

# PRODUCT MANUAL.



# COMPANY PROFILE.

## ABOUT US

The company's main products are external rotor DC motor and drive control. Provide high performance, high quality, integrated and intelligent servomotor. Ten years of experience, with rich customer resources. Eight series, 165 products in total.



# CATALOG

## 02 MF SERIES

|            |     |
|------------|-----|
| MF4005 V2  | B1  |
| MF4010 V2  | B2  |
| MF4015 V3  | B3  |
| MF5005 V3  | B4  |
| MS5010 V3  | B5  |
| MS5015 V3  | B6  |
| MS6010 V3  | B7  |
| MS6015 V3  | B8  |
| MS7010 V3  | B9  |
| MS7015 V3  | B10 |
| MS7025 V3  | B11 |
| MS9010 V3  | B12 |
| MS9015 V3  | B13 |
| MS9025 V3  | B14 |
| MS12025 V3 | B15 |

## 01 MS SERIES

|            |     |
|------------|-----|
| MS3008 V2  | A1  |
| MS3506 V2  | A2  |
| MS4005 V3  | A3  |
| MS4010 V3  | A4  |
| MS4015 V3  | A5  |
| MS5005 V3  | A6  |
| MS5010 V3  | A7  |
| MS5015 V3  | A8  |
| MS6010 V3  | A9  |
| MS6015 V3  | A10 |
| MS7010 V3  | A11 |
| MS7015 V3  | A12 |
| MS7025 V3  | A13 |
| MS9010 V3  | A14 |
| MS9015 V3  | A15 |
| MS9025 V3  | A16 |
| MS12025 V3 | A17 |

## 03 MG SERIES

|              |     |
|--------------|-----|
| MG4005-i10   | C1  |
| MG4005E-i10  | C2  |
| MG4010E-i10  | C3  |
| MG4010-i10B  | C4  |
| MG4010E-i36  | C5  |
| MG5010E-i10  | C6  |
| MG5010E-i36  | C7  |
| MG6010E-i6   | C8  |
| MG6012E-i8   | C9  |
| MG6012E-i36  | C10 |
| MG6012E-i8B  | C11 |
| MG8008E-i9   | C12 |
| MG8010E-i36  | C13 |
| MG8015E-i9   | C14 |
| MG8016E-i6   | C15 |
| MG8016E-i6B  | C16 |
| MG8016E-i24B | C17 |
| MG10015E-i10 | C18 |
| MG10015E-i36 | C19 |



# CATALOG

## 04 ME SERIES

|        |     |
|--------|-----|
| ME1605 | D1  |
| ME2605 | D2  |
| ME3506 | D3  |
| ME4005 | D4  |
| ME4010 | D5  |
| ME5010 | D6  |
| ME5015 | D7  |
| ME6015 | D8  |
| ME6025 | D9  |
| ME7010 | D10 |
| ME7025 | D11 |

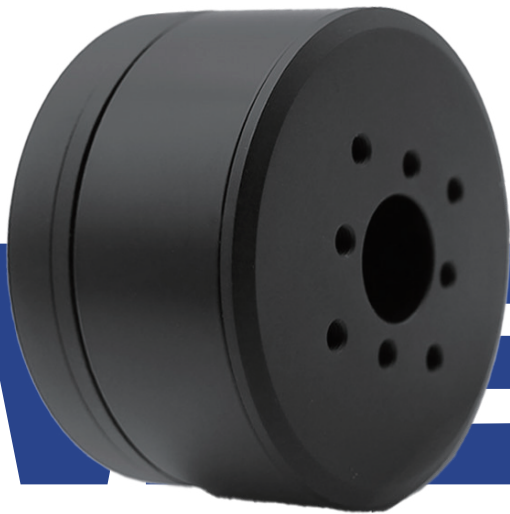
## 06 DRIVE SERIES

|      |    |
|------|----|
| DS30 | F1 |
| DS40 | F2 |
| DS70 | F3 |
| DF40 | F4 |
| DF70 | F5 |
| DG60 | F6 |
| BC30 | F7 |
| BC40 | F8 |
| BC70 | F9 |

## 05 MH SERIES

|               |    |
|---------------|----|
| MH3008        | E1 |
| MHS5010-OPT22 | E2 |
| MHS5015-OPT22 | E3 |
| MH5010        | E4 |





#### SERIES INTRODUCTION

Small structure, thin, smooth rotation, can slip rings, with 12bit and 14bit encoder, widely used in PTZ, pod low speed stability.

#### APPLICATION SCENARIO

Pod head    Handheld camera    Laser radar



#### SERIES INTRODUCTION

Motor + drive integrated design, 18bit absolute magnetic encoder, flat design Add aviation aluminum, external rotor with NdFeb

#### APPLICATION SCENARIO

Laser radar    Service robot



#### SERIES INTRODUCTION

High performance 32bit MCU, torque, speed, position control mode arbitrary switch. The core material of the motor is high quality silicon steel sheet and high temperature strong magnetic permanent magnet.

#### APPLICATION SCENARIO

360° camera    Laser radar  
Hanging bin head    Handheld camera





#### SERIES INTRODUCTION

Dc servo motor with hollow shaft, large and medium holes can be threaded slip ring/gas pipe/water pipe/oil pipe. It can be widely used in LiDAR, increase PPS input signal synchronization, eliminate stuck, high speed hollow shaft design, stable performance and long service life.

#### APPLICATION SCENARIO

Handheld camera Laser radar

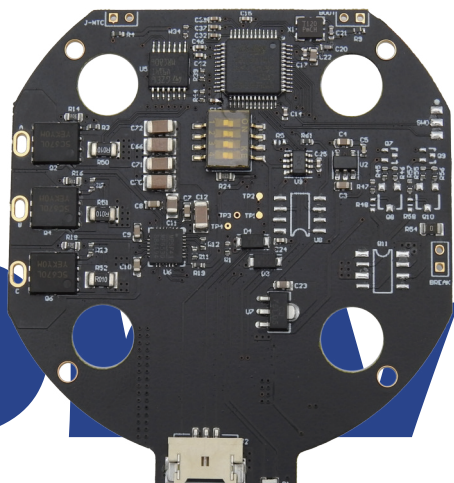


#### SERIES INTRODUCTION

Dual encoder (motor encoder + reducer encoder) MG6012-i36, added Reducer end encoder V3, reducer position reading and "0" bit set power off Memory function.

#### APPLICATION SCENARIO

AGV car Robotic arm Mecha Dog Exoskeleton robot



#### SERIES INTRODUCTION

High precision, low temperature bleached alloy resistance sampling, accurate current up to 24V voltage motor temperature real-time monitoring, high integrated three-phase full bridge driver chip, low internal resistance, high current.

# MS SERIES

- High performance 32bit MCU
- Torque, speed, position control mode can be switched
- Brushless structure with high-performance bearings for smoother rotation and longer life
- Full N-tube three-phase full bridge drive, low internal resistance, high current

MS



# MS SERIES MODELS



| Turns               | MS3008 | MS3506 | MS4005   | MS4010   |
|---------------------|--------|--------|----------|----------|
| Rated Voltage (V)   | 12     | 12     | 12       | 16       |
| Interval Voltage(V) | 8-17   | 8-17   | 7.4-32   | 7.4-32   |
| Maximum Speed(rpm)  | 2000   | 2100   | 1090     | 550      |
| Rated Speed (rpm)   | 1160   | 1250   | 450      | 100      |
| Rated Torque (N.m)  | 0.04   | 0.05   | 0.07     | 0.13     |
| Maximum Torque(N.m) | 0.09   | 0.13   | 0.1      | 0.16     |
| Motor Weight (g)    | 49     | 50     | 65       | 91       |
| Maximum Size(mm)    | Φ30*25 | Φ35*26 | Φ39.6*23 | Φ39.6*28 |



| Turns               | MS4015   | MS5005   | MS5010   | MS5015   |
|---------------------|----------|----------|----------|----------|
| Rated Voltage (V)   | 16       | 16       | 16       | 16       |
| Interval Voltage(V) | 7.4-32   | 7.4-32   | 7.4-32   | 7.4-32   |
| Maximum Speed(rpm)  | 675      | 985      | 505      | 340      |
| Rated Speed (rpm)   | 160      | 500      | 150      | 80       |
| Rated Torque (N.m)  | 0.25     | 0.18     | 0.25     | 0.32     |
| Maximum Torque(N.m) | 0.35     | 0.28     | 0.37     | 0.41     |
| Motor Weight (g)    | 112      | 99       | 135      | 177      |
| Maximum Size(mm)    | Φ36.9*33 | Φ49*23.9 | Φ49*28.9 | Φ49*33.9 |

# MS SERIES

**K<sub>o</sub>TECH** LINGKONG  
TECHNOLOGY



| Turns               | MS6010 | MS6015 | MS7010   | MS7015   | MS7025 |
|---------------------|--------|--------|----------|----------|--------|
| Rated Voltage (V)   | 24     | 24     | 24       | 24       | 24     |
| Interval Voltage(V) | 7.4-32 | 7.4-32 | 7.4-32   | 7.4-32   | 7.4-32 |
| Maximum Speed(rpm)  | 530    | 360    | 460      | 300      | 215    |
| Rated Speed (rpm)   | 200    | 100    | 230      | 140      | 40     |
| Rated Torque (N.m)  | 0.58   | 0.79   | 0.65     | 0.8      | 1.3    |
| Maximum Torque(N.m) | 1.4    | 1.12   | 1.4      | 1.6      | 1.75   |
| Motor Weight (g)    | 185    | 242    | 270      | 356      | 356    |
| Maximum Size(mm)    | Φ58*29 | Φ58*34 | Φ69*28.9 | Φ69*33.9 | Φ69*46 |



| Turns               | MS9010 | MS9015 | MS9025 | MS12025   |
|---------------------|--------|--------|--------|-----------|
| Rated Voltage (V)   | 24     | 24     | 24     | 24        |
| Interval Voltage(V) | 7.4-32 | 7.4-32 | 7.4-32 | 7.4-32    |
| Maximum Speed(rpm)  | 370    | 260    | 150    | 96        |
| Rated Speed (rpm)   | 160    | 100    | 20     | 25        |
| Rated Torque (N.m)  | 1      | 1.55   | 2.5    | 3.5       |
| Maximum Torque(N.m) | 2.2    | 2.7    | 3.4    | 5         |
| Motor Weight (g)    | 510    | 650    | 945    | 1173      |
| Maximum Size(mm)    | Φ89*37 | Φ89*42 | Φ89*53 | Φ120*63.2 |



# APPLICATION SCENARIOS \_

## Camera Head



## Laser Radar



**MS SERIES**



## Drone Pod

## 360° Camera



## PRODUCT PARAMETERS •

### Item Name

### MS3008v2

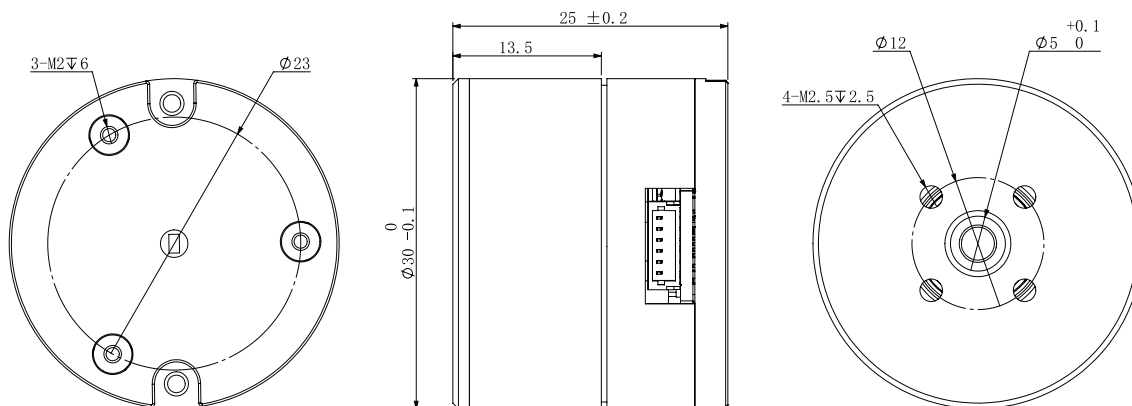
|                                   |      |
|-----------------------------------|------|
| Turns                             | 54   |
| Rated Voltage (V)                 | 12   |
| Max Speed (rpm)                   | 2000 |
| Rated Torque (N.m)                | 0.04 |
| Rated Speed (rpm)                 | 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 (Ω)               | 6    |
| Phase Inductance (mH)             | 1.68 |
| Motor Poles                       | 14   |
| Rotor Inertia (gcm <sup>2</sup> ) | 35   |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 67   |
| Motor Weight (g)                  | 49   |

### Recommand Drive

### DS30v2

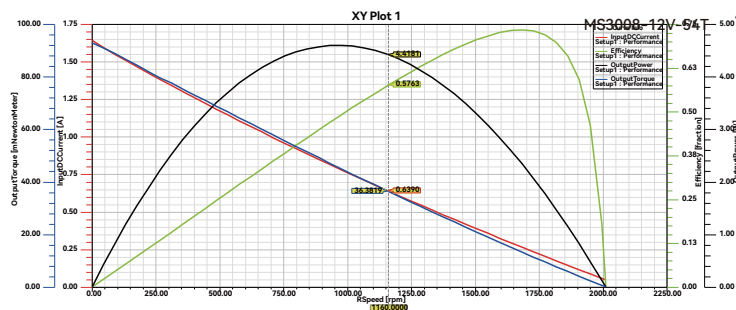
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 6~16                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque







## PRODUCT PARAMETERS •

### Item Name

### MS4005V3

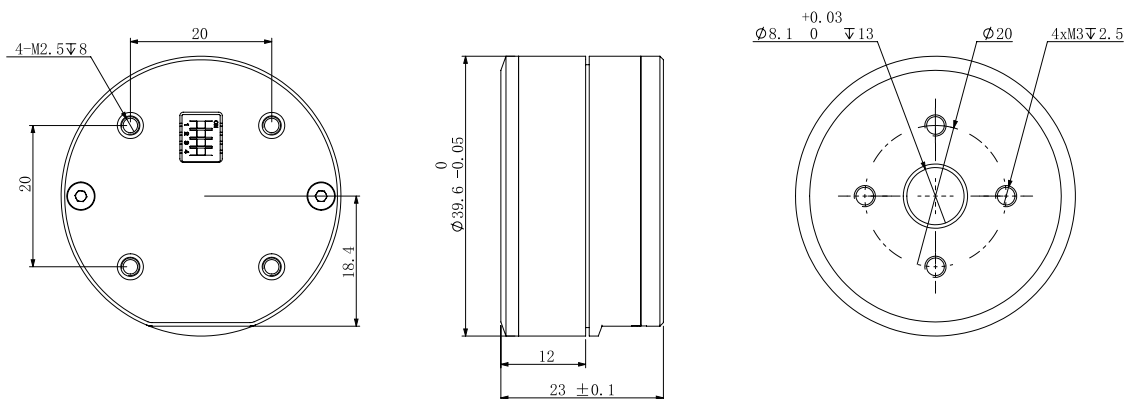
|                                   |      |
|-----------------------------------|------|
| Turns                             | 55   |
| Rated Voltage (V)                 | 12   |
| Max Speed (rpm)                   | 1090 |
| Rated Torque (N.m)                | 0.07 |
| Rated Speed (rpm)                 | 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 (Ω)               | 8    |
| Phase Inductance (mH)             | 2.35 |
| Motor Poles                       | 26   |
| Rotor Inertia (gcm <sup>2</sup> ) | 52   |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 140  |
| Motor Weight (g)                  | 65   |

### Recommand 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      — Efficiency      — Output Power      — Output Torque



PRODUCT PARAMETERS •

Item Name

MS4010V3

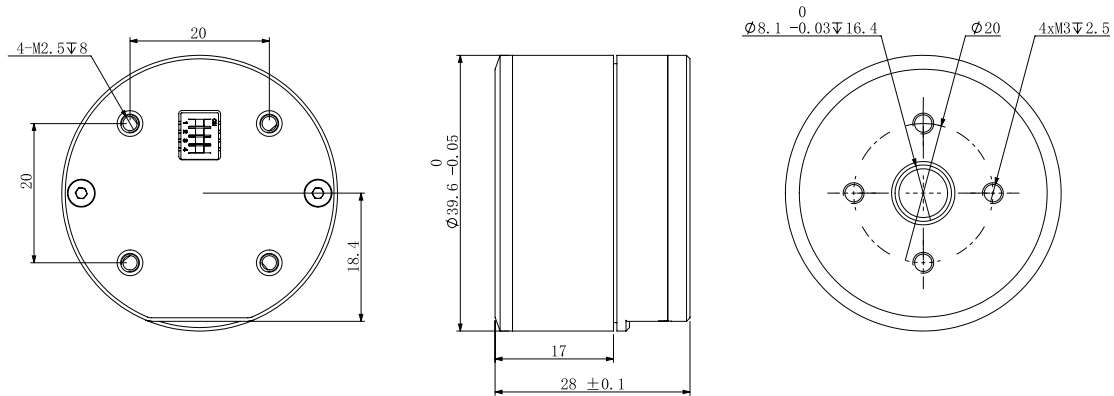
|                                   |      |
|-----------------------------------|------|
| Turns                             | 55   |
| Rated Voltage (V)                 | 12   |
| Max Speed (rpm)                   | 550  |
| Rated Torque (N.m)                | 0.13 |
| Rated Speed (rpm)                 | 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 (Ω)               | 11.6 |
| Phase Inductance (mH)             | 3.95 |
| Motor Poles                       | 26   |
| Rotor Inertia (gcm <sup>2</sup> ) | 81   |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 140  |
| Motor Weight (g)                  | 91   |

Recommand 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      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MS4015V3

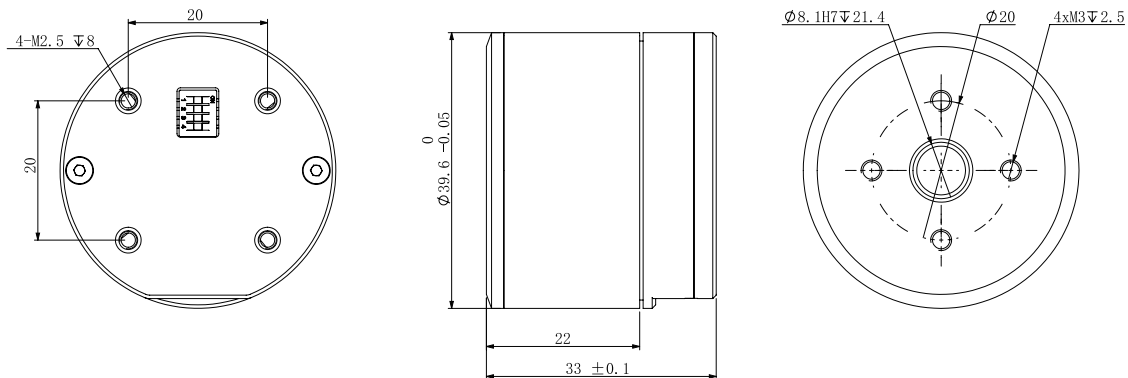
|                                   |      |
|-----------------------------------|------|
| Turns                             | 40   |
| Rated Voltage (V)                 | 16   |
| Max Speed (rpm)                   | 675  |
| Rated Torque (N.m)                | 0.25 |
| Rated Speed (rpm)                 | 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 <sup>2</sup> ) | 105  |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 140  |
| Motor Weight (g)                  | 112  |

### Recommand Drive

### DS40V3

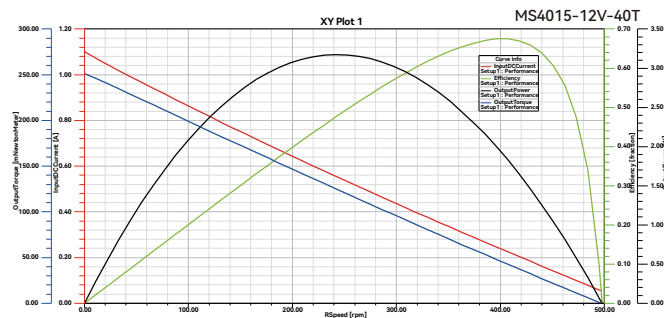
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque





## PRODUCT PARAMETERS •

### Item Name

### MS5005V3

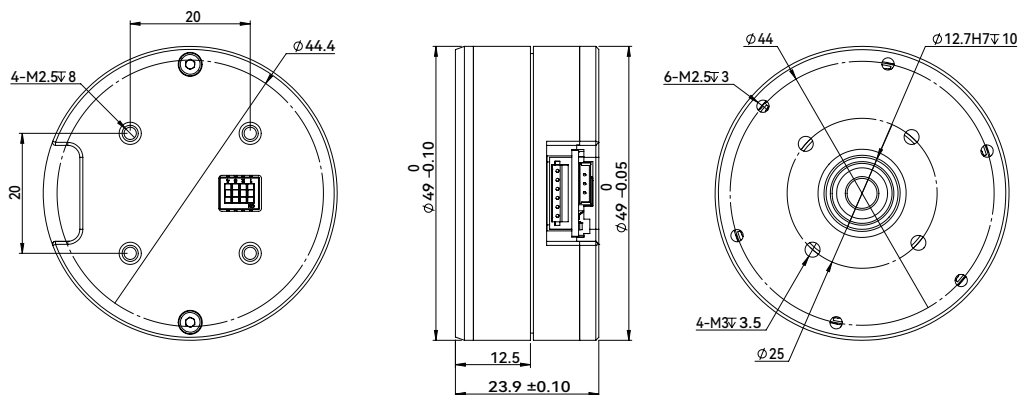
|                                   |      |
|-----------------------------------|------|
| Turns                             | 60   |
| Rated Voltage (V)                 | 16   |
| Max Speed (rpm)                   | 985  |
| Rated Torque (N.m)                | 0.18 |
| Rated Speed (rpm)                 | 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 (Ω)               | 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   |

### Recommand Drive

### DS40V3

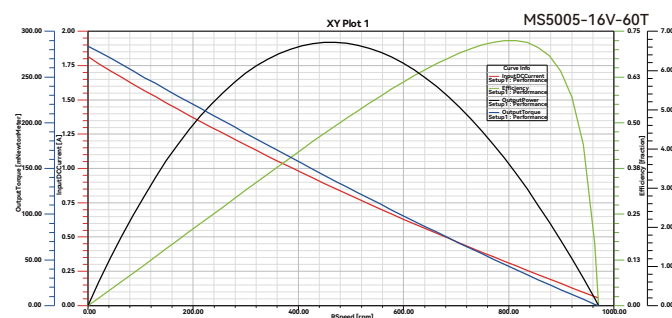
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MS5010V3

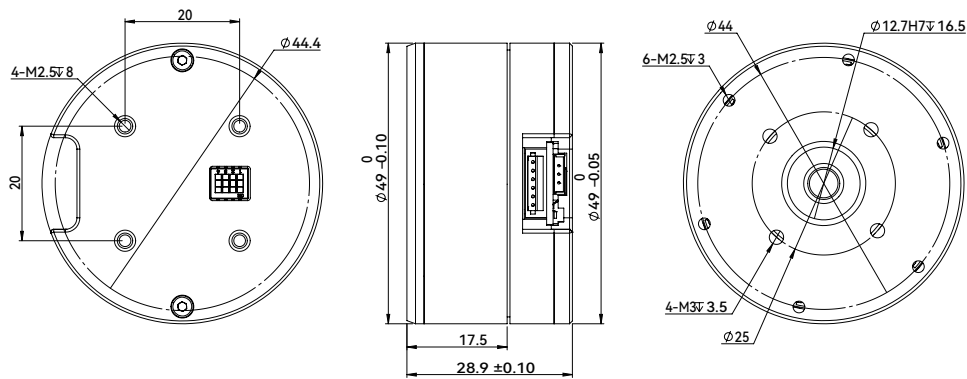
|                                   |      |
|-----------------------------------|------|
| Turns                             | 60   |
| Rated Voltage (V)                 | 16   |
| Max Speed (rpm)                   | 505  |
| Rated Torque (N.m)                | 0.25 |
| Rated Speed (rpm)                 | 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 (Ω)               | 10.8 |
| Phase Inductance (mH)             | 4.74 |
| Motor Poles                       | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | 192  |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 153  |
| Motor Weight (g)                  | 135  |

### Recommand Drive

### DS40V3

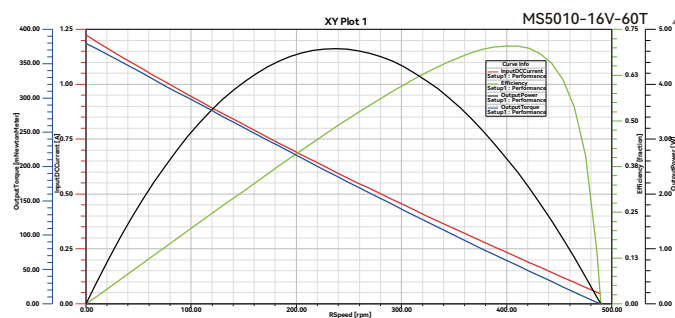
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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、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      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MS5015V3

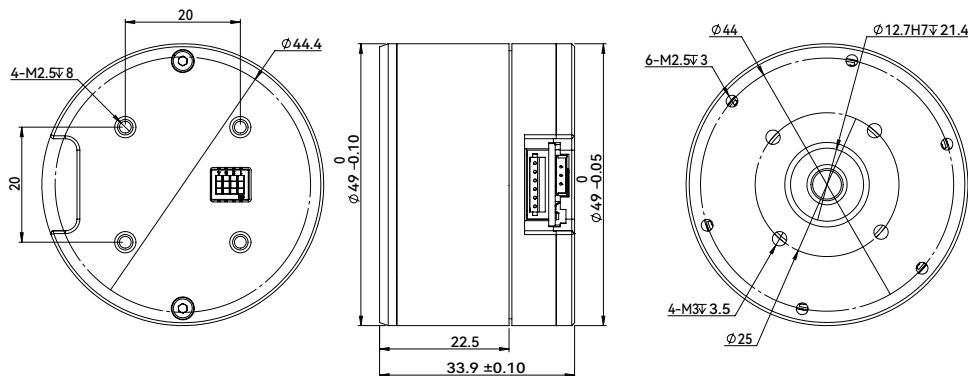
|                                   |      |
|-----------------------------------|------|
| Turns                             | 60   |
| Rated Voltage (V)                 | 16   |
| Max Speed (rpm)                   | 340  |
| Rated Torque (N.m)                | 0.32 |
| Rated Speed (rpm)                 | 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 (Ω)               | 13.5 |
| Phase Inductance (mH)             | 6.56 |
| Motor Poles                       | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | 268  |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 153  |
| Motor Weight (g)                  | 177  |

### Recommand Drive

### DS40V3

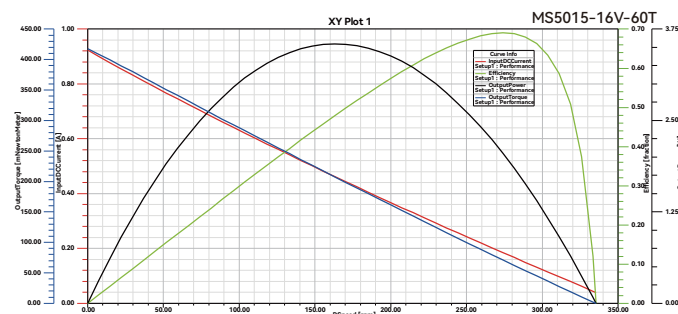
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MS6010V3

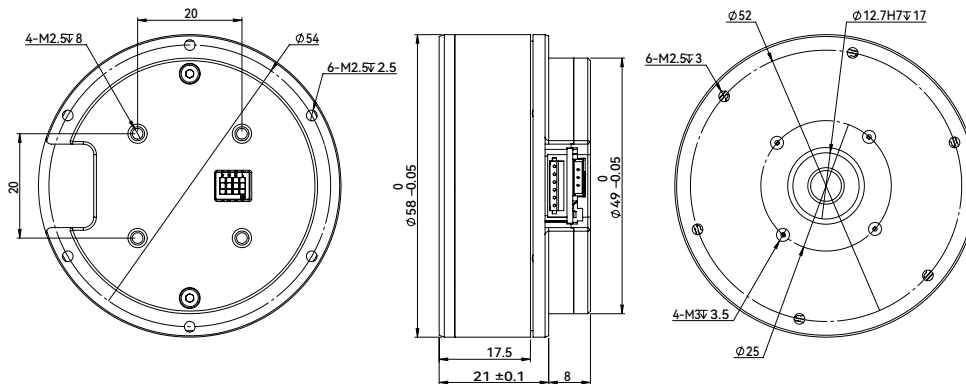
|                                   |       |
|-----------------------------------|-------|
| Turns                             | 60    |
| Rated Voltage (V)                 | 24    |
| Max Speed (rpm)                   | 530   |
| Rated Torque (N.m)                | 0.58  |
| Rated Speed (rpm)                 | 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 (Ω)               | 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   |

### Recommand Drive

### DS70V3

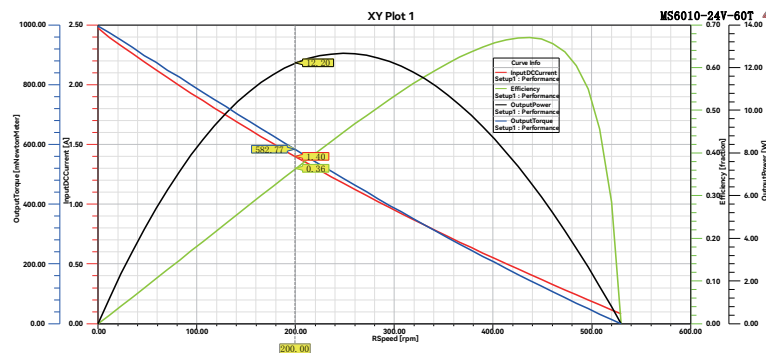
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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           | Trapeziod acceleration                                  |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current      — Efficiency      — Output Power      — Output Torque





# PRODUCT PARAMETERS •

## Item Name

## MS6015V3

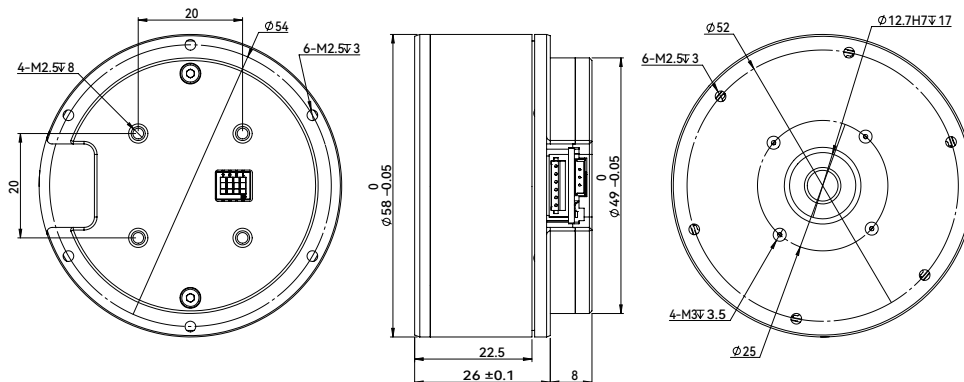
|                                  |      |
|----------------------------------|------|
| Turns                            | 60   |
| Rated Voltage (V)                | 24   |
| Max Speed (rpm)                  | 360  |
| Rated Torque (N.m)               | 0.79 |
| Rated Speed (rpm)                | 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 ( $\text{gcm}^2$ ) | 515  |
| Motor Temperature                | YES  |
| Bearing Rated Load (N)           | 280  |
| Motor Weight (g)                 | 242  |

## Recommand Drive

## DS70V3

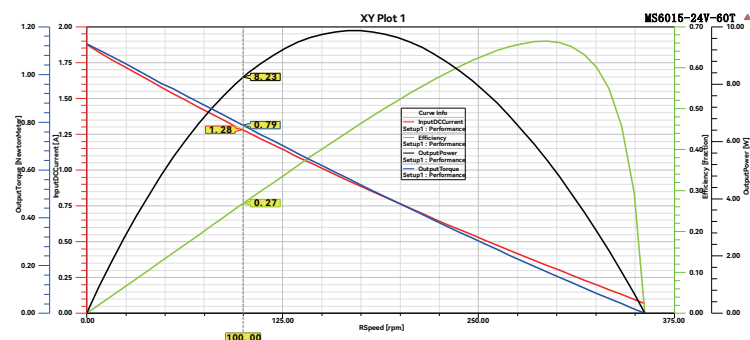
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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           | Trapeziod acceleration                                  |

# INSTALLATION DRAWING •



# MOTOR CHARACTERISTIC CURVE •

— Inputdc Current    — Efficiency    — Output Power    — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MS7010V3

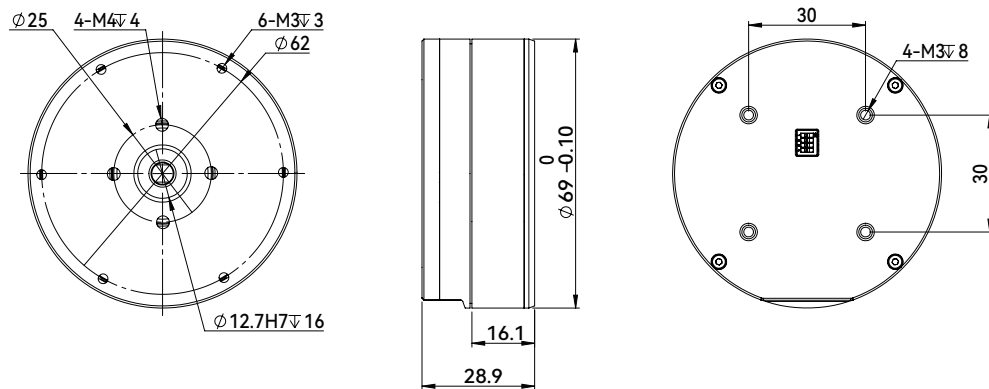
|                                   |       |
|-----------------------------------|-------|
| Turns                             | 60    |
| Rated Voltage (V)                 | 24    |
| Max Speed (rpm)                   | 460   |
| Rated Torque (N.m)                | 0.65  |
| Rated Speed (rpm)                 | 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 (Ω)               | 5.9   |
| Phase Inductance (mH)             | 13.03 |
| Motor Poles                       | 28    |
| Rotor Inertia (gcm <sup>2</sup> ) | 748   |
| Motor Temperature                 | YES   |
| Bearing Rated Load (N)            | 330   |
| Motor Weight (g)                  | 270   |

### Recommand Drive

### DS70V3

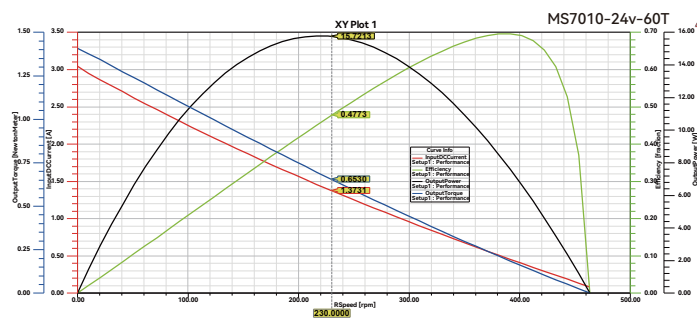
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

### Item Name

**MS7015V3**

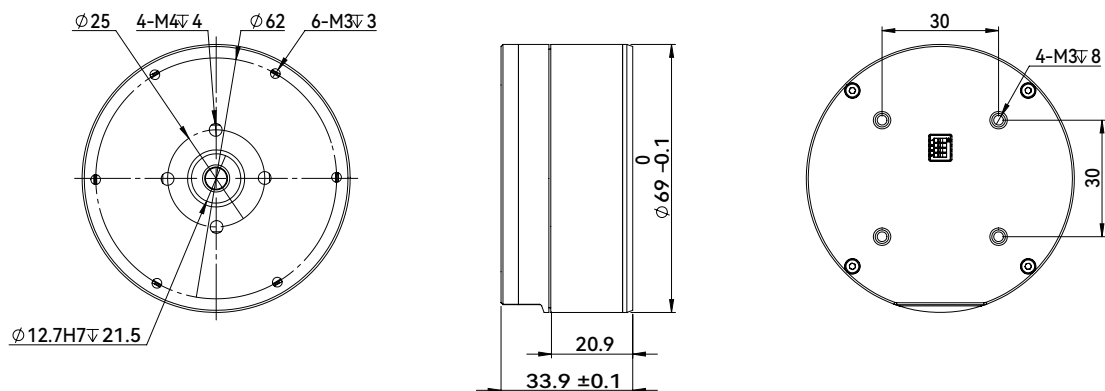
|                                   |      |
|-----------------------------------|------|
| Turns                             | 60   |
| Rated Voltage (V)                 | 24   |
| Max Speed (rpm)                   | 300  |
| Rated Torque (N.m)                | 0.8  |
| Rated Speed (rpm)                 | 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 (Ω)               | 7.5  |
| Phase Inductance (mH)             | 3.7  |
| Motor Poles                       | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | 933  |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 330  |
| Motor Weight (g)                  | 356  |

### Recommand Drive

**DS70V3**

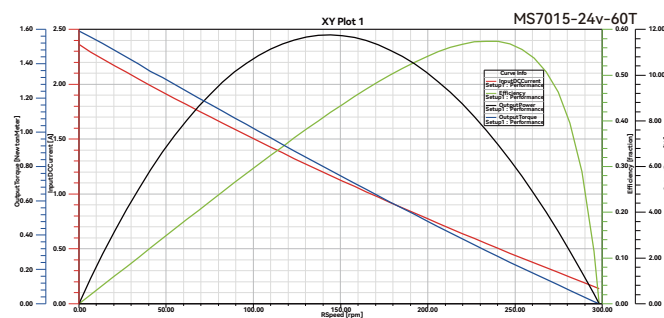
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MS7025V3

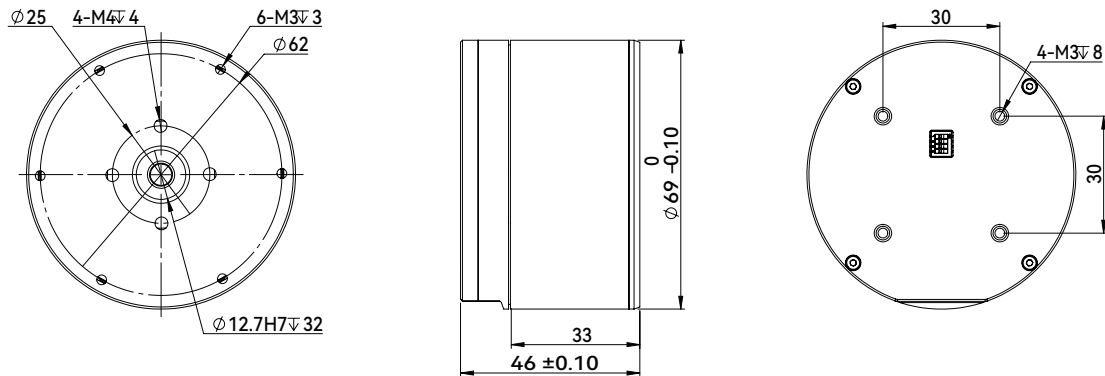
|                                   |      |
|-----------------------------------|------|
| Turns                             | 60   |
| Rated Voltage (V)                 | 24   |
| Max Speed (rpm)                   | 215  |
| Rated Torque (N.m)                | 1.3  |
| Rated Speed (rpm)                 | 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 (Ω)               | 7    |
| Phase Inductance (mH)             | 3.7  |
| Motor Poles                       | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | 1040 |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 330  |
| Motor Weight (g)                  | 525  |

### Recommand Drive

### DS70V3

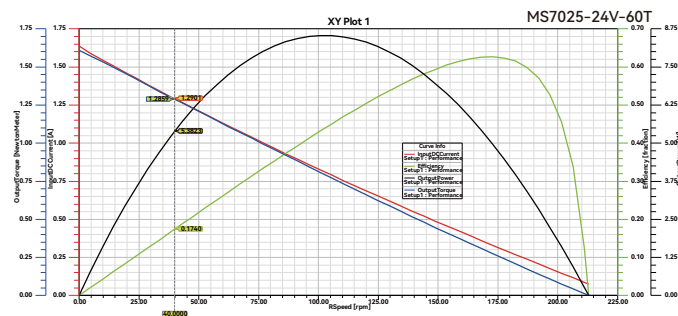
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque



PRODUCT PARAMETERS •

Item Name

MS9010V3

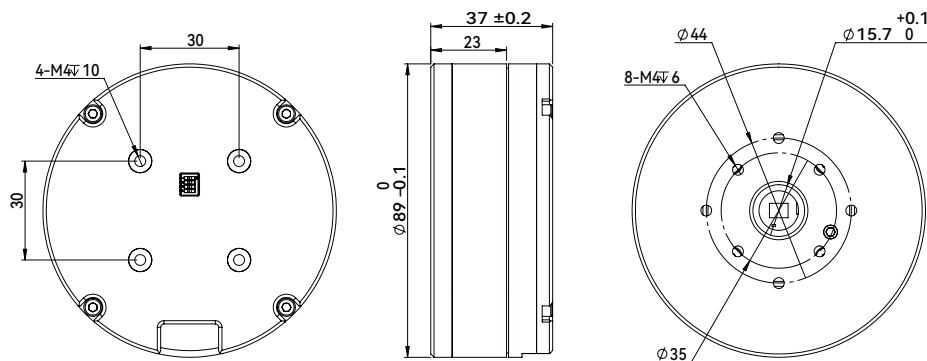
|                                   |      |
|-----------------------------------|------|
| Turns                             | 65   |
| Rated Voltage (V)                 | 24   |
| Max Speed (rpm)                   | 370  |
| Rated Torque (N.m)                | 1    |
| Rated Speed (rpm)                 | 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 (Ω)               | 8.2  |
| Phase Inductance (mH)             | 30   |
| Motor Poles                       | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | 2860 |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 650  |
| Motor Weight (g)                  | 510  |

Recommand Drive

DS70V3

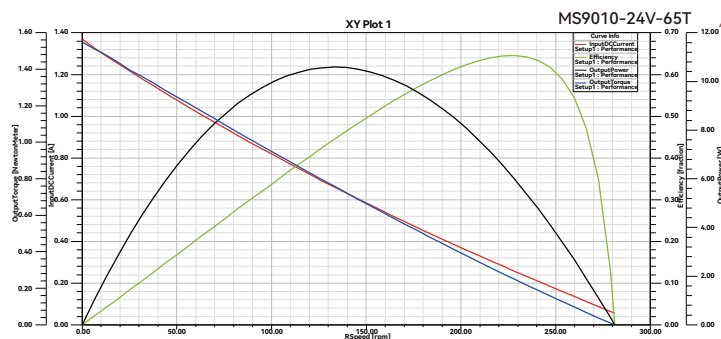
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque





## PRODUCT PARAMETERS •

### Item Name

### MS9015V3

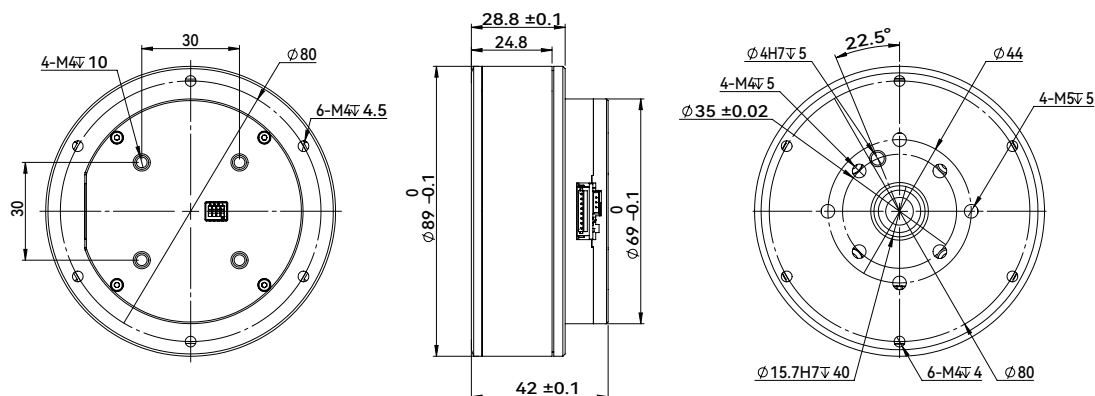
|                                   |      |
|-----------------------------------|------|
| Turns                             | 65   |
| Rated Voltage (V)                 | 24   |
| Max Speed (rpm)                   | 260  |
| Rated Torque (N.m)                | 1.55 |
| Rated Speed (rpm)                 | 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 <sup>2</sup> ) | 3100 |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 650  |
| Motor Weight (g)                  | 650  |

### Recommand Drive

### DS70V3

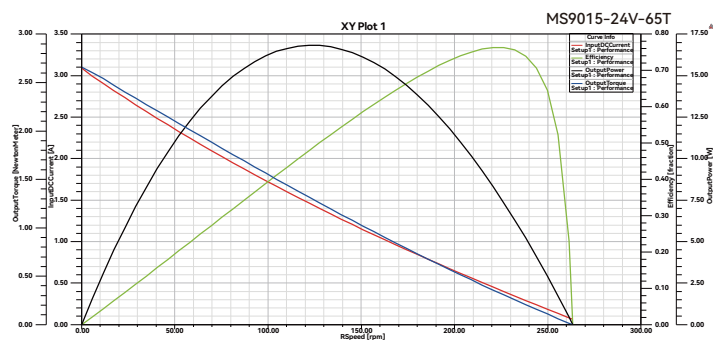
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MS9025V3

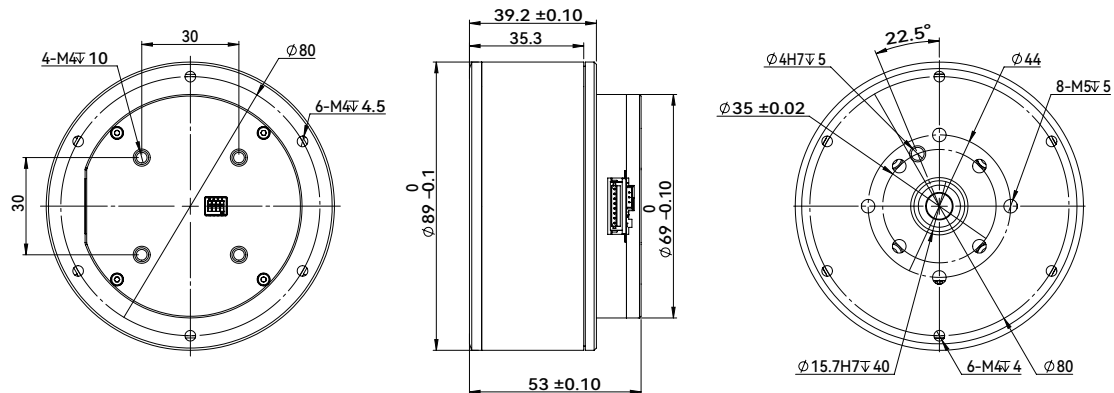
|                                   |      |
|-----------------------------------|------|
| Turns                             | 65   |
| Rated Voltage (V)                 | 24   |
| Max Speed (rpm)                   | 150  |
| Rated Torque (N.m)                | 2.5  |
| Rated Speed (rpm)                 | 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 <sup>2</sup> ) | 4656 |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 650  |
| Motor Weight (g)                  | 945  |

### Recommand 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      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MS12025V3

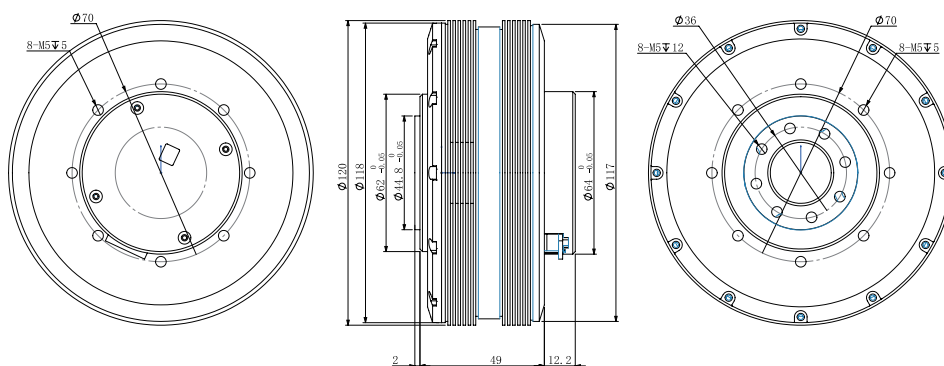
|                                   |      |
|-----------------------------------|------|
| Turns                             | 50   |
| Rated Voltage (V)                 | 24   |
| Max Speed (rpm)                   | 96   |
| Rated Torque (N.m)                | 3.5  |
| Rated Speed (rpm)                 | 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 (Ω)               | 10.5 |
| Phase Inductance (mH)             | 4.8  |
| Motor Poles                       | 42   |
| Rotor Inertia (gcm <sup>2</sup> ) | 5500 |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 1650 |
| Motor Weight (g)                  | 1173 |

### Recommand Drive

### DS70V3

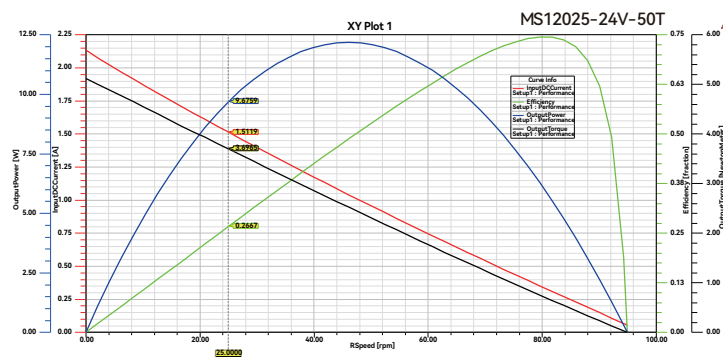
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 7~30                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque





# MF SERIES

18bit absolute magnetic encoder •

External rotor with NdFeb •

Motor + drive integration design •

Flat design with aviation aluminum •

# MF SERIES MODELS



| Item Name           | MF4005   | MF4010   | MF4015   | MF5005   |
|---------------------|----------|----------|----------|----------|
| Rated Voltage (V)   | 12       | 12       | 16       | 16       |
| Interval voltage(V) | 7.4-32   | 7.4-32   | 7.4-32   | 7.4-32   |
| Turns(T)            | 25       | 27       | 20       | 35       |
| Maximum speed(rpm)  | 2390     | 1120     | 1350     | 1700     |
| Rated Torque (N.m)  | 0.07     | 0.15     | 0.25     | 0.12     |
| Rated Speed (rpm)   | 1600     | 560      | 750      | 1100     |
| Maximum torque(N.m) | 0.25     | 0.33     | 0.65     | 0.4      |
| Motor Weight (g)    | 65       | 90       | 116      | 104      |
| Maximum Size(mm)    | Φ39.6*23 | Φ39.6*28 | Φ39.6*33 | Φ49*23.9 |



| Item Name           | MF5010    | MF5015    | MF6010    | MF6015   |
|---------------------|-----------|-----------|-----------|----------|
| Rated Voltage (V)   | 16        | 16        | 24        | 12       |
| Interval voltage(V) | 7.4-32    | 7.4-32    | 7.4-32    | 7.4-32   |
| Turns(T)            | 10 35     | 10 35     | 15 25     | 25       |
| Maximum speed(rpm)  | 3050 870  | 2040 580  | 2200 1280 | 2390     |
| Rated Torque (N.m)  | 0.26 0.24 | 0.38 0.32 | 0.55 0.55 | 0.07     |
| Rated Speed (rpm)   | 2400 440  | 1550 250  | 1700 900  | 1600     |
| Maximum torque(N.m) | 0.4 0.53  | 0.7 0.82  | 4 2.7     | 0.25     |
| Motor Weight (g)    | 137       | 175       | 193       | 65       |
| Maximum Size(mm)    | 49*28.9   | Φ49*33.9  | Φ58*29    | Φ39.6*23 |



# MF SERIES

K<sup>o</sup>TECH LINGKONG  
TECHNOLOGY



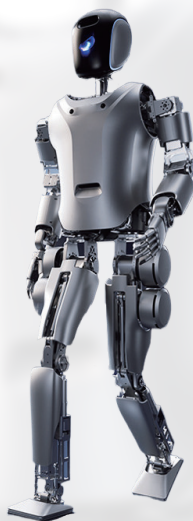
| Item Name           | MF9010 |      | MF9015 |      | MF9025 |      | MF12025   |  |
|---------------------|--------|------|--------|------|--------|------|-----------|--|
| Rated Voltage (V)   | 24     |      | 24     |      | 24     |      | 24        |  |
| Interval voltage(V) | 7.4-32 |      | 7.4-32 |      | 7.4-32 |      | 7.4-32    |  |
| Turns(T)            | 17     | 35   | 16     | 35   | 16     | 35   | 20        |  |
| Maximum speed(rpm)  | 1465   | 2390 | 1085   | 500  | 710    | 280  | 250       |  |
| Rated Torque (N.m)  | 1.09   | 1.07 | 1.63   | 1.67 | 2.42   | 2.79 | 5         |  |
| Rated Speed (rpm)   | 1080   | 450  | 780    | 290  | 490    | 130  | 115       |  |
| Maximum torque(N.m) | 2.2    | 4.1  | 3.4    | 5    | 4.5    | 5.8  | 10        |  |
| Motor Weight (g)    | 525    |      | 660    |      | 963    |      | 1147      |  |
| Maximum Size(mm)    | Φ89*37 |      | Φ89*42 |      | Φ89*53 |      | Φ120*63.2 |  |



| Item Name           | MF7010   |      | MF7015   |     |      | MF7025 |     |     |
|---------------------|----------|------|----------|-----|------|--------|-----|-----|
| Rated Voltage (V)   | 24       |      | 24       |     |      | 24     |     |     |
| Interval voltage(V) | 7.4-32   |      | 7.4-32   |     |      | 7.4-32 |     |     |
| Turns(T)            | 23       | 45   | 10       | 23  | 45   | 10     | 28  | 45  |
| Maximum speed(rpm)  | 1230     | 620  | 1890     | 805 | 410  | 1350   | 462 | 285 |
| Rated Torque (N.m)  | 0.61     | 0.63 | 1        | 1   | 0.99 | 1.6    | 1.6 | 1.5 |
| Rated Speed (rpm)   | 940      | 400  | 1500     | 580 | 220  | 970    | 250 | 100 |
| Maximum torque(N.m) | 2        | 2.1  | 2        | 3.8 | 2.42 | 2.1    | 2.9 | 2.7 |
| Motor Weight (g)    | 278      |      | 352      |     |      | 526    |     |     |
| Maximum Size(mm)    | Φ69*28.9 |      | Φ69*33.9 |     |      | Φ69*46 |     |     |

# APPLICATION SCENARIOS \_

## Humanoid Robot



## Service Robot



**MF SERIES**

## Laser Radar



## Camera Head



## PRODUCT PARAMETERS •

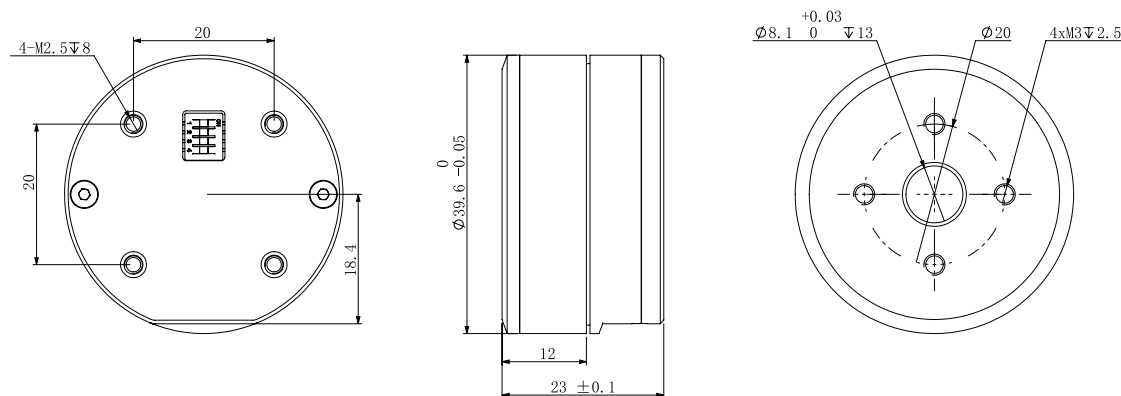
| Item Name                        | MF4005V2 |      |
|----------------------------------|----------|------|
| Turns                            | 25       | 40   |
| Rated Voltage (V)                | 12       | 12   |
| Max Speed (rpm)                  | 2390     | 1300 |
| Rated Torque (N.m)               | 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       |      |

## Recommand Drive

## DF40V2

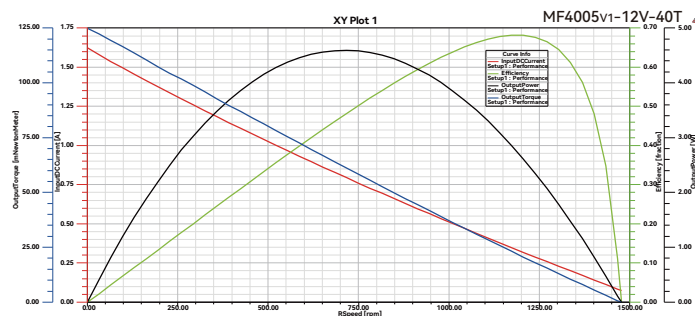
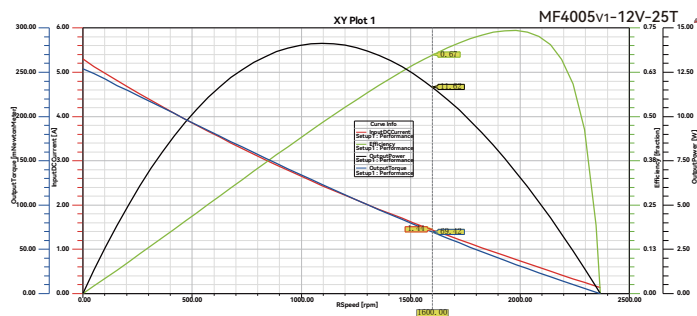
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque



# PRODUCT PARAMETERS •

## Item Name

## MF4010V2

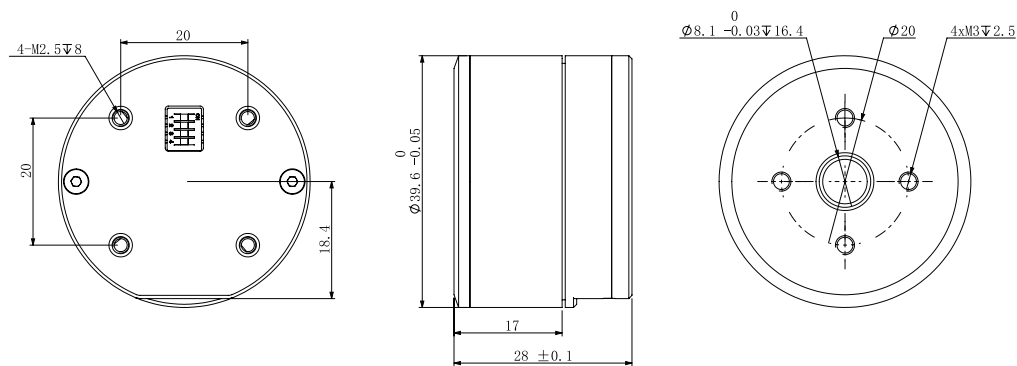
|                                   |      |
|-----------------------------------|------|
| Turns                             | 27   |
| Rated Voltage (V)                 | 12   |
| Max Speed (rpm)                   | 1120 |
| Rated Torque (N.m)                | 0.15 |
| Rated Speed (rpm)                 | 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 (Ω)               | 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)                  | 90   |

## Recommand Drive

## DF40V2

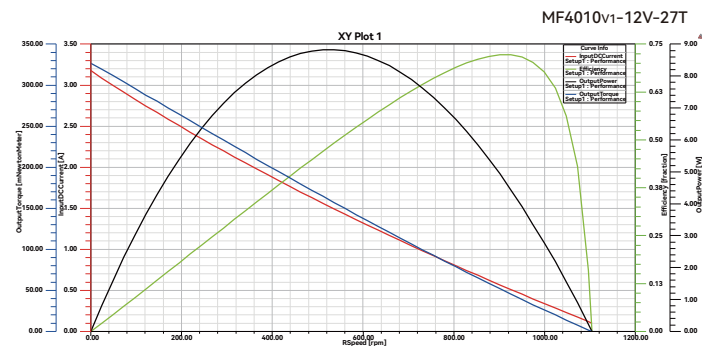
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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    — Efficiency    — Output Power    — Output Torque



## PRODUCT PARAMETERS •

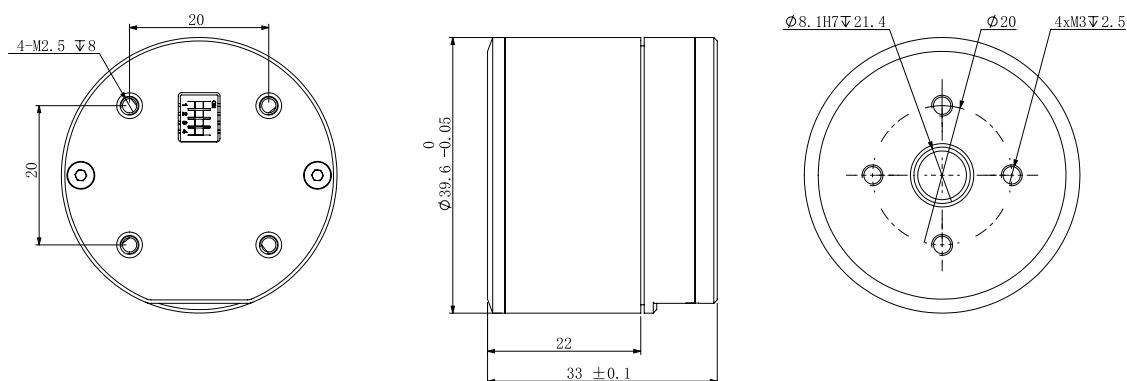
| Item Name                         | MF4015V2 |
|-----------------------------------|----------|
| Turns                             | 20       |
| Rated Voltage (V)                 | 16       |
| Max Speed (rpm)                   | 1350     |
| Rated Torque (N.m)                | 0.25     |
| Rated 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      |

## Recommand 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      — Efficiency      — Output Power      — Output Torque



# PRODUCT PARAMETERS •

## Item Name

## MF5005V2

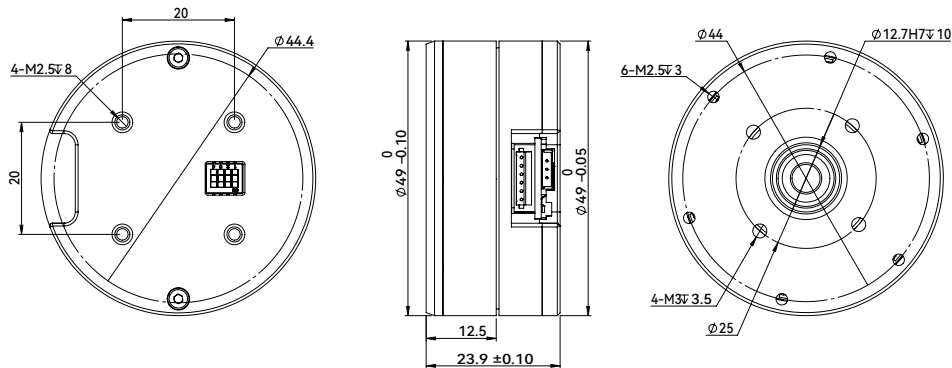
|                                   |      |
|-----------------------------------|------|
| Turns                             | 35   |
| Rated Voltage (V)                 | 16   |
| Max Speed (rpm)                   | 1700 |
| Rated Torque (N.m)                | 0.12 |
| Rated Speed (rpm)                 | 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 (Ω)               | 2    |
| Phase Inductance (mH)             | 0.65 |
| Motor Poles                       | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | 136  |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 153  |
| Motor Weight (g)                  | 104  |

## Recommand Drive

## DF40V2

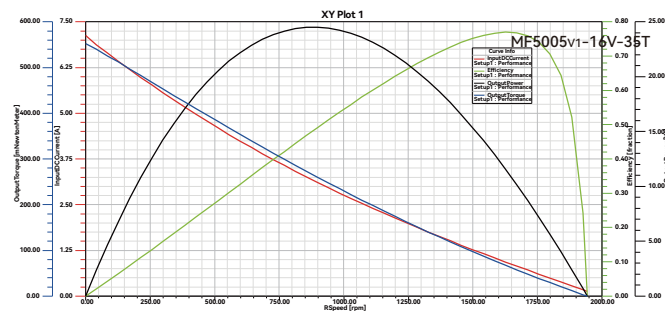
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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    — Efficiency    — Output Power    — Output Torque





## PRODUCT PARAMETERS •

### Item Name

### MF5010V2

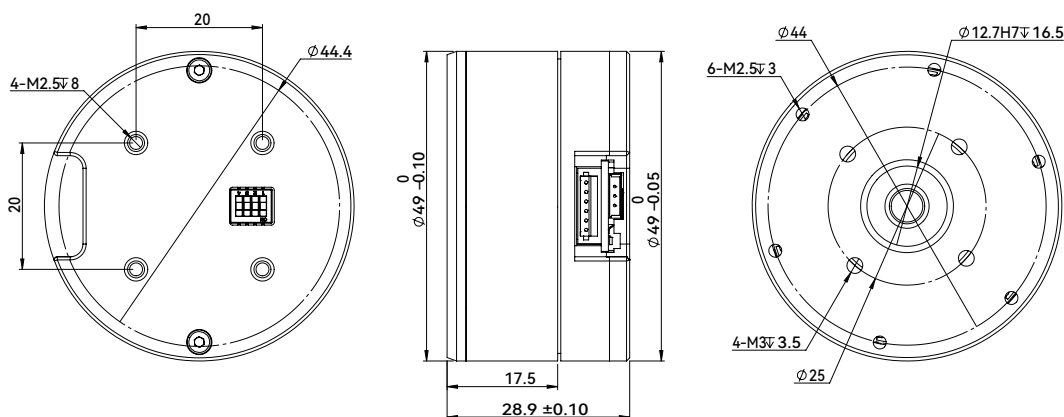
|                                   |      |      |
|-----------------------------------|------|------|
| Turns                             | 10   | 35   |
| Rated Voltage (V)                 | 16   | 16   |
| Max Speed (rpm)                   | 3050 | 870  |
| Rated Torque (N.m)                | 0.26 | 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 (Ω)               | 0.33 | 3.2  |
| Phase Inductance (mH)             | 0.13 | 1.2  |
| Motor Poles                       | 28   |      |
| Rotor Inertia (gcm <sup>2</sup> ) | 202  |      |
| Motor Temperature                 | YES  |      |
| Bearing Rated Load (N)            | 153  |      |
| Motor Weight (g)                  | 137  |      |

### Recommand 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 •



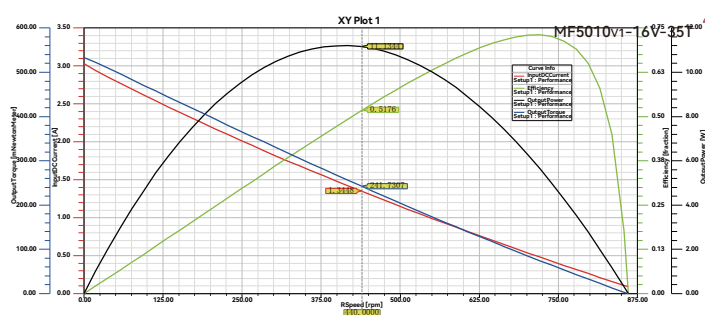
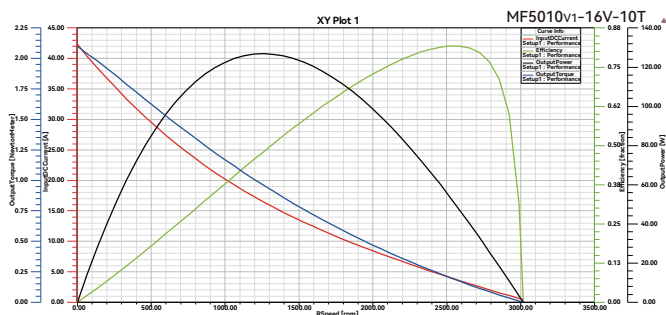
## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current

— Efficiency

— Output Power

— Output Torque



PRODUCT PARAMETERS •

Item Name

MF5015V2

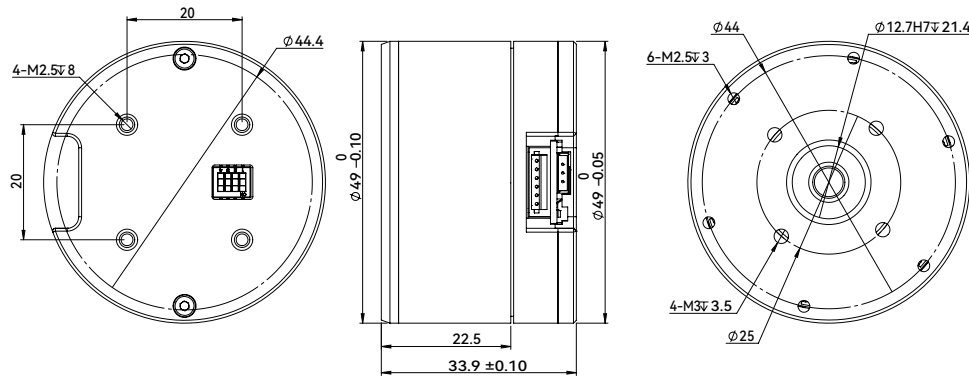
|                                   |      |      |
|-----------------------------------|------|------|
| Turns                             | 10   | 35   |
| Rated Voltage (V)                 | 16   | 16   |
| Max Speed (rpm)                   | 2040 | 580  |
| Rated Torque (N.m)                | 0.38 | 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 (Ω)               | 0.48 | 4    |
| Phase Inductance (mH)             | 0.19 | 1.76 |
| Motor Poles                       | 28   |      |
| Rotor Inertia (gcm <sup>2</sup> ) | 202  |      |
| Motor Temperature                 | YES  |      |
| Bearing Rated Load (N)            | 153  |      |
| Motor Weight (g)                  | 175  |      |

Recommand Drive

DF40V2

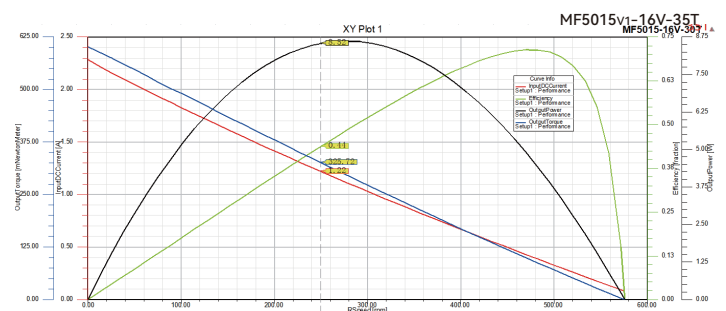
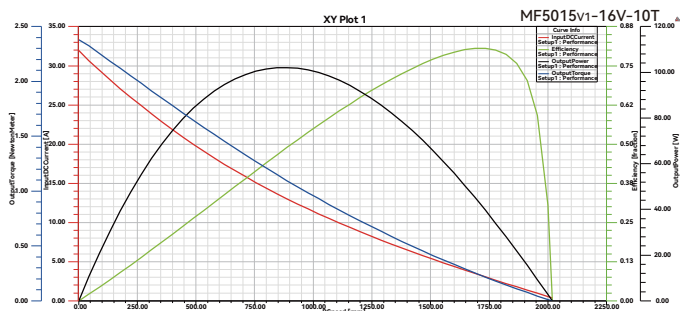
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

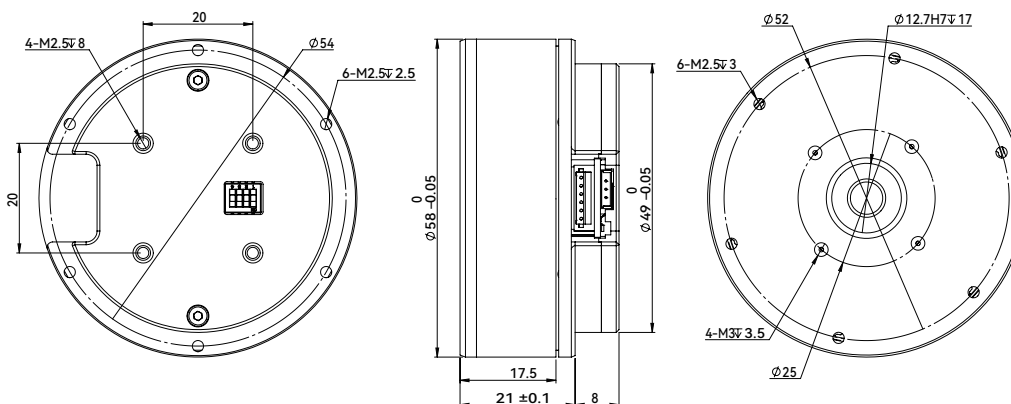
| Item Name                         | MF6010V2 |      |
|-----------------------------------|----------|------|
| Turns                             | 15       | 25   |
| Rated Voltage (V)                 | 24       | 24   |
| Max Speed (rpm)                   | 2200     | 1280 |
| Rated Torque (N.m)                | 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 <sup>2</sup> ) | 394      |      |
| Motor Temperature                 | YES      |      |
| Bearing Rated Load (N)            | 280      |      |
| Motor Weight (g)                  | 193      |      |

## Recommand Drive

|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| 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           | Trapeziod acceleration                                    |

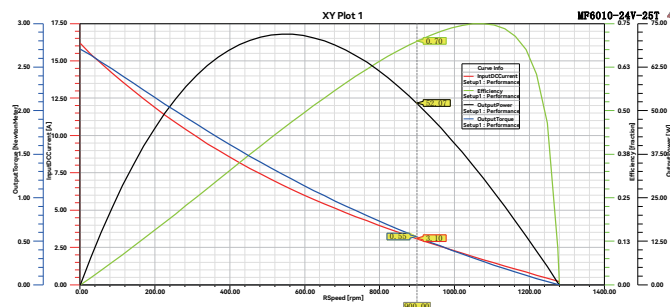
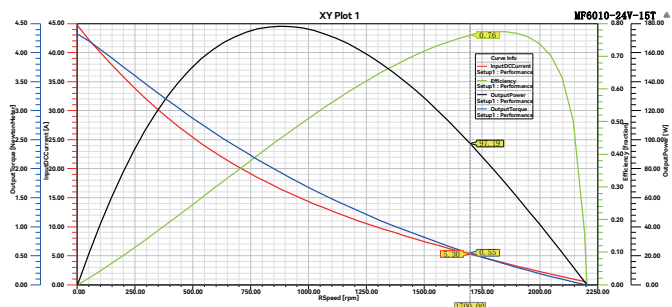
## DF40V2

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MF6015V2

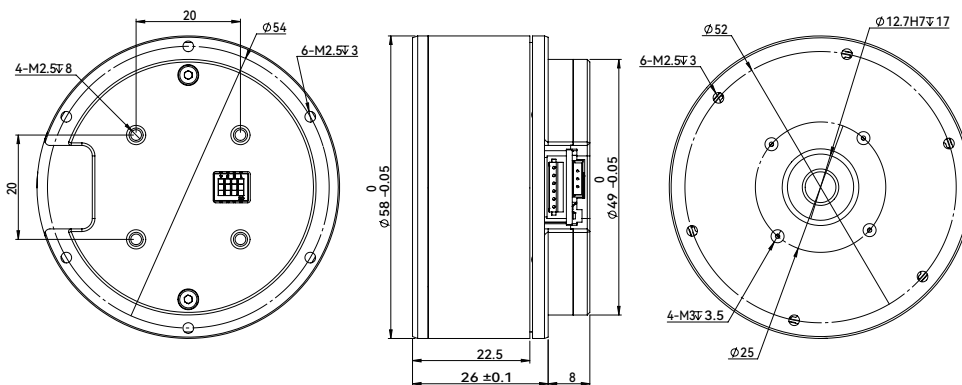
|                                   |      |      |
|-----------------------------------|------|------|
| Turns                             | 15   | 25   |
| Rated Voltage (V)                 | 24   | 24   |
| Max Speed (rpm)                   | 1650 | 872  |
| Rated Torque (N.m)                | 0.81 | 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 (Ω)               | 0.89 | 2.17 |
| Phase Inductance (mH)             | 0.49 | 1.44 |
| Motor Poles                       |      | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) |      | 515  |
| Motor Temperature                 |      | YES  |
| Bearing Rated Load (N)            |      | 280  |
| Motor Weight (g)                  |      | 251  |

### Recommand Drive

### DF40V2

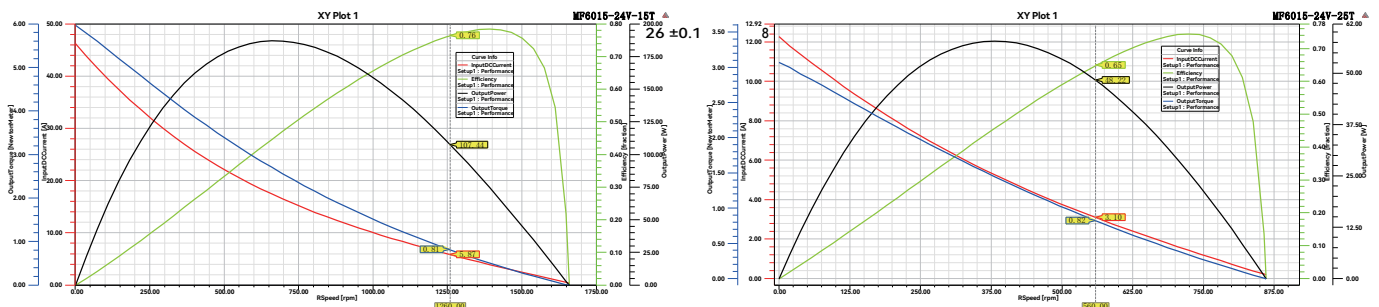
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

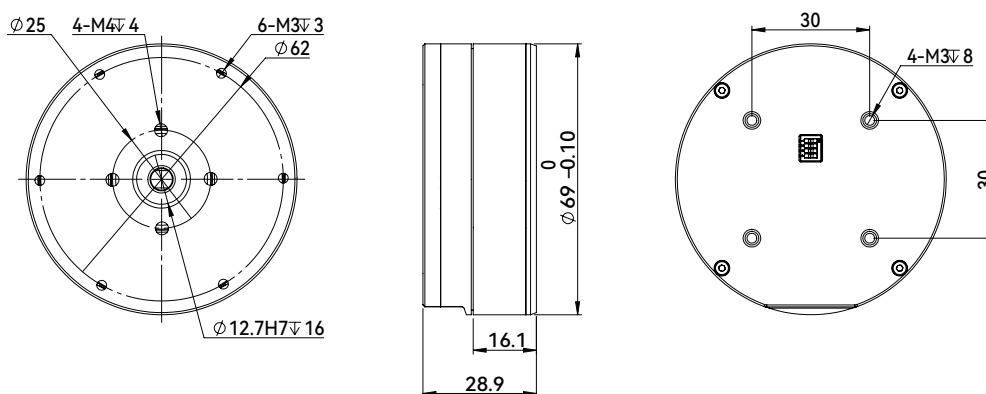
| Item Name                         | MF7010V2 |      |
|-----------------------------------|----------|------|
| Turns                             | 23       | 45   |
| Rated Voltage (V)                 | 24       | 24   |
| Max Speed (rpm)                   | 1230     | 620  |
| Rated Torque (N.m)                | 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 (Ω)               | 0.71     | 2.73 |
| Phase Inductance (mH)             | 0.86     | 3.3  |
| Motor Poles                       | 28       |      |
| Rotor Inertia (gcm <sup>2</sup> ) | 748      |      |
| Motor Temperature                 | YES      |      |
| Bearing Rated Load (N)            | 330      |      |
| Motor Weight (g)                  | 278      |      |

## Recommnd Drive

## DF70V2

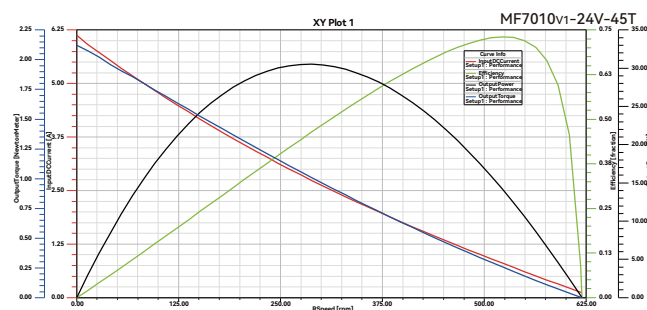
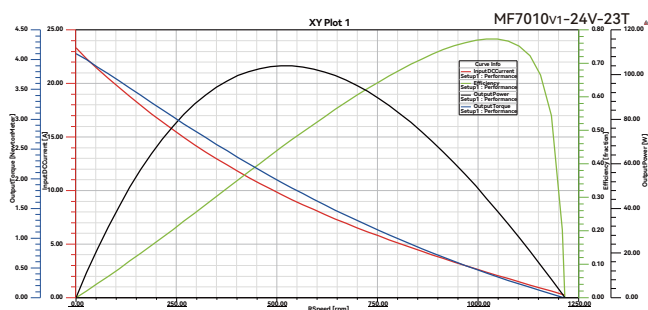
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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 •

## Item Name

## MF7015V2

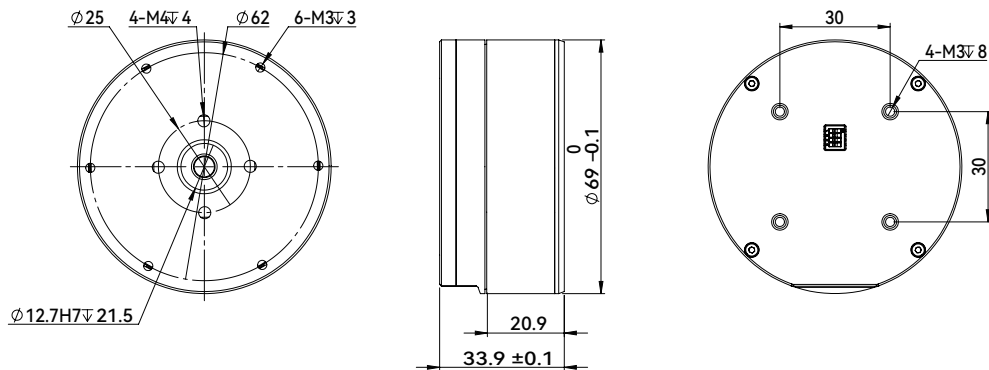
|                                   |      |      |      |
|-----------------------------------|------|------|------|
| Turns                             | 10   | 23   | 45   |
| Rated Voltage (V)                 | 24   | 24   | 24   |
| Max Speed (rpm)                   | 1890 | 805  | 410  |
| Rated 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 (Ω)               | 0.28 | 1.14 | 3.9  |
| Phase Inductance (mH)             | 0.24 | 1.25 | 4.83 |
| Motor Poles                       |      | 28   |      |
| Rotor Inertia (gcm <sup>2</sup> ) |      | 933  |      |
| Motor Temperature                 |      | YES  |      |
| Bearing Rated Load (N)            |      | 330  |      |
| Motor Weight (g)                  |      | 352  |      |

## Recommand Drive

## DF70V2

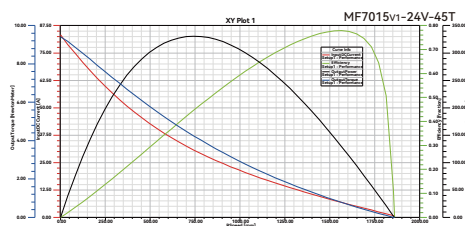
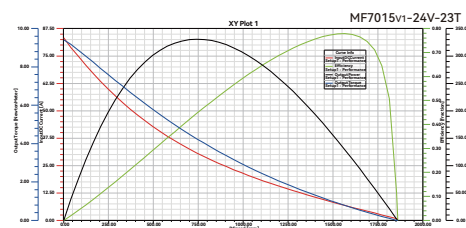
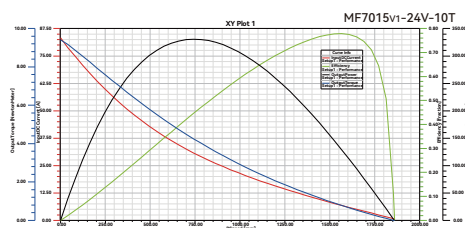
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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           | Trapeziod acceleration                                    |

# INSTALLATION DRAWING •



# MOTOR CHARACTERISTIC CURVE •

— Inputdc Current    — Efficiency    — Output Power    — Output Torque





## PRODUCT PARAMETERS •

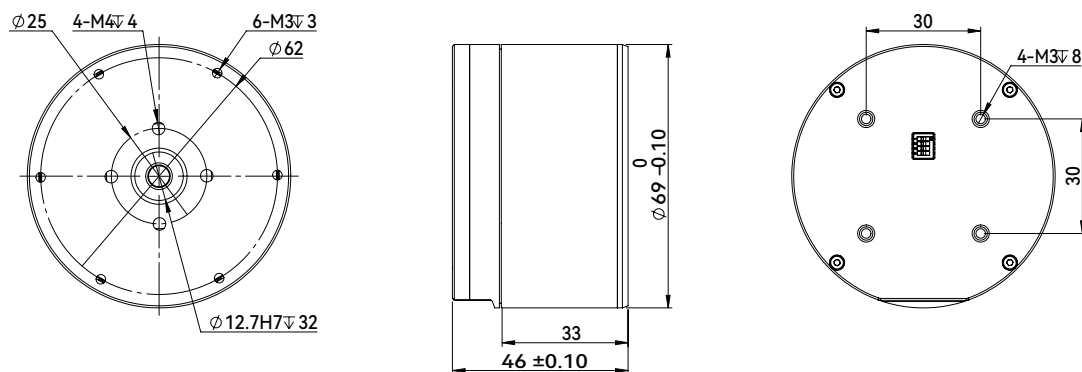
| Item Name                         | MF7025V2 |      |      |
|-----------------------------------|----------|------|------|
| Turns                             | 10       | 28   | 45   |
| Rated Voltage (V)                 | 24       | 24   | 24   |
| Max Speed (rpm)                   | 1350     | 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 (Ω)               | 0.28     | 2.2  | 5.5  |
| Phase Inductance (mH)             | 0.24     | 2.95 | 7.6  |
| Motor Poles                       |          | 28   |      |
| Rotor Inertia (gcm <sup>2</sup> ) |          | 1040 |      |
| Motor Temperature                 |          | YES  |      |
| Bearing Rated Load (N)            |          | 330  |      |
| Motor Weight (g)                  |          | 526  |      |

## Recommand Drive

## DF70V2

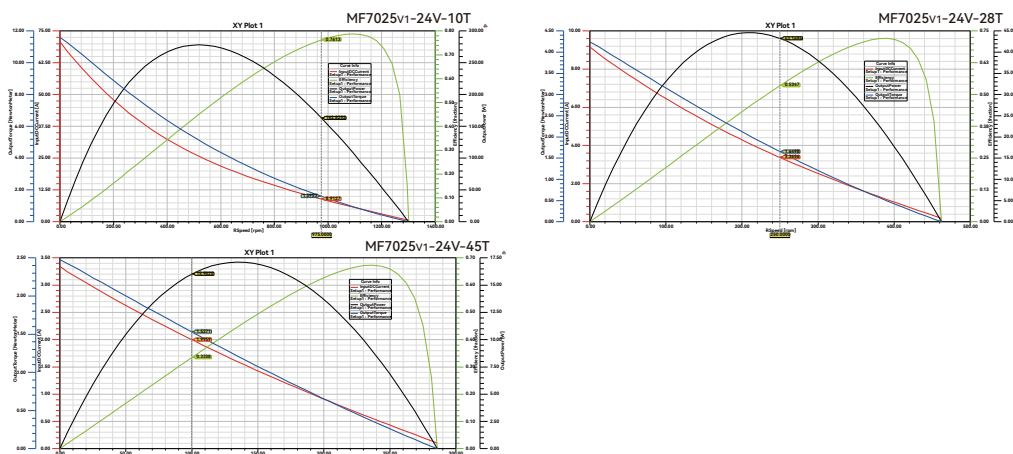
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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           | Trapeziod acceleration                                    |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current    — Efficiency    — Output Power    — Output Torque



# PRODUCT PARAMETERS •

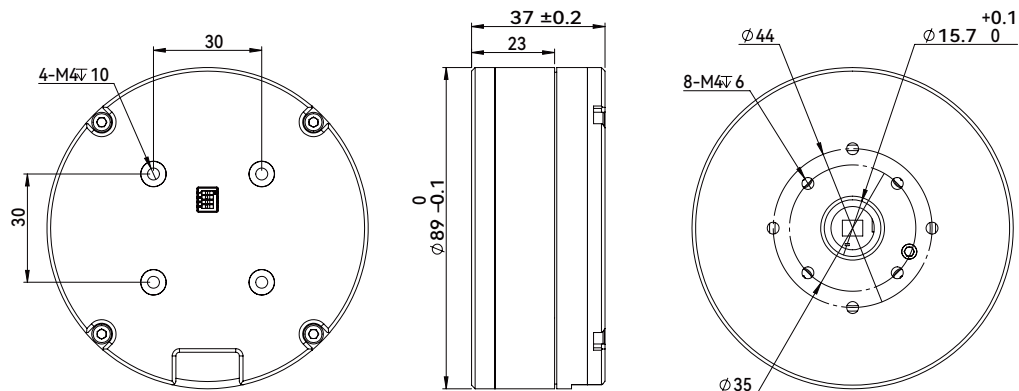
| Item Name                         | MF9010V2 |      |
|-----------------------------------|----------|------|
| Turns                             | 17       | 35   |
| Rated Voltage (V)                 | 24       | 24   |
| Max Speed (rpm)                   | 1465     | 690  |
| Rated Torque (N.m)                | 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 (Ω)               | 0.29     | 1.15 |
| Phase Inductance (mH)             | 0.53     | 3    |
| Motor Poles                       | 28       |      |
| Rotor Inertia (gcm <sup>2</sup> ) | 2860     |      |
| Motor Temperature                 | YES      |      |
| Bearing Rated Load (N)            | 650      |      |
| Motor Weight (g)                  | 525      |      |

## Recommand Drive

## DF70V2

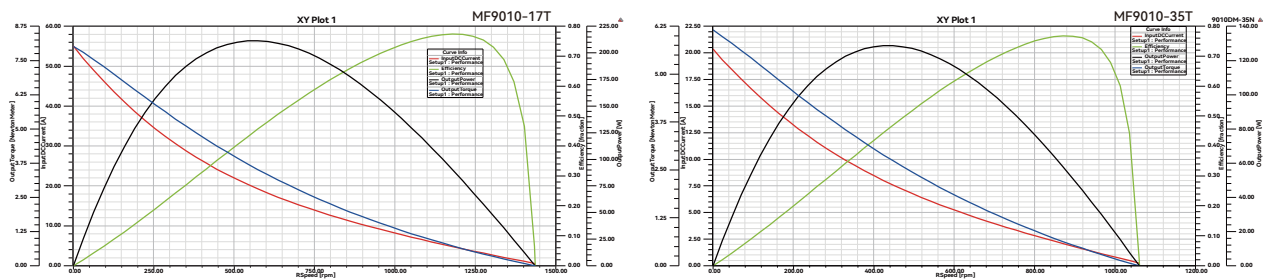
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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)         | 1M                                                        |
| Control Mode                 | Torque Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz) |
| Acceleration Curve           | Trapeziod acceleration                                    |

# INSTALLATION DRAWING •



# MOTOR CHARACTERISTIC CURVE •

— Inputdc Current    — Efficiency    — Output Power    — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MF9015V2

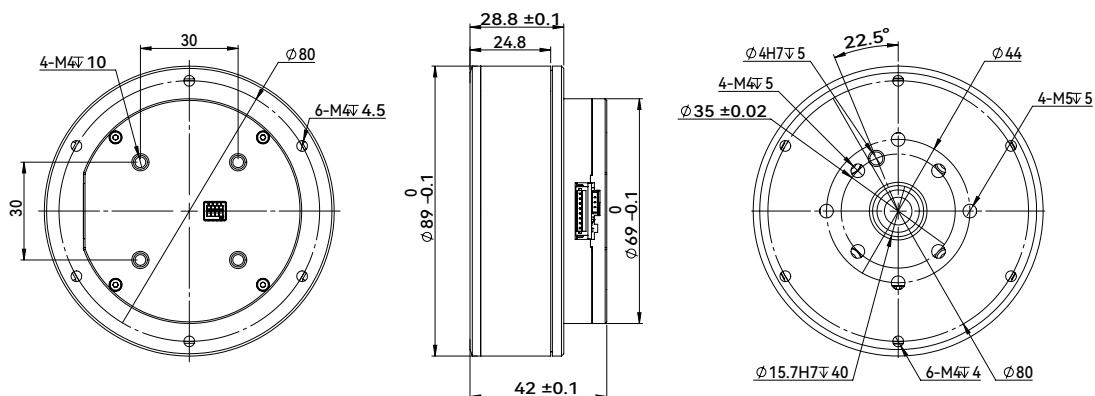
|                                   |      |      |
|-----------------------------------|------|------|
| Turns                             | 16   | 35   |
| Rated Voltage (V)                 | 24   | 24   |
| Max Speed (rpm)                   | 1085 | 500  |
| Rated Torque (N.m)                | 1.63 | 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 <sup>2</sup> ) | 3271 |      |
| Motor Temperature                 | YES  |      |
| Bearing Rated Load (N)            | 650  |      |
| Motor Weight (g)                  | 660  |      |

### Recommand Drive

### DF70V2

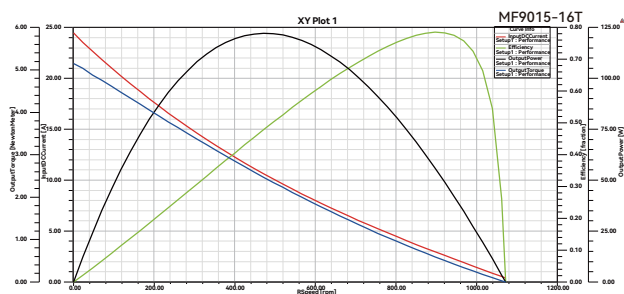
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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)         | 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 •

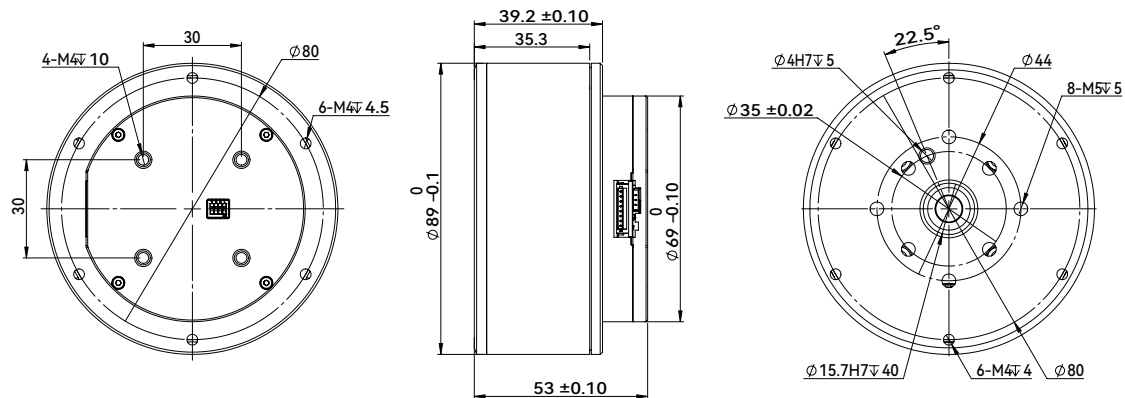
| Item Name                         |  | MF9025V2 |      |
|-----------------------------------|--|----------|------|
| Turns                             |  | 16       | 35   |
| Rated Voltage (V)                 |  | 24       | 24   |
| Max Speed (rpm)                   |  | 710      | 280  |
| Rated 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 (Ω)               |  | 0.5      | 1.9  |
| Phase Inductance (mH)             |  | 0.96     | 4.71 |
| Motor Poles                       |  | 28       |      |
| Rotor Inertia (gcm <sup>2</sup> ) |  | 4656     |      |
| Motor Temperature                 |  | YES      |      |
| Bearing Rated Load (N)            |  | 650      |      |
| Motor Weight (g)                  |  | 963      |      |

## Recommnd Drive

## DF70V2

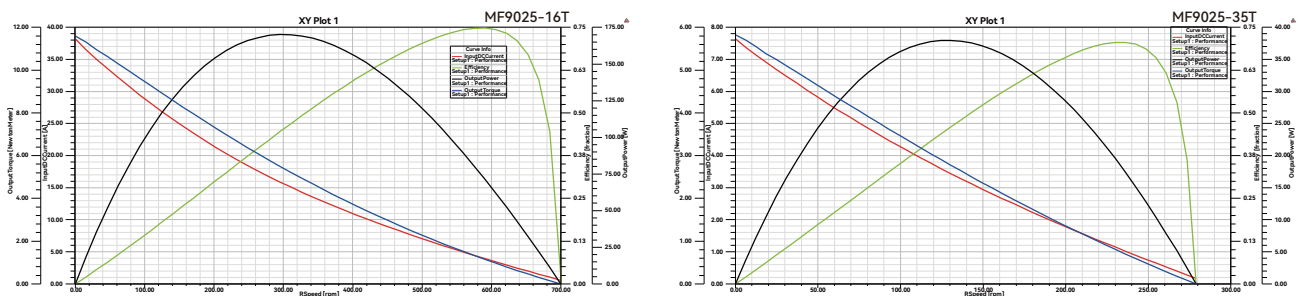
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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    — Efficiency    — Output Power    — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MF12025V2

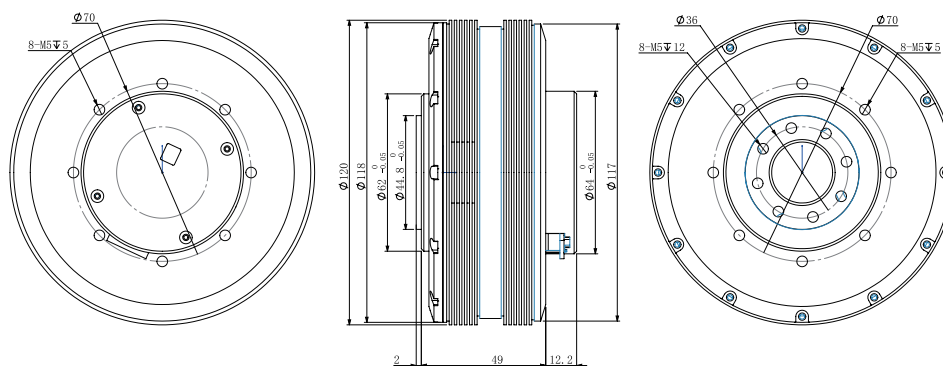
|                                   |      |
|-----------------------------------|------|
| Turns                             | 20   |
| Rated Voltage (V)                 | 24   |
| Max Speed (rpm)                   | 250  |
| Rated Torque (N.m)                | 5    |
| Rated Speed (rpm)                 | 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 (Ω)               | 2.4  |
| Phase Inductance (mH)             | 5    |
| Motor Poles                       | 42   |
| Rotor Inertia (gcm <sup>2</sup> ) | 5500 |
| Motor Temperature                 | YES  |
| Bearing Rated Load (N)            | 1560 |
| Motor Weight (g)                  | 1147 |

### Recommand Drive

### DF70V2

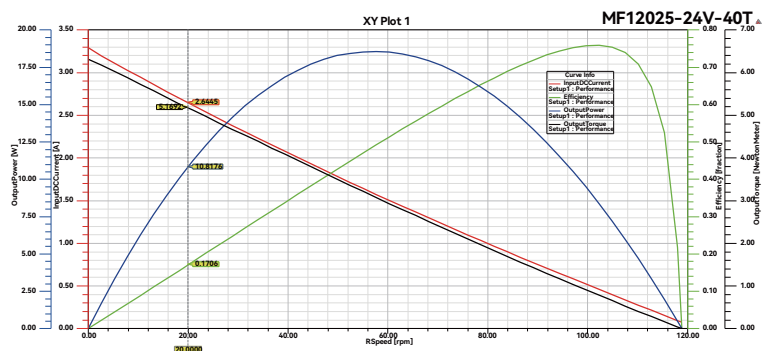
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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



# MG SERIES

- High power brushless motor
- High precision planetary reducer
- High performance FOC driver
- 18bit absolute magnetic encoder





# PLANETARY REDUCER SERIES -



| Item Name          | MG4005-i10 | MG4005E-i10 | MG4010E-i10 | MG5010E-i10 | MG6010E-i6               |
|--------------------|------------|-------------|-------------|-------------|--------------------------|
| Rated Torque (N.m) | 1N.m       | 1N.m        | 2.5N.m      | 4N.m        | 5N.m                     |
| Max Torque (N.m)   | 2.5N.m     | 2.5N.m      | 4.5N.m      | 7N.m        | 10N.m                    |
| Maximum Speed      | 320rpm@24V | 320rpm@24V  | 320rpm@24V  | 320rpm@24V  | 251rpm@24V<br>505rpm@48V |
| Overall Dimension  | Φ53*33.2   | Φ53*36      | Φ53*41      | Φ63*44      | Φ76*39                   |
| Motor Weight (g)   | 153g       | 183g        | 250g        | 420g        | 343g                     |
| Operating Voltage  | 7.4-32V    | 7.4-32V     | 7.4-32V     | 7.4-32V     | 12-60V                   |



| Item Name          | MG6012E-i8               | MG8008E-i9               | MG8015E-i9             | MG8016E-i6               | MG10015E-i10            |
|--------------------|--------------------------|--------------------------|------------------------|--------------------------|-------------------------|
| Rated Torque (N.m) | 6N.m                     | 10N.m                    | 15N.m                  | 12N.m                    | 20N.m                   |
| Max Torque (N.m)   | 12N.m                    | 20N.m                    | 30N.m                  | 25N.m                    | 40N.m                   |
| Maximum Speed      | 160rpm@24V<br>324rpm@48V | 112rpm@24V<br>220rpm@48V | 45rpm@24V<br>90rpm@48V | 130rpm@24V<br>258rpm@48V | 92rpm@24V<br>185rpm@48V |
| Overall Dimension  | Φ80*47                   | Φ98*44.5                 | Φ98*49.5               | Φ99*52.5                 | Φ120*50.6               |
| Motor Weight (g)   | 430g                     | 570g                     | 705g                   | 759g                     | 1203g                   |
| Operating Voltage  | 12-60V                   | 12-60V                   | 12-60V                 | 12-60V                   | 12-60V                  |

# NAME RULE

## ① ② ③ ④ ⑤ ⑥ MG 40 10 E-i10 B

- ① Deceleration series (MG Planetary gear)    ② Electronic stator size  
③ Stator height dimension    ④ E: Dual encoder    ⑤ i+ Reduction ratio  
⑥ B: Built-in brake



| Item Name          | MG4010E-i36 | MG5010E-i36 | MG6012E-i36            | MG8010E-i36            | MG10015E-i36            |
|--------------------|-------------|-------------|------------------------|------------------------|-------------------------|
| Rated Torque (N.m) | 9N.m        | 13N.m       | 25N.m                  | 35N.m                  | 100N.m                  |
| Max Torque (N.m)   | 18N.m       | 25N.m       | 40N.m                  | 55N.m                  | 150N.m                  |
| Maximum Speed      | 30rpm@24V   | 74rpm@24V   | 33rpm@24V<br>88rpm@48V | 40rpm@24V<br>80rpm@48V | 99rpm@26V<br>198rpm@52V |
| Overall Dimension  | Φ53*41      | Φ63*54.5    | Φ80*53.5               | Φ99*55.5               | Φ120*90.6               |
| Motor Weight (g)   | 350g        | 460g        | 503g                   | 860g                   | 2422g                   |
| Operating Voltage  | 12-24V      | 12-40V      | 12-60V                 | 12-60V                 | 12-60V                  |



| Item Name          | MG4010E-i10B | MG6012E-i8B              | MG8016E-i6B | MG8016E-i24B            | MG8016E-i24BB |
|--------------------|--------------|--------------------------|-------------|-------------------------|---------------|
| Rated Torque (N.m) | 2.5N.m       | 6N.m                     | 12N.m       | 30N.m                   | 30N.m         |
| Max Torque (N.m)   | 4.5N.m       | 12N.m                    | 35N.m       | 45N.m                   | 45N.m         |
| Maximum Speed      | 320rpm@24V   | 160rpm@24V<br>324rpm@48V | 300rpm@48V  | 80rpm@24V<br>160rpm@48V | 80rpm@24V     |
| Overall Dimension  | Φ59*37       | Φ80*61                   | Φ99*63.5    | Φ53*33.2                | Φ99*74.5      |
| Motor Weight (g)   | 392g         | 695g                     | 1064g       | 1235g                   | 1325g         |
| Operating Voltage  | 7.4-32V      | 12-60V                   | 12-60V      | 12-60V                  | 12-60V        |

# APPLICATION SCENARIOS \_

## Cooperative Manipulator



## AGV Car



## Mechanical Exoskeleton



**MG SERIES**

## Mecha Dog



## PRODUCT PARAMETERS •

### Item Name

## MG4005-i10v2

|                                   |       |
|-----------------------------------|-------|
| Rated Voltage (V)                 | 24    |
| Max Speed (rpm)                   | 320   |
| Rated Torque (N.m)                | 1     |
| Rated Speed (rpm)                 | 255   |
| Rated Current (A)                 | 1.8   |
| Max Power (W)                     | 65    |
| Max Torque (N.m)                  | 2.5   |
| Speed Constant (rpm/V)            | 106.3 |
| Torque Constant (N.m/A)           | 0.06  |
| Turns                             | 28    |
| Winding Type                      | Y     |
| Line Resistance (Ω)               | 1.4   |
| Phase Inductance (mH)             | 0.5   |
| Motor Poles                       | 28    |
| Rotor Inertia (gcm <sup>2</sup> ) | 140   |
| Motor Temperature                 | YES   |

### Reducer Type

## PG4210

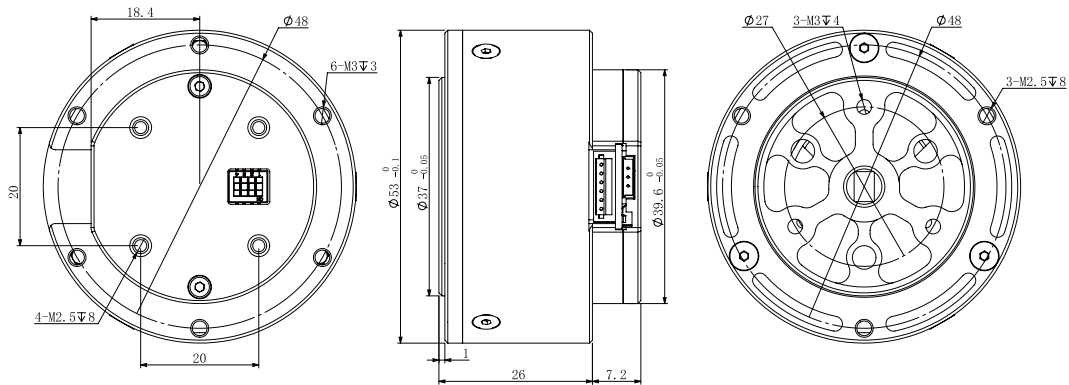
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:10 |
| Backlash (arcmin)      | ≤10  |
| Bearing Rated Load (N) | 1000 |
| Motor Weight (g)       | 183  |

### Recommand Drive

## DF40V2

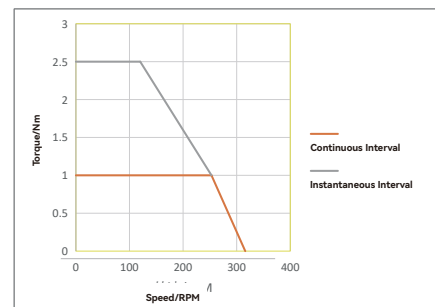
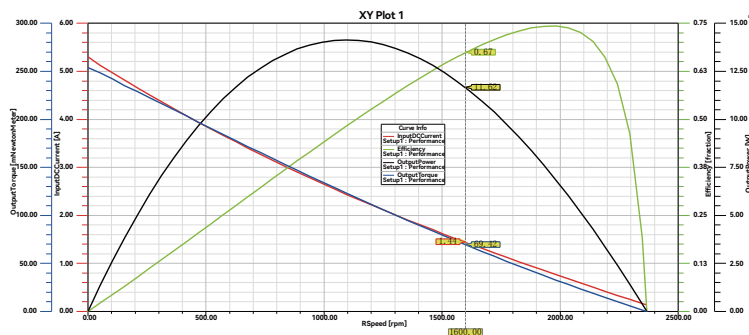
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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           | Trapeziod acceleration                                    |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current      — Efficiency      — Output Power      — Output Torque



# PRODUCT PARAMETERS •

## MG4005E-i10v3

|                                   |       |
|-----------------------------------|-------|
| <b>Item Name</b>                  |       |
| Rated Voltage (V)                 | 24    |
| Max Speed (rpm)                   | 320   |
| Rated Torque (N.m)                | 1     |
| Rated Speed (rpm)                 | 255   |
| Rated Current (A)                 | 1.8   |
| Max Power (W)                     | 65    |
| Max Torque (N.m)                  | 2.5   |
| Speed Constant (rpm/V)            | 106.3 |
| Torque Constant (N.m/A)           | 0.06  |
| Turns                             | 28    |
| Winding Type                      | Y     |
| Line Resistance (Ω)               | 1.4   |
| Phase Inductance (mH)             | 0.5   |
| Motor Poles                       | 28    |
| Rotor Inertia (gcm <sup>2</sup> ) | 140   |
| Motor Temperature                 | YES   |

## Reducer Type

## PG4210

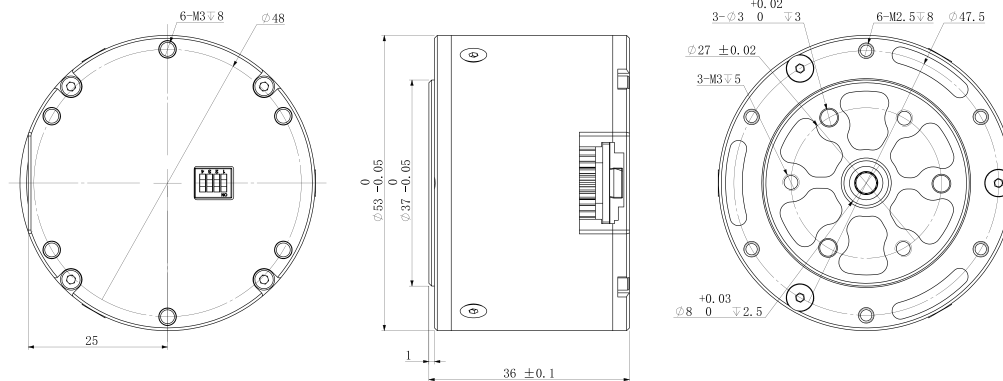
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:10 |
| Backlash (arcmin)      | ≤10  |
| Bearing Rated Load (N) | 1000 |
| Motor Weight (g)       | 183  |

## Recommand Drive

## DF40

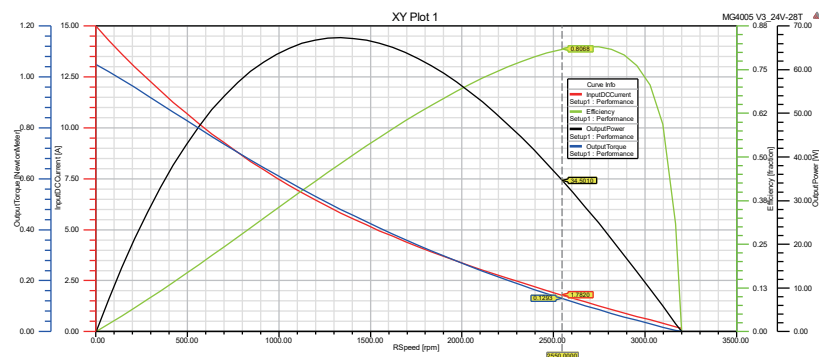
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | RS485 Or CAN                                              |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                 |
| Encoder                      | 18bit(motor)+14bit(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(24KHz) /Speed Loop(8KHz) /Position Loop(4KHz) |
| Acceleration Curve           | Trapezoid acceleration                                    |

# INSTALLATION DRAWING •



# MOTOR CHARACTERISTIC CURVE •

— Inputdc Current    — Efficiency    — Output Power    — Output Torque



## PRODUCT PARAMETERS •

### MG4010E-i10v3

#### Item Name

|                                   |       |
|-----------------------------------|-------|
| Rated Voltage (V)                 | 24    |
| Max Speed (rpm)                   | 320   |
| Rated Torque (N.m)                | 2.5   |
| Rated Speed (rpm)                 | 260   |
| Rated Current (A)                 | 3.5   |
| Max Power (W)                     | 140   |
| Max Torque (N.m)                  | 4.5   |
| Speed Constant (rpm/V)            | 108.3 |
| Torque Constant (N.m/A)           | 0.07  |
| Turns                             | 14    |
| Winding Type                      | Y     |
| Line Resistance ( $\Omega$ )      | 604   |
| Phase Inductance (mH)             | 0.28  |
| Motor Poles                       | 28    |
| Rotor Inertia (gcm <sup>2</sup> ) | 202   |
| Motor Temperature                 | YES   |

#### Reducer Type

#### PG4210

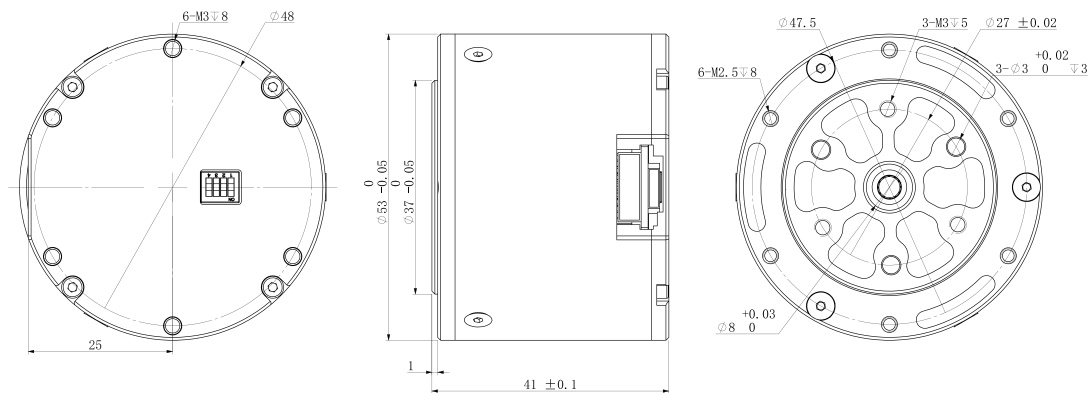
|                        |          |
|------------------------|----------|
| Gear Ratio             | 1:10     |
| Backlash (arcmin)      | $\leq 8$ |
| Bearing Rated Load (N) | 1000     |
| Motor Weight (g)       | 250      |

#### Recommend Drive

#### DG40

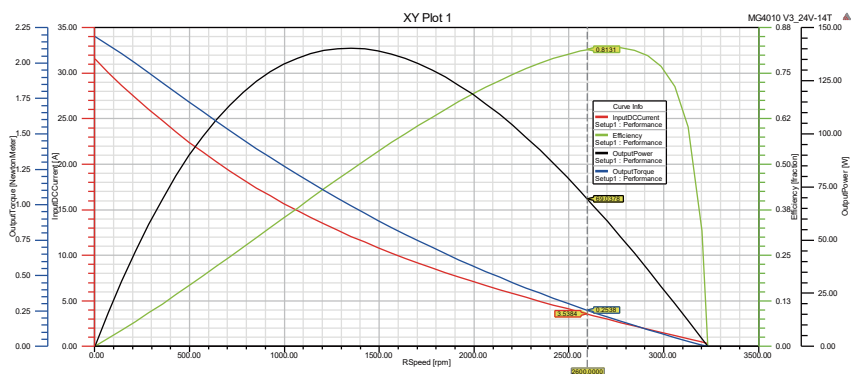
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | RS485 Or CAN                                              |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                 |
| Encoder                      | 18bit(motor)+14bit(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(24KHz) /Speed Loop(8KHz) /Position Loop(4KHz) |
| Acceleration Curve           | Trapeziod acceleration                                    |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current      — Efficiency      — Output Power      — Output Torque





# PRODUCT PARAMETERS •

## Item Name

## MG4010-i10Bv3

|                                   |       |
|-----------------------------------|-------|
| Rated Voltage (V)                 | 24    |
| Max Speed (rpm)                   | 320   |
| Rated Torque (N.m)                | 2.5   |
| Rated Speed (rpm)                 | 260   |
| Rated Current (A)                 | 3.5   |
| Max Power (W)                     | 140   |
| Max Torque (N.m)                  | 4.5   |
| Speed Constant (rpm/V)            | 108.3 |
| Torque Constant (N.m/A)           | 0.07  |
| Turns                             | 14    |
| Winding Type                      | Y     |
| Line Resistance (Ω)               | 0.604 |
| Phase Inductance (mH)             | 0.28  |
| Motor Poles                       | 28    |
| Rotor Inertia (gcm <sup>2</sup> ) | 202   |
| Motor Temperature                 | YES   |

## Reducer Type

## PG4210

|                        |      |
|------------------------|------|
| Gear Ratio             | 1:10 |
| Backlash (arcmin)      | ≤8   |
| Bearing Rated Load (N) | 1000 |
| Motor Weight (g)       | 392  |

## Brake Type

## BG4906

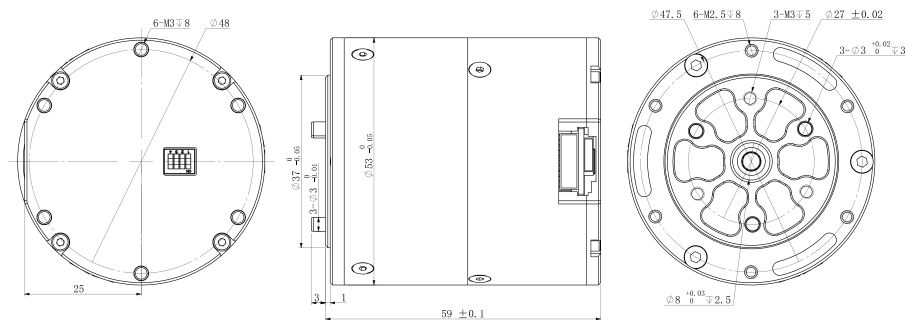
|                        |     |
|------------------------|-----|
| Brake Torque (N.m)     | 3.2 |
| Startup Voltage (V)    | 24  |
| Sustaining Voltage (V) | 7   |
| Sustaining Power (W)   | 1.4 |

## Recommand Drive

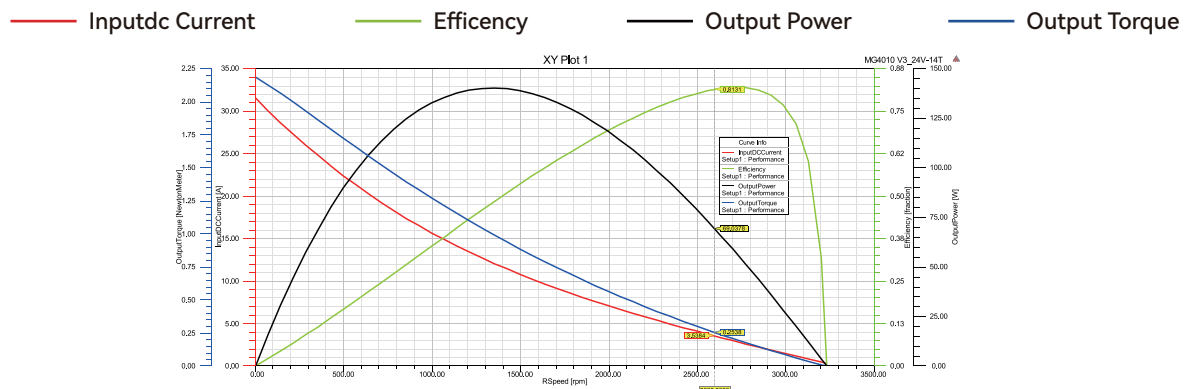
## DG40

|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| 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 •



## PRODUCT PARAMETERS •

### Item Name

## MG4010E-i36v3

|                                   |      |
|-----------------------------------|------|
| Rated Voltage (V)                 | 24   |
| Max Speed (rpm)                   | 90   |
| Rated Torque (N.m)                | 9    |
| Rated Speed (rpm)                 | 72   |
| Rated Current (A)                 | 3.5  |
| Max Power (W)                     | 135  |
| Max Torque (N.m)                  | 18   |
| Speed Constant (rpm/V)            | 3    |
| Torque Constant (N.m/A)           | 2.58 |
| Turns                             | 14   |
| Winding Type                      | Y    |
| Line Resistance (Ω)               | 0.65 |
| Phase Inductance (mH)             | 0.25 |
| Motor Poles                       | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | /    |
| Motor Temperature                 | YES  |

### Reducer Type

### PG5336

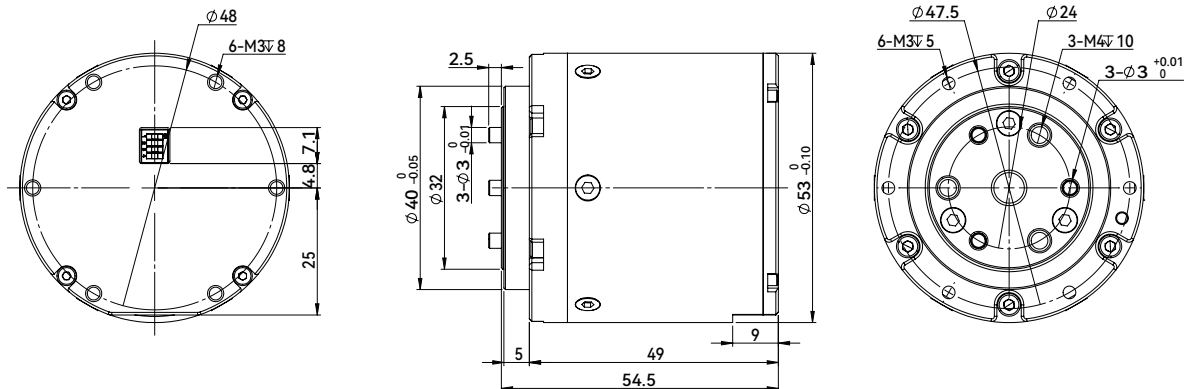
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:36 |
| Backlash (arcmin)      | ≤6   |
| Bearing Rated Load (N) | 1120 |
| Motor Weight (g)       | 350  |

### Recommend Drive

### DG40V3

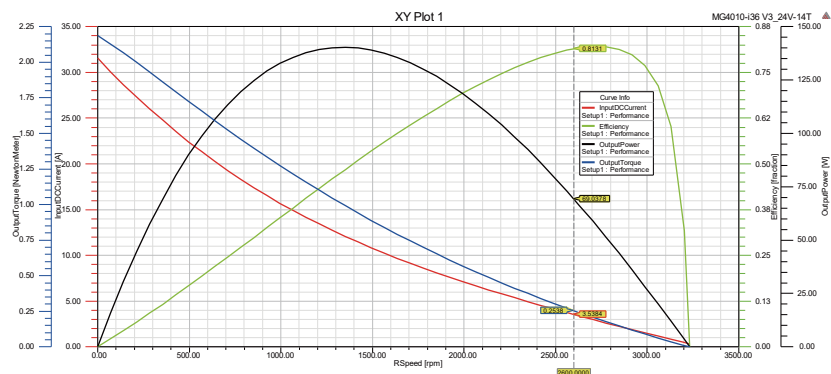
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 12~24                                                     |
| Communication                | RS485 Or CAN                                              |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                 |
| Encoder                      | 18bit(motor)+14bit(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(24KHz) /Speed Loop(8KHz) /Position Loop(4KHz) |
| Acceleration Curve           | Trapeziod acceleration                                    |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current      — Efficiency      — Output Power      — Output Torque



# PRODUCT PARAMETERS •

## MG5010E-i10v3

|                                   |       |
|-----------------------------------|-------|
| <b>Item Name</b>                  |       |
| Rated Voltage (V)                 | 24    |
| Max Speed (rpm)                   | 320   |
| Rated Torque (N.m)                | 4     |
| Rated Speed (rpm)                 | 235   |
| Rated Current (A)                 | 4.4   |
| Max Power (W)                     | 160   |
| Max Torque (N.m)                  | 7     |
| Speed Constant (rpm/V)            | 97.9  |
| Torque Constant (N.m/A)           | 0.1   |
| Turns                             | 13    |
| Winding Type                      | Y     |
| Line Resistance ( $\Omega$ )      | 0.466 |
| Phase Inductance (mH)             | 0.26  |
| Motor Poles                       | 28    |
| Rotor Inertia (gcm <sup>2</sup> ) | 850   |
| Motor Temperature                 | YES   |

### Reducer Type

PG5110

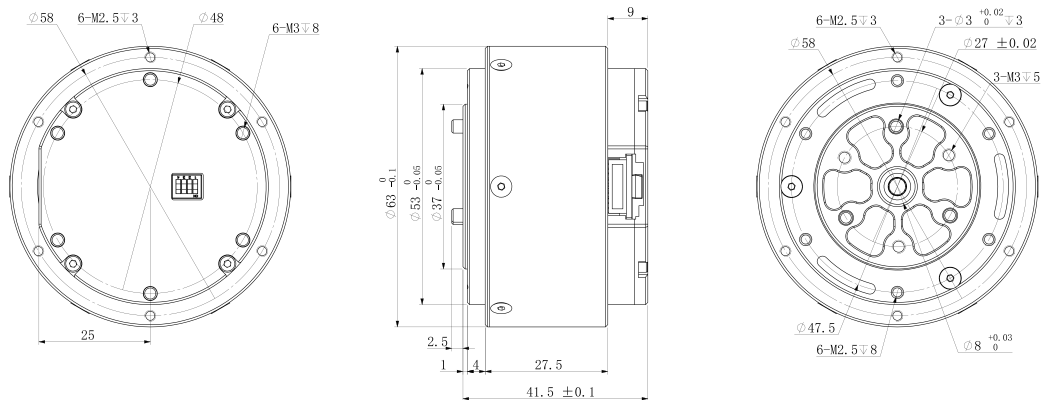
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:10 |
| Backlash (arcmin)      | ≤8   |
| Bearing Rated Load (N) | 1000 |
| Motor Weight (g)       | 420  |

### Recommand Drive

DG50

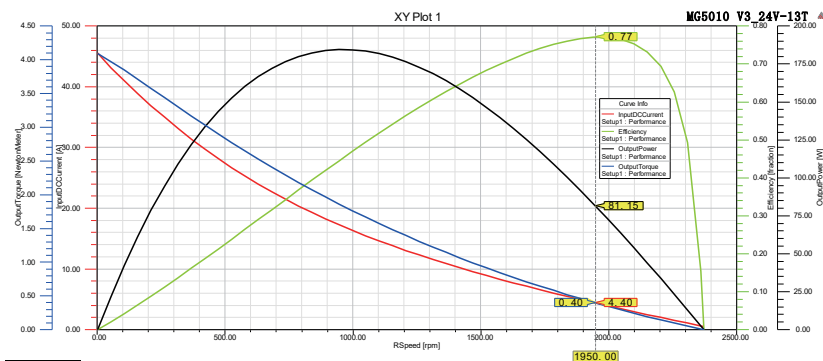
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | RS485 Or CAN                                              |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                 |
| Encoder                      | 18bit(motor)+14bit(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(24KHz) /Speed Loop(8KHz) /Position Loop(4KHz) |
| Acceleration Curve           | Trapeziod acceleration                                    |

# INSTALLATION DRAWING •



# MOTOR CHARACTERISTIC CURVE •

— Inputdc Current    — Efficiency    — Output Power    — Output Torque



## PRODUCT PARAMETERS •

### Item Name

|                                   |      |
|-----------------------------------|------|
| Rated Voltage (V)                 | 24   |
| Max Speed (rpm)                   | 61   |
| Rated Torque (N.m)                | 5.5  |
| Rated Speed (rpm)                 | 170  |
| Rated Current (A)                 | 3.1  |
| Max Power (W)                     | 175  |
| Max Torque (N.m)                  | 11   |
| Speed Constant (rpm/V)            | 91.7 |
| Torque Constant (N.m/A)           | 0.2  |
| Turns                             | 15   |
| Winding Type                      | Y    |
| Line Resistance ( $\Omega$ )      | 0.98 |
| Phase Inductance (mH)             | 0.55 |
| Motor Poles                       | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | 850  |
| Motor Temperature                 | YES  |

## MG5010E-i36v3

### Reducer Type

### PG5110

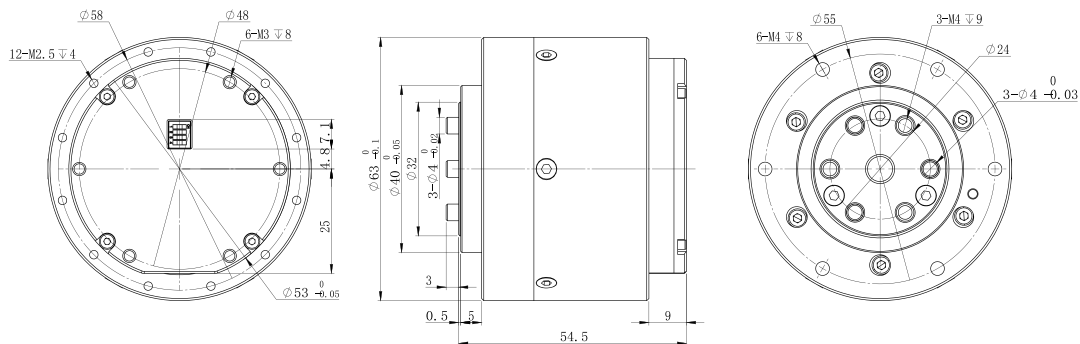
|                        |          |
|------------------------|----------|
| Gear Ratio             | 1:10     |
| Backlash (arcmin)      | $\leq 8$ |
| Bearing Rated Load (N) | 1000     |
| Motor Weight (g)       | 420      |

### Recommand Drive

### DG50v1

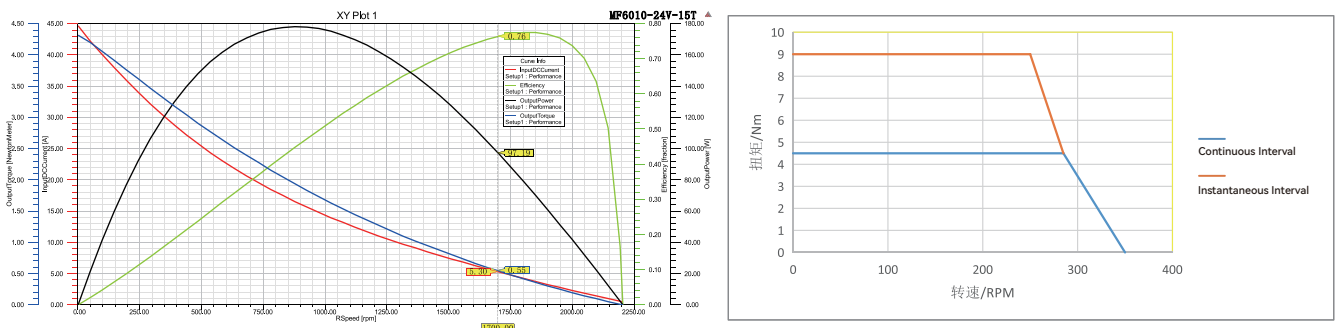
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz) |
| Acceleration Curve           | Trapeziod acceleration                                    |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current      — Efficiency      — Output Power      — Output Torque



# PRODUCT PARAMETERS •

## Item Name

## MG6010E-i6v3

|                                   |      |      |
|-----------------------------------|------|------|
| 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    |
| Phase Resistance (Ω)              | 0.56 | 0.56 |
| Phase Inductance (mH)             | 0.57 | 0.57 |
| Motor Poles                       | 28   | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | 805  | 805  |
| Motor Temperature                 | YES  | YES  |

## Reducer Type

## PG4106

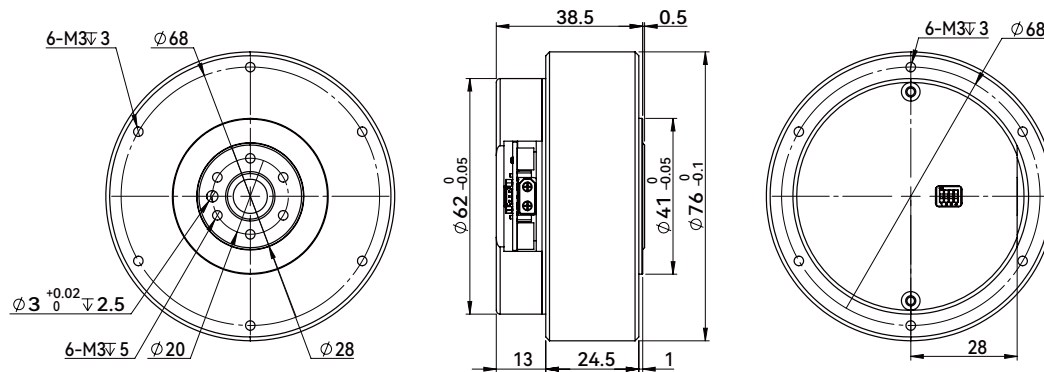
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:6  |
| Backlash (arcmin)      | ≤8   |
| Bearing Rated Load (N) | 900  |
| Motor Weight (g)       | 1217 |

## Recommand Drive

## DG60v2 / DG60Ev2

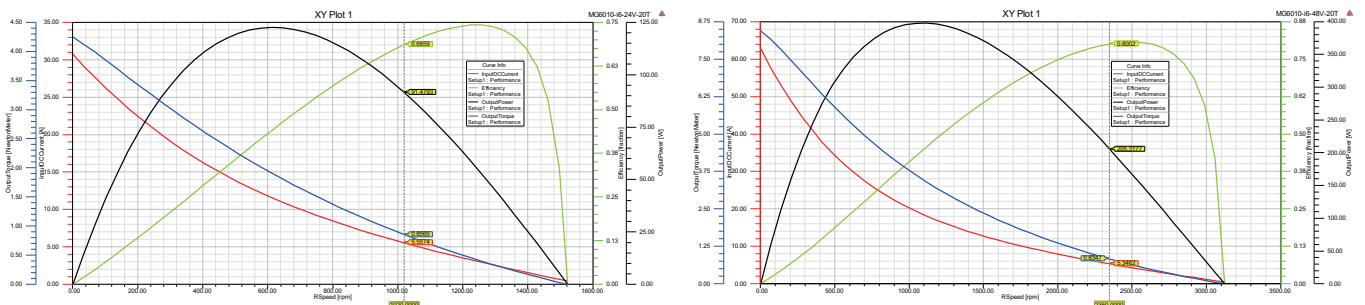
|                              |                                                                      |
|------------------------------|----------------------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                                |
| Communication                | RS485 Or CAN                                                         |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                            |
| Encoder                      | 18bit Magnetic Encoder 18bit(motor) +14bit(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 •

### Item Name

### MG6012E-i8v3

|                                   |      |
|-----------------------------------|------|
| 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)           | 1.09 |
| Turns                             | 20   |
| Winding Type                      | Y    |
| Line Resistance ( $\Omega$ )      | 1.3  |
| Phase Inductance (mH)             | 0.55 |
| Motor Poles                       | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | 930  |
| Motor Temperature                 | YES  |

### Reducer Type

### PG4108

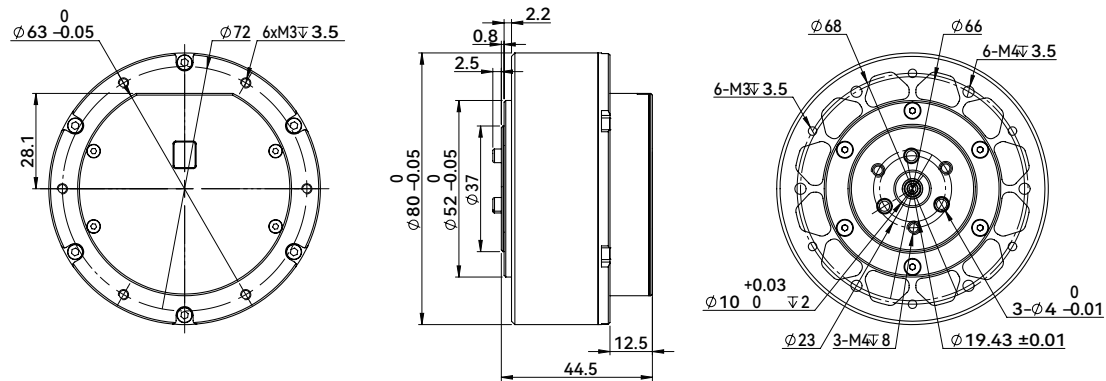
|                        |          |
|------------------------|----------|
| Gear Ratio             | 1:8      |
| Backlash (arcmin)      | $\leq 6$ |
| Bearing Rated Load (N) | 906      |
| Motor Weight (g)       | 430      |

### Recommend Drive

### DG60v2 / DG60Ev2

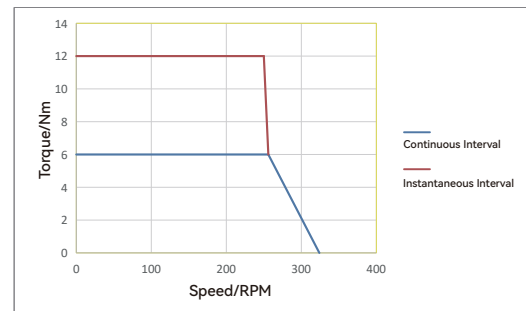
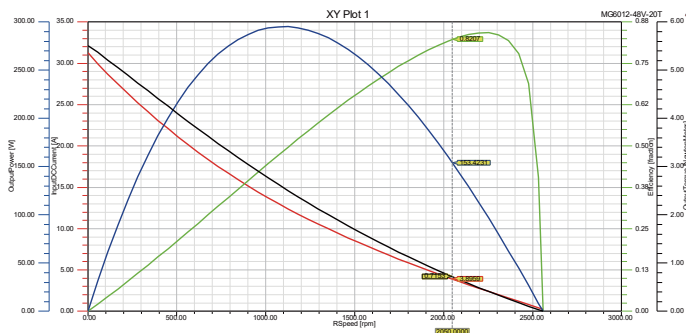
|                              |                                                                      |
|------------------------------|----------------------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                                |
| Communication                | RS485 Or CAN                                                         |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                            |
| Encoder                      | 18bit Magnetic Encoder 18bit(motor) +14bit(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 •

## MG6012E-i36v3

|                                   |       |       |
|-----------------------------------|-------|-------|
| <b>Item Name</b>                  |       |       |
| Rated Voltage (V)                 | 24    | 48    |
| Max Speed (rpm)                   | 45    | 88    |
| Rated Torque (N.m)                | 25    | 25    |
| Rated Speed (rpm)                 | 33    | 74    |
| Rated Current (A)                 | 4     | 4.8   |
| Max Power (W)                     | 140   | 500   |
| Max Torque (N.m)                  | 40    | 40    |
| Speed Constant (rpm/V)            | 67.0  | 67.0  |
| Torque Constant (N.m/A)           | 0.175 | 0.146 |
| Turns                             | 15    | 15    |
| Winding Type                      | Y     | Y     |
| Line Resistance (Ω)               | 0.63  | 0.63  |
| Phase Inductance (mH)             | 0.28  | 0.28  |
| Motor Poles                       | 28    | 28    |
| Rotor Inertia (gcm <sup>2</sup> ) | 930   | 8930  |
| Motor Temperature                 | YES   | YES   |

### Reducer Type

### PG4136

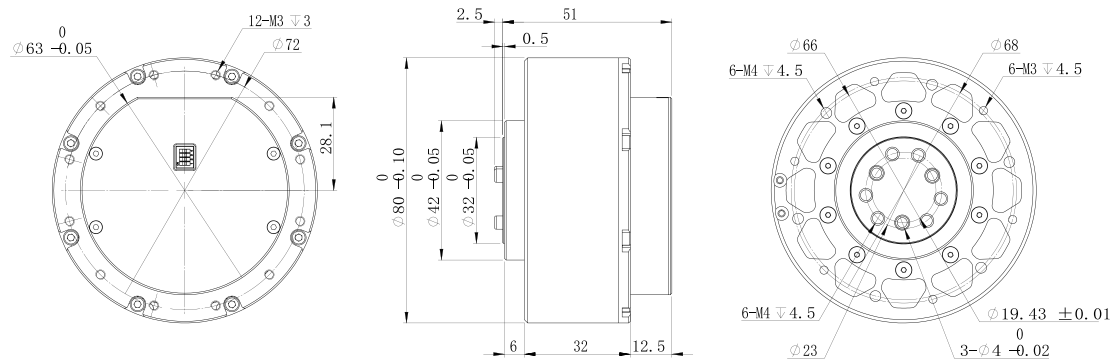
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:36 |
| Backlash (arcmin)      | ≤8   |
| Bearing Rated Load (N) | 1770 |
| Motor Weight (g)       | 503  |

### Recommand Drive

### DG80v3

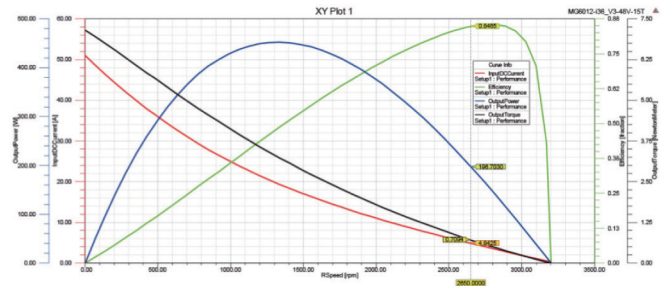
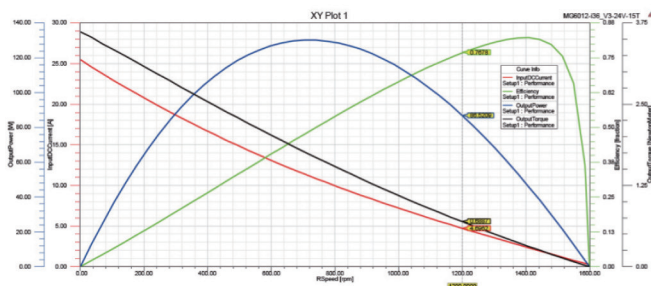
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                     |
| Communication                | 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)         | 100K、125K、250K、500K、1M                                    |
| Control Mode                 | Torque Loop(32KHz) /Speed Loop(8KHz) /Position Loop(4KHz) |
| Acceleration Curve           | Trapeziod acceleration                                    |

# INSTALLATION DRAWING •



# MOTOR CHARACTERISTIC CURVE •

— Inputdc Current    — Efficiency    — Output Power    — Output Torque



## PRODUCT PARAMETERS •

### MG6012E-i8Bv3

#### Item Name

|                                   |      |
|-----------------------------------|------|
| 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 (Ω)               | 1.3  |
| Phase Inductance (mH)             | 0.55 |
| Motor Poles                       | 28   |
| Rotor Inertia (gcm <sup>2</sup> ) | 930  |
| Motor Temperature                 | YES  |

#### Reducer Type

PG4108

|                        |      |
|------------------------|------|
| Gear Ratio             | 1:24 |
| Backlash (arcmin)      | ≤10  |
| Bearing Rated Load (N) | 1800 |
| Motor Weight (g)       | 1235 |

#### Brake Type

MT15

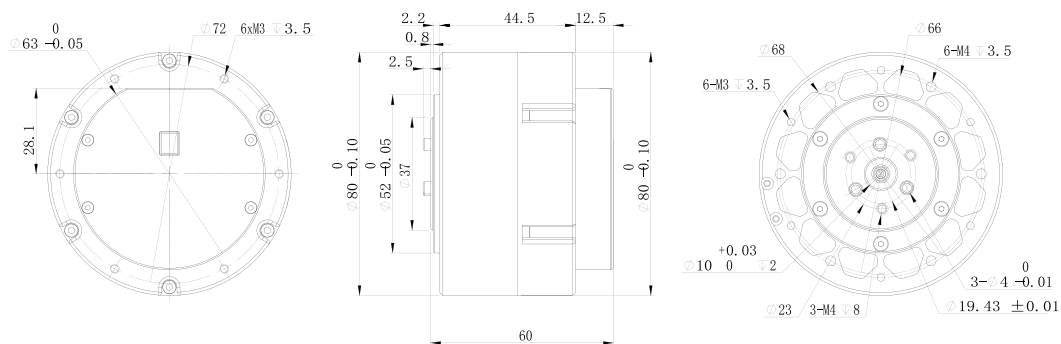
|                        |      |
|------------------------|------|
| Brake Torque (N.m)     | 1.5  |
| Startup Voltage (V)    | 24   |
| Startup Power (W)      | 17.5 |
| Sustaining Voltage (V) | 7    |
| Sustaining Power (W)   | 1.5  |

#### Recommand Drive

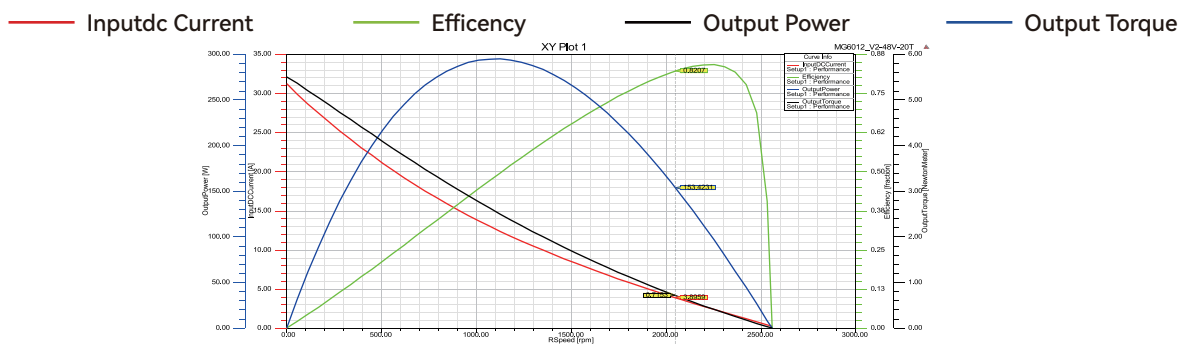
DG80v2

|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                     |
| Communication                | RS485 Or CAN                                              |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                 |
| Encoder                      | 18 bit Magnetic Encoder/18 bit+14 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 •



# PRODUCT PARAMETERS •

## Item Name

## MG8008E-i9v3

|                                   |      |      |
|-----------------------------------|------|------|
| 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    |
| Phase Resistance (Ω)              | 0.74 | 0.74 |
| Phase Inductance (mH)             | 0.59 | 0.59 |
| Motor Poles                       | 40   | 40   |
| Rotor Inertia (gcm <sup>2</sup> ) | 1550 | 1550 |
| Motor Temperature                 | YES  | YES  |

## Reducer Type

## PG5509

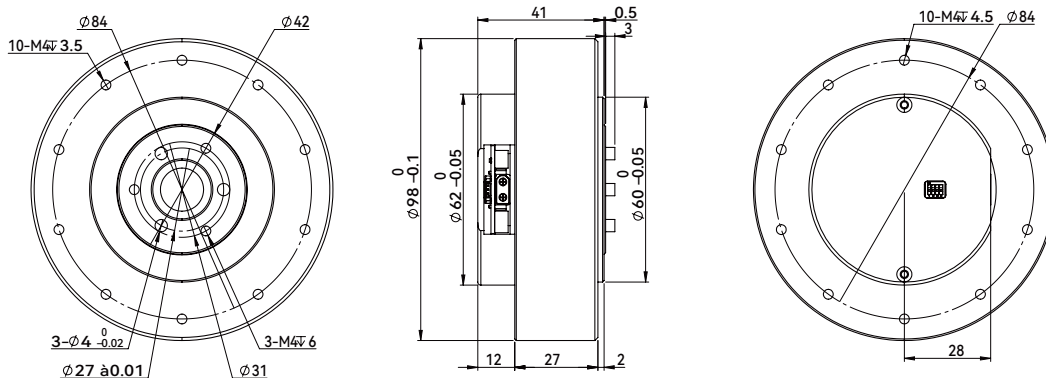
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:9  |
| Backlash (arcmin)      | ≤6   |
| Bearing Rated Load (N) | 1120 |
| Motor Weight (g)       | 1217 |

## Recommand Drive

## DG80v2 / DG80Ev2

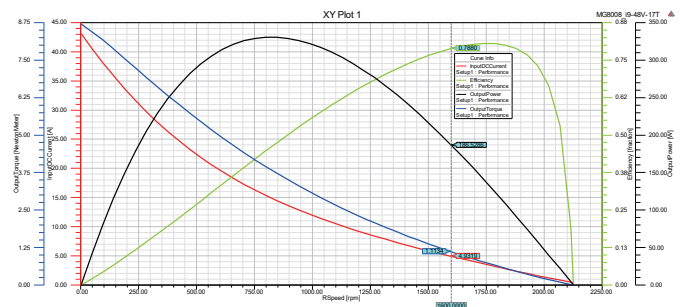
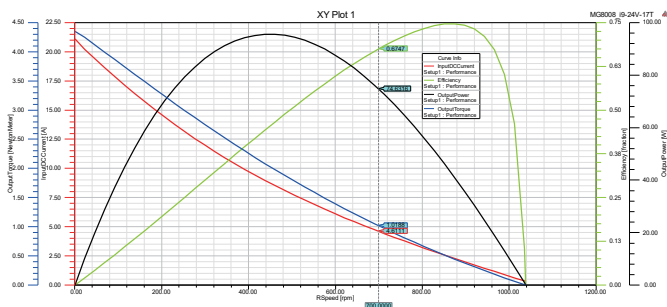
|                              |                                                                      |
|------------------------------|----------------------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                                |
| Communication                | RS485 Or CAN                                                         |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                            |
| Encoder                      | 18bit Magnetic Encoder 18bit(motor) +14bit(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 •

### Item Name

## MG8010E-i36v2

|                                   |      |
|-----------------------------------|------|
| 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 (Ω)               | 0.27 |
| Phase Inductance (mH)             | 0.23 |
| Motor Poles                       | 40   |
| Rotor Inertia (gcm <sup>2</sup> ) | 2670 |
| Motor Temperature                 | YES  |

### Reducer Type

## PG5536

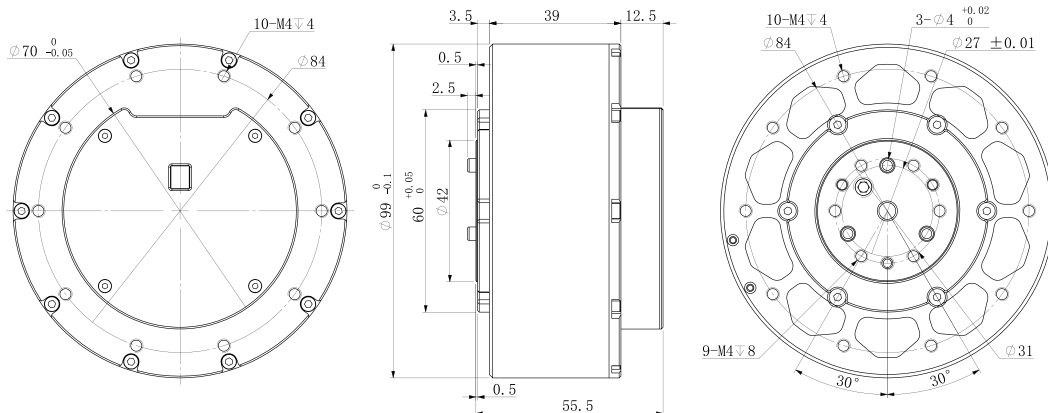
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:36 |
| Backlash (arcmin)      | ≤8   |
| Bearing Rated Load (N) | 1770 |
| Motor Weight (g)       | 860  |

### Recommand Drive

## DG80v2

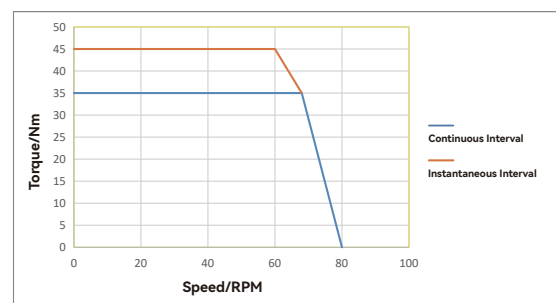
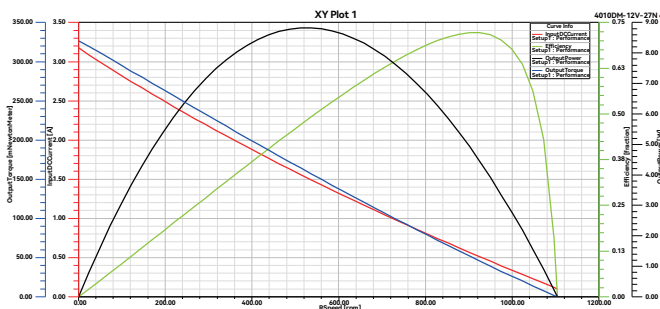
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                     |
| Communication                | 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           | Trapeziod acceleration                                    |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current      — Efficiency      — Output Power      — Output Torque



# PRODUCT PARAMETERS •

## Item Name

## MG8015E-i9v3

|                                   |       |       |
|-----------------------------------|-------|-------|
| Rated Voltage (V)                 | 24    | 48    |
| Max Speed (rpm)                   | 104   | 216   |
| Rated Torque (N.m)                | 14    | 14    |
| Rated Speed (rpm)                 | 80    | 177   |
| Rated Current (A)                 | 6.7   | 6.8   |
| Max Power (W)                     | 195   | 670   |
| Max Torque (N.m)                  | 28    | 28    |
| Speed Constant (rpm/V)            | 39.00 | 40.50 |
| Torque Constant (N.m/A)           | 1.35  | 1.35  |
| Turns                             | 16    |       |
| Winding Type                      | Y     |       |
| Line Resistance (Ω)               | 0.3   |       |
| Phase Inductance (mH)             | 0.32  |       |
| Motor Poles                       | 42    |       |
| Rotor Inertia (gcm <sup>2</sup> ) | 2570  |       |
| Motor Temperature                 | YES   |       |

## Reducer Type

## PG5509

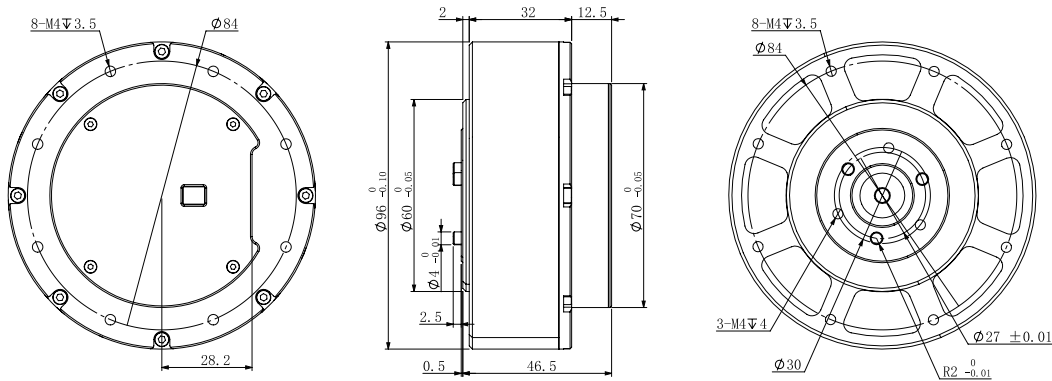
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:9  |
| Backlash (arcmin)      | ≤6   |
| Bearing Rated Load (N) | 1120 |
| Motor Weight (g)       | 705  |

## Recommand Drive

## DG60v2 / DG60Ev2

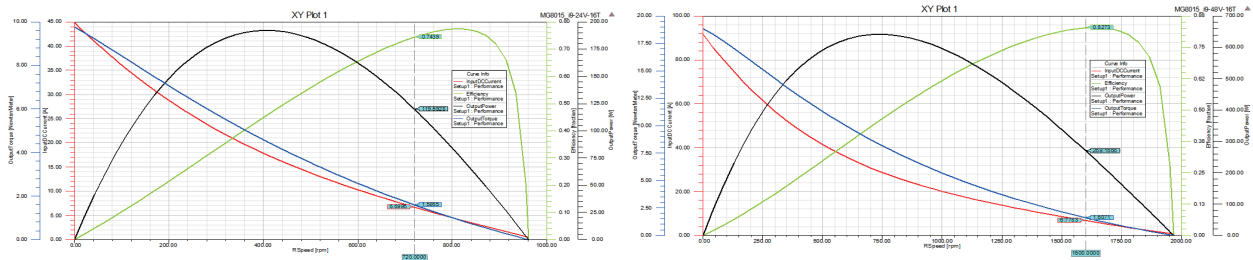
|                              |                                                                      |
|------------------------------|----------------------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                                |
| Communication                | RS485 Or CAN                                                         |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                            |
| Encoder                      | 18bit Magnetic Encoder 18bit(motor) +14bit(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           | Trapeziod acceleration                                               |

# INSTALLATION DRAWING •



# MOTOR CHARACTERISTIC CURVE •

— Inputdc Current      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

### Item Name

## MG8016E-i6v2

|                                   |          |
|-----------------------------------|----------|
| 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                      | $\Delta$ |
| Line Resistance ( $\Omega$ )      | 0.6      |
| Phase Inductance (mH)             | 0.6      |
| Motor Poles                       | 40       |
| Rotor Inertia (gcm <sup>2</sup> ) | 2570     |
| Motor Temperature                 | YES      |

### Reducer Type

## PG5506

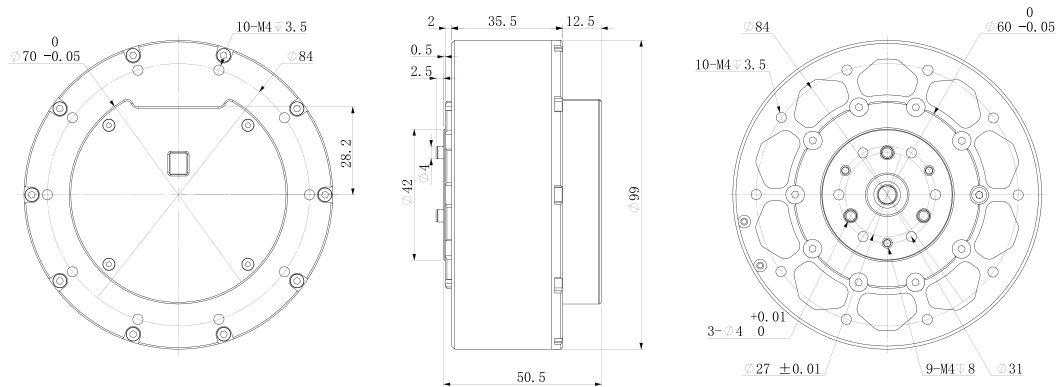
|                        |          |
|------------------------|----------|
| Gear Ratio             | 1:6      |
| Backlash (arcmin)      | $\leq 6$ |
| Bearing Rated Load (N) | 1120     |
| Motor Weight (g)       | 759      |

### Recommand Drive

## DG80v2 / DG80Ev2

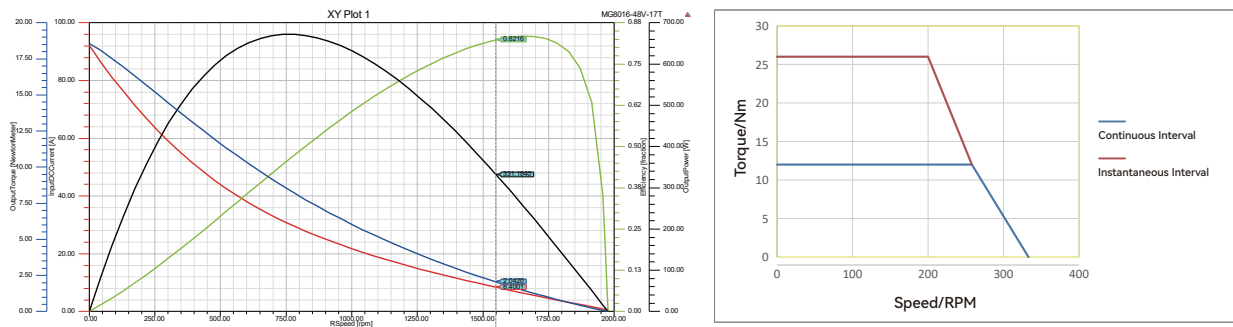
|                              |                                                                      |
|------------------------------|----------------------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                                |
| Communication                | RS485 Or CAN                                                         |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                            |
| Encoder                      | 18bit Magnetic Encoder 18bit(motor) +14bit(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           | Trapeziod acceleration                                               |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current — Efficiency — Output Power — Output Torque



# PRODUCT PARAMETERS •

## Item Name

## MG8016E-i6Bv3

|                                   |      |
|-----------------------------------|------|
| 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)                  | 21   |
| Speed Constant (rpm/V)            | 27.6 |
| Torque Constant (N.m/A)           | 2.9  |
| Turns                             | 17   |
| Winding Type                      | Y    |
| Line Resistance (Ω)               | 0.4  |
| Phase Inductance (mH)             | 0.3  |
| Motor Poles                       | 40   |
| Rotor Inertia (gcm <sup>2</sup> ) | 2570 |
| Motor Temperature                 | YES  |

## Reducer Type

## PG5506

|                        |      |
|------------------------|------|
| Gear Ratio             | 1:6  |
| Backlash (arcmin)      | ≤6   |
| Bearing Rated Load (N) | 1120 |
| Motor Weight (g)       | 1064 |

## Brake Type

## MT32

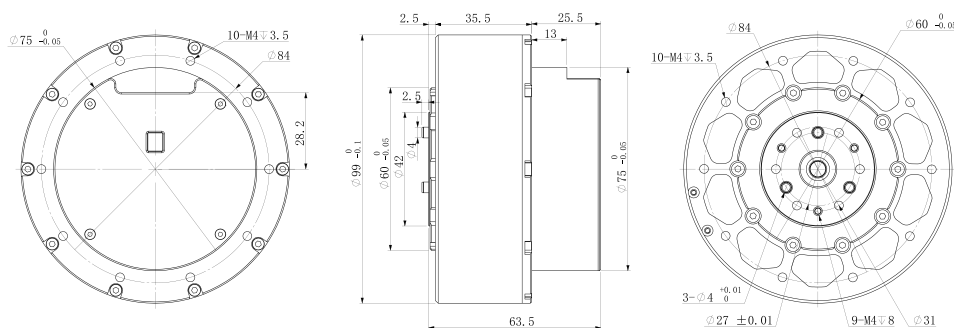
|                        |      |
|------------------------|------|
| Brake Torque (N.m)     | 3.2  |
| Startup Voltage (V)    | 24   |
| Startup Power (W)      | 16.3 |
| Sustaining Voltage (V) | 7    |
| Sustaining Power (W)   | 1.4  |

## Recommand Drive

## DG80v3

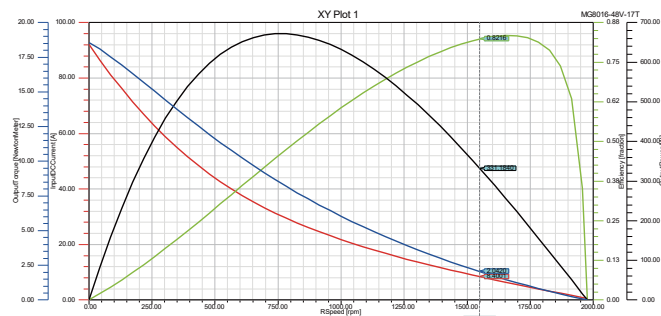
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                     |
| Communication                | RS485 Or CAN                                              |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                 |
| Encoder                      | 18 bit+14 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



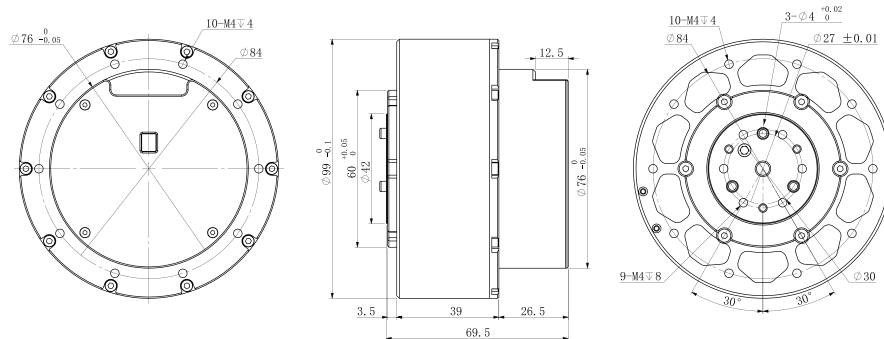


## PRODUCT PARAMETERS •

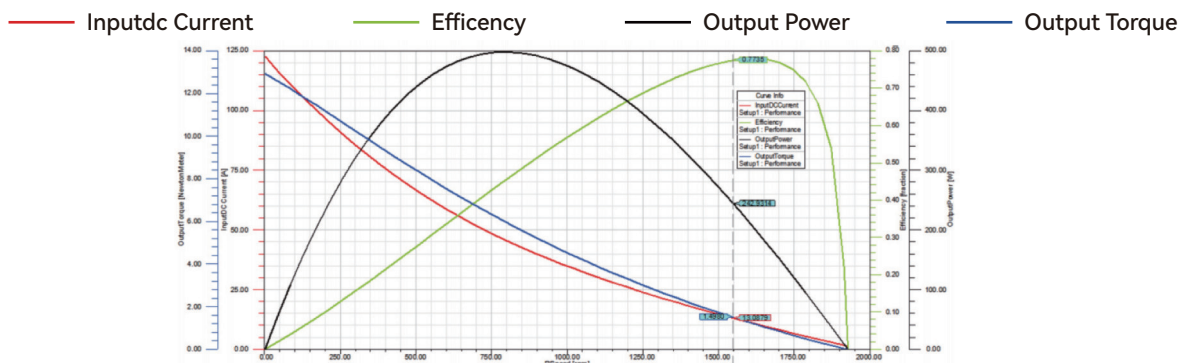
### MG8016-i24Bv2

|                                   |  |                                                           |
|-----------------------------------|--|-----------------------------------------------------------|
| <b>Item Name</b>                  |  |                                                           |
| Rated Voltage (V)                 |  | 24                                                        |
| Max Speed (rpm)                   |  | 80                                                        |
| Rated Torque (N.m)                |  | 30                                                        |
| Rated Speed (rpm)                 |  | 64                                                        |
| Rated Current (A)                 |  | 13                                                        |
| Max Power (W)                     |  | 500                                                       |
| Max Torque (N.m)                  |  | 45                                                        |
| Speed Constant (rpm/V)            |  | 64.6                                                      |
| Torque Constant (N.m/A)           |  | 0.12                                                      |
| Turns                             |  | 9                                                         |
| Winding Type                      |  | △                                                         |
| Line Resistance (Ω)               |  | 0.15                                                      |
| Phase Inductance (mH)             |  | 0.101                                                     |
| Motor Poles                       |  | 40                                                        |
| Rotor Inertia (gcm <sup>2</sup> ) |  | 2505                                                      |
| Motor Temperature                 |  | YES                                                       |
| <b>Reducer Type</b>               |  | <b>PG5524</b>                                             |
| Gear Ratio                        |  | 1:24                                                      |
| Backlash (arcmin)                 |  | ≤10                                                       |
| Bearing Rated Load (N)            |  | 1800                                                      |
| Motor Weight (g)                  |  | 1235                                                      |
| <b>Brake Type</b>                 |  | <b>MT32</b>                                               |
| Brake Torque (N.m)                |  | 3.2                                                       |
| Startup Voltage (V)               |  | 24                                                        |
| Startup Power (W)                 |  | 16.3                                                      |
| Sustaining Voltage (V)            |  | 7                                                         |
| Sustaining Power (W)              |  | 1.4                                                       |
| <b>Recommand Drive</b>            |  | <b>DG80v2</b>                                             |
| 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                |  | Trapeziod acceleration                                    |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •



# PRODUCT PARAMETERS •

## Item Name

## MG10015E-i10v2

|                                   |      |
|-----------------------------------|------|
| 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)                  | 45   |
| Speed Constant (rpm/V)            | 38.0 |
| Torque Constant (N.m/A)           | 1.4  |
| Turns                             | 15   |
| Winding Type                      | △    |
| Line Resistance (Ω)               | 0.38 |
| Phase Inductance (mH)             | 0.45 |
| Motor Poles                       | 42   |
| Rotor Inertia (gcm <sup>2</sup> ) | 5668 |
| Motor Temperature                 | YES  |

## Reducer Type

## PG7407

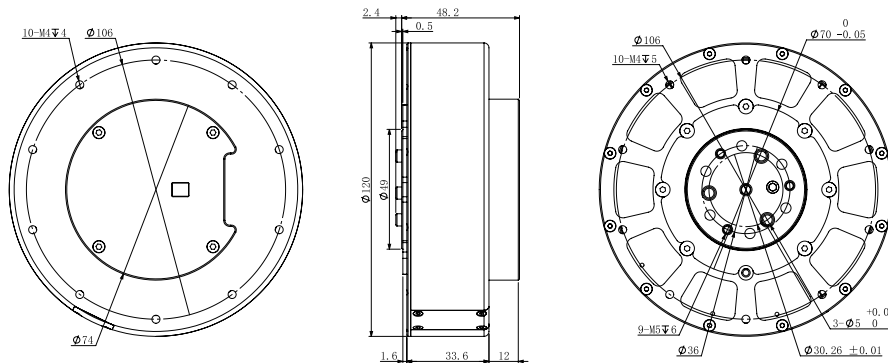
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:10 |
| Backlash (arcmin)      | ≤8   |
| Bearing Rated Load (N) | 1430 |
| Motor Weight (g)       | 1213 |

## Recommand Drive

## DG60v2 / DG60Ev2

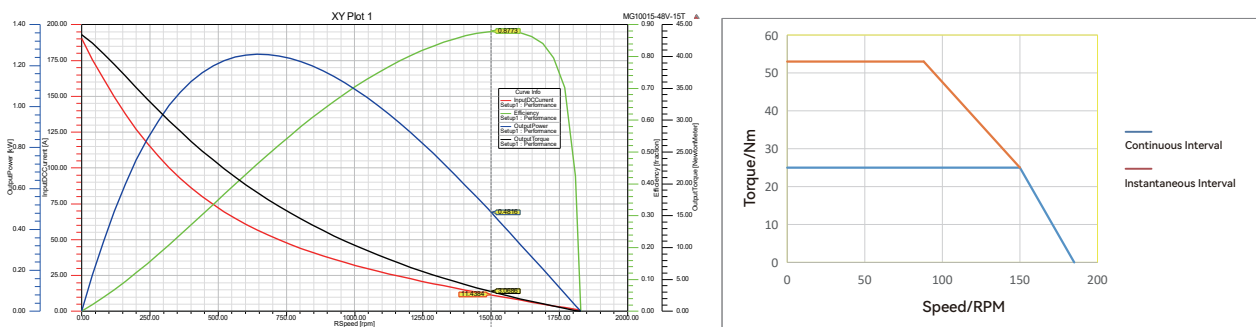
|                              |                                                                      |
|------------------------------|----------------------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                                |
| Communication                | RS485 Or CAN                                                         |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps) /CAN:2KHz(1Mbps)                            |
| Encoder                      | 18bit Magnetic Encoder 18bit(motor) +14bit(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           | Trapeziod acceleration                                               |

# INSTALLATION DRAWING •



# MOTOR CHARACTERISTIC CURVE •

— Inputdc Current    — Efficiency    — Output Power    — Output Torque



## PRODUCT PARAMETERS •

### Item Name

### MG10015E-i36v3

|                                   |      |
|-----------------------------------|------|
| Rated Voltage (V)                 | 48   |
| Max Speed (rpm)                   | 55   |
| Rated Torque (N.m)                | 108  |
| Rated Speed (rpm)                 | 45   |
| Rated Current (A)                 | 11.4 |
| Max Power (W)                     | 1200 |
| Max Torque (N.m)                  | 200  |
| Speed Constant (rpm/V)            | 33.8 |
| Torque Constant (N.m/A)           | 0.26 |
| Turns                             | 13   |
| Winding Type                      | △    |
| Line Resistance (Ω)               | 0.38 |
| Phase Inductance (mH)             | 0.45 |
| Motor Poles                       | 42   |
| Rotor Inertia (gcm <sup>2</sup> ) | 5251 |
| Motor Temperature                 | YES  |

### Reducer Type

### PG7407

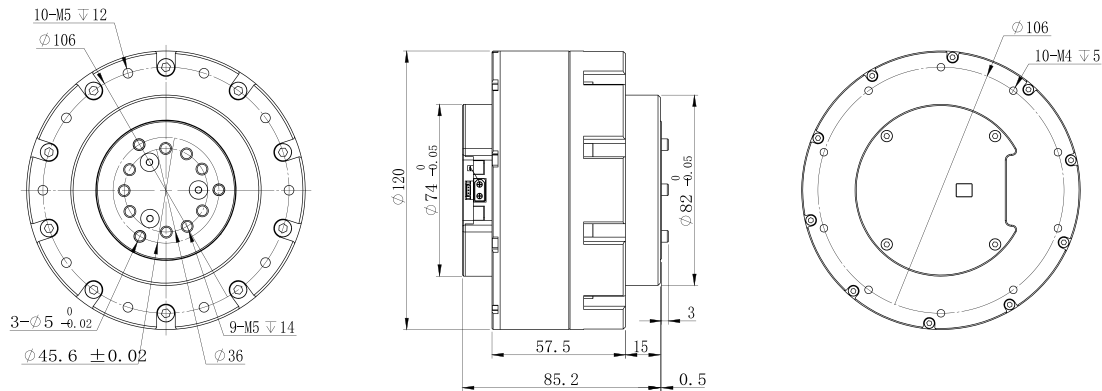
|                        |      |
|------------------------|------|
| Gear Ratio             | 1:36 |
| Backlash (arcmin)      | ≤10  |
| Bearing Rated Load (N) | 4100 |
| Motor Weight (g)       | 2420 |

### Recommand Drive

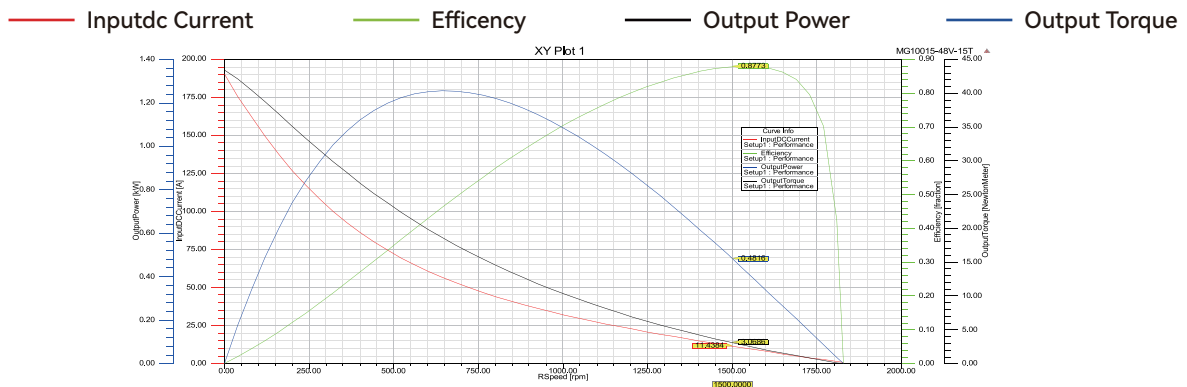
### DG60

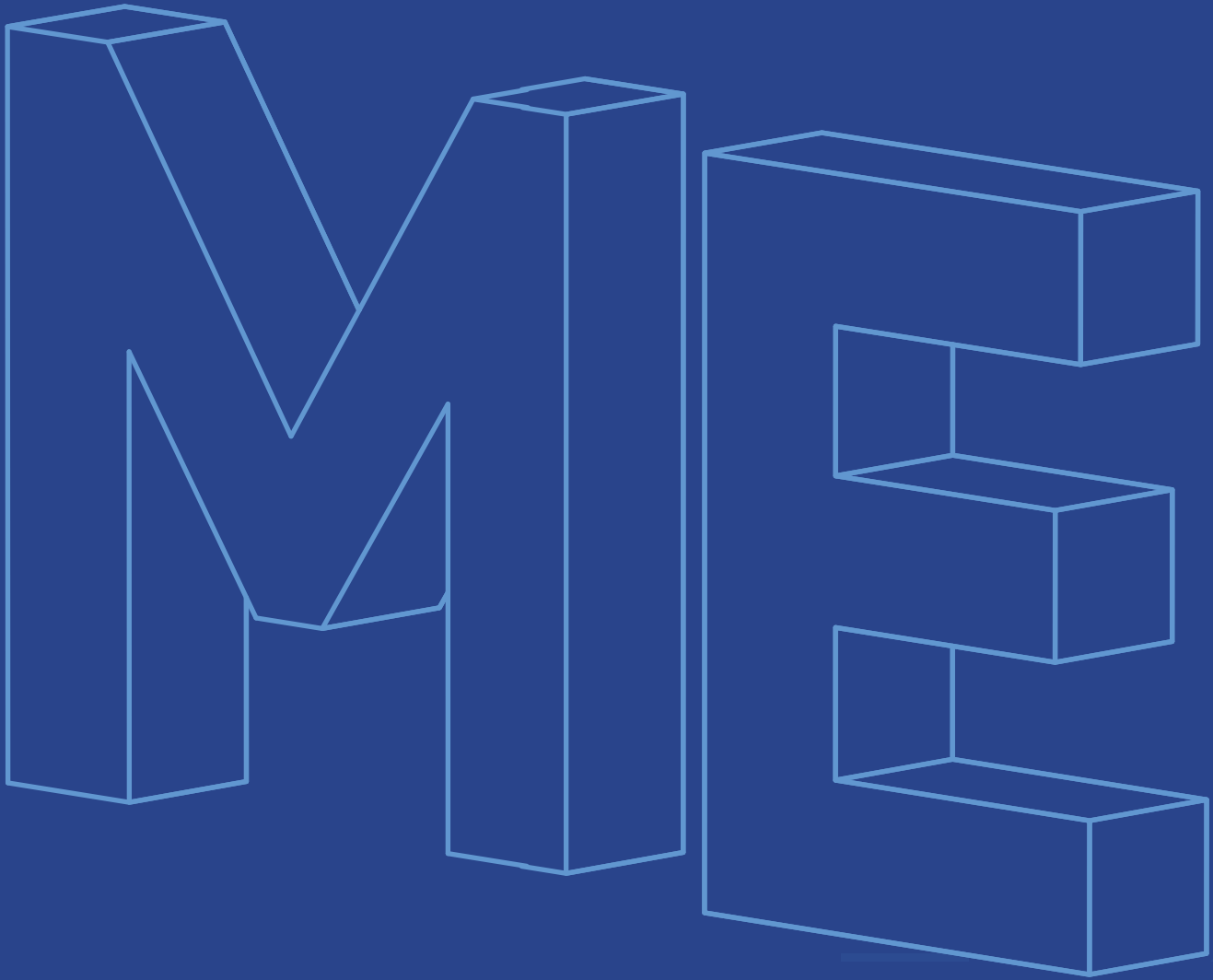
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 12~60                                                     |
| Communication                | 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           | Trapeziod acceleration                                    |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •





# ME SERIES

- Small structure, thin and light, smooth rotation, can pass the slip ring
- Available with 12bit and 14bit encoders
- Widely used in PTZ, pod low speed stability.

# APPLICATION SCENARIOS \_

Camera Head



Laser Radar



**ME** SERIES

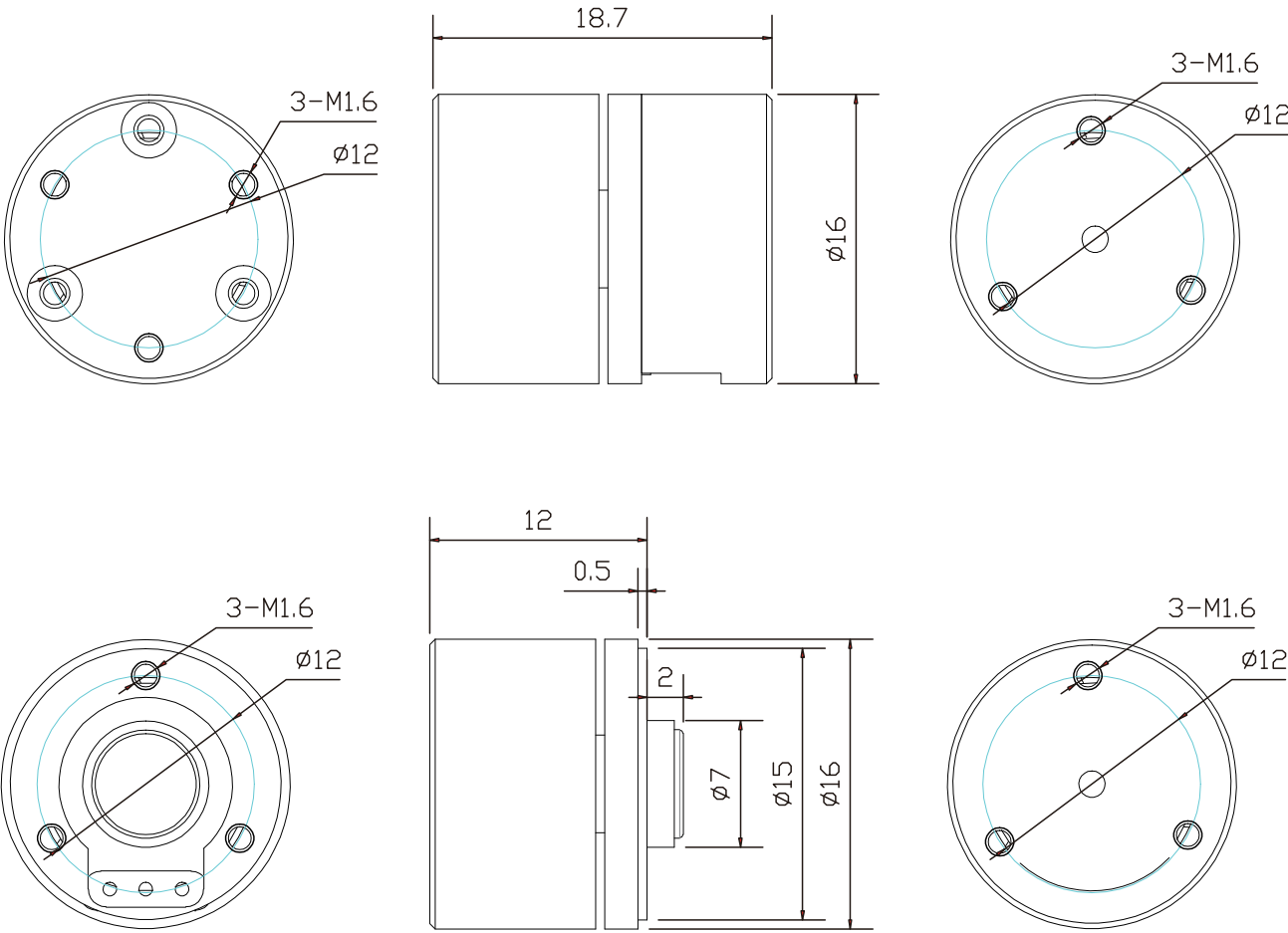
Drone Pod



PRODUCT PARAMETERS •

| 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 (Ω)               | 12.5                           |
| Phase Inductance (mH)             | 1.15                           |
| Speed Constant (rpm/v)            | 108                            |
| Torque Constant (N.M/A)           | 0.01                           |
| Rotor Inertia (gcm <sup>2</sup> ) | 15                             |
| Number Of Pole Pairs              | 6                              |
| Motor Weight (g)                  | /                              |
| Working Temperature (°C)          | -20/80                         |
| Encoder                           | 12 bit/14 bit Magnetic Encoder |

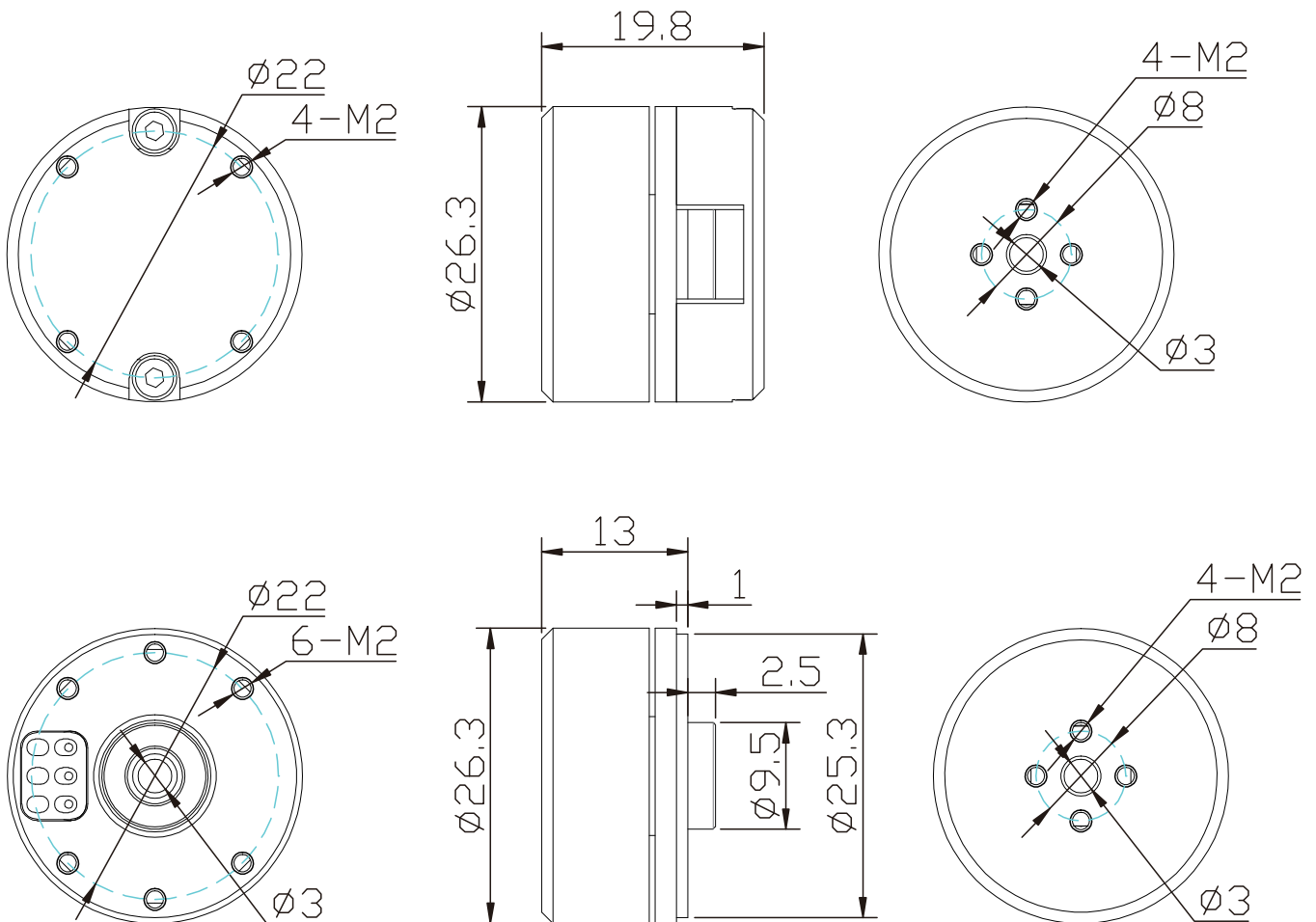
INSTALLATION DRAWING •



PRODUCT PARAMETERS •

| 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 <sup>2</sup> ) | 42                             |
| Number Of Pole Pairs              | 7                              |
| Motor Weight (g)                  | 20                             |
| Working Temperature (°C)          | -35/80                         |
| Encoder                           | 12 bit/14 bit Magnetic Encoder |

INSTALLATION DRAWING •

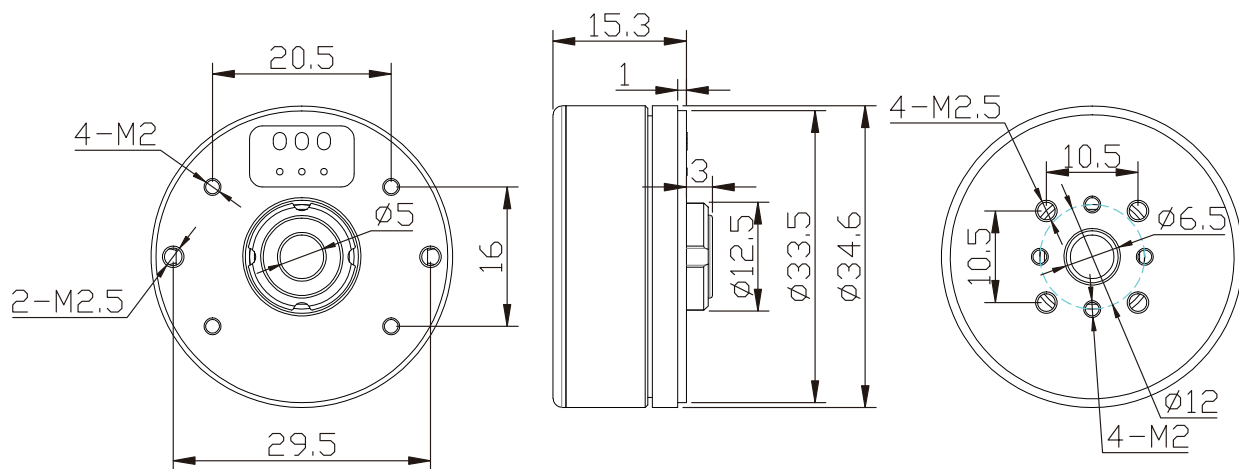




## PRODUCT PARAMETERS •

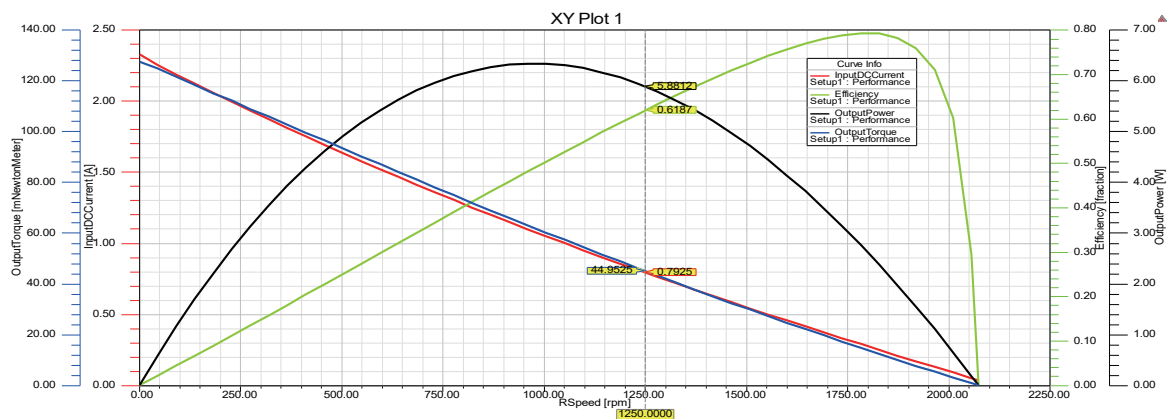
| Item Name                         |  | ME3506                         |
|-----------------------------------|--|--------------------------------|
| Rated Voltage (V)                 |  | 12                             |
| Rated Current (A)                 |  | 0.81                           |
| Rated 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 <sup>2</sup> ) |  | 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 •

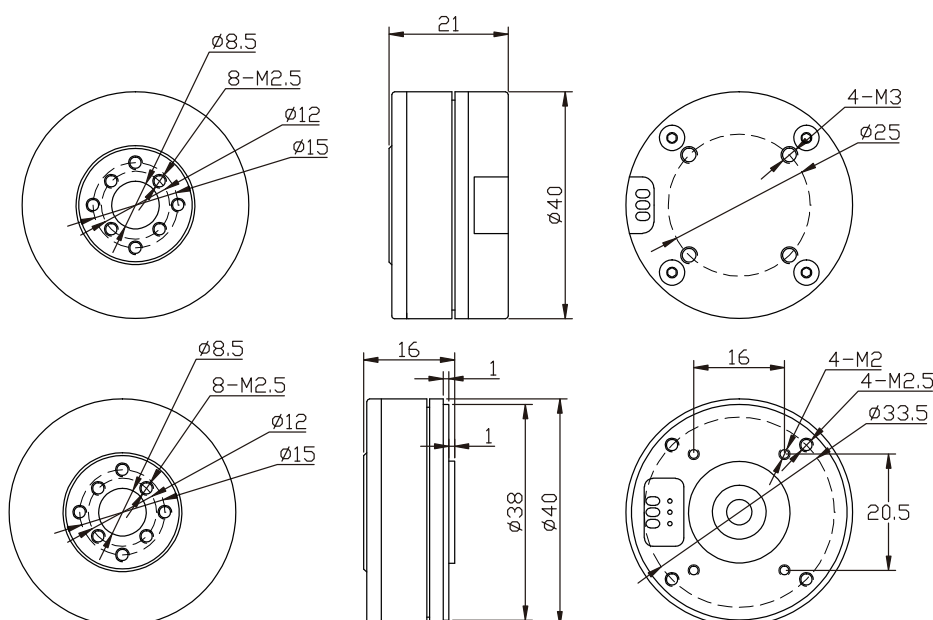
— Inputdc Current      — Efficiency      — Output Power      — Output Torque



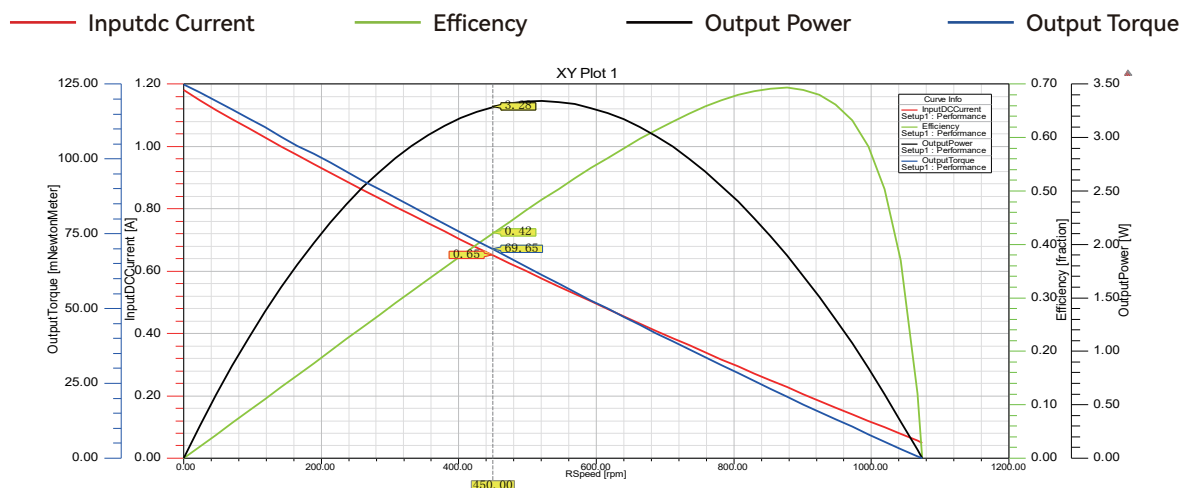
## PRODUCT PARAMETERS •

| 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 <sup>2</sup> ) | 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 •



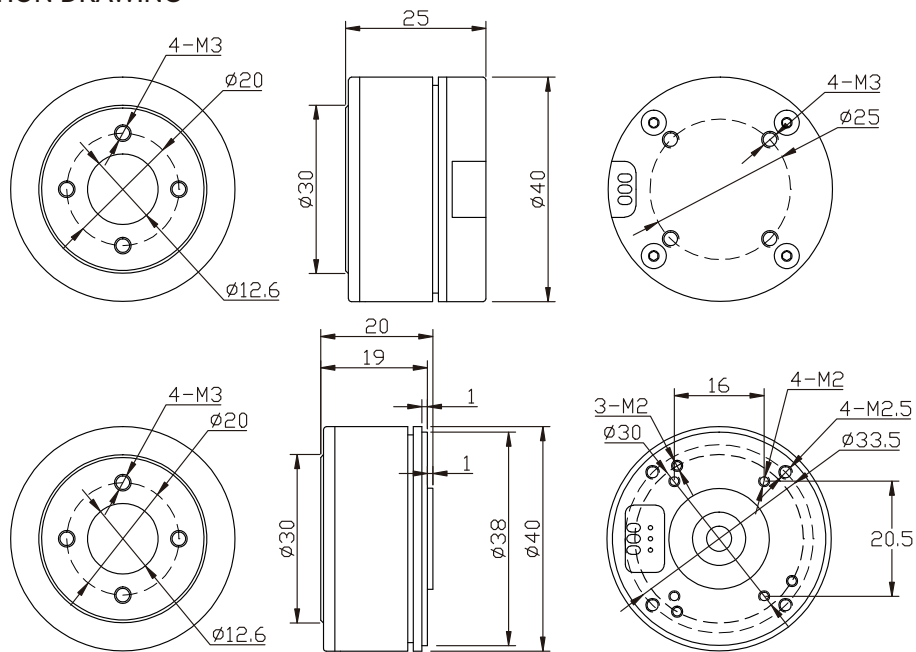
## PRODUCT PARAMETERS •

### Item Name

### ME4010

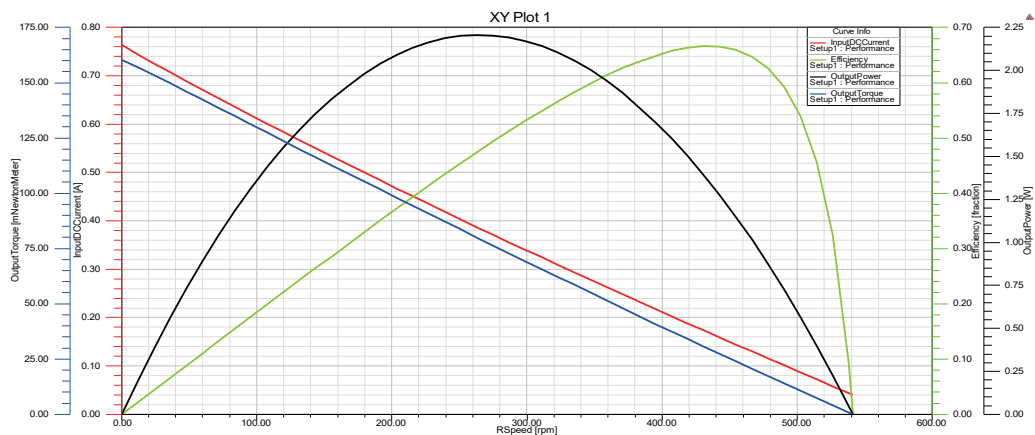
|                                   |                                |
|-----------------------------------|--------------------------------|
| Rated Voltage (V)                 | 12                             |
| Rated Current (A)                 | 0.53                           |
| Rated Torque (N.m)                | 0.11                           |
| Rated Speed (rpm)                 | 363                            |
| Max Speed (rpm)                   | 550                            |
| Max Torque (N.m)                  | 0.16                           |
| Turns                             | 40                             |
| Line Resistance (Ω)               | 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 •

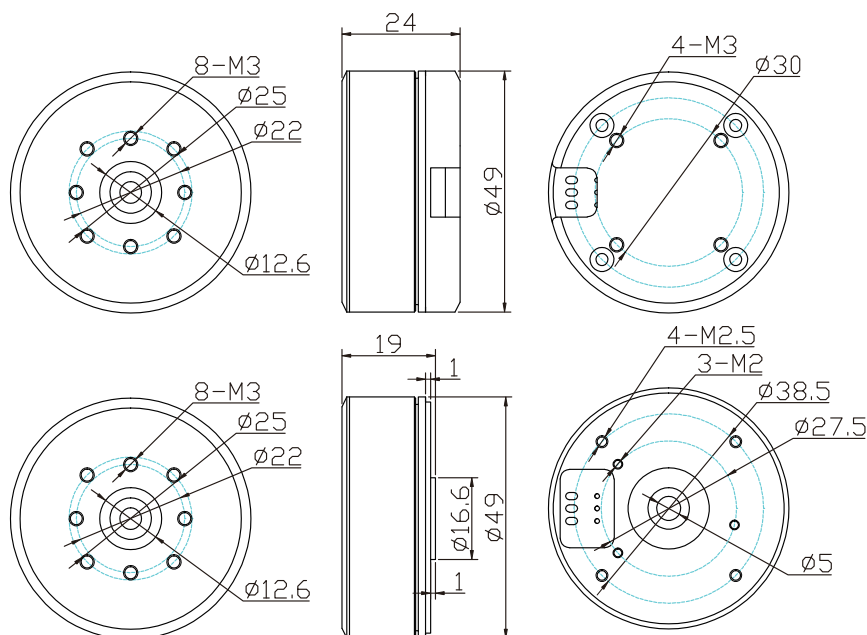
— Inputdc Current      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

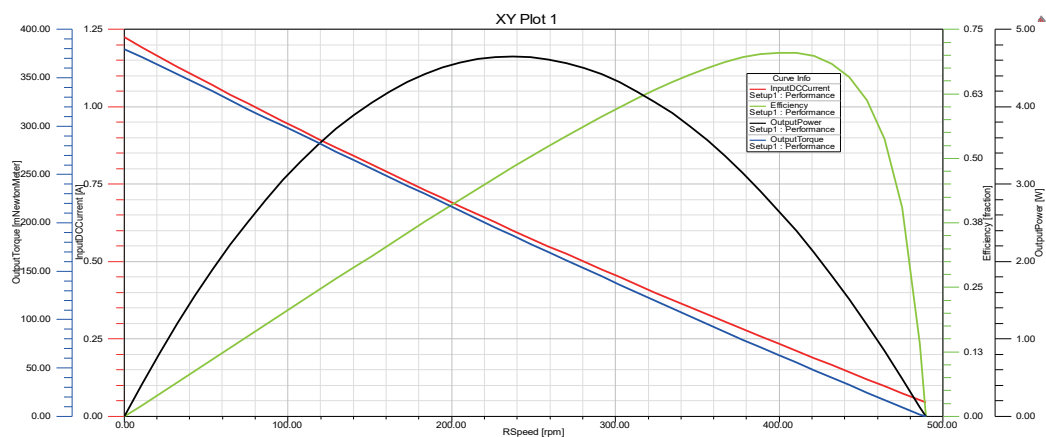
| Item Name                         | ME5010                         |
|-----------------------------------|--------------------------------|
| Rated Voltage (V)                 | 16                             |
| Rated Current (A)                 | 0.79                           |
| Rated Torque (N.m)                | 0.21                           |
| Rated Speed (rpm)                 | 343                            |
| Max Speed (rpm)                   | 520                            |
| Max Torque (N.m)                  | 0.32                           |
| Turns                             | 60                             |
| Line Resistance (Ω)               | 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

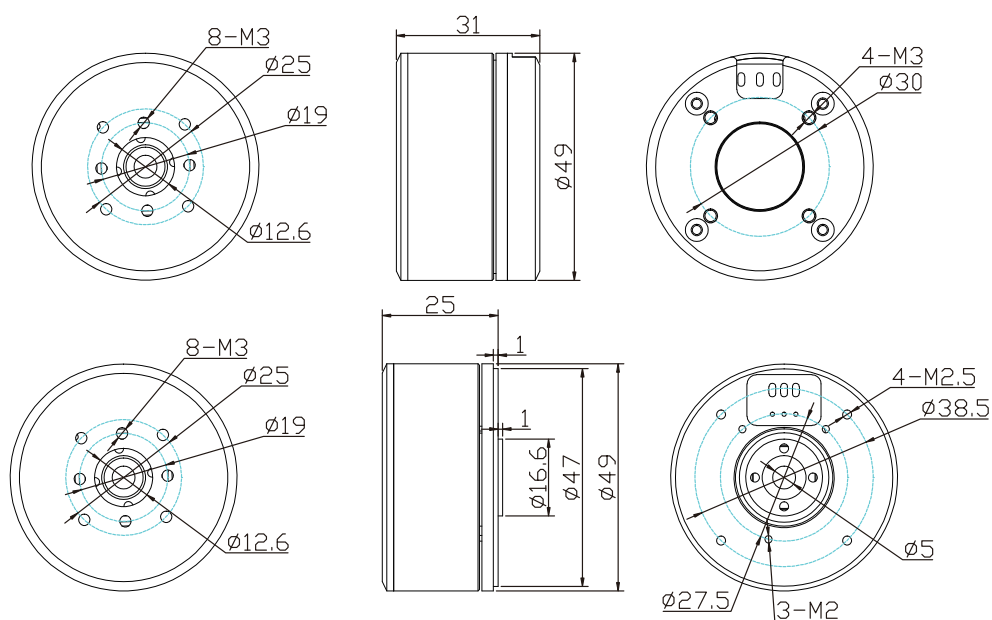


## PRODUCT PARAMETERS •

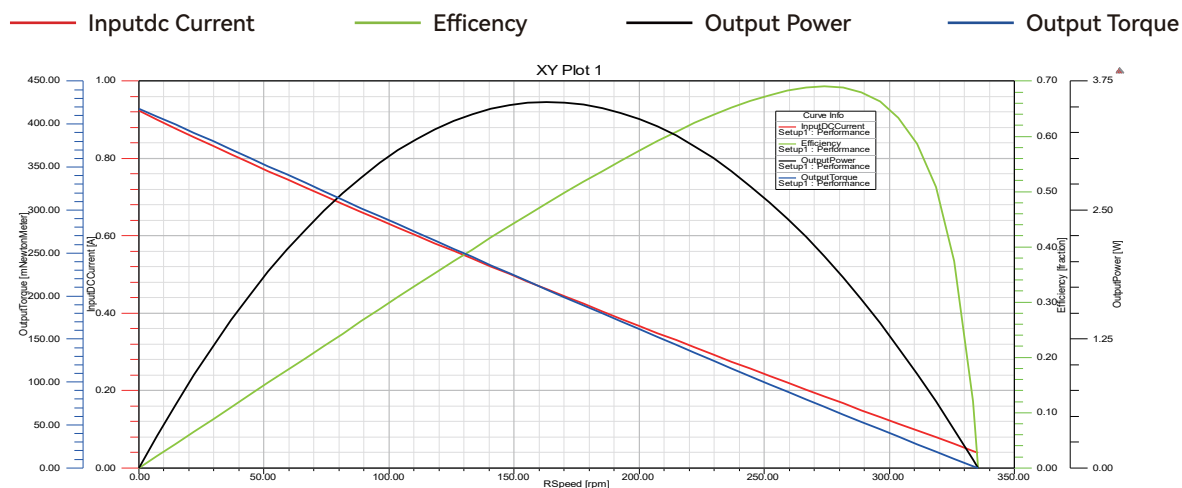
**Item Name**

|                                   |                                |
|-----------------------------------|--------------------------------|
| 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 •



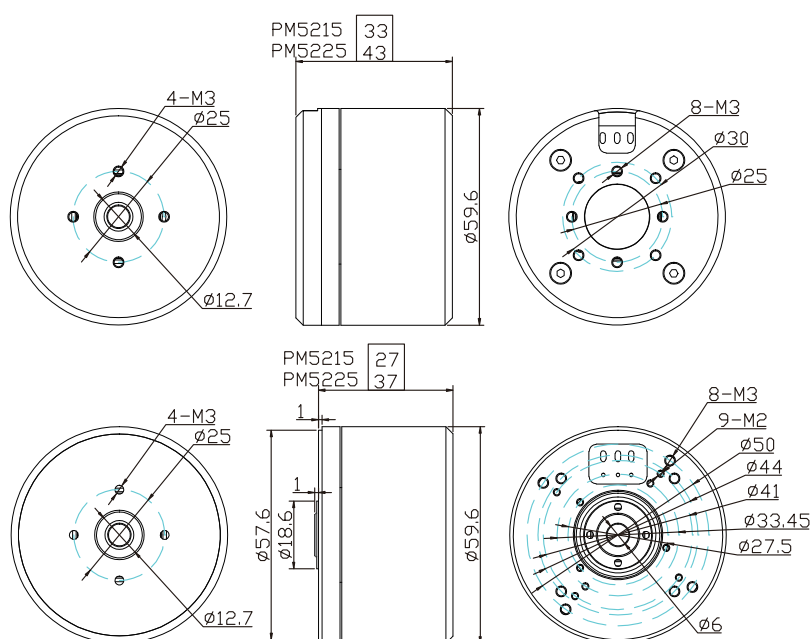
## PRODUCT PARAMETERS •

### Item Name

**ME6015**

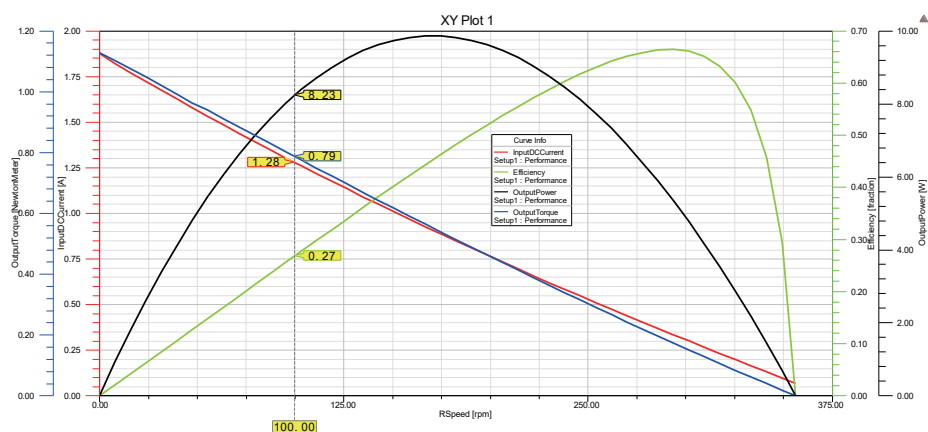
|                                   |                                |
|-----------------------------------|--------------------------------|
| Rated Voltage (V)                 | 24                             |
| Rated Current (A)                 | 1.12                           |
| Rated Torque (N.m)                | 0.76                           |
| Rated Speed (rpm)                 | 221                            |
| Max Speed (rpm)                   | 336                            |
| Max Torque (N.m)                  | 1.15                           |
| Turns                             | 60                             |
| Line Resistance (Ω)               | 11.8                           |
| Phase Inductance (mH)             | 7.8                            |
| Speed Constant (rpm/v)            | 14                             |
| Torque Constant (N.M/A)           | 0.68                           |
| Rotor Inertia (gcm <sup>2</sup> ) | 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 •

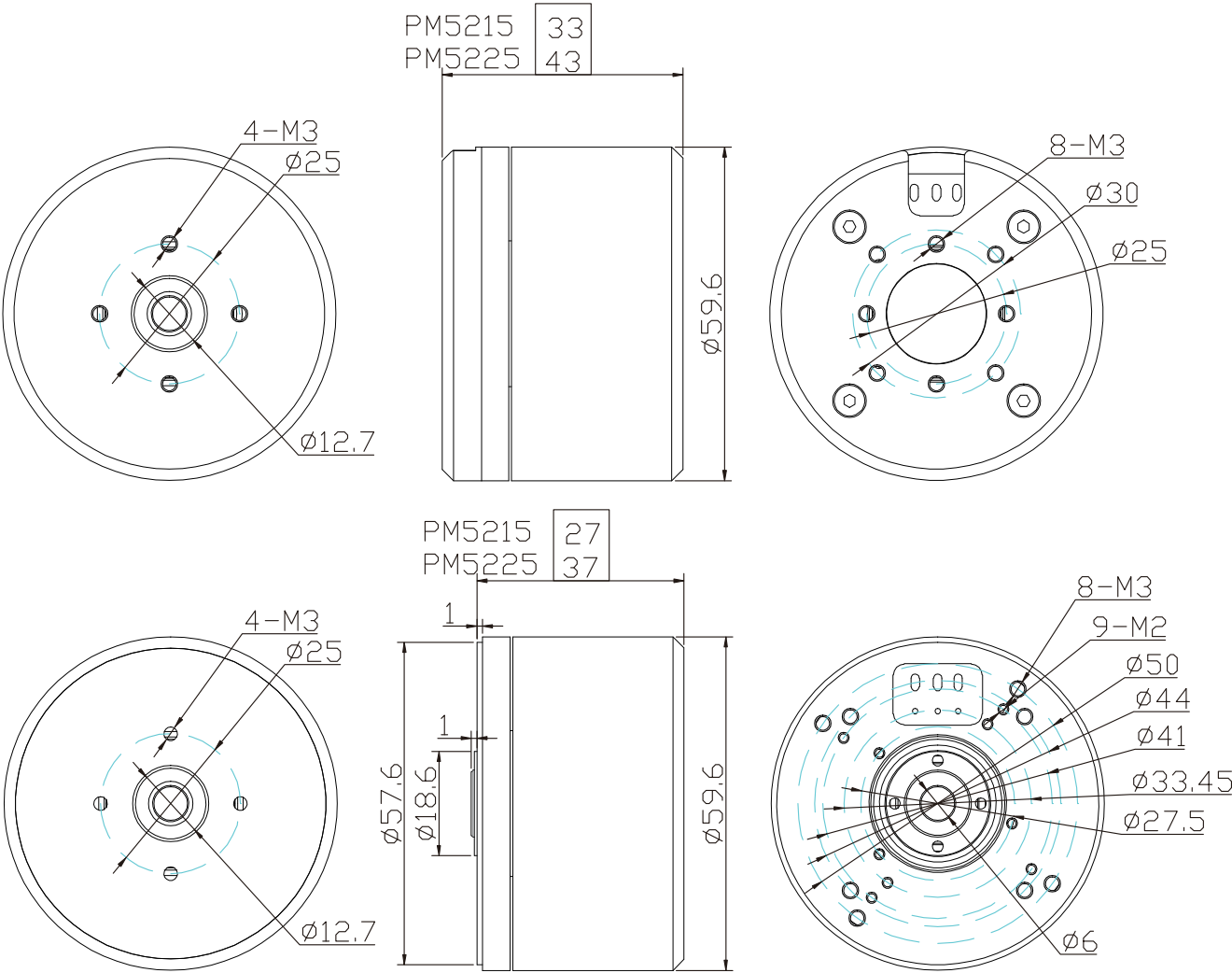
— Inputdc Current      — Efficiency      — Output Power      — Output Torque



PRODUCT PARAMETERS •

| 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 (Ω)      |  | 11.8                           |
| Phase Inductance (mH)    |  | 11.31                          |
| Speed Constant (rpm/v)   |  | 14                             |
| Torque Constant (N.M/A)  |  | 0.98                           |
| Rotor Inertia (gcm²)     |  | 933                            |
| Number Of Pole Pairs     |  | 11                             |
| Motor Weight (g)         |  | 330                            |
| Working Temperature (°C) |  | -35/80                         |
| Encoder                  |  | 12 bit/14 bit Magnetic Encoder |

INSTALLATION DRAWING •

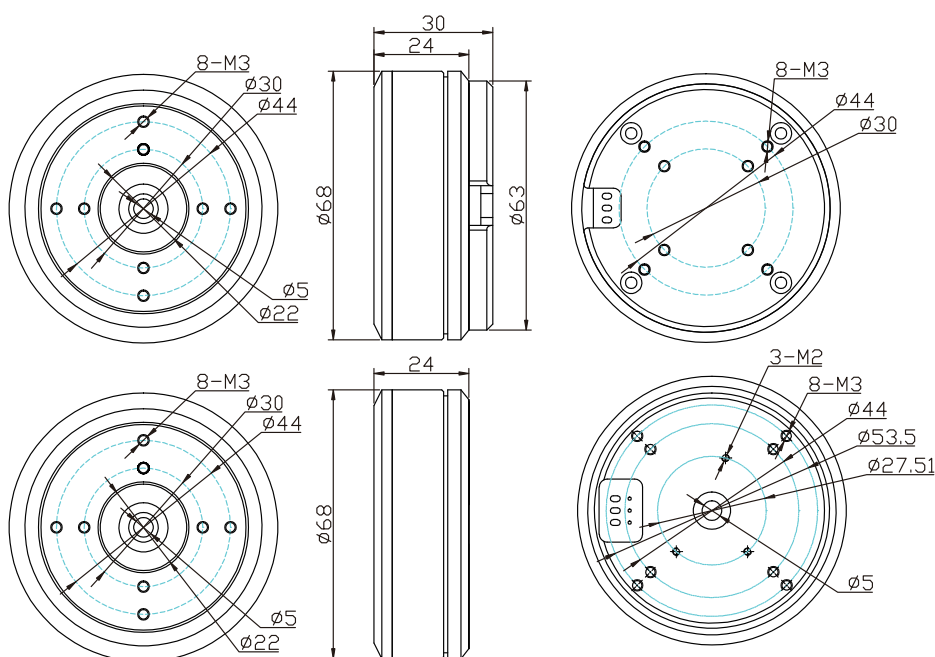




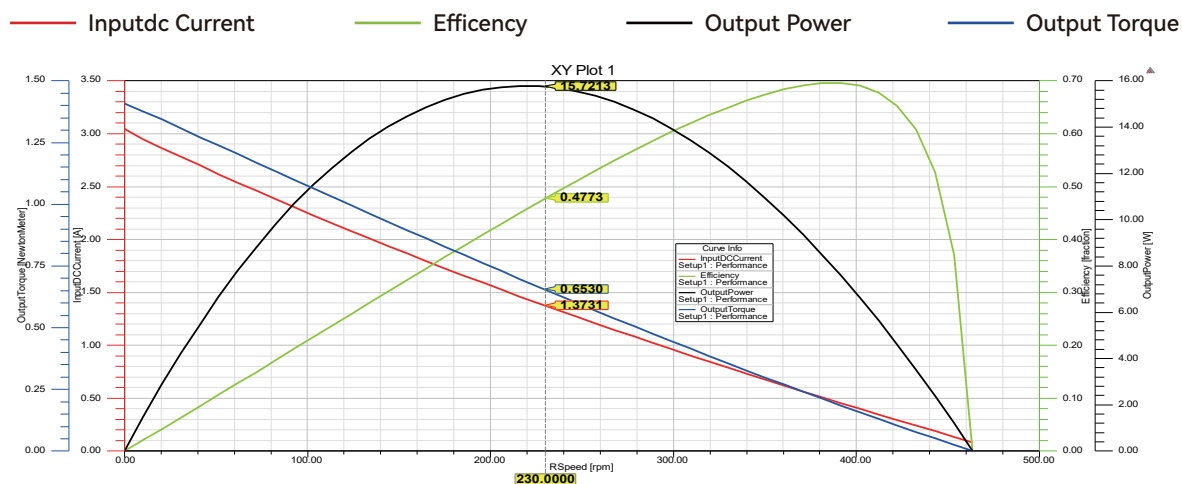
## PRODUCT PARAMETERS •

| 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 (Ω)               | 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 •



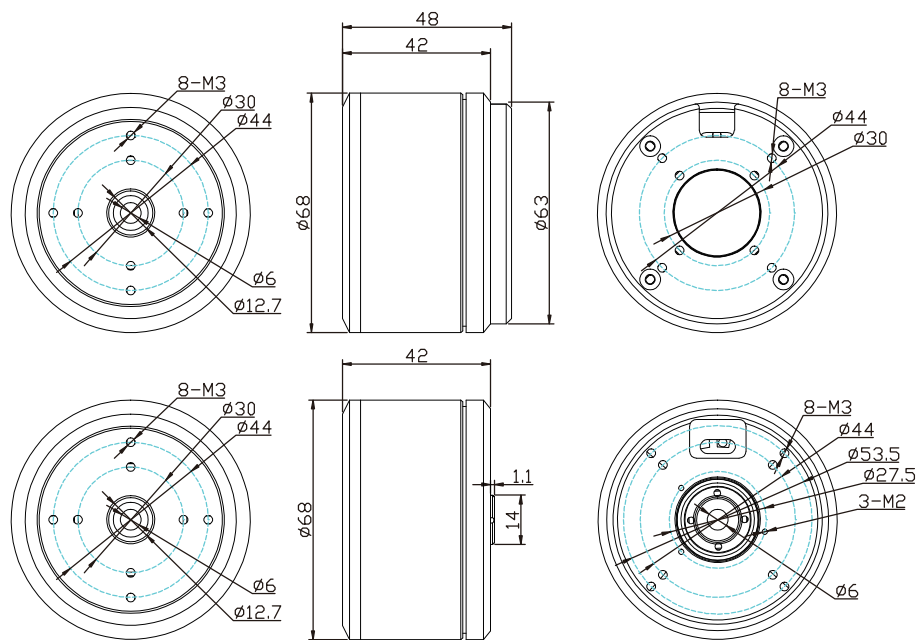
## MOTOR CHARACTERISTIC CURVE •



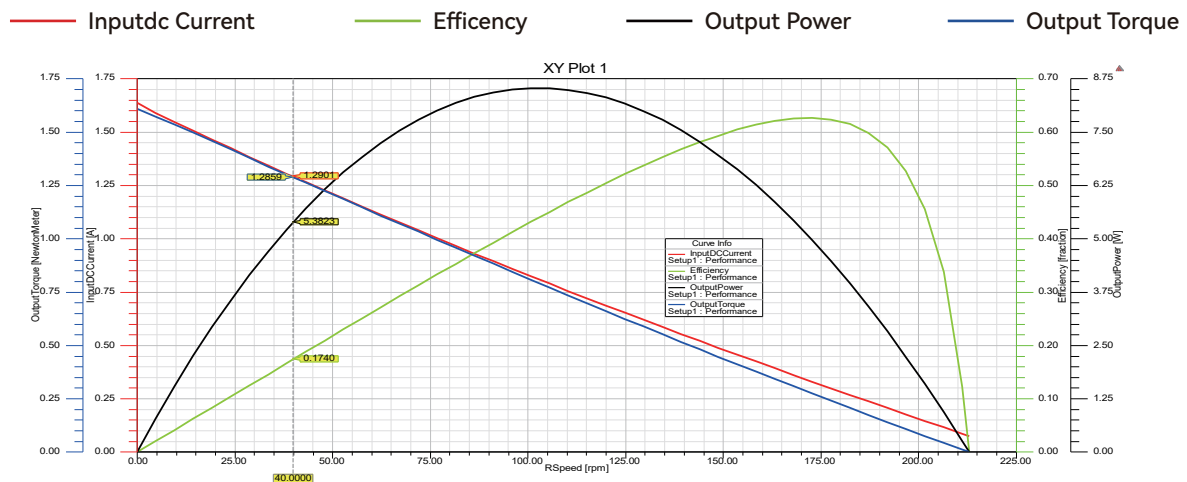
## PRODUCT PARAMETERS •

| 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 •





# MH SERIES

- Hollow shaft design
- Stable performance
- 22 bit optical encoder
- High accuracy

# APPLICATION SCENARIOS \_

Camera Head



Laser Radar



**MH** SERIES

Drone Pod



## PRODUCT PARAMETERS •

### Item Name

### MH3008

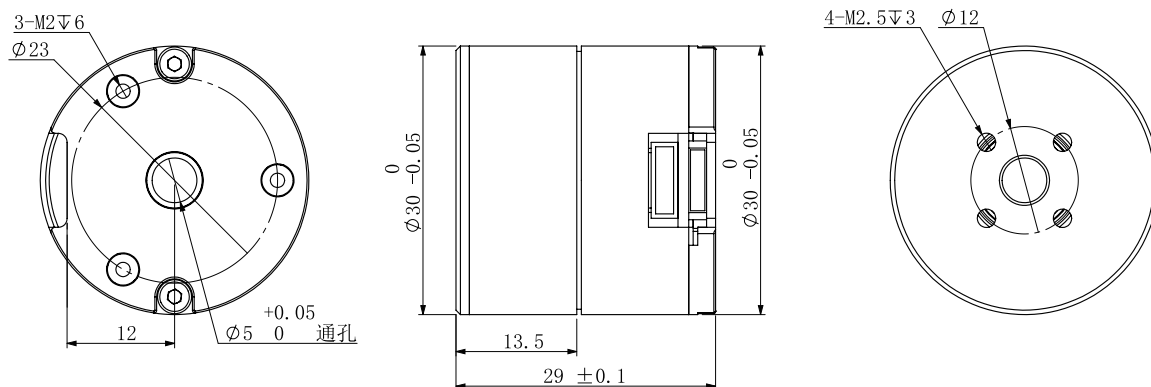
|                                   |      |
|-----------------------------------|------|
| Turns                             | 54   |
| Rated Voltage (V)                 | 12   |
| Rated Current (A)                 | 0.64 |
| Rated Torque (N.m)                | 0.04 |
| Rated Speed (rpm)                 | 1160 |
| Max Speed (rpm)                   | 2000 |
| Max Torque (A)                    | 0.09 |
| Max Current (N.m)                 | 1.6  |
| Phase Resistance ( $\Omega$ )     | 6    |
| Wire Connect (rpm/V)              | Y    |
| Phase Inductance (mH)             | 1.68 |
| Speed Constant (rpm/V)            | 167  |
| Torque Constant (N.m/A)           | 0.06 |
| Rotor Inertia (gcm <sup>2</sup> ) | 35   |
| Motor Poles                       | 14   |
| Motor Temperature                 | YES  |
| Motor Weight (g)                  | 49   |

### Recommnd Drive

### DS30V2

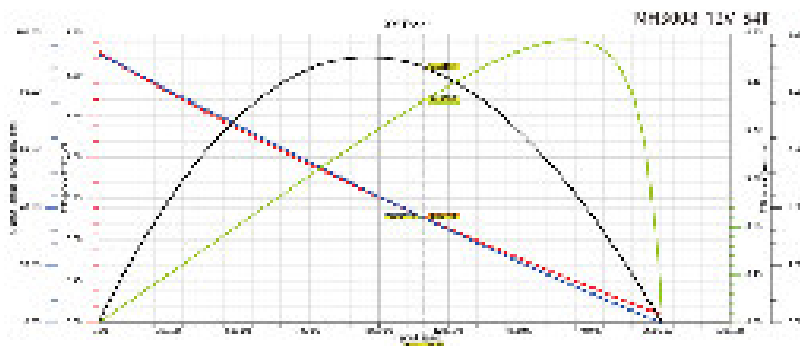
|                              |                                                         |
|------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)      | 6~16                                                    |
| Communication                | RS485                                                   |
| Communication Frequency (Hz) | RS485: 500Hz (115200bps)                                |
| Encoder                      | 15bit Magnetic Encoder                                  |
| Baudrate (RS485) (bps)       | 9600、19200、57600、115200、230400、406800、1M、2M             |
| Control Mode                 | Open Loop /Speed Loop /Position Loop                    |
| Control Frequency            | Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz) |
| Acceleration Curve           | Trapeziod acceleration                                  |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current    — Efficiency    — Output Power    — Output Torque



## PRODUCT PARAMETERS •

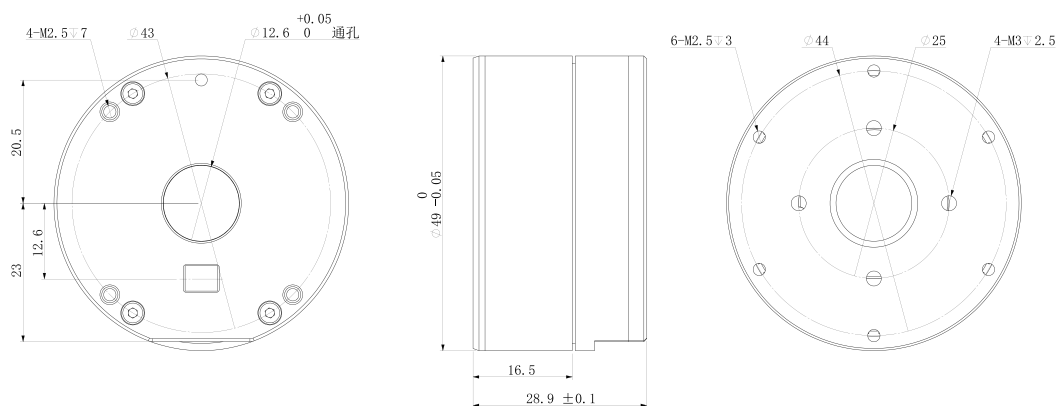
| Item Name                         | MH5010 |
|-----------------------------------|--------|
| Turns                             | 35     |
| Rated Voltage (V)                 | 16     |
| Max Speed (rpm)                   | 870    |
| Rated Torque (N.m)                | 0.24   |
| Rated Speed (rpm)                 | 440    |
| Rated Current (A)                 | 1.35   |
| Max Power (W)                     | 12     |
| Max Torque (A)                    | 0.53   |
| Speed Constant (rpm/V)            | 27.5   |
| Torque Constant (N.m/A)           | 0.18   |
| Winding Type                      | Y      |
| Phase Resistance ( $\Omega$ )     | 3.2    |
| Phase Inductance (mH)             | 1.2    |
| Motor Poles                       | 28     |
| Rotor Inertia (gcm <sup>2</sup> ) | 202    |
| Motor Temperature                 | YES    |
| Bearing Rated Load (N)            | 153    |
| Motor Weight (g)                  | 145    |

## Recommand Drive

## DF40V2

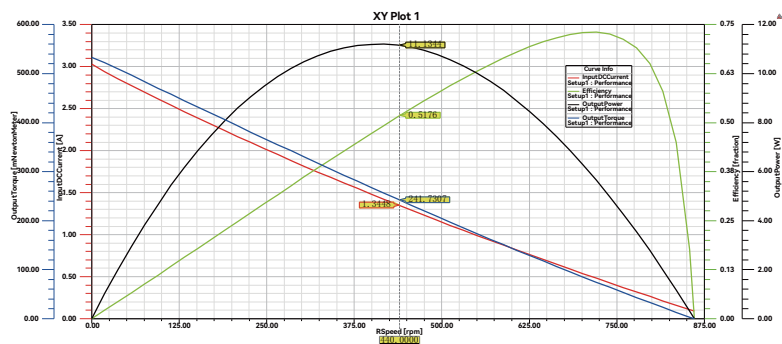
|                              |                                                           |
|------------------------------|-----------------------------------------------------------|
| Drive Input Voltage (V)      | 7.4~32                                                    |
| Communication                | 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 •

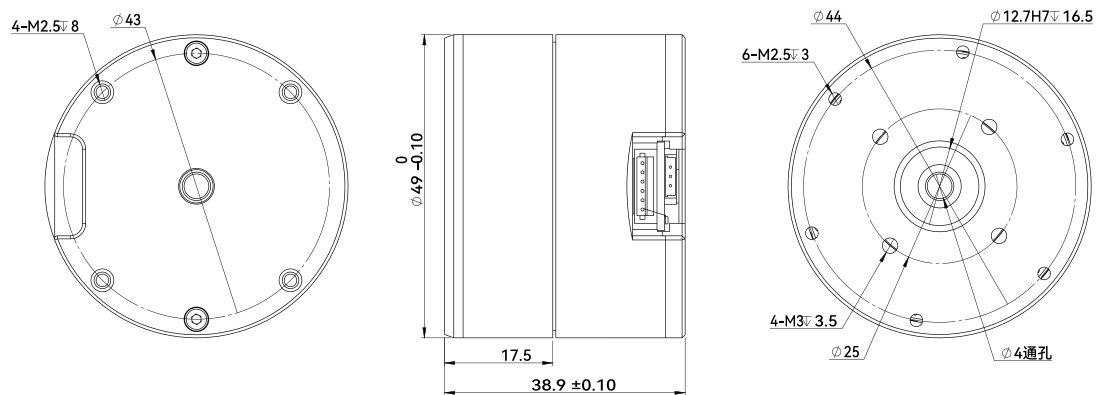
— Inputdc Current      — Efficiency      — Output Power      — Output Torque



## PRODUCT PARAMETERS •

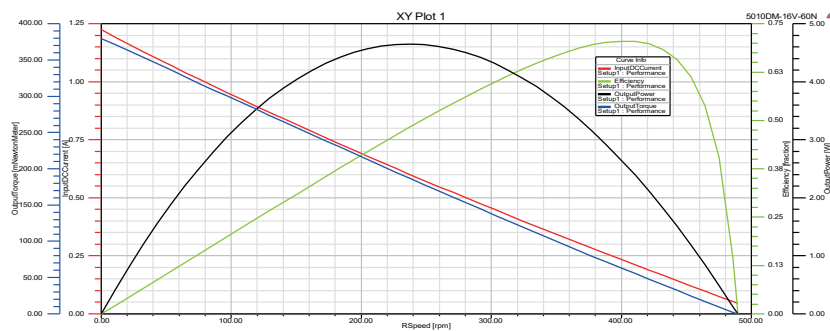
| Item Name                         |  | MHS5010-OPT22                                           |
|-----------------------------------|--|---------------------------------------------------------|
| Turns                             |  | 60                                                      |
| Rated 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 (A)                    |  | 0.37                                                    |
| Speed Constant (rpm/V)            |  | 9.3                                                     |
| Torque Constant (N.m/A)           |  | 0.3                                                     |
| Winding Type                      |  | Y                                                       |
| Phase Resistance ( $\Omega$ )     |  | 10.8                                                    |
| Phase Inductance (mH)             |  | 4.74                                                    |
| Motor Poles                       |  | 28                                                      |
| Rotor Inertia (gcm <sup>2</sup> ) |  | 192                                                     |
| Motor Temperature                 |  | YES                                                     |
| Bearing Rated Load (N)            |  | 153                                                     |
| Motor Weight (g)                  |  | 170                                                     |
| Recommand Drive                   |  | DHS50                                                   |
| Drive Input Voltage (V)           |  | 8~30                                                    |
| Communication                     |  | RS485                                                   |
| Communication Frequency (Hz)      |  | RS485: 500Hz (115200bps) /CAN:1KHz(1Mbps)               |
| Encoder                           |  | 22bit Optical Encoder                                   |
| Repetitive positioning accuracy   |  | $\pm 2''$                                               |
| Absolute positioning accuracy     |  | $\pm 20''$                                              |
| Encoder Baudrate (RS485) (bps)    |  | 2Mbps                                                   |
| Encoder output Frequency          |  | 10KHz                                                   |
| Control Mode                      |  | Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz) |
| Acceleration Curve                |  | Trapeziod acceleration                                  |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current      — Efficiency      — Output Power      — Output Torque





## PRODUCT PARAMETERS •

## Item Name

## MHS5015-OPT22

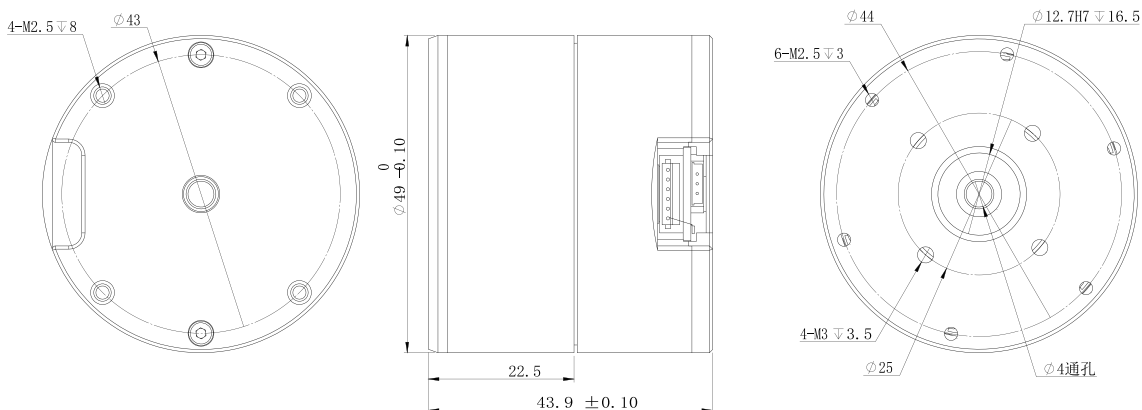
|                                  |      |
|----------------------------------|------|
| Turns                            | 60   |
| Rated Voltage (V)                | 16   |
| Max Speed (rpm)                  | 340  |
| Rated Torque (N.m)               | 0.32 |
| Rated Speed (rpm)                | 80   |
| Rated Current (A)                | 0.69 |
| Max Power (W)                    | 3.5  |
| Max Torque (A)                   | 0.41 |
| Speed Constant (rpm/V)           | 21.3 |
| Torque Constant (N.m/A)          | 0.46 |
| Winding Type                     | Y    |
| Phase Resistance ( $\Omega$ )    | 13.5 |
| Phase Inductance (mH)            | 6.56 |
| Motor Poles                      | 28   |
| Rotor Inertia ( $\text{gcm}^2$ ) | 268  |
| Motor Temperature                | YES  |
| Bearing Rated Load (N)           | 153  |
| Motor Weight (g)                 | 210  |

## Recommand Drive

## DHS50

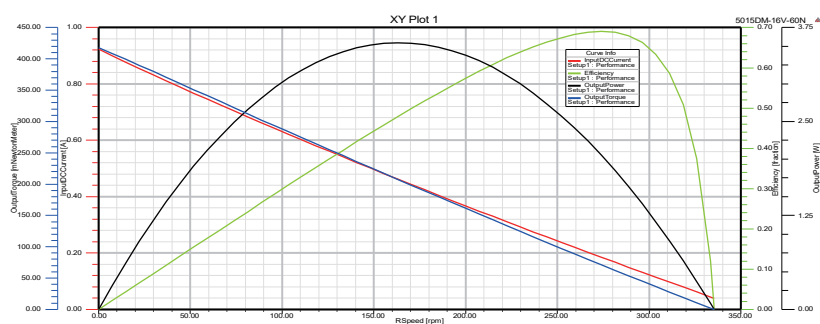
|                                 |                                                         |
|---------------------------------|---------------------------------------------------------|
| Drive Input Voltage (V)         | 8~30                                                    |
| Communication                   | TTL串口                                                   |
| Encoder                         | 22bit Optical Encoder                                   |
| Repetitive positioning accuracy | $\pm 2''$                                               |
| Absolute positioning accuracy   | $\pm 20''$                                              |
| Encoder Baudrate (RS485) (bps)  | 2M                                                      |
| Encoder output Frequency        | 10KHz                                                   |
| Control Mode                    | Open Loop(24KHz) /Speed Loop(8KHz) /Position Loop(8KHz) |
| Acceleration Curve              | Trapezoid acceleration                                  |

## INSTALLATION DRAWING •



## MOTOR CHARACTERISTIC CURVE •

— Inputdc Current      — Efficiency      — Output Power      — Output Torque



# Driver

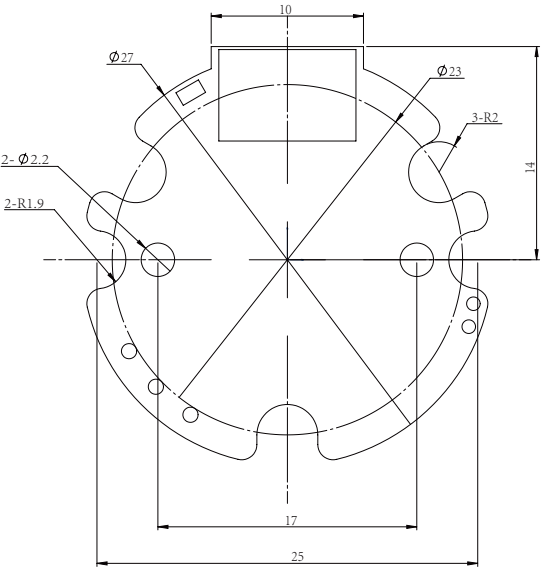
## **DRIVER**

- Multiple control modes
- Multiple control command
- Provides host parameters/tests/  
firmware upgrades

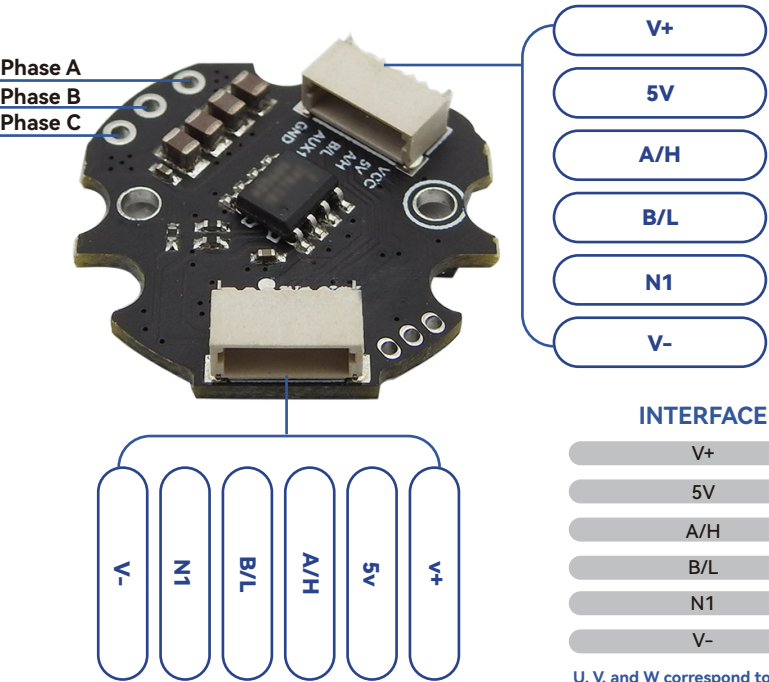
PRODUCT PARAMETERS •

| Recommand 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 •



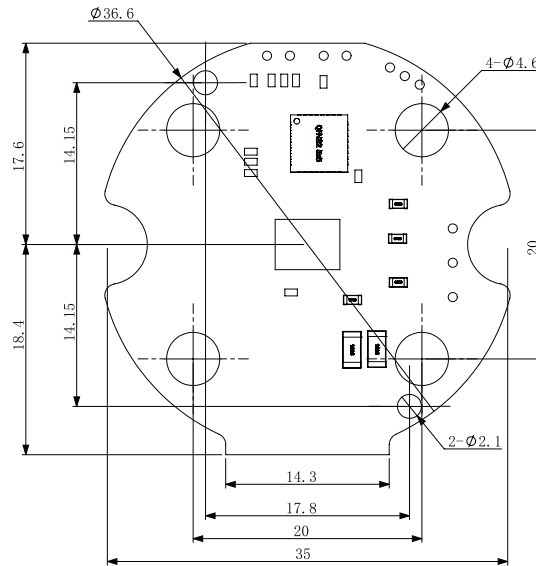
| INTERFACE | NOTE                  |
|-----------|-----------------------|
| V+        | Positive Power Supply |
| 5V        | 5Voutput              |
| A/H       | RS485-A OR can-H      |
| B/L       | RS485-B OR can-L      |
| N1        | No Connection1        |
| V-        | Negative Power Supply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

U, V, and W correspond to the three-phase output lines of the motor, which are connected by default before delivery

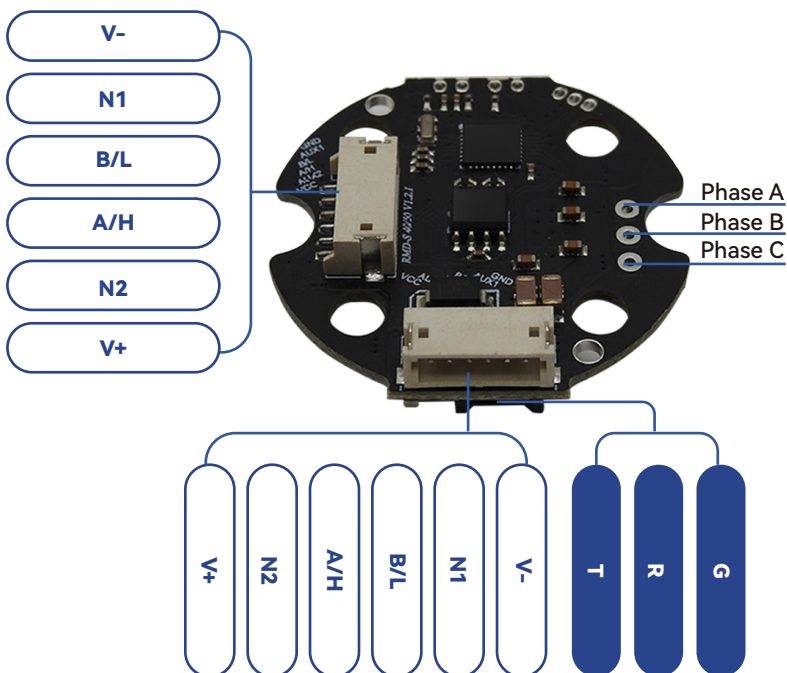
## PRODUCT PARAMETERS •

| Recommand Drive         | DS40                                                  |
|-------------------------|-------------------------------------------------------|
| Drive Input Voltage     | 6~20                                                  |
| 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               | ZH1.5-6PIN                                            |

## 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 Receiver         |
| G   | Signal GND            |

U, V, and W correspond to the three-phase output lines of the motor which are connected by default before delivery

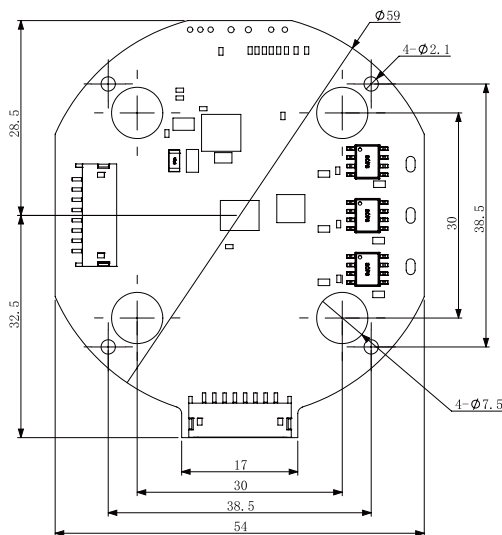
## PRODUCT PARAMETERS •

### Recommand Drive

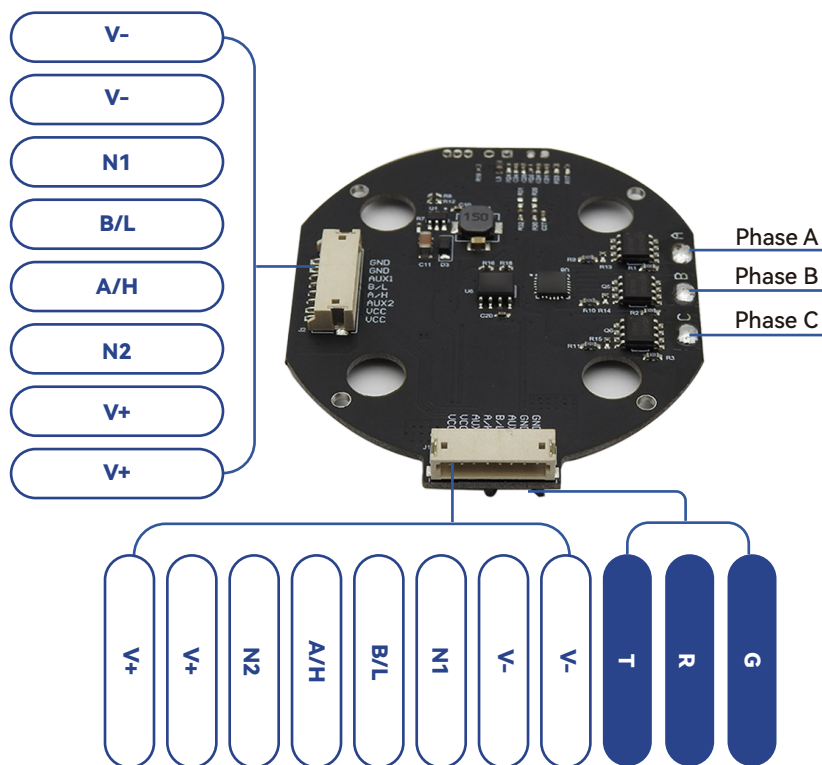
|                         |                                                   |                                                       |
|-------------------------|---------------------------------------------------|-------------------------------------------------------|
| Drive Input Voltage     | V                                                 | 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                                            |

### DS70

## 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            |

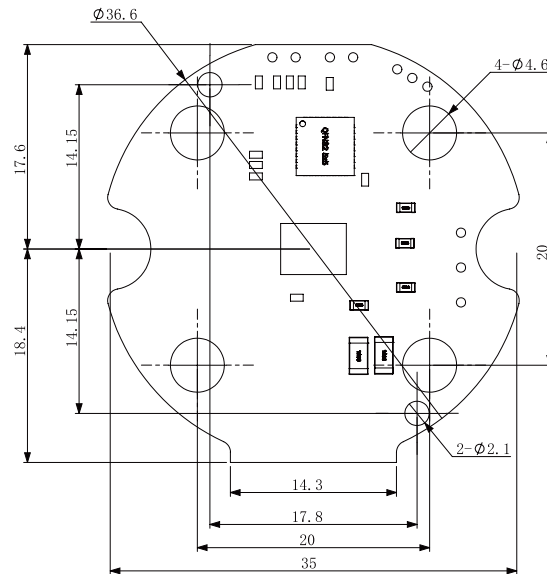
U, V, and W correspond to the three-phase output lines of the motor which are connected by default before delivery

## PRODUCT PARAMETERS •

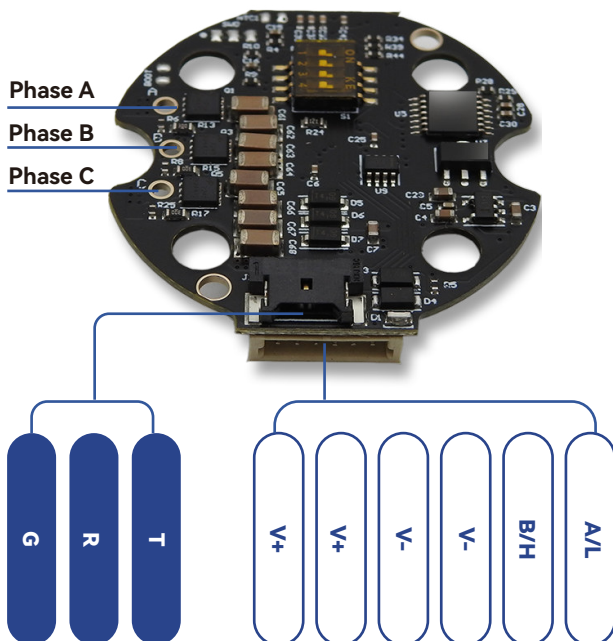
### Recommand Drive

|                         |                                                   |      |                                                         |
|-------------------------|---------------------------------------------------|------|---------------------------------------------------------|
| Drive Input Voltage     | V                                                 | DF40 | 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

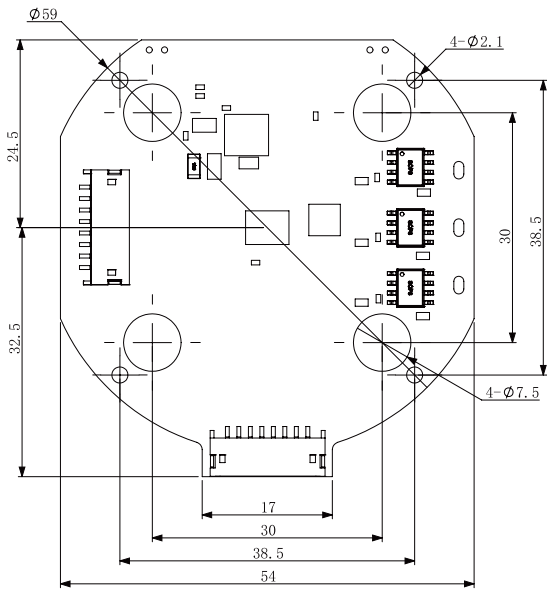
### NOTE

|     |                       |
|-----|-----------------------|
| 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            |

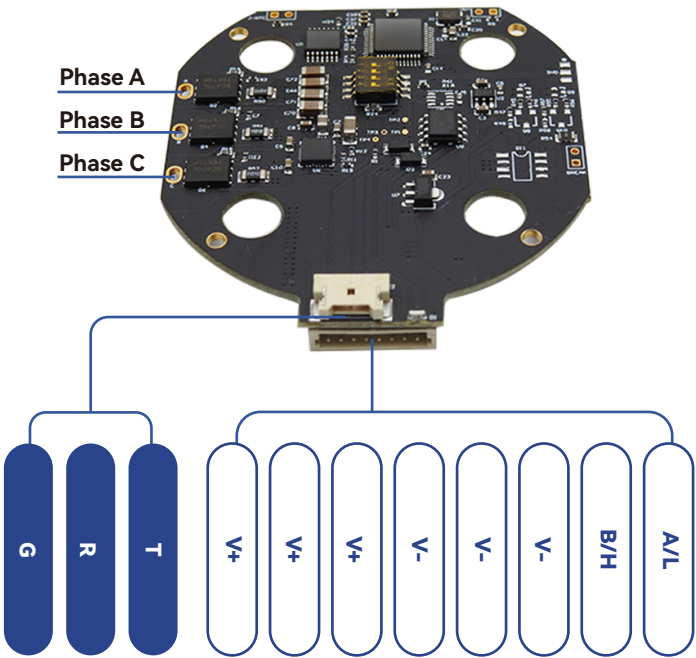
PRODUCT PARAMETERS •

| Recommand Drive         | DF70                                                    |
|-------------------------|---------------------------------------------------------|
| Drive Input Voltage     | 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               | ZH1.5-8PIN                                              |

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            |

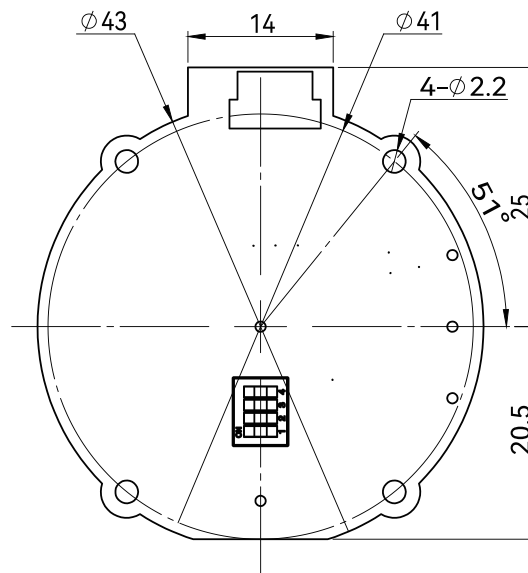


## PRODUCT PARAMETERS •

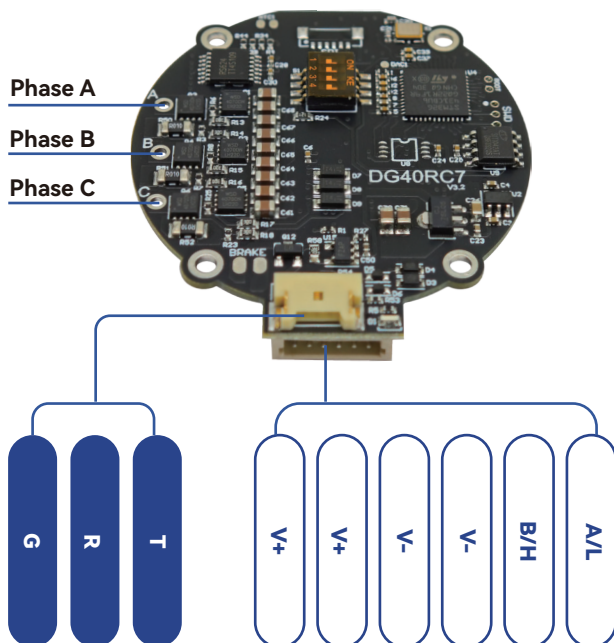
### Recommand Drive

|                         |                                                   |             |                                                         |
|-------------------------|---------------------------------------------------|-------------|---------------------------------------------------------|
| Drive Input Voltage     | V                                                 | <b>DG40</b> | 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

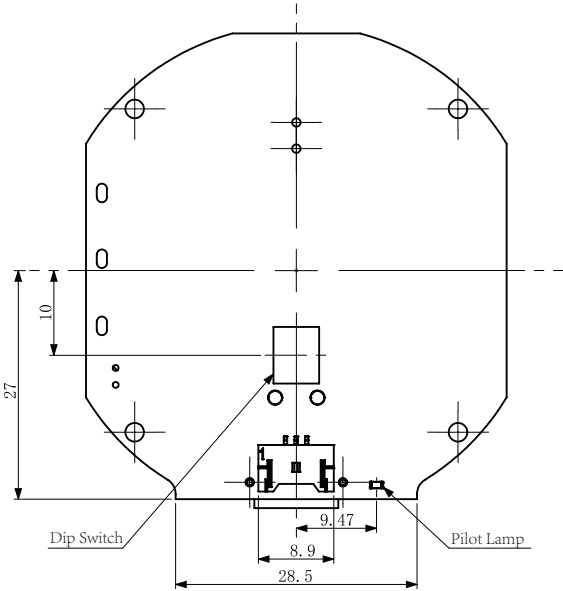
### NOTE

|     |                       |
|-----|-----------------------|
| 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            |

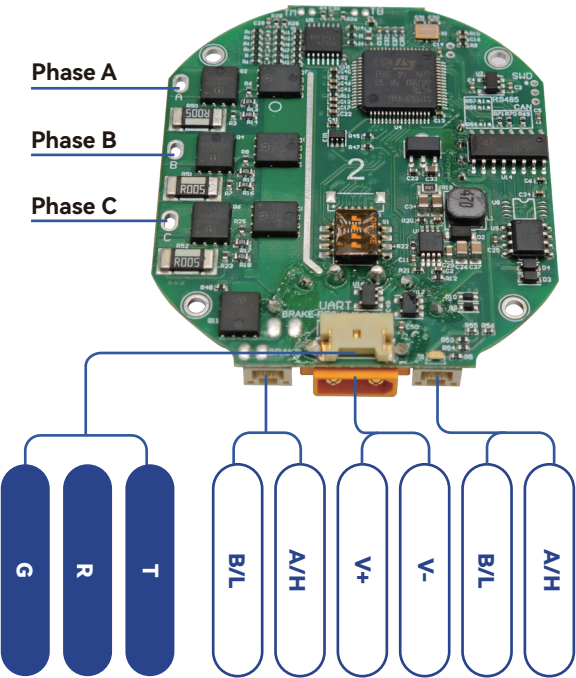
PRODUCT PARAMETERS •

| Recommand Drive         | DG60                                                  |
|-------------------------|-------------------------------------------------------|
| Drive Input Voltage     | 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 •



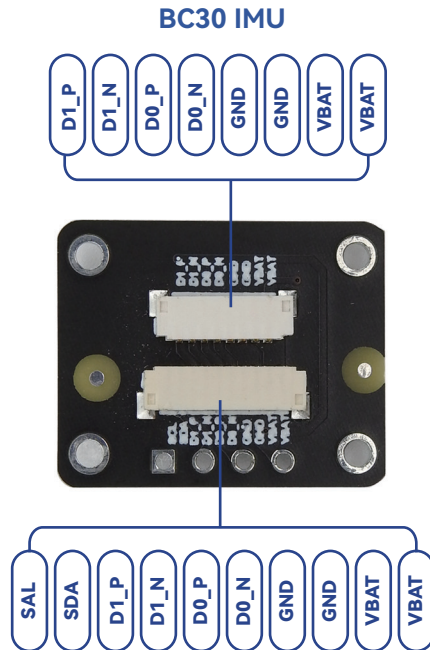
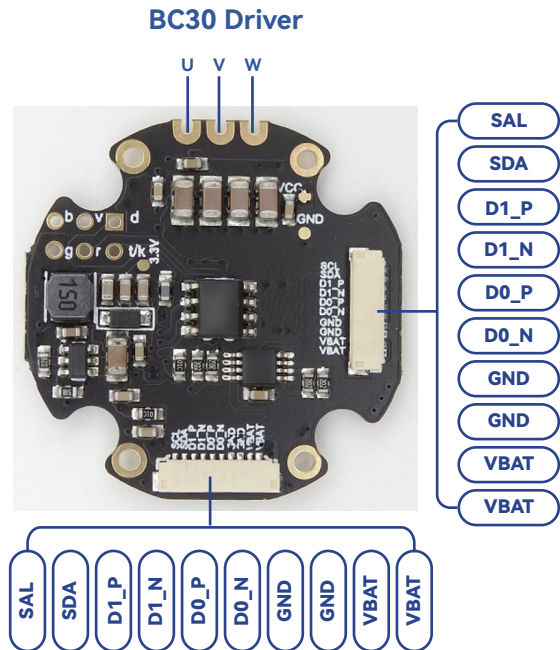
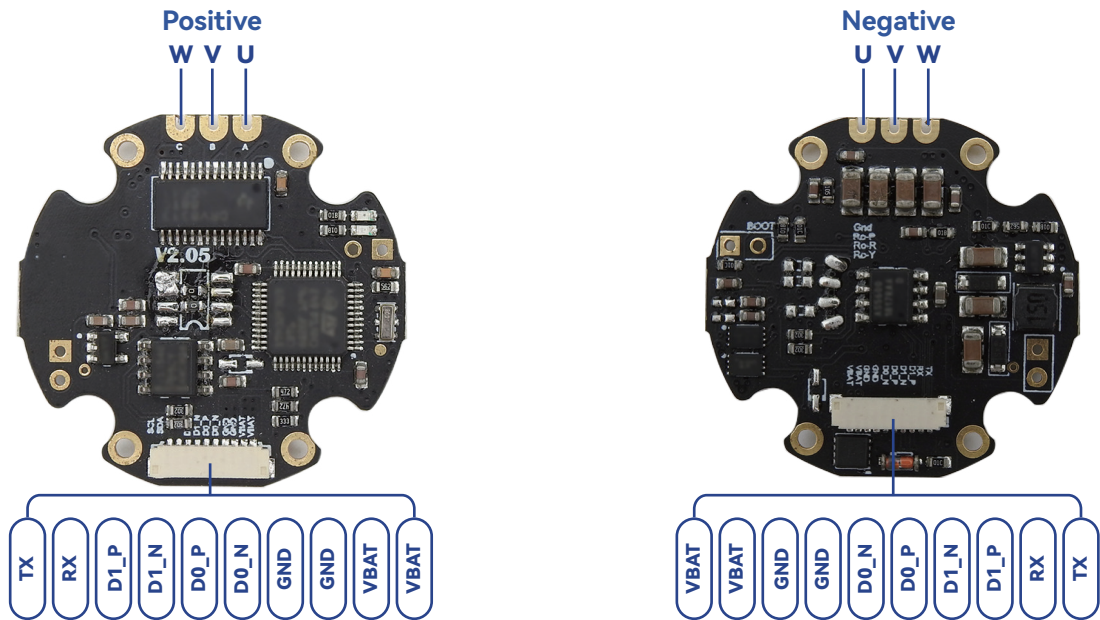
| INTERFACE | NOTE                  |
|-----------|-----------------------|
| A/H       | RS485-A Or CAN-H      |
| B/L       | RS485-B Or CAN-L      |
| V-        | Negative Power Supply |
| V+        | Positive Power Supply |
| A/H       | RS485-A Or CAN-H      |
| B/L       | RS485-B Or CAN-L    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

PRODUCT PARAMETERS •

| 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

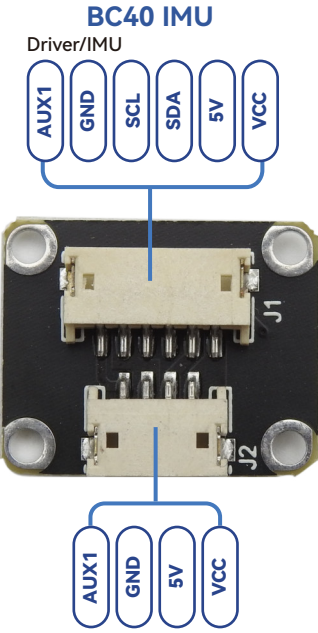
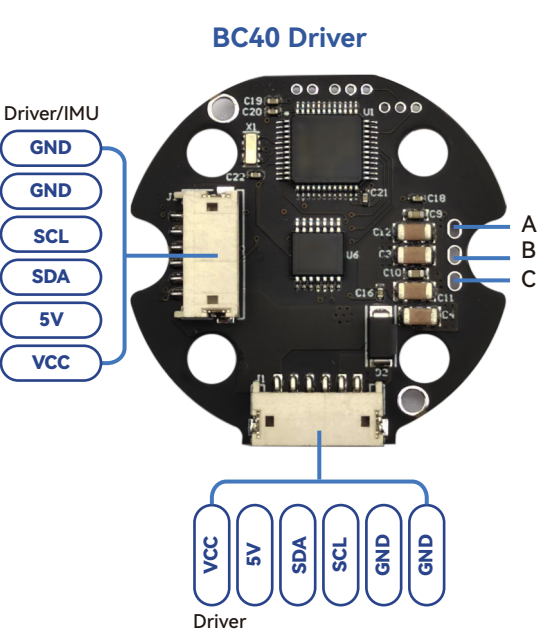
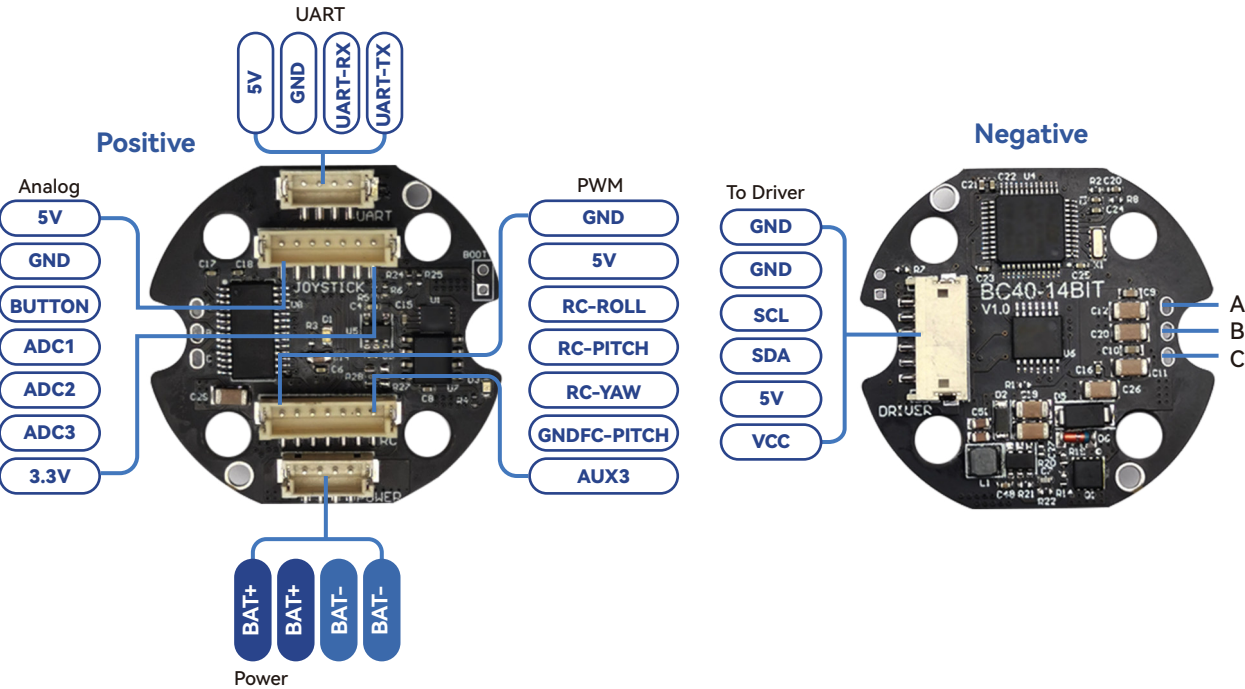


PRODUCT PARAMETERS •

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

INTERFACE DEFINITION •

BC40 Controller



PRODUCT PARAMETERS •

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

INTERFACE DEFINITION •

BC70 Controller

