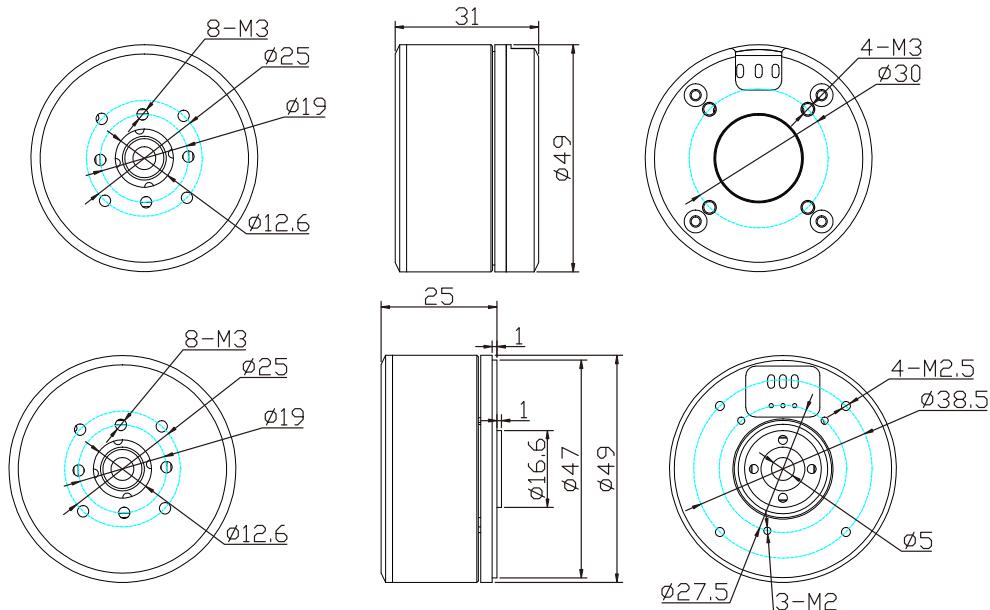


## PRODUCT PARAMETERS

ME5015

Item Name	ME5015
Rated Voltage (V)	16
Rated Current (A)	0.59
Rated Torque (N.m)	0.28
Rated Speed (rpm)	238
Max Speed (rpm)	360
Max Torque (N.m)	0.42
Turns	60
Line Resistance ( $\Omega$ )	15.2
Phase Inductance (mH)	6.56
Speed Constant (rpm/v)	23
Torque Constant (N.M/A)	0.47
Rotor Inertia (gcm <sup>2</sup> )	268
Number Of Pole Pairs	14
Motor Weight (g)	158
Working Temperature (°C)	-35/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque





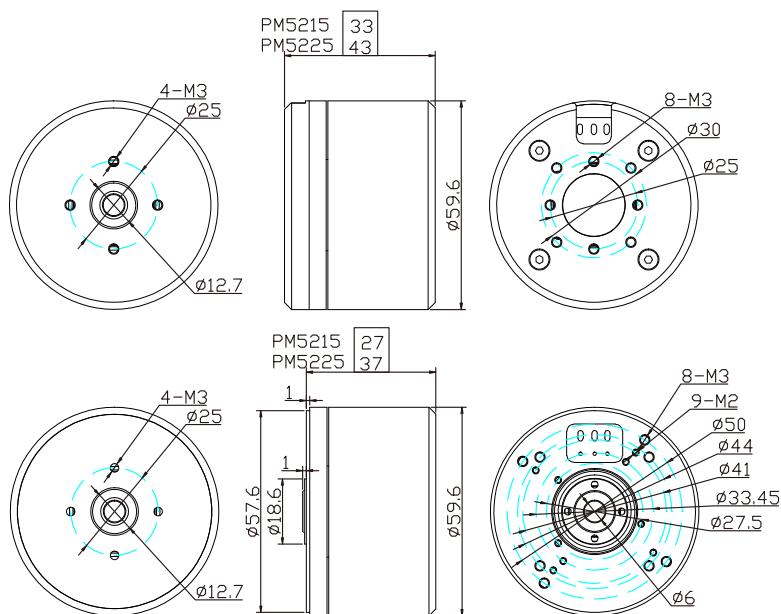
# ME SERIES

## PRODUCT PARAMETERS

ME6015

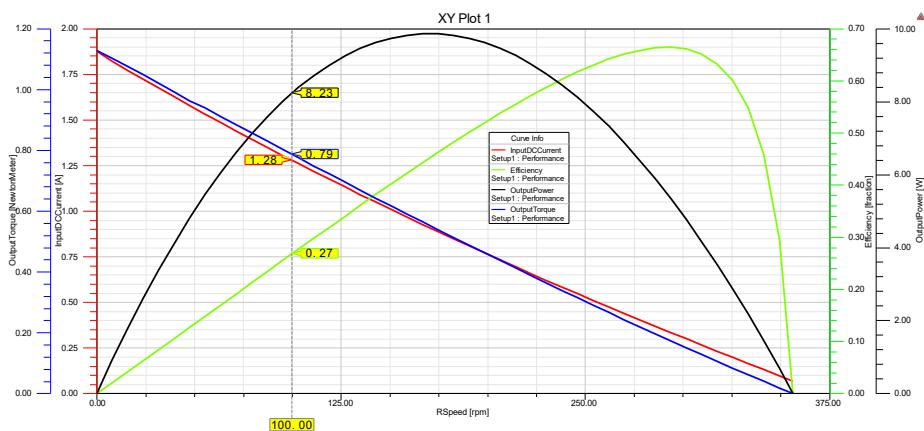
Item Name	ME6015
Rated Voltage (V)	24
Rated Current (A)	1.12
Rated Torque (N.m)	0.76
Rated Speed (rpm)	221
Max Speed (rpm)	336
Max Torque (N.m)	1.15
Turns	60
Line Resistance ( $\Omega$ )	11.8
Phase Inductance (mH)	7.8
Speed Constant (rpm/v)	14
Torque Constant (N.M/A)	0.68
Rotor Inertia ( $gcm^2$ )	667
Number Of Pole Pairs	14
Motor Weight (g)	246
Working Temperature (°C)	-35/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque



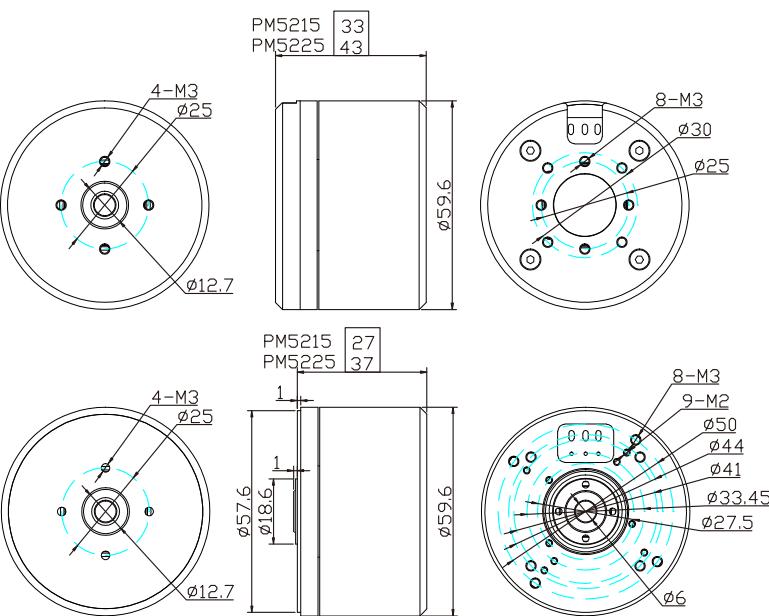
## PRODUCT PARAMETERS



ME6025

Item Name	ME6025
Rated Voltage (V)	24
Rated Current (A)	1.28
Rated Torque (N.m)	1.26
Rated Speed (rpm)	221
Max Speed (rpm)	336
Max Torque (N.m)	1.9
Turns	50
Line Resistance ( $\Omega$ )	11.8
Phase Inductance (mH)	11.31
Speed Constant (rpm/v)	14
Torque Constant (N.M/A)	0.98
Rotor Inertia ( $gcm^2$ )	933
Number Of Pole Pairs	11
Motor Weight (g)	330
Working Temperature ( $^{\circ}C$ )	-35/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING





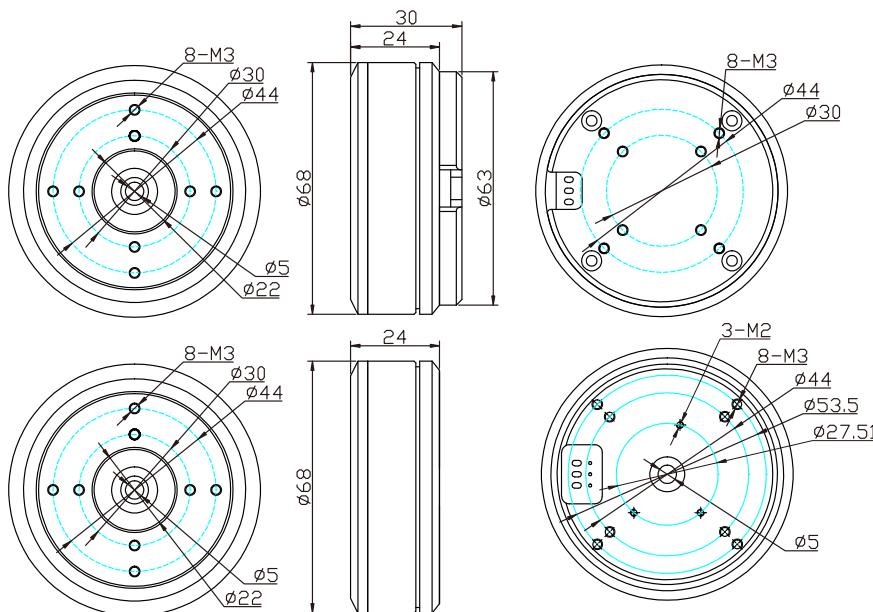
# ME SERIES

## PRODUCT PARAMETERS

ME7010

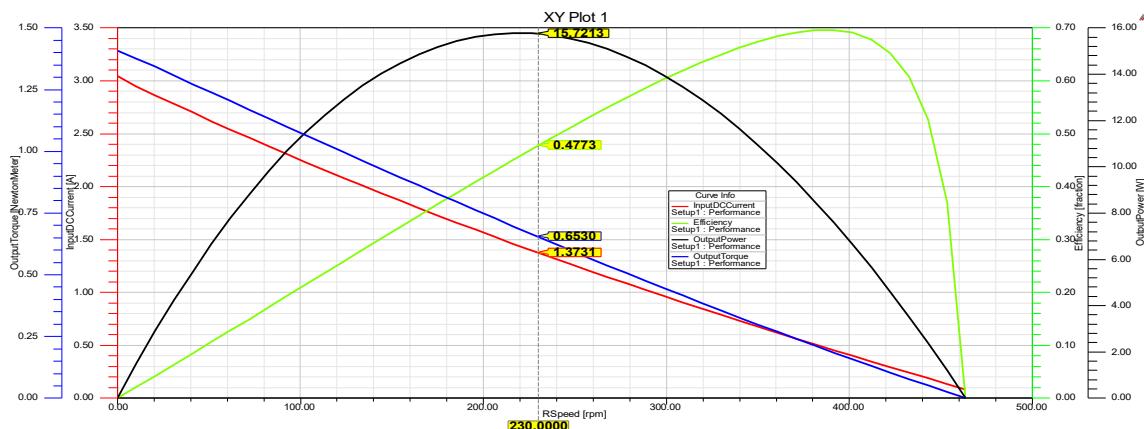
Item Name	ME7010
Rated Voltage (V)	24
Rated Current (A)	1.19
Rated Torque (N.m)	0.73
Rated Speed (rpm)	182
Max Speed (rpm)	275
Max Torque (N.m)	1.10
Turns	80
Line Resistance ( $\Omega$ )	11.9
Phase Inductance (mH)	13.03
Speed Constant (rpm/v)	11
Torque Constant (N.M/A)	0.61
Rotor Inertia (gcm <sup>2</sup> )	748
Number Of Pole Pairs	14
Motor Weight (g)	247
Working Temperature (°C)	-35/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficiency      — Output Power      — Output Torque

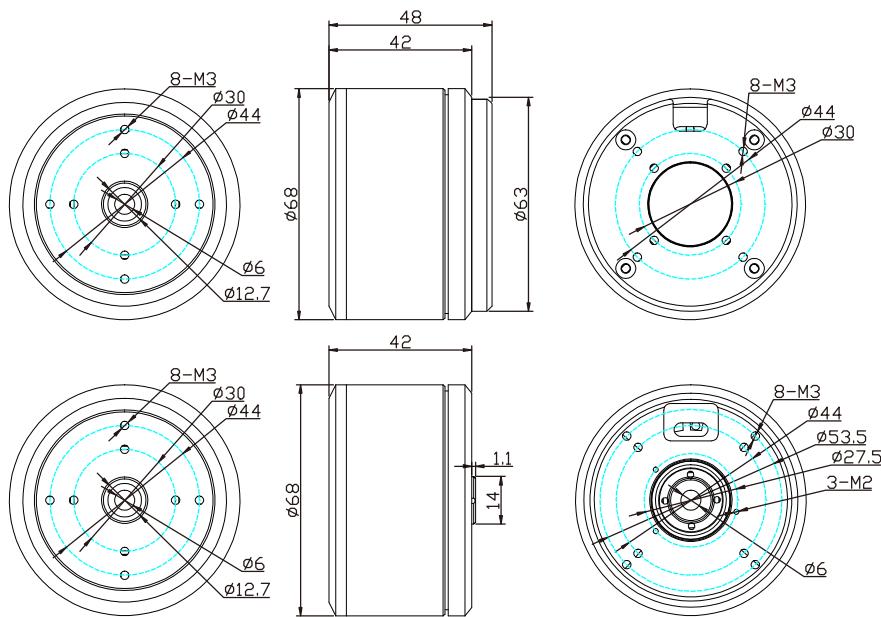


## PRODUCT PARAMETERS

ME7025

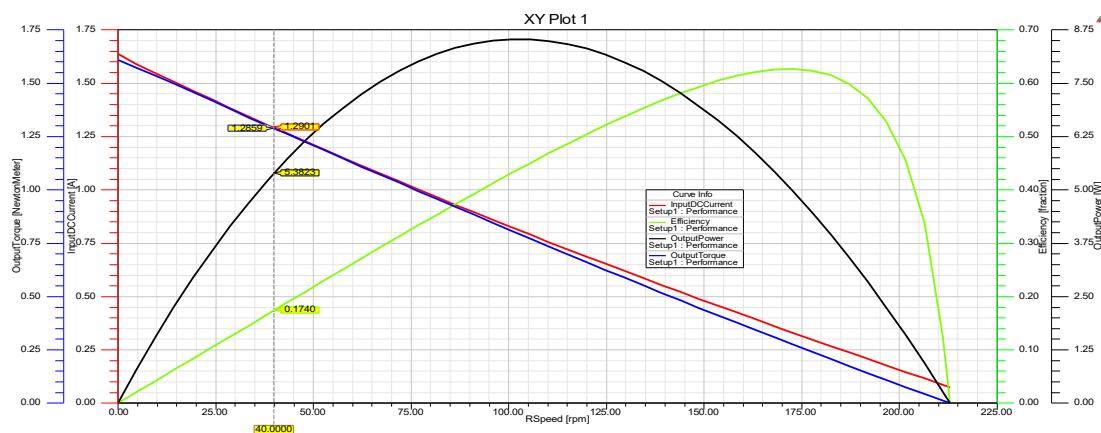
Item Name	ME7025
Rated Voltage (V)	36
Rated Current (A)	1.78
Rated Torque (N.m)	1.77
Rated Speed (rpm)	166
Max Speed (rpm)	252
Max Torque (N.m)	2.68
Turns	50
Line Resistance ( $\Omega$ )	10.1
Phase Inductance (mH)	10.07
Speed Constant (rpm/v)	7
Torque Constant (N.M/A)	1.62
Rotor Inertia (gcm <sup>2</sup> )	1645
Number Of Pole Pairs	14
Motor Weight (g)	511
Working Temperature (°C)	-35/80
Encoder	12 bit/14 bit Magnetic Encoder

## INSTALLATION DRAWING



## MOTOR CHARACTERISTIC CURVE

— Inputdc Current      — Efficency      — Output Power      — Output Torque



# Driver

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- Multiple control mode
- Multiple control commands
- Provide software for adjust parameters/test/firmware upgrade

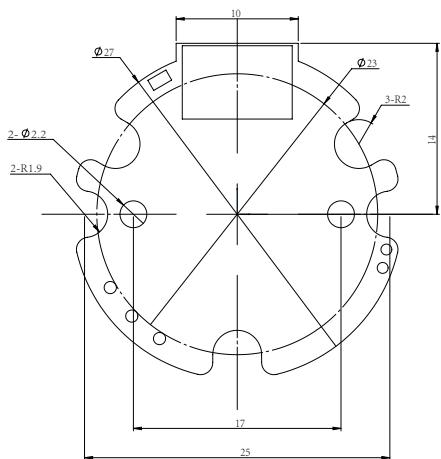


PRODUCT PARAMETERS ■■■■■

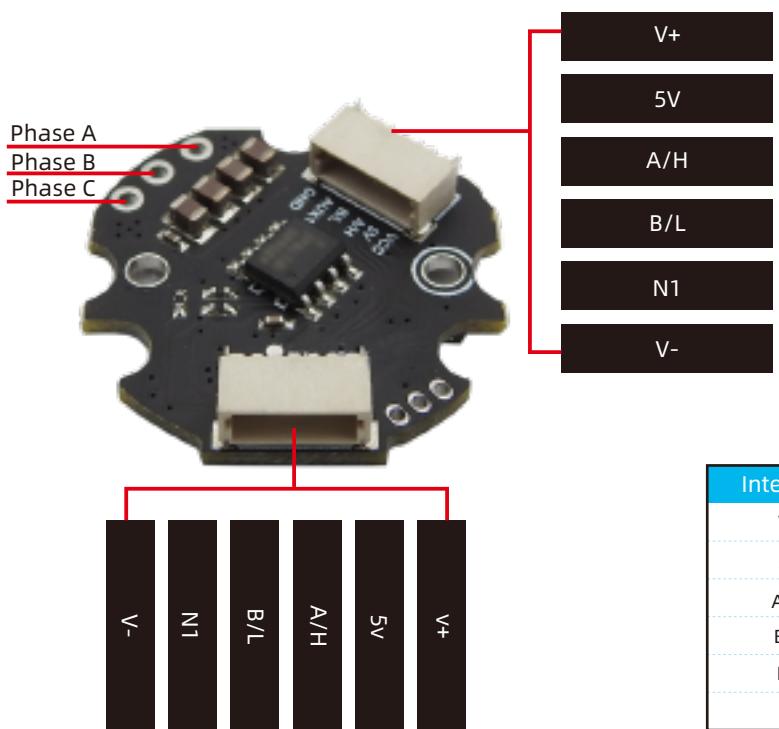
DS30

Recommend Drive	DS30
Drive Input Voltage (V)	6~16
Communication	RS485 Or CAN
Communication Frequency	RS485 @115200bps : 500Hz/CAN@1Mbps:2KHz
Encoder	12 bit Or 18 bit Magnetic Encoder
Baut Rate	9600, 19200, 57600, 115200, 230400, 406800, 1Mbps, 2Mbps
Baut Rate	1Mbps
Control Mode	Open Loop/Speed Loop/Position Loop
Control Frequency	Open Loop:24KHz /Speed Loop: 4KHz/Position Loop: 2KHz
Acceleration Curve	YES
Connector	SH1.0-6PIN

INSTALLATION DRAWING ■■■■■



INTERFACE DEFINITION ■■■■■



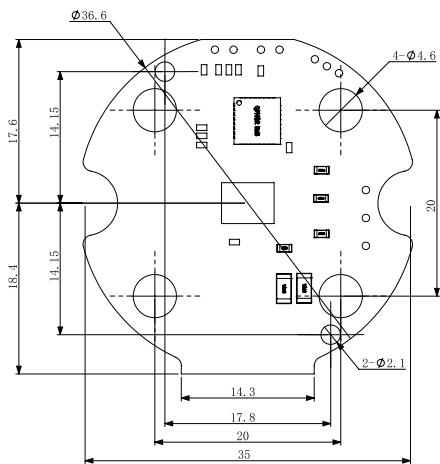
Interface	Note
V+	Positive Power Supply
5V	Voutput
A/H	RS485-A OR can-H
B/L	RS485-B OR can-L
N1	No Connection1
V-	Negative Power Supply

PRODUCT PARAMETERS ■■■■■

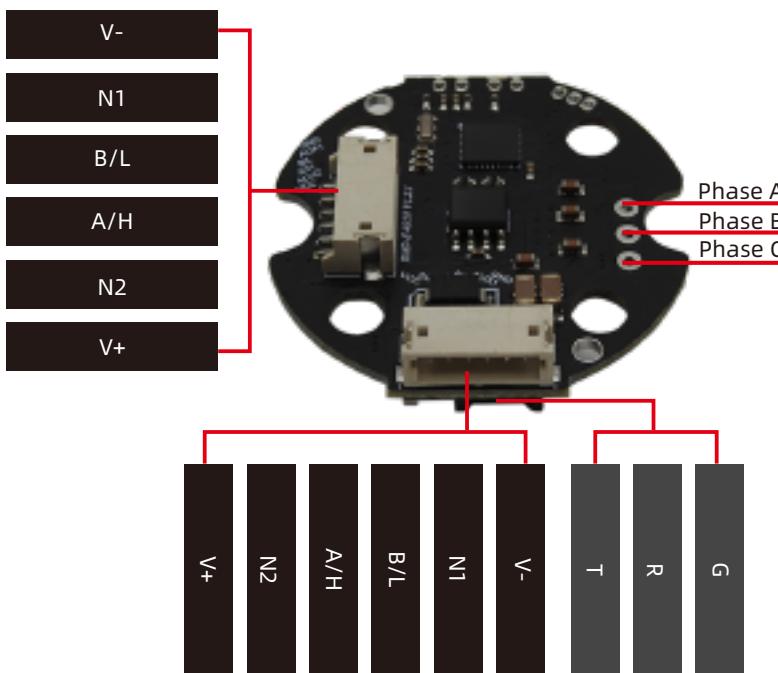
DS40

Recommend Drive	DS40
Drive Input Voltage (V)	6~20
Communication	RS485 Or CAN
Communication Frequency	RS485 @115200bps : 500Hz/CAN@1Mbps:2KHz
Encoder	12 bit Or 18 bit Magnetic Encoder
Baud Rate	9600, 19200, 57600, 115200, 230400, 406800, 1Mbps, 2Mbps
Baud Rate	1Mbps
Control Mode	Open Loop/Speed Loop/Position Loop
Control Frequency	Open Loop:24KHz /Speed Loop: 4KHz/Position Loop: 2KHz
Acceleration Curve	YES
Connector	ZH15-6PIN

INSTALLATION DRAWING ■■■■■



INTERFACE DEFINITION ■■■■■



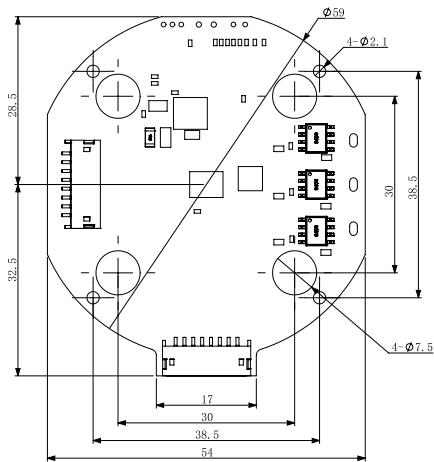
Interface	Note
V+	Positive Power Supply
N2	No Connection2
A/H	RS485-A OR can-H
B/L	RS485-B OR can-L
N1	No Connection1
V-	Negative Power Supply
T	UART Transmitter
R	UART接收/UART Receiver
G	Signal GND

## PRODUCT PARAMETERS

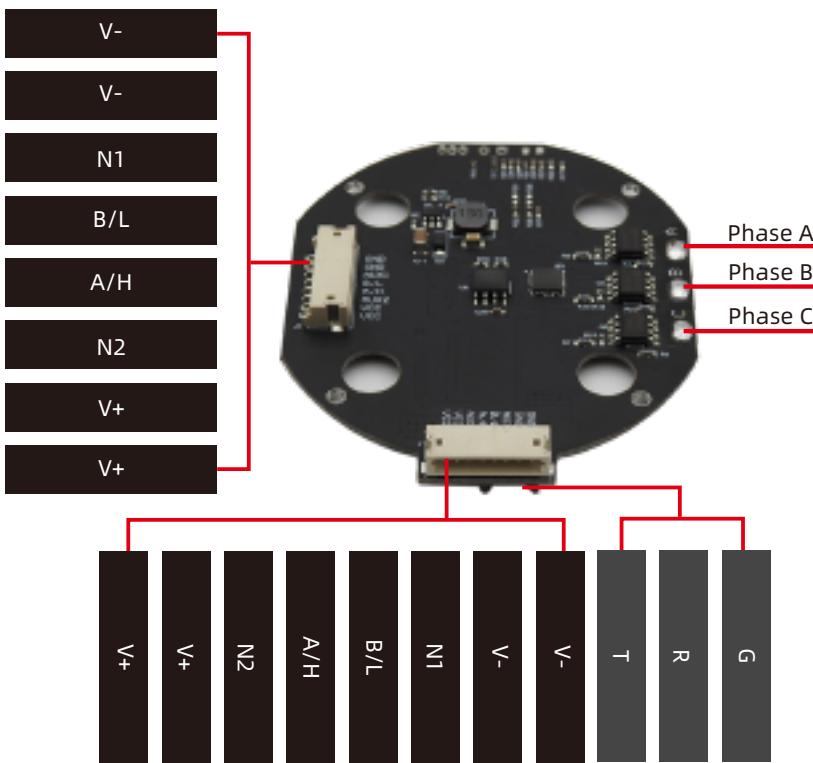
DS70

Recommend Drive	DS70
Drive Input Voltage (V)	7.4~24
Communication	RS485 Or CAN
Communication Frequency	RS485 @115200bps : 500Hz/CAN@1Mbps:2KHz
Encoder	12 bit Or 18 bit Magnetic Encoder
Baut Rate	9600、19200、57600、115200、230400、406800、1Mbps、2Mbps
Baut Rate	1Mbps
Control Mode	Open Loop/Speed Loop/Position Loop
Control Frequency	Open Loop:24KHz /Speed Loop: 4KHz/Position Loop: 2KHz
Acceleration Curve	YES
Connector	ZH1.5-8PIN

## INSTALLATION DRAWING



## INTERFACE DEFINITION



Interface	Note
V+	Positive Power Supply
V+	Positive Power Supply
N2	No Connection2
A/H	RS485-A OR can-H
B/L	RS485-B OR can-L
N1	No Connection1
V-	Negative Power Supply
V-	Negative Power Supply
T	UART Transmitter
R	UART Receiver
G	Signal GND



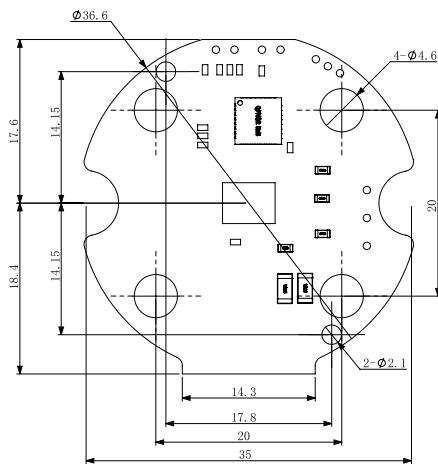
# DRIVER

## PRODUCT PARAMETERS

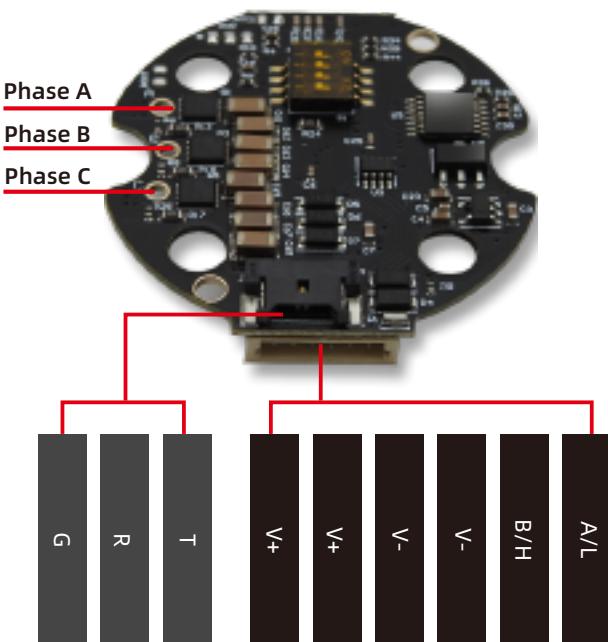
DF40

Recommend Drive		DF40
Drive Input Voltage (V)	7.4~32	
Communication	RS485 Or CAN	
Communication Frequency	RS485 @115200bps : 500Hz/CAN@1Mbps:2KHz	
Encoder	14 bit Magnetic Encoder	
Baut Rate	9600, 19200, 57600, 115200, 230400, 406800, 1Mbps, 2Mbps	
Baut Rate	1Mbps	
Control Mode	Torque Loop/Speed Loop/Position Loop	
Control Frequency	Torque Loop:24KHz /Speed Loop: 8KHz/Position Loop: 4KHz	
Acceleration Curve	YES	
Connector	ZH1.5-6PIN	

## INSTALLATION DRAWING



## INTERFACE DEFINITION



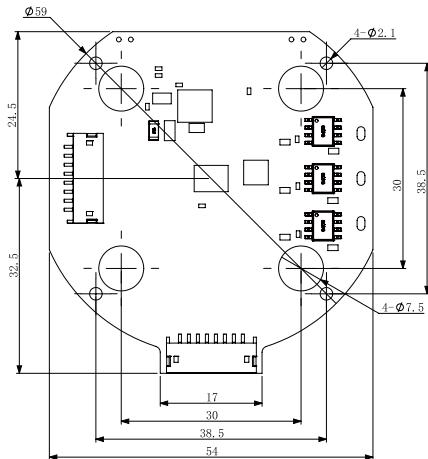
Interface	Note
A/L	RS485-A OR can-L
B/H	RS485-B OR can-H
V-	Negative Power Supply
V-	Negative Power Supply
V+	Positive Power Supply
V+	Positive Power Supply
T	UART Transmitter
R	UART Receiver
G	Signal GND

## PRODUCT PARAMETERS

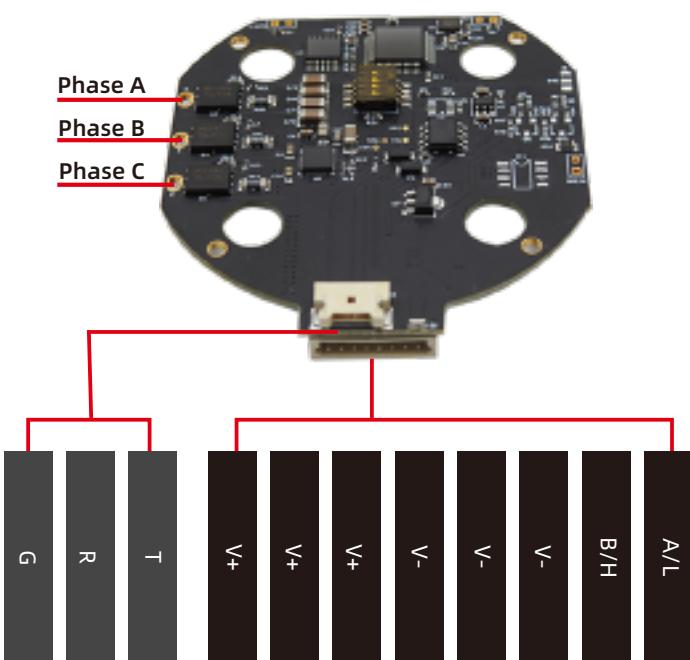
DF70

Recommend Drive		DF70
Drive Input Voltage (V)	7.4~32	
Communication	RS485 Or CAN	
Communication Frequency	RS485 @115200bps : 500Hz/CAN@1Mbps:2KHz	
Encoder	14 bit Magnetic Encoder	
Baud Rate	9600、19200、57600、115200、230400、406800、1Mbps、2Mbps	
Baud Rate	1Mbps	
Control Mode	Torque Loop/Speed Loop/Position Loop	
Control Frequency	Torque Loop:24KHz /Speed Loop: 8KHz/Position Loop: 4KHz	
Acceleration Curve	YES	
Connector	ZH1.5-8PIN	

## INSTALLATION DRAWING



## INTERFACE DEFINITION



Interface	Note
A/L	RS485-A OR can-L
B/H	RS485-B OR can-H
V-	Negative Power Supply
V-	Negative Power Supply
V-	Negative Power Supply
V+	Positive Power Supply
V+	Positive Power Supply
V+	Positive Power Supply
T	UART Transmitter
R	UART Receiver
G	Signal GND



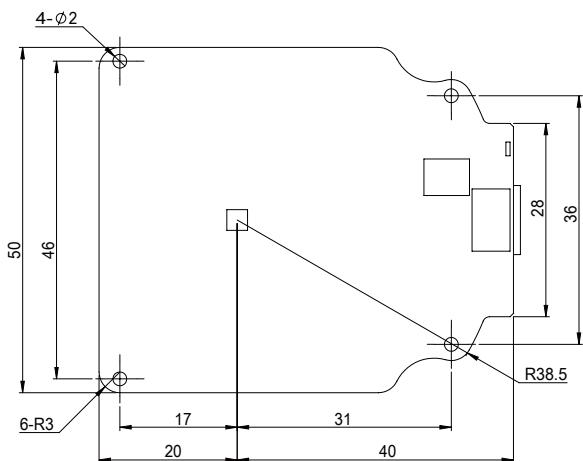
# DRIVER

## PRODUCT PARAMETERS

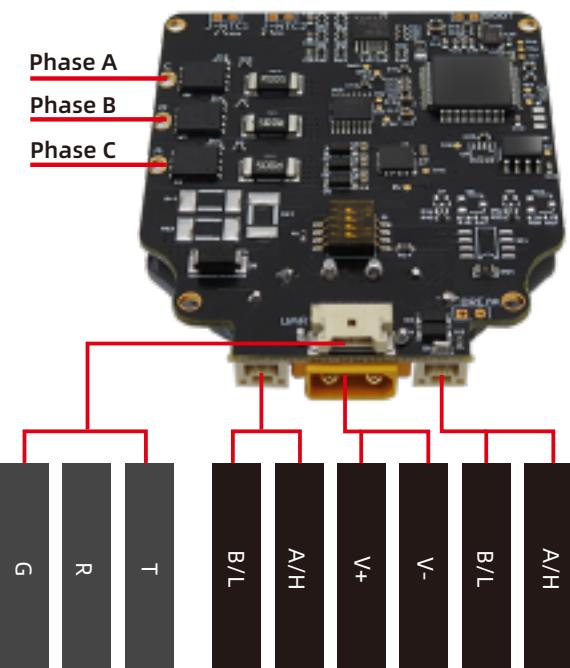
DG80

Recommend Drive	DG80
Drive Input Voltage (V)	12~60
Communication	RS485 Or CAN
Communication Frequency	RS485 @115200bps : 500Hz/CAN@1Mbps:2KHz
Encoder	18 bit Magnetic Encoder
Baut Rate	9600, 19200, 57600, 115200, 230400, 406800, 1Mbps, 2Mbps
Baut Rate	1Mbps
Control Mode	Open Loop/Speed Loop/Position Loop
Control Frequency	Open Loop:32KHz /Speed Loop: 8KHz/Position Loop: 4KHz
Acceleration Curve	YES
Connector	XT2.0

## INSTALLATION DRAWING



## INTERFACE DEFINITION



Interface	Note
A/H	RS485-A Or CAN-H
B/L	RS485-B Or CAN-L
V-	Negative Power Supply
V+	Positive Power Supply
A/H	RS485-A Or CAN-H
B/L	RS485-B Or CAN-L
T	Uart Transmitter
R	Uart Receiver
G	Signal GND

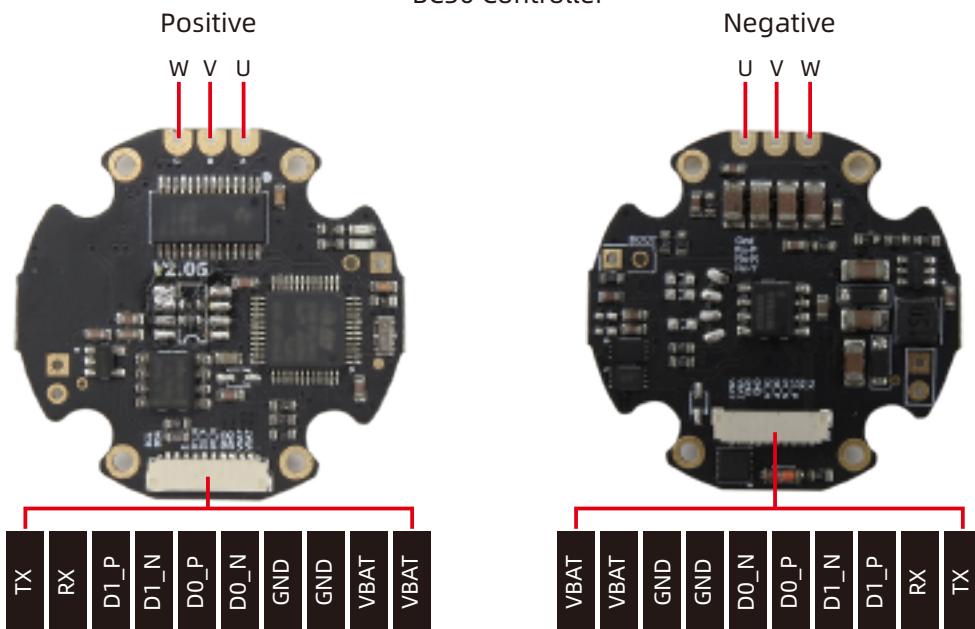
## PRODUCT PARAMETERS

BC30

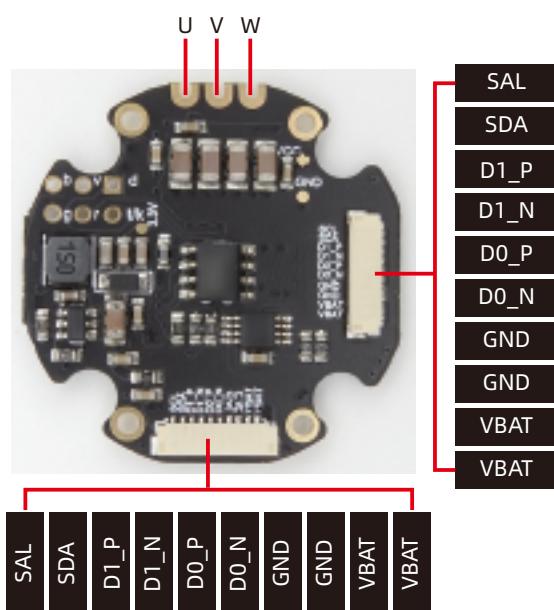
Item Name	BC30
Nominal Voltage	7.4V-12V
Number Of Batteries	2S-3S LiPo
Max Current	2A
Communication	I <sup>2</sup> C
Encoder	12 bit Magnetic Encoder
Connector	SM10B-SURS

## INTERFACE DEFINITION

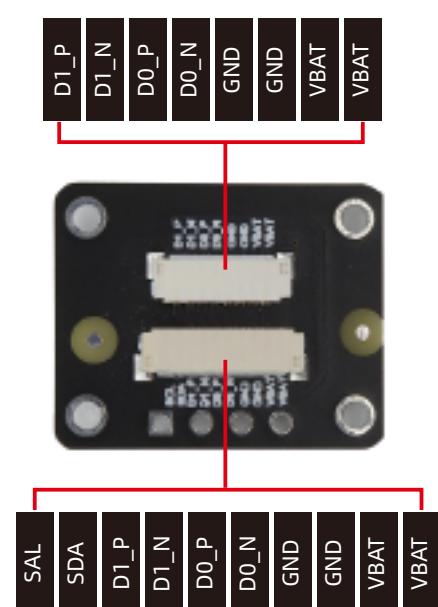
BC30 Controller



BC30 Driver



BC30 IMU

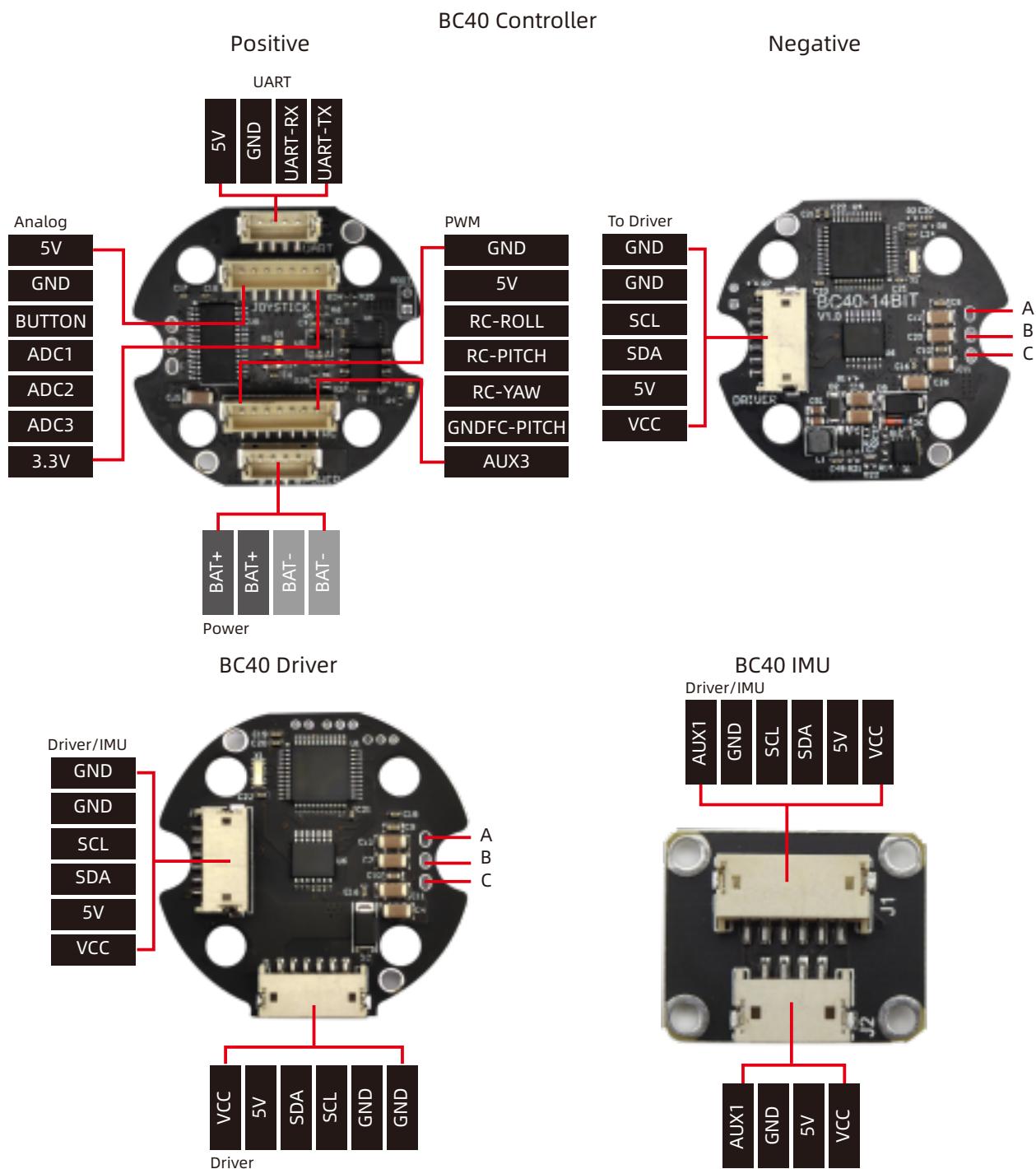


## PRODUCT PARAMETERS

BC40

Item Name	BC40-14bit
Nominal Voltage	11.1V-20V
Number Of Batteries	3S-5S Li-Po
Max Current	2.5A
Communication	I <sup>2</sup> C
Encoder	14 bit Magnetic Encoder
Connector	ZH1.5-6PIN

## INTERFACE DEFINITION



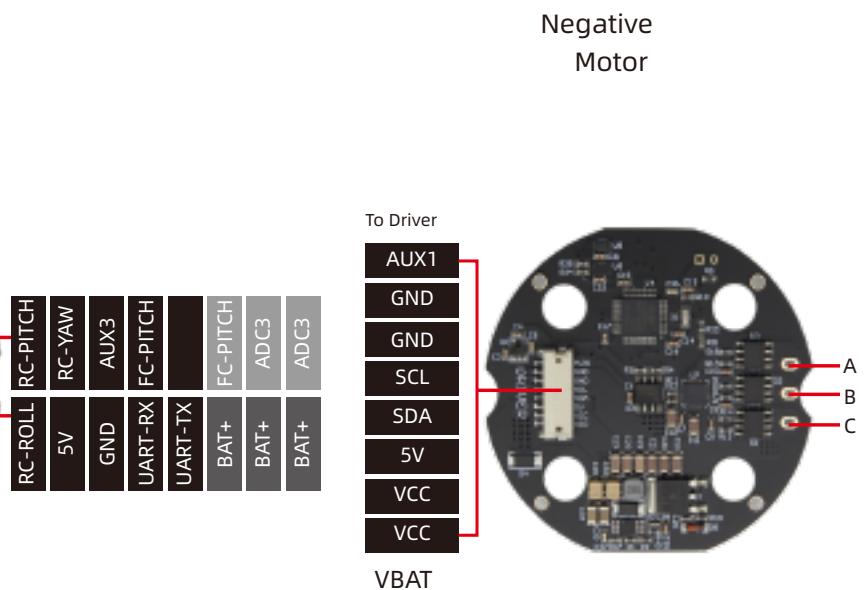
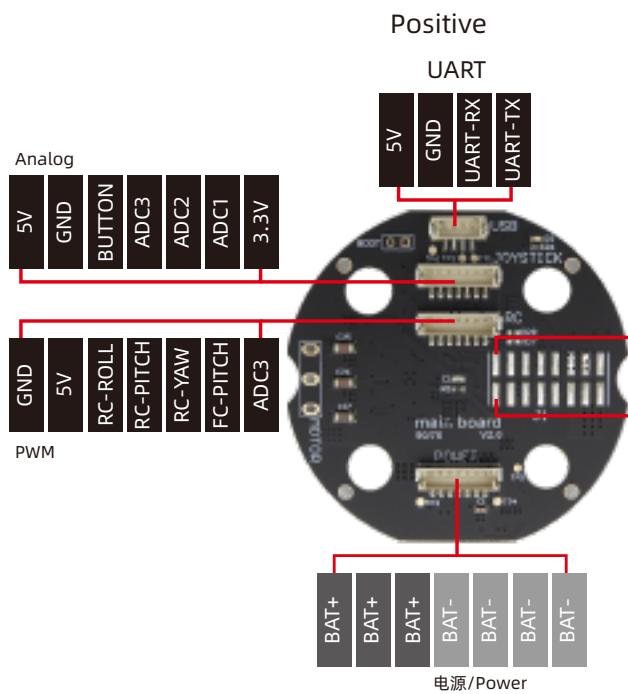
PRODUCT PARAMETERS

BC70

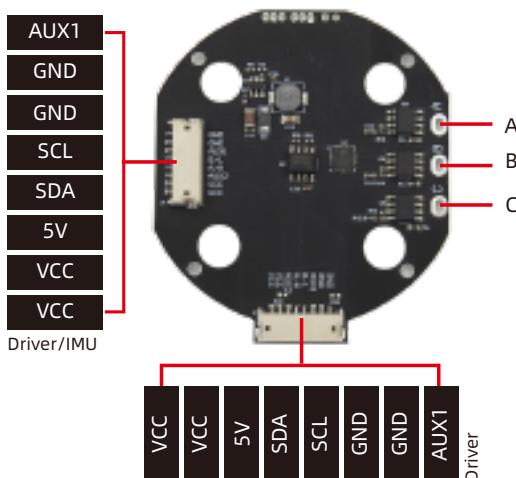
Item Name	BC70
Nominal Voltage	11.1V-30V
Number Of Batteries	3S-8S Li-Po
Max Current	6A
Communication	I <sup>2</sup> C
Encoder	12 bit Magnetic Encoder
Connector	ZH1.5-8PIN

INTERFACE DEFINITION

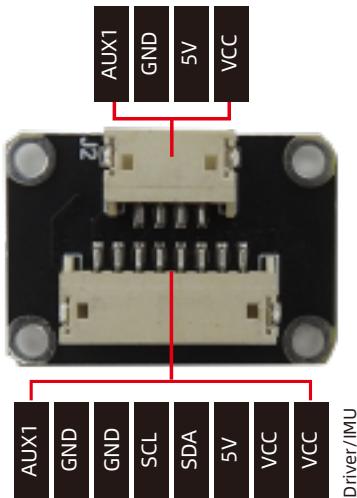
BC70 Controller



BC70 Driver(驱动)



BC70 IMU





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📞 0512-57376886