

DINGS'

Precision Motion Specialist

JOINT SERVO ACTUATOR

Integrated Intelligent Direct Drive / Planetary / Harmonic / Outer Runner FLO

PRODUCT CATALOG



Since its establishment in 2008, Jiangsu DINGS' Intelligent Control Technology Co., Ltd adheres to the "Quality comes from Responsibility, Details determine Success or Failure" business concept, commits to become a Precision Motion Specialist and world-class motion control solutions provider. DINGS' provides precision stepper motor actuators, brushless DC motors and motion controllers.

SIZE

DINGS' facility covers an area of 56 acres, with more than 5,000 square meters of processing center, equipped with more than 100 sets of processing equipment such as wire rolling machine, automatic injection molding machine, CNC machine tools, machining centers, automatic screw straightening machine, etc., with a total investment of more than 100 million in equipment; there are more than 20 motor assembly lines in the production workshop, with an annual production capacity of up to 4 million units and there is a product research and development center, a precision testing and inspection laboratory and an experimental center.

It is equipped with testing and inspection instruments such as positioning torque test, hardness test, precision measurement, dynamic balance, etc. It has an integrated management system of product design, manufacturing and inspection, which provides the necessary conditions to meet the customized demands of users.



GROWTH

2008	Established a company and registered DINGS' Brand
2010	Established DINGS' MOTION USA
2016	Established DINGS' Korea
2019	Join in LEILI group
2021	Established Changzhou Intelligent Manufacturing Factory Listed on the new third board, NEEQ stock market
2022	Set up R&D Center in Korea Listed on the Beijing Stock Exchange [Stock Code : 873593]
2023	Conversion to DINGS' Korea Corporation Established of DINGS' Japan
2024	Relocation of Headquarter into new plant Established of DINGS' Motion Europe

QUALIFICATIONS

DINGS' is a high-tech company listed on the new third board, NEEQ stock market in June, 2021. And listed on the Beijing Stock Exchange 13th Apr, 2023. DINGS' has awards of "Jiangsu Private Science and Technology Enterprise", "Jiangsu Science and Technology Small and Medium-sized Enterprise" and "Jiangsu Specialized and New Small Giant Enterprise". In addition, DINGS' products have RoHS, CE, REACH and other certifications as ISO9001 and ISO14001. DINGS' has more than 80 invention patents.

PRODUCT WARRANTY STATEMENT

DINGS' provides product quality certificates during shipping, and customers are to inspect product according to technical drawings and/or related requirements. DINGS's product warranty period is 2 years, calculated from delivery date, and customers are to refer to the product manual for proper storage and usage of the product. During the service life or warranty period, if our products are damaged or do not work properly due to quality problems, DINGS' provides no-charge repairs.

The following conditions do not belong to the scope of free maintenance :

- When the validity period has been exceeded
(In the case of loss of nameplate or artificial damage, it is considered to have exceeded the validity period)
- Damage caused by improper usage
- Man-made dismantling
- Products that have been disassembled or repaired, but not by a DINGS' accredited representative
- Failure caused by irresistible factors such as natural disasters



PRODUCT CATALOG

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RMD-X Series

INTEGRATION PLANETARY ACTUATORS

SMALL SIZE | LIGHT WEIGHT | HIGH INTEGRATION

RMD-X V2



RMD-X V3



RMD-X V4



RMD-X V3 series and RMD-X Bionic series Both support a second encoder

- The first encoder records the multiturn position, and the second encoder records the output shaft position.
- RMD-X planetary series, with high speed, high dynamic response and high torque density, is suitable for the needs of bionic robots with high sensitivity.
- Multiple protections such as over-current protection, over-temperature protection, and over-voltage protection make the product safer and more secure.



Products widely used

Widely Used In Humaniod Robot/Legged Robots/Robot Arm/SCARA/AGV/AMR etc.



Robotic Arm



Humanoid Robot



Exoskeleton Robot



Quadruped Robot



AGV Smart Car



ARU Robot

RMD-X Series Part Number Construction

RMD-X4-P6-3-C-N

① ② ③ ④ ⑤ ⑥

- ① Brand Name : R-Reducer M-Motor D-Drive
- ② X Stands For The Series Name, 4 represent motor model number e.g:X4 X6 X8 X10 etc
- ③ Planetary Gear Ratio e.g:P6 P7 P8 etc
- ④ Peak Torque 3N.m
- ⑤ Communication C: CAN bus R: RS485
- ⑥ N: Without Brake

For example

Model	RMD-X6-P6-7-C-N
Illustrate	RMD : Brand Name X6 : Motor model name P6 : Planetary gear ratio 6:1 7 : Peak torque C : Communication C: CAN bus N : Without Brake

Series Name
RMD-X V2

Previous Name
RMD-X4 1:6 V2

Motor Simplified Name
X4-3

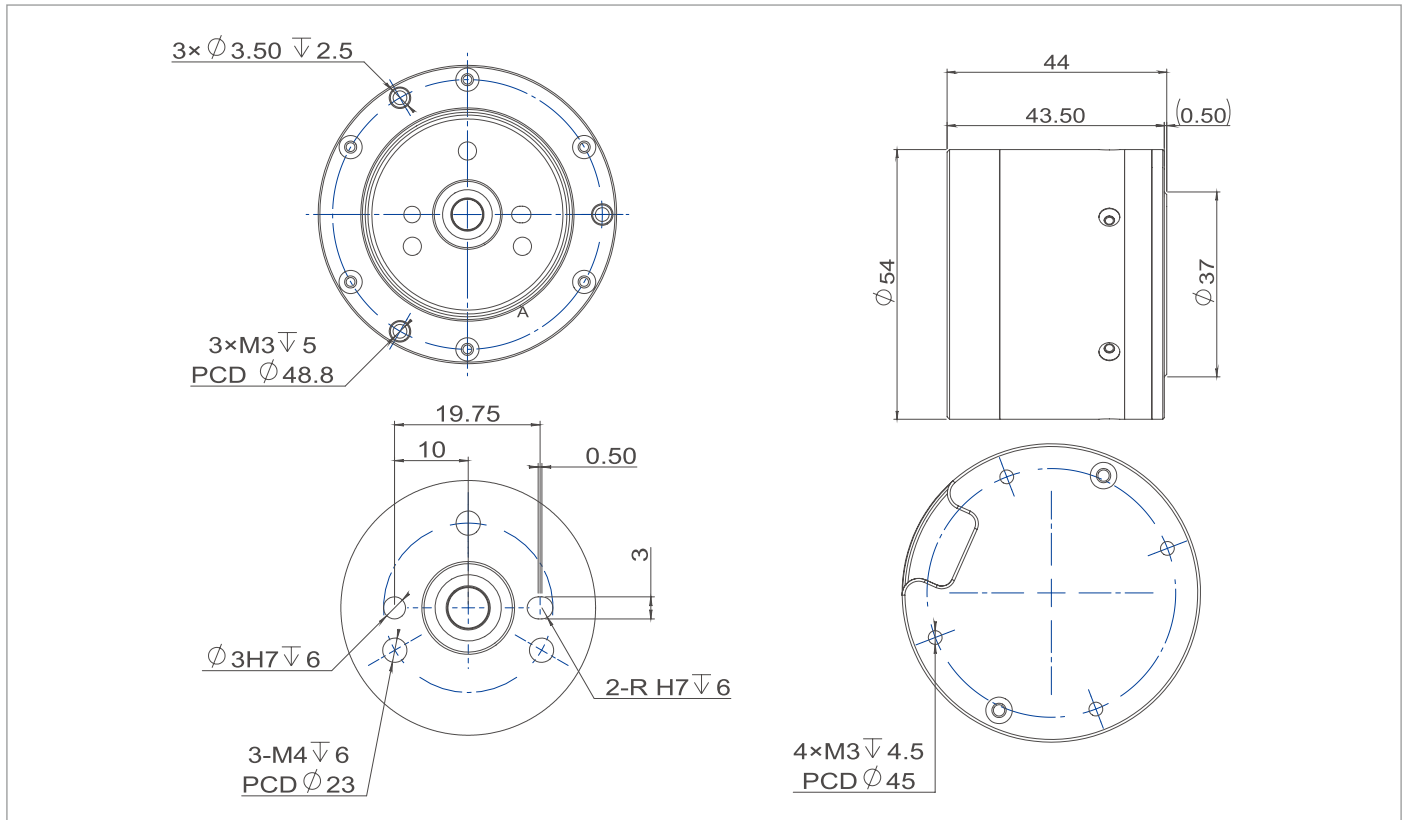


SINGLE ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X4-P6-3-R-N	1102010060230100	N (without brake)
RMD-X4-P6-3-C-N	1102010060130100	N (without brake)

- * 1. The standard motor doesn't support brake, support customization.
- * 2. The standard motor doesn't support IP54, support customization.
- * 3. The standard motor support CAN BUS and RS485.

INSTALLATION DRAWING

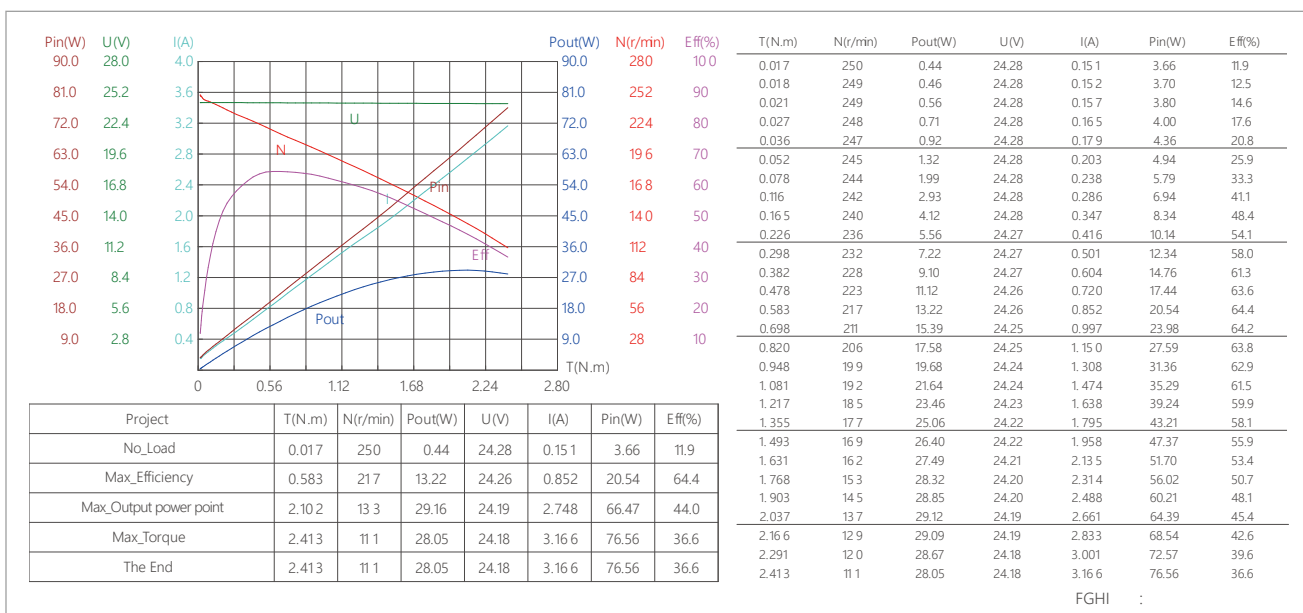


PRODUCT PARAMETERS

Item Name	Unit	X4-3
Gear Ratio	-	6
Input Voltage	V	24
Rated Speed	RPM	200
Rated Torque	N.m	1.5
Rated Power	W	30
Rated Current	A	2
Peak Torque	N.m	3
Peak Current	A	4
Efficiency	%	60
Pole Pair	-	14
Anti-Force Torque	N.m	0.06
Backlash	Arcmin	10
Axial Payload	N	300
Radial Payload	N	550
Inertia	Kg.cm ²	1.2
Encoder Type	bit	18
Communication	-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Weight	kg	0.3

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



Series Name
RMD-X V2

Previous Name
RMD-X6 1:6 V2

Motor Simplified Name
X6-7

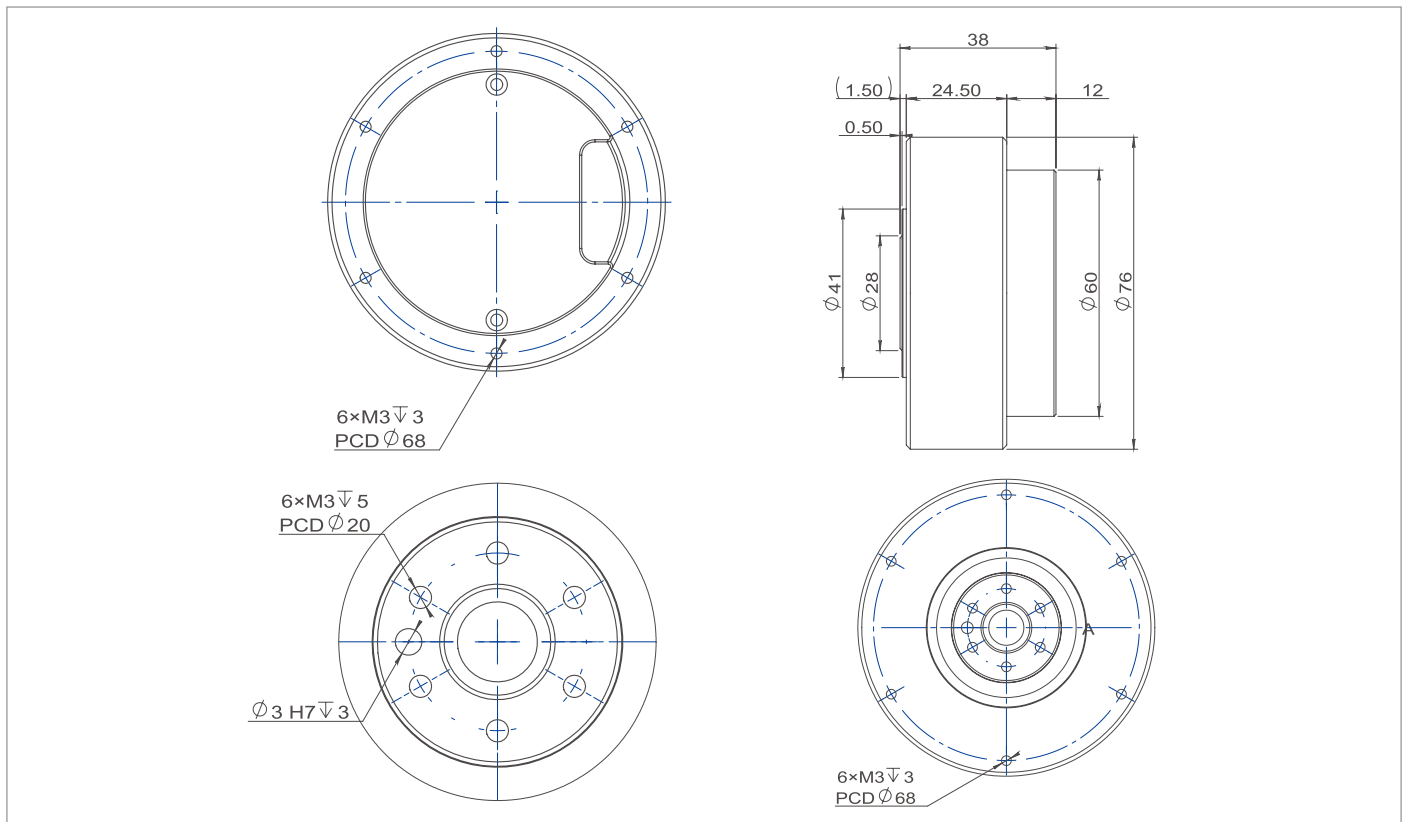


■ SINGLE ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X6-P6-7-R-N	1102150060230100	N (without brake)
RMD-X6-P6-7-C-N	1102150060130100	N (without brake)

- * 1. The standard motor doesn't support brake, support customization.
- * 2. The standard motor doesn't support IP54, support customization.
- * 3. The standard motor support CAN BUS and RS485.

■ INSTALLATION DRAWING

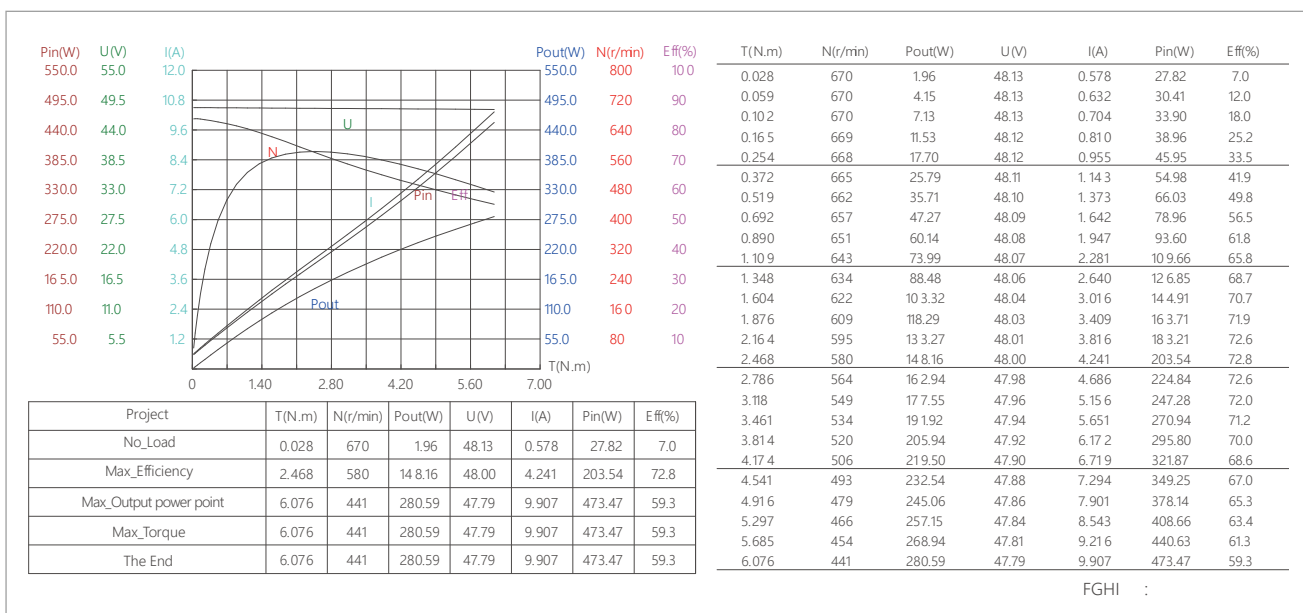


PRODUCT PARAMETERS

Item Name	Unit	X6-7
Gear Ratio	-	6
Input Voltage	V	48
Rated Speed	RPM	400
Rated Torque	N.m	3.5
Rated Power	W	150
Rated Current	A	4
Peak Torque	N.m	7
Peak Current	A	9
Efficiency	%	70
Pole Pair	-	14
Anti-Force Torque	N.m	0.08
Backlash	Arcmin	10
Axial Payload	N	775
Radial Payload	N	1250
Inertia	Kg.cm ²	4.8
Encoder Type	bit	18
Communication	-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Weight	kg	0.35

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



FGHI :

Series Name
RMD-X V2

Previous Name
RMD-X6 S2 1:36 V2

Motor Simplified Name
X6-40

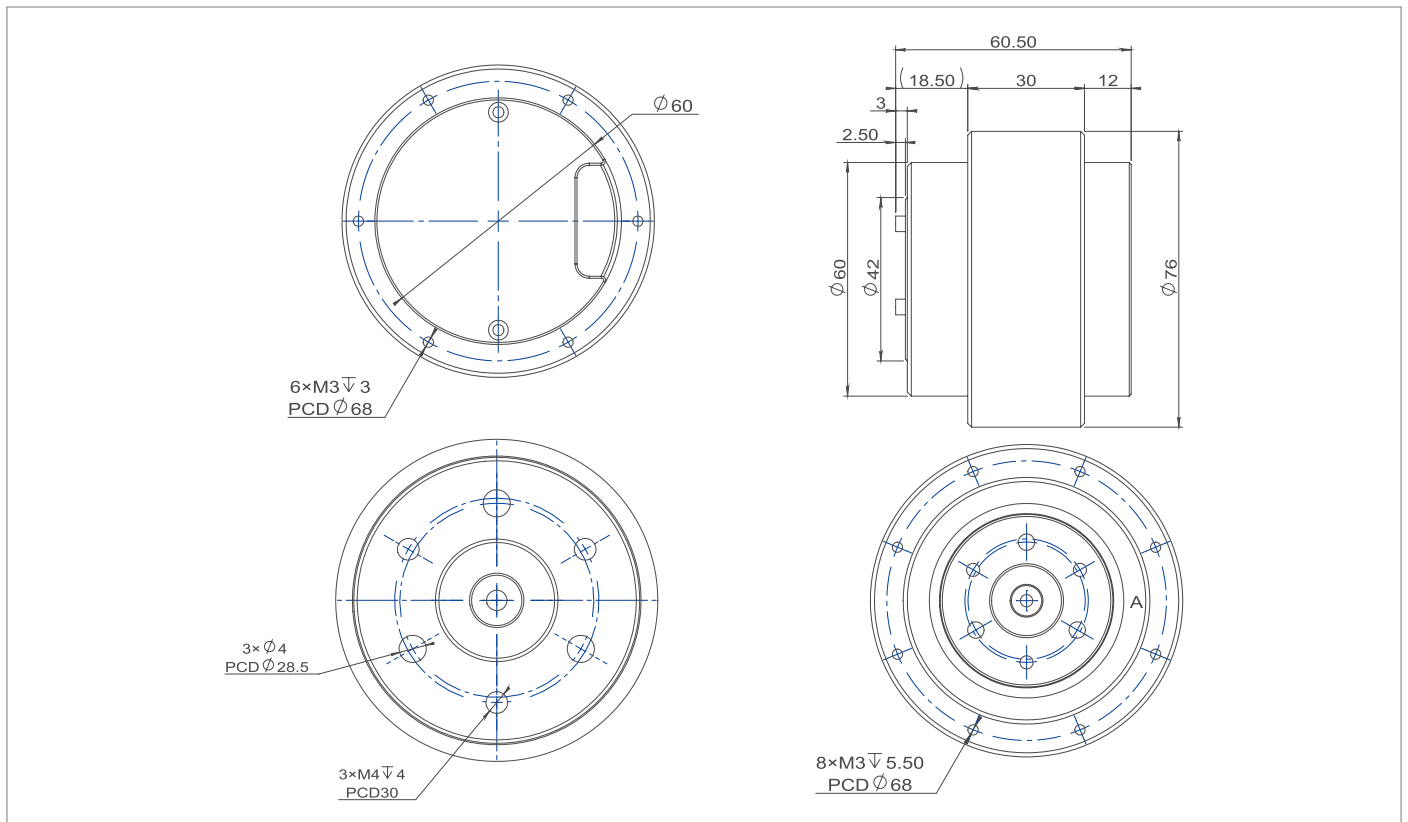


■ SINGLE ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X6-P36-40-R-N	1102050360230100	N (without brake)
RMD-X6-P36-40-C-N	1102050360130100	N (without brake)

- * 1. The standard motor doesn't support brake, support customization.
- * 2. The standard motor doesn't support IP54, support customization.
- * 3. The standard motor support CAN BUS and RS485.

■ INSTALLATION DRAWING

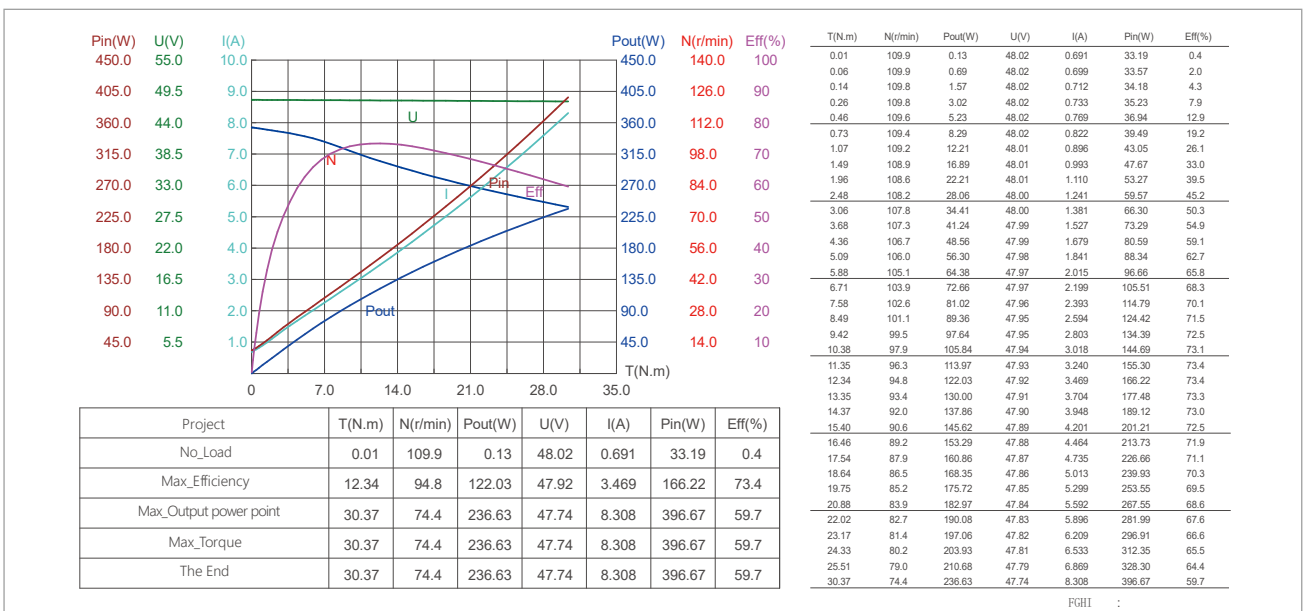


PRODUCT PARAMETERS

Item Name	Unit	X6-40
Gear Ratio	-	36
Input Voltage	V	48
Rated Speed	RPM	90
Rated Torque	N.m	18
Rated Power	W	170
Rated Current	A	5.2
Peak Torque	N.m	40
Peak Current	A	10.5
Efficiency	%	70
Pole Pair	-	14
Anti-Force Torque	N.m	0.91
Backlash	Arcmin	15
Axial Payload	N	775
Radial Payload	N	1250
Inertia	Kg.cm ²	28.8
Encoder Type	bit	18
Communication	-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Weight	kg	0.59

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



Series Name
RMD-X V2

Previous Name
RMD-X8 Pro 1:9 V2

Motor Simplified Name
X8-25

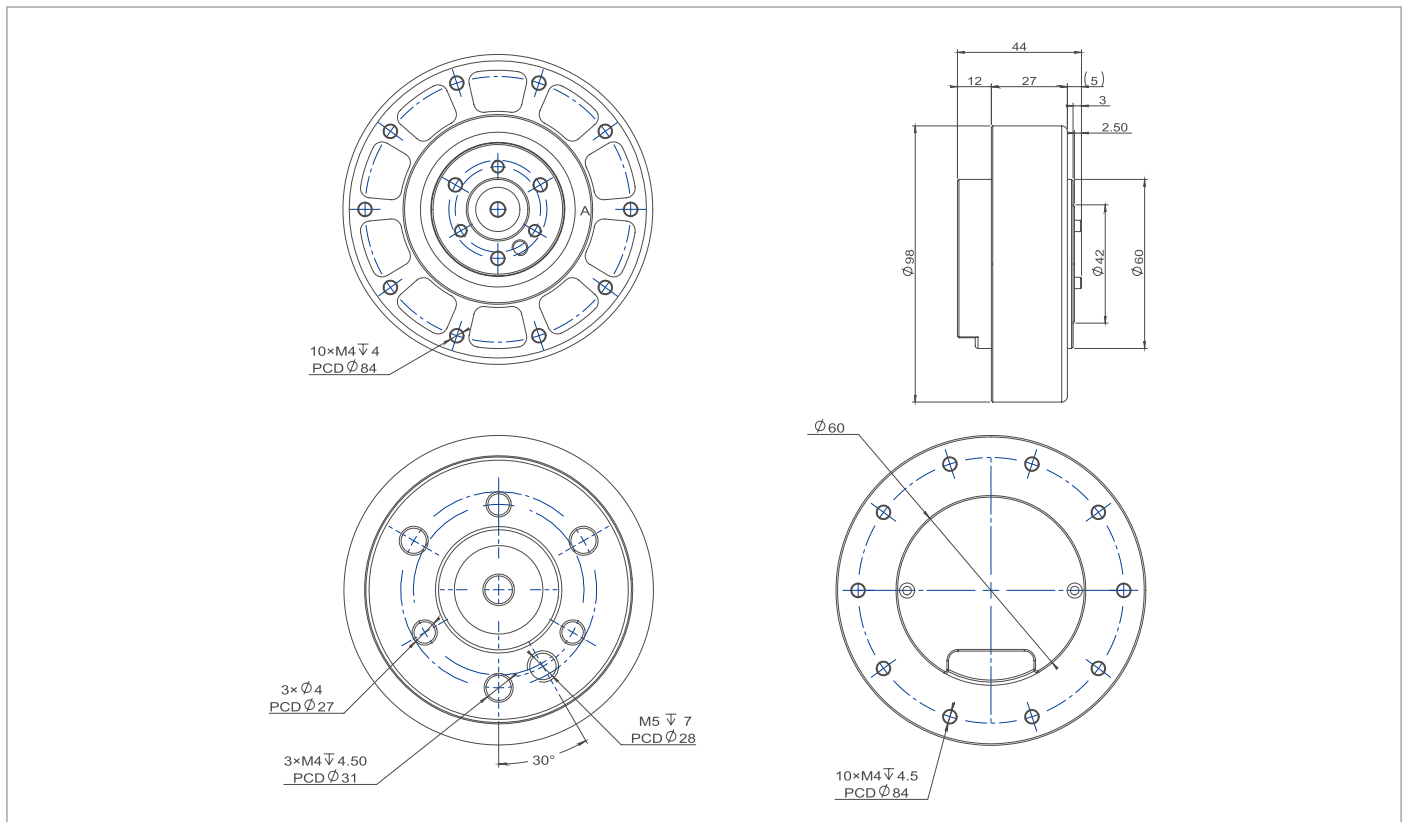


SINGLE ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X8-P9-25-R-N	1102030090230100	N (without brake)
RMD-X8-P9-25-C-N	1102030090130100	N (without brake)

- * 1. The standard motor doesn't support brake, support customization.
- * 2. The standard motor doesn't support IP54, support customization.
- * 3. The standard motor support CAN BUS and RS485.

INSTALLATION DRAWING

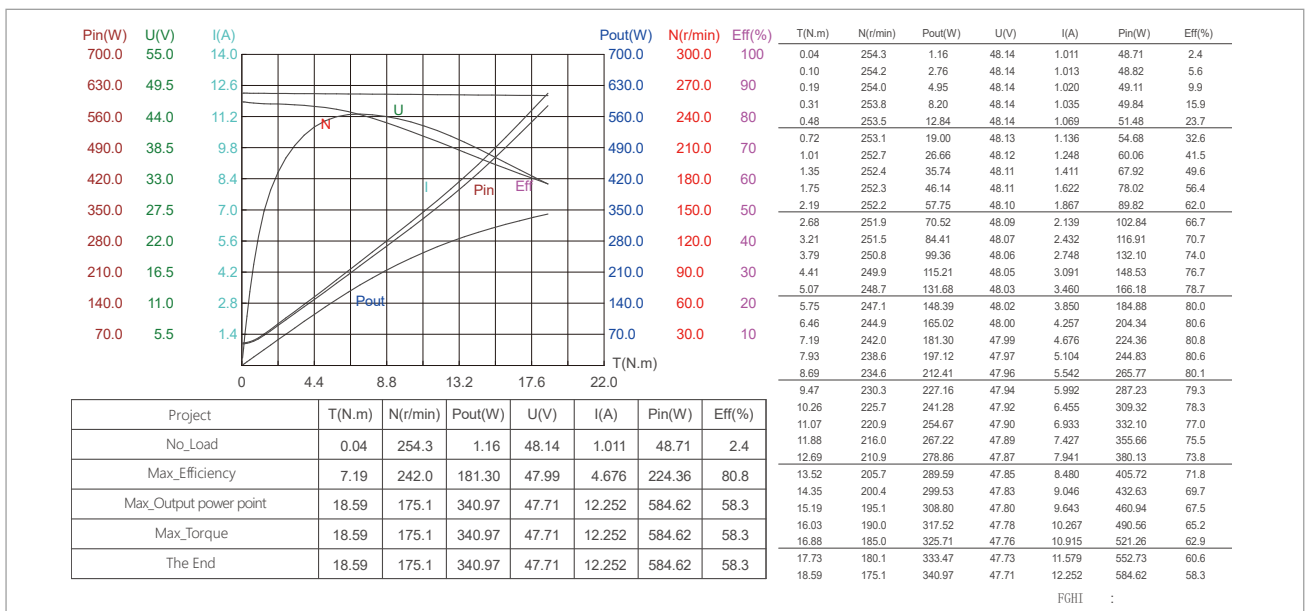


PRODUCT PARAMETERS

Item Name	Unit	X8-25
Gear Ratio	-	9
Input Voltage	V	48
Rated Speed	RPM	110
Rated Torque	N.m	10
Rated Power	W	125
Rated Current	A	3.2
Peak Torque	N.m	25
Peak Current	A	8
Efficiency	%	80
Pole Pair	-	21
Anti-Force Torque	N.m	0.61
Backlash	Arcmin	10
Axial Payload	N	985
Radial Payload	N	1250
Inertia	Kg.cm ²	30.6
Encoder Type	bit	18
Communication	-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Weight	kg	0.71

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



Series Name
RMD-X V3

Previous Name
RMD-X6 1:8 V3

Motor Simplified Name
X6-8

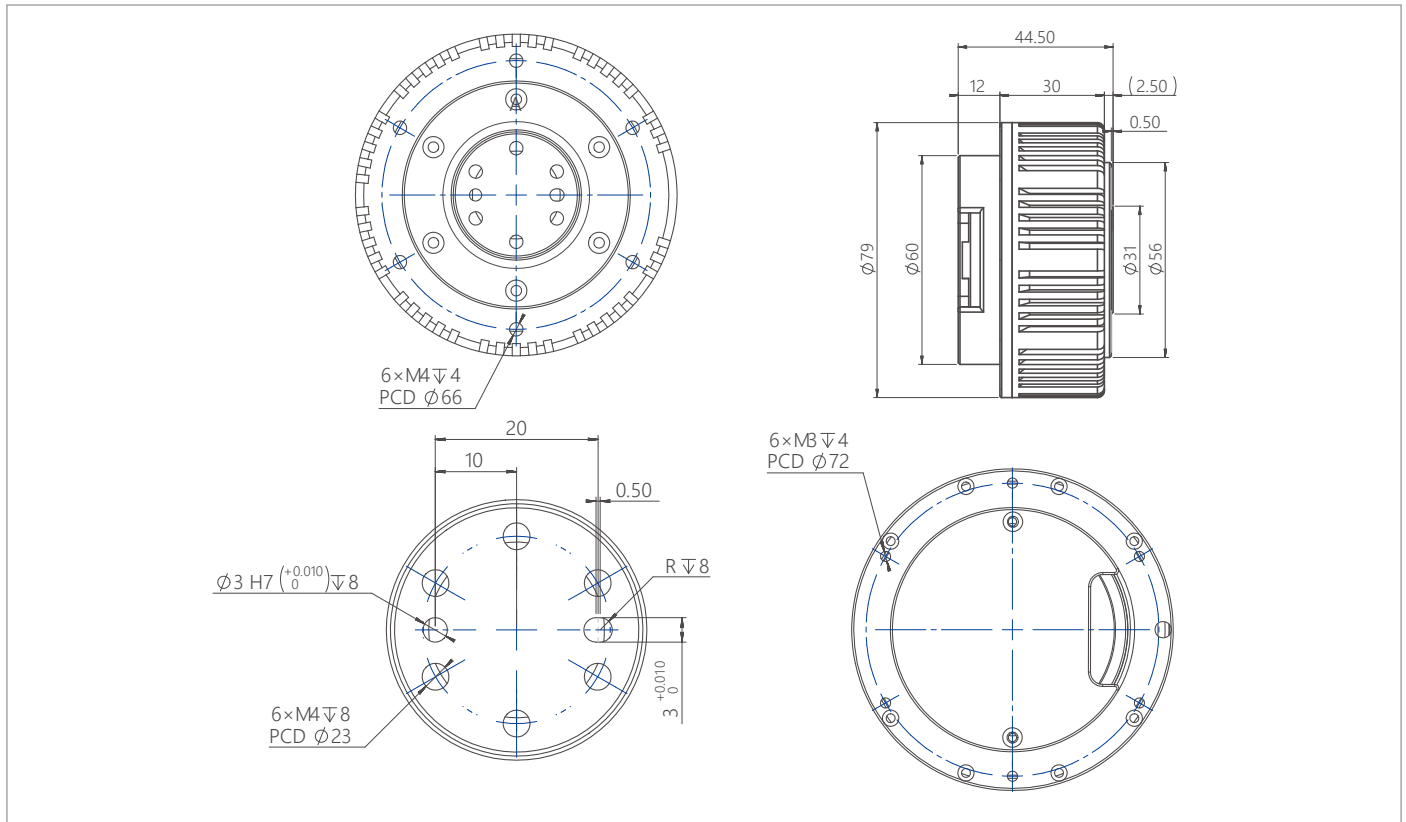


DUAL ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X6-P8-8-R-N	1102020080230200	N (without brake)
RMD-X6-P8-8-C-N	1102020080130200	N (without brake)

- * 1. The standard motor doesn't support brake, support customization.
- * 2. The standard motor doesn't support IP54, support customization.
- * 3. The standard motor support CAN BUS and RS485.

INSTALLATION DRAWING

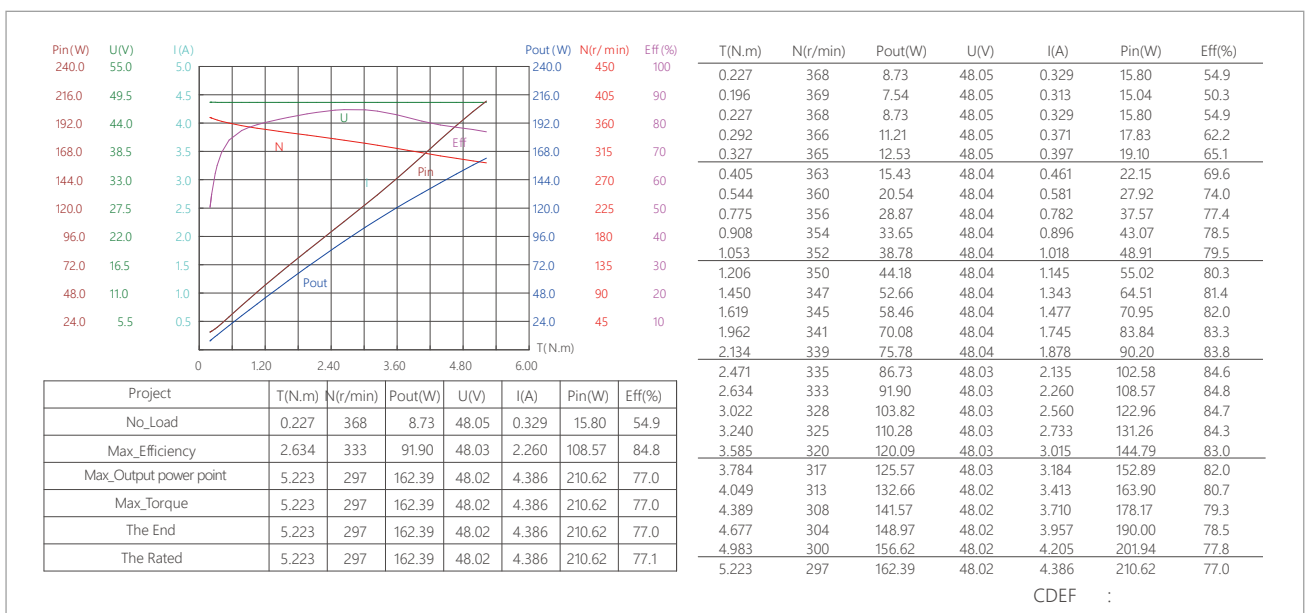


PRODUCT PARAMETERS

Item Name	Unit	X6-8
Gear Ratio	-	8
Input Voltage	V	48
Rated Speed	RPM	310
Rated Torque	N.m	4.5
Rated Power	W	135
Rated Current	A	3.6
Peak Torque	N.m	8
Peak Current	A	7.2
Efficiency	%	78
Pole Pair	-	14
Anti-Force Torque	N.m	0.1
Backlash	Arcmin	10
Axial Payload	N	775
Radial Payload	N	1040
Inertia	Kg.cm ²	6.8
Encoder Type	bit	14 / 14
Communication	-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Weight	kg	0.49

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



CDEF :

Series Name
RMD-X V3

Previous Name
RMD-X8-Pro-H 1:6 V3

Motor Simplified Name
X8-20

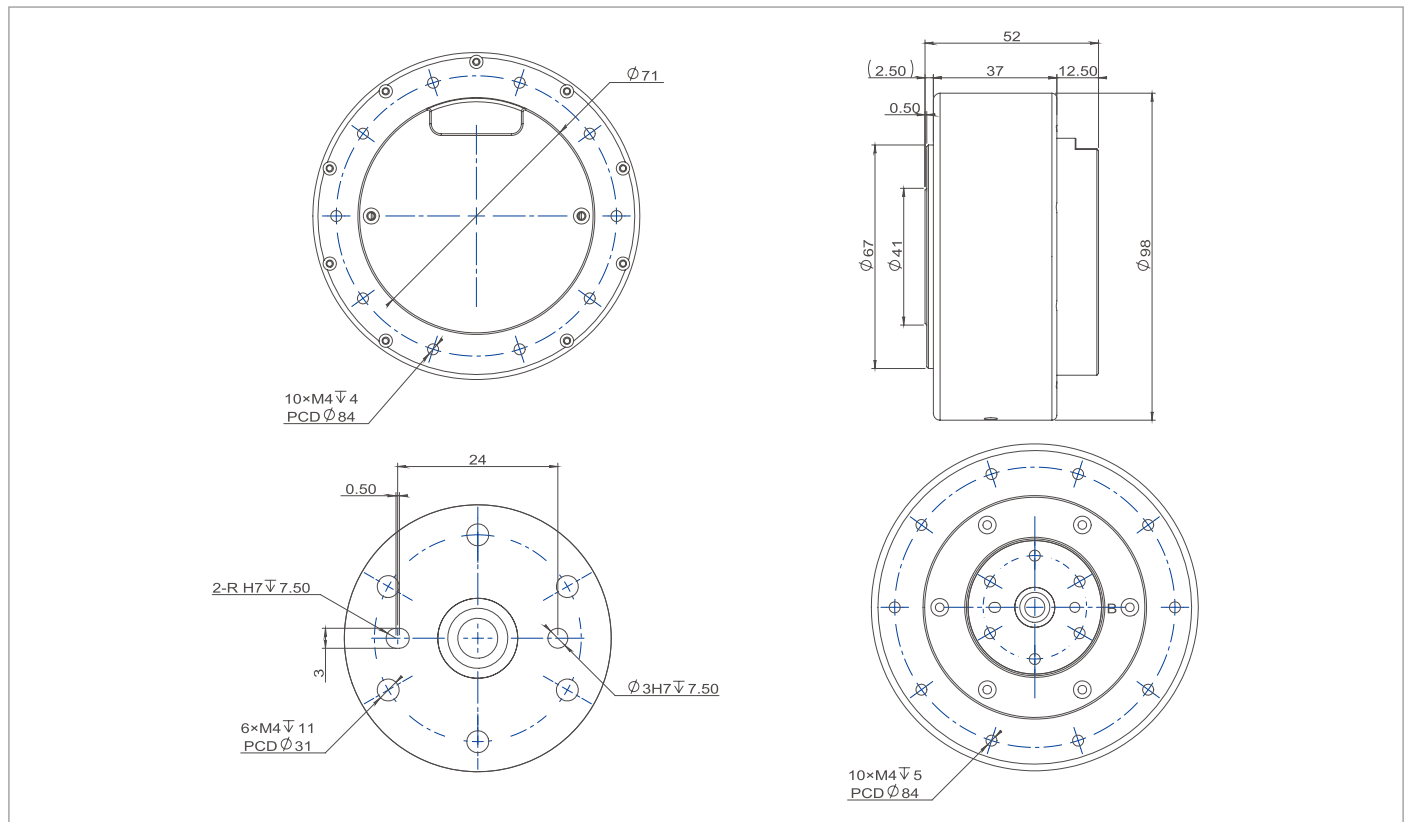


DUAL ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X8-P6-20-R-N	1102140060230200	N (without brake)
RMD-X8-P6-20-C-N	1102140060130200	N (without brake)

- * 1. The standard motor doesn't support brake, support customization.
- * 2. The standard motor doesn't support IP54, support customization.
- * 3. The standard motor support CAN BUS and RS485.

INSTALLATION DRAWING

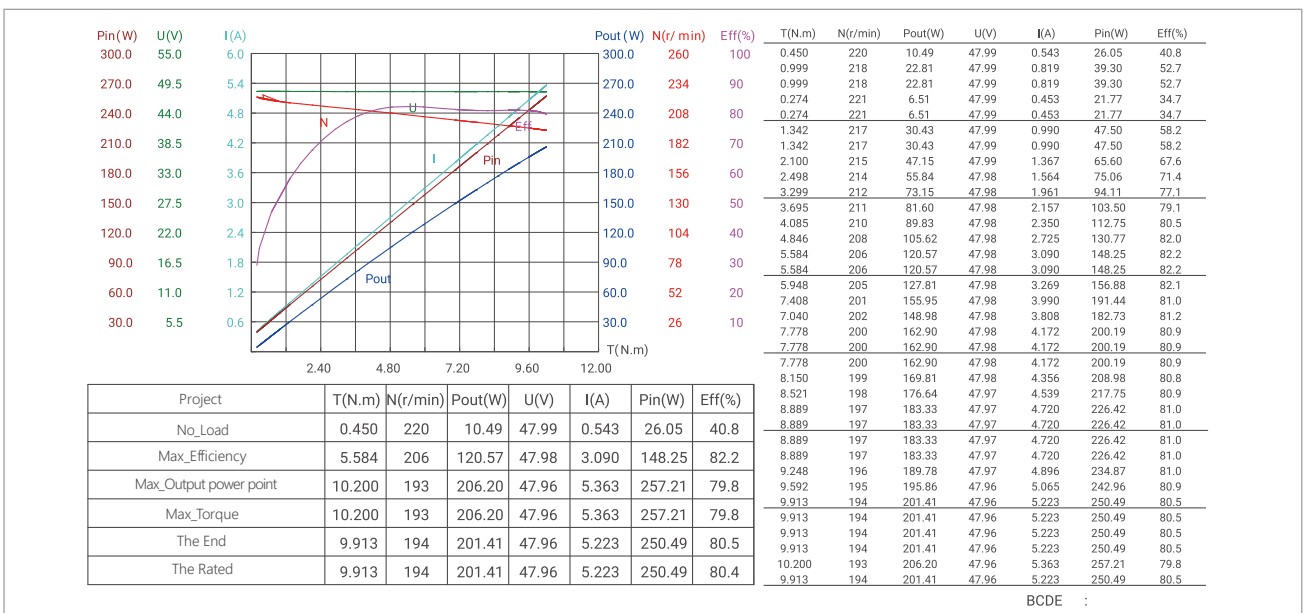


PRODUCT PARAMETERS

Item Name	Unit	X8-20
Gear Ratio	-	6
Input Voltage	V	48
Rated Speed	RPM	190
Rated Torque	N.m	10
Rated Power	W	200
Rated Current	A	5.2
Peak Torque	N.m	20
Peak Current	A	10.5
Efficiency	%	80
Pole Pair	-	20
Anti-Force Torque	N.m	0.4
Backlash	Arcmin	10
Axial Payload	N	985
Radial Payload	N	1250
Inertia	Kg.cm ²	20
Encoder Type	bit	14 / 14
Communication	-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Weight	kg	0.78

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



Series Name
RMD-X V3

Previous Name
RMD-X8 S2 1:36 V3

Motor Simplified Name
X8-60

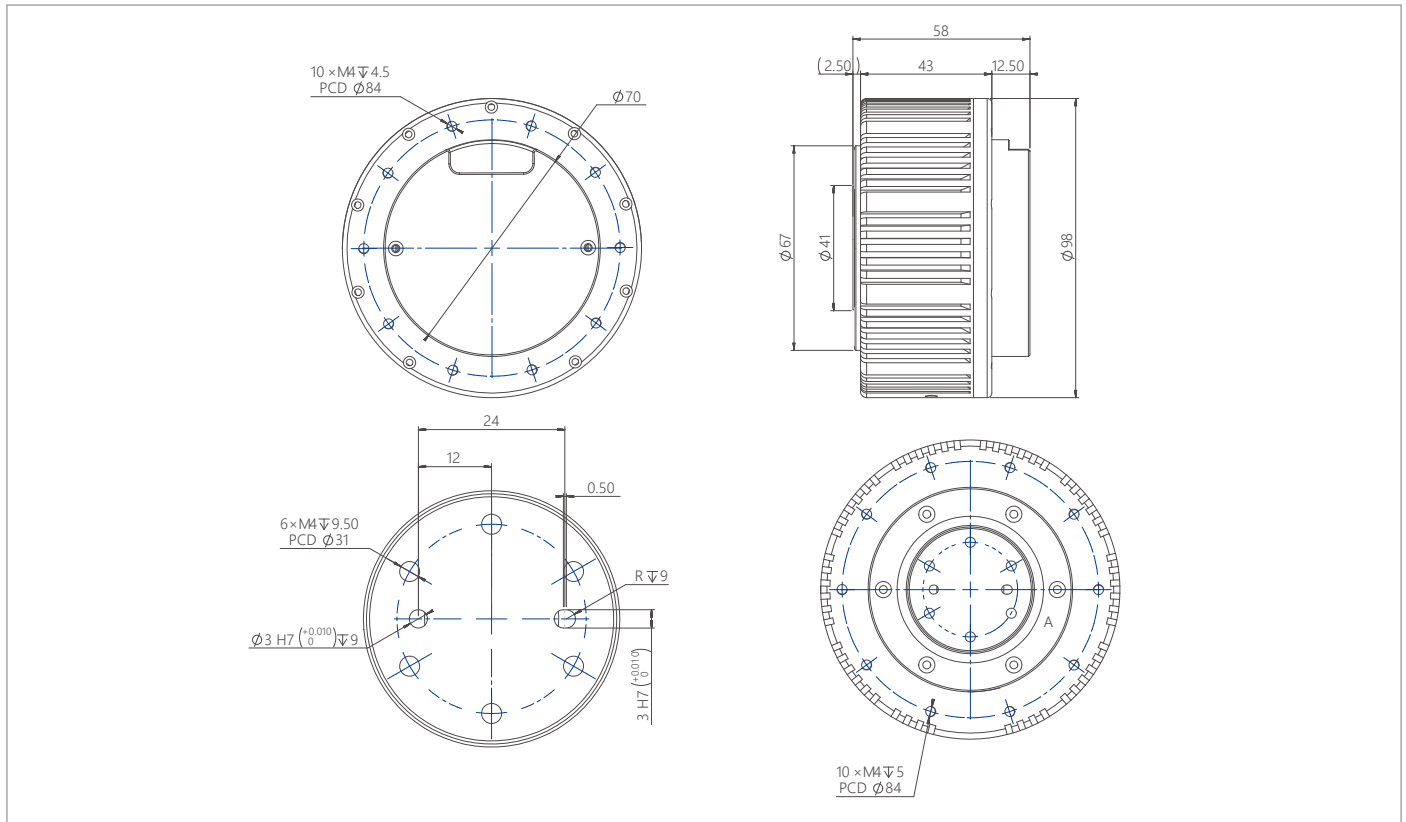


DUAL ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X8-P36-60-R-N	1102060360230200	N (without brake)
RMD-X8-P36-60-C-N	1102060360130200	N (without brake)

- * 1. The standard motor doesn't support brake, support customization.
- * 2. The standard motor doesn't support IP54, support customization.
- * 3. The standard motor support CAN BUS and RS485.

INSTALLATION DRAWING

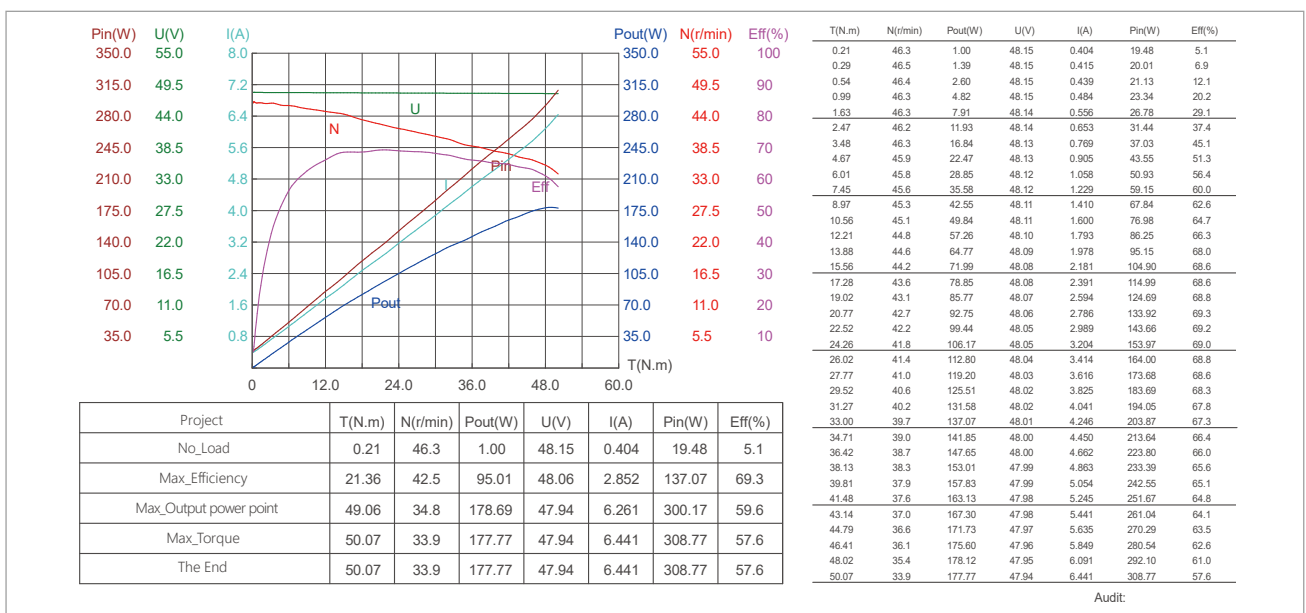


PRODUCT PARAMETERS

Item Name	Unit	X8-60
Gear Ratio	-	36
Input Voltage	V	48
Rated Speed	RPM	40
Rated Torque	N.m	30
Rated Power	W	130
Rated Current	A	4
Peak Torque	N.m	60
Peak Current	A	8
Efficiency	%	69
Pole Pair	-	20
Anti-Force Torque	N.m	1
Backlash	Arcmin	15
Axial Payload	N	985
Radial Payload	N	1250
Inertia	Kg.cm ²	96
Encoder Type	bit	14 / 14
Communication	-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Weight	kg	0.9

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



Audit:

Series Name
RMD-X V3

Previous Name
RMD-X10 1:7 V3

Motor Simplified Name
X10-40

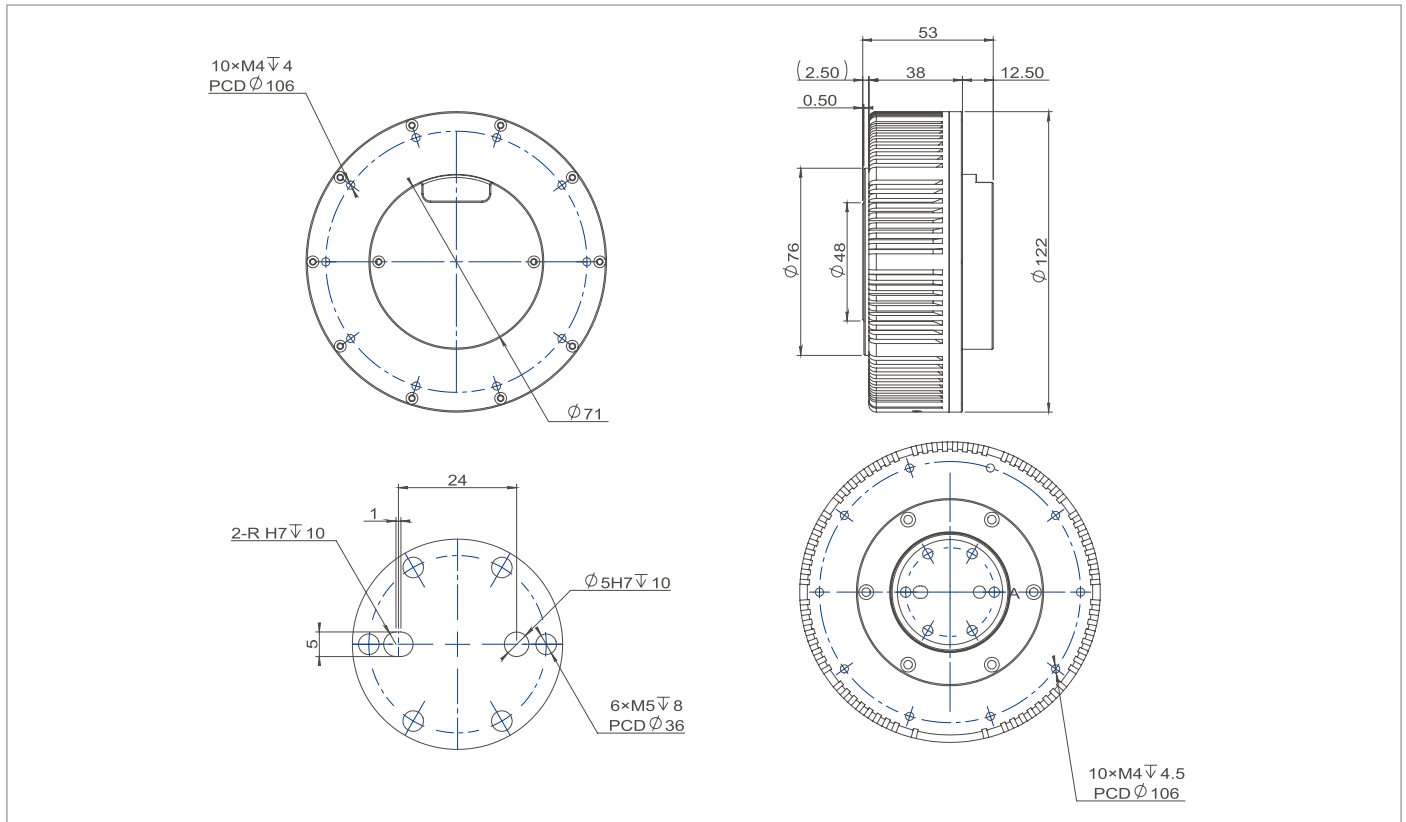


DUAL ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X10-P7-40-R-N	1102040070230200	N (without brake)
RMD-X10-P7-40-C-N	1102040070130200	N (without brake)

- * 1. The standard motor doesn't support brake, support customization.
- * 2. The standard motor doesn't support IP54, support customization.
- * 3. The standard motor support CAN BUS and RS485.

INSTALLATION DRAWING

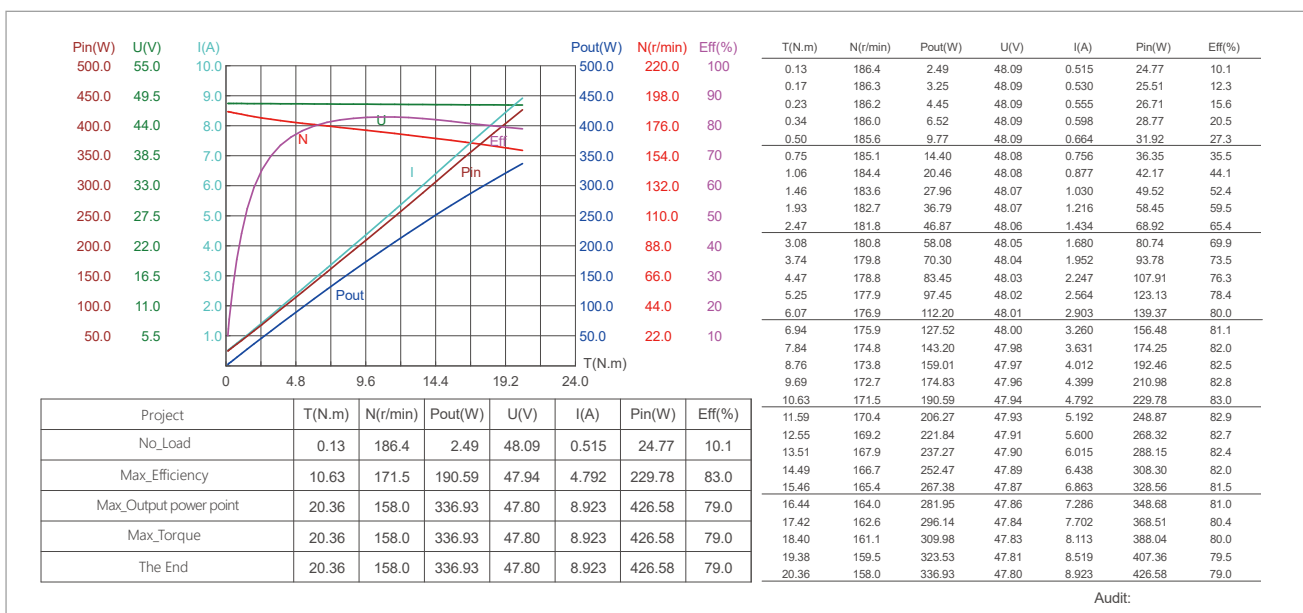


PRODUCT PARAMETERS

Item Name	Unit	X10-40
Gear Ratio	-	7
Input Voltage	V	48
Rated Speed	RPM	165
Rated Torque	N.m	15
Rated Power	W	265
Rated Current	A	6.5
Peak Torque	N.m	40
Peak Current	A	15
Efficiency	%	82
Pole Pair	-	21
Anti-Force Torque	N.m	0.62
Backlash	Arcmin	10
Axial Payload	N	1625
Radial Payload	N	2250
Inertia	Kg.cm ²	39.7
Encoder Type	bit	14 / 14
Communication	-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Weight	kg	1.15

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



Audit:

Series Name
RMD-X V3

Previous Name
RMD-X10 S2 1:35 V3

Motor Simplified Name
X10-100

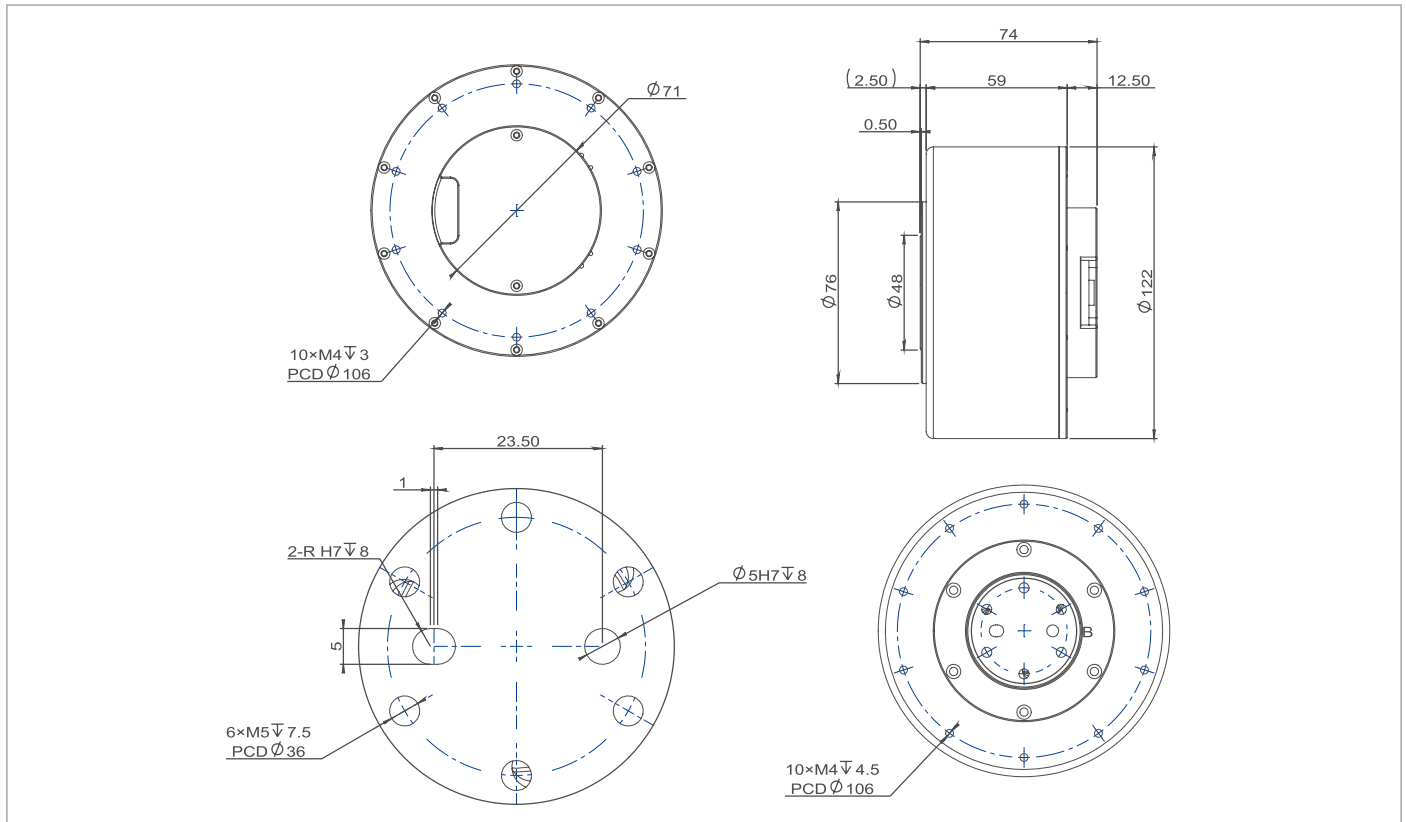


DUAL ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X10-P35-100-R-N	1102070350230200	N (without brake)
RMD-X10-P35-100-C-N	1102070350130200	N (without brake)

- * 1. The standard motor doesn't support brake, support customization.
- * 2. The standard motor doesn't support IP54, support customization.
- * 3. The standard motor support CAN BUS and RS485.

INSTALLATION DRAWING

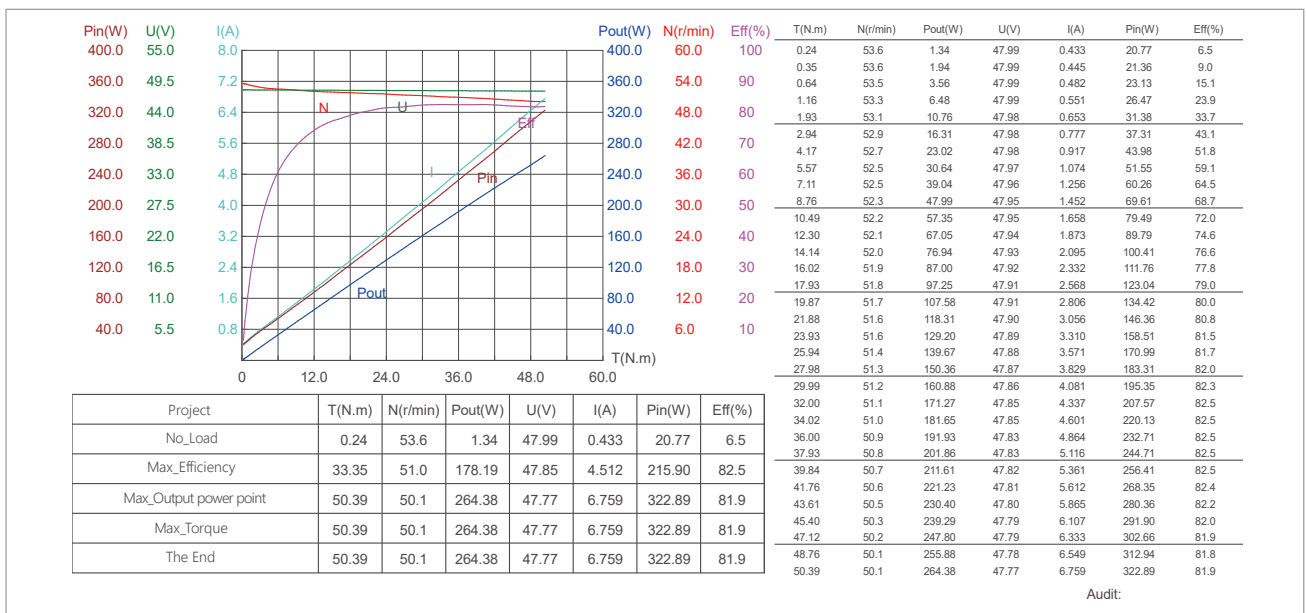


PRODUCT PARAMETERS

Item Name	Unit	X10-100
Gear Ratio	-	35
Input Voltage	V	48
Rated Speed	RPM	50
Rated Torque	N.m	50
Rated Power	W	265
Rated Current	A	6.7
Peak Torque	N.m	100
Peak Current	A	13.5
Efficiency	%	82
Pole Pair	-	21
Anti-Force Torque	N.m	2.88
Backlash	Arcmin	15
Axial Payload	N	1625
Radial Payload	N	2250
Inertia	Kg.cm ²	198.6
Encoder Type	bit	14 / 14
Communication	-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Weight	kg	1.7

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



A new generation of planetary modules V4 series

(EtherCAT+CAN BUS)
(Dual encoder)



Special Series For Robot

Latest Generation RMD-X V4 Planetary Actuator

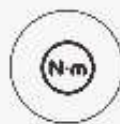
- Crossed Roller Bearing - Pioneer Of Ultra-large Hollow Design - High-precision Dual Encoder - Series Supports EtherAT



X Series Product Features



Hollow Design



High Torque



High Precision



Anti-bending Moment



High Load Capacity



Easy To Operate

Series Name
RMD-X V4

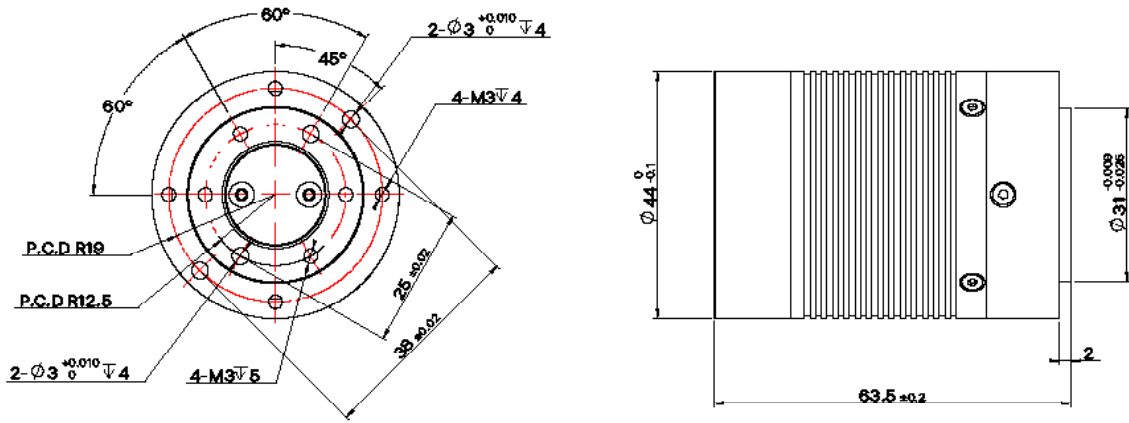
Motor Simplified Name
X2-7



DUAL ENCODER

Actuator Full Name	With Brake / Without Brake	Communication
RMD-X2-P28-7-C	N (without brake)	CAN BUS
RMD-X2-P28-7-E	N (without brake)	EtherCAT

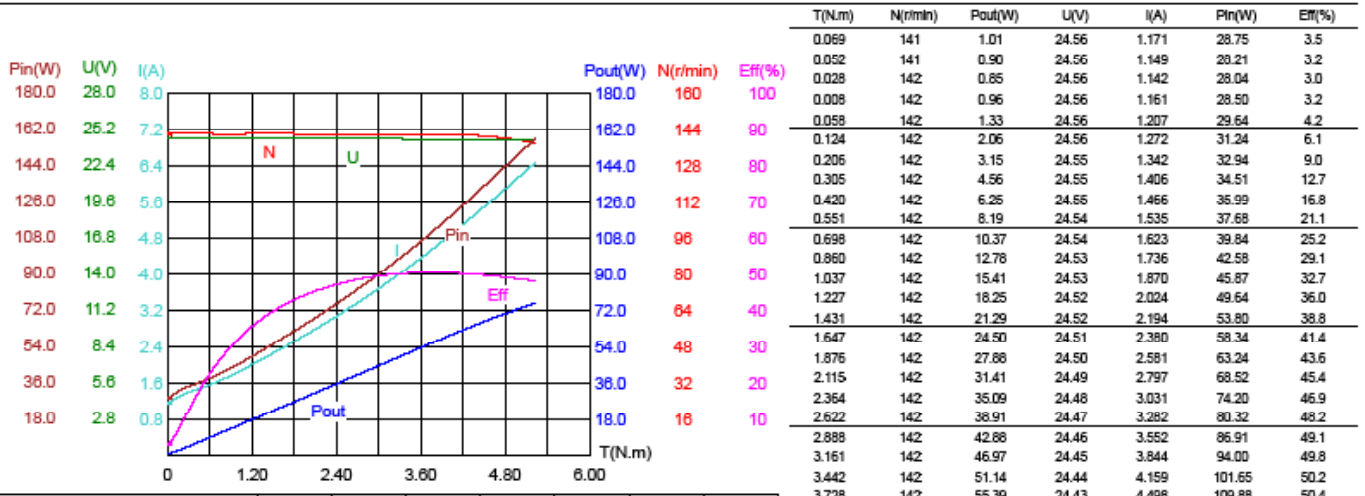
INSTALLATION DRAWING



TORQUE PERFORMANCE CURVE

Motor Type: X2-P28 Rated Volt: 24.0(V)
Customer: Unknown Feature: MC-X-300

No: MT20241220002
TestDate: 2024/12/20



Description	T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
No_Load	0.069	141	1.01	24.56	1.171	28.75	3.5
Max_Eff	3.728	142	55.39	24.43	4.498	109.88	50.4
Max_Pout	5.229	138	75.57	24.35	6.460	157.32	48.0
Max_Torque	5.229	138	75.57	24.35	6.460	157.32	48.0
The End	5.229	138	75.57	24.35	6.460	157.32	48.0

检验审核:

PRODUCT PARAMETERS

Parameters	Unit	X2-7	
Gear Ratio	-	28.17	
Input Voltage	V	24	
No Load Speed	RPM	178	
No Load Input Current	A	1	
Rated Speed	RPM	142	
Rated Torque	N.m	2.5	
Rated Output Power	W	37	
Rated Phase Current	A (rms)	3	
Peak Torque	N.m	7	
Peak Phase Current	A (rms)	8.1	
Efficiency	%	63	
Motor Back-EMF Constant	Vdc/Krpm	4.3	
Module Torque Constant	N.m/A	0.8	
Motor Phase Resistance	Ω	0.61	
Motor Phase Inductance	mH	0.13	
Pole Pair	-	13	
3 Phase Connection	-	Y	
Back Drive Torque	N.m	0.4	
Backlash	Arcmin	12	
Output Bearing Type	-	Deep Groove Ball Bearings	
Axial Load	Tension	KN	0.25
	Compression	KN	0.25
Radial Load	KN	1	
Inertia	Kg.cm ²	0.17	
Encoder Type & Interface	-	Dual Encoder ABS-17BIT [Input] / 18BIT [Output]	
Repeat Position Accuracy	Degree	<0.01	
Communication	-	CAN / EtherCAT	
Weight	kg	0.25	
Insulation Grade	-	F	

STALL TORQUE DATA

	Torque (N.m)	Temperature rise (°C)	Rotation time (s)	Phase current (Arms)
X2-7	3.75	20	15	4.3
	5	48	10	5.7
	6.25	31	8	7.4
	7.5	59	5	8.6

Series Name
RMD-X V4

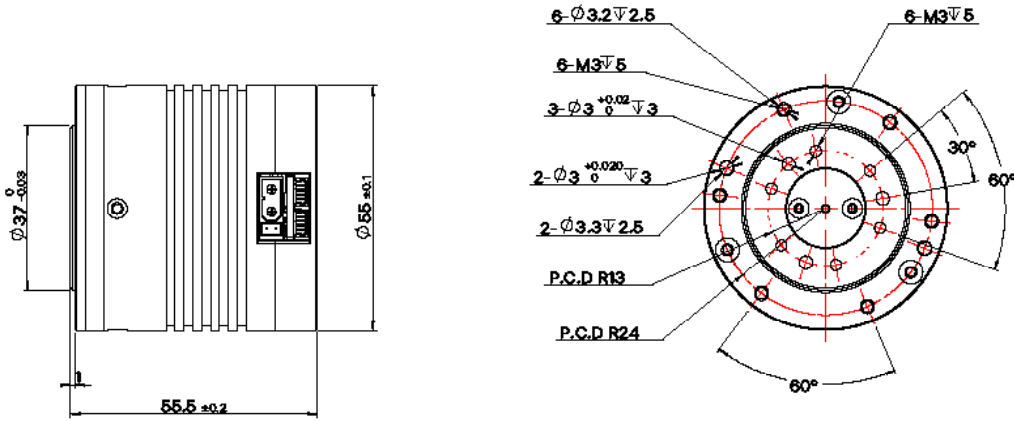
Motor Simplified Name
X4-10



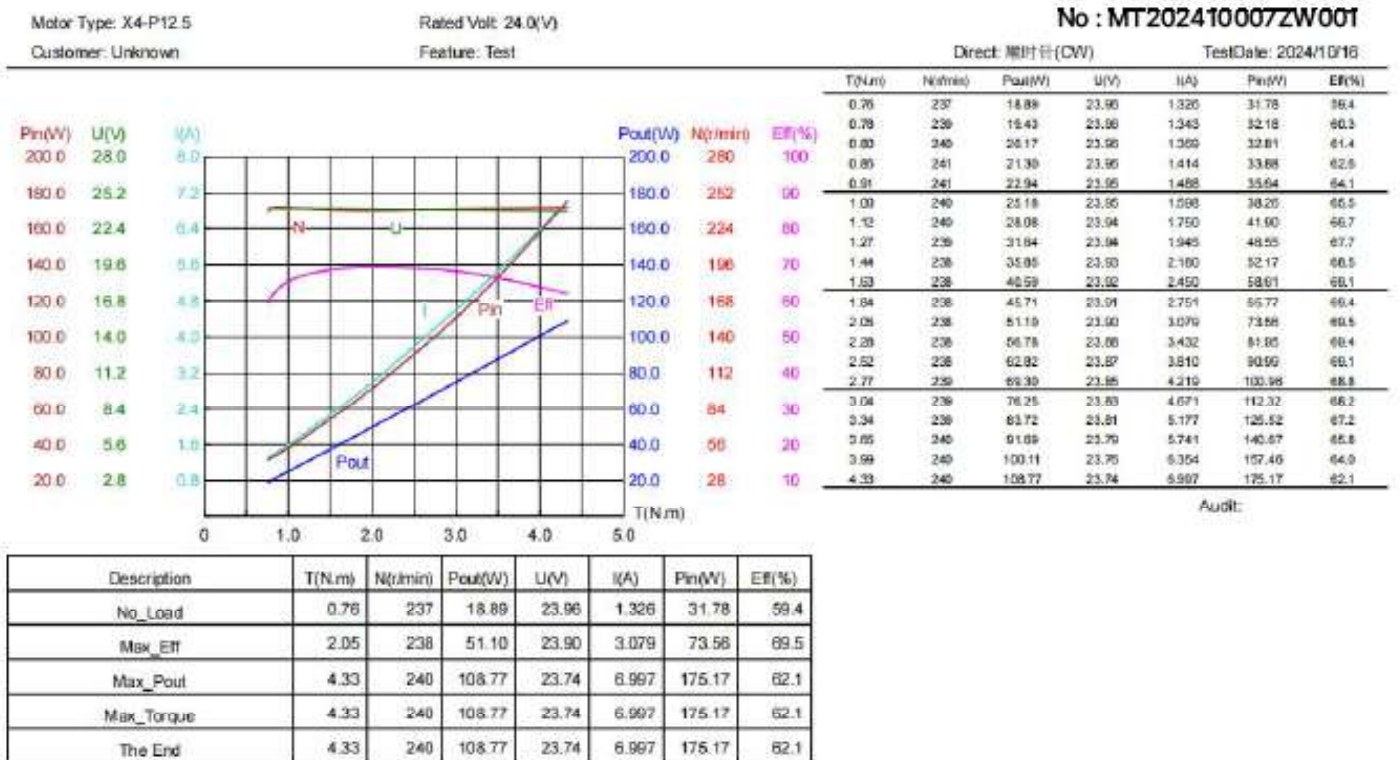
DUAL ENCODER

Actuator Full Name	With Brake / Without Brake	Communication
RMD-X4-P12.5-10-C	N (without brake)	CAN BUS
RMD-X4-P12.5-10-E	N (without brake)	EtherCAT

INSTALLATION DRAWING



TORQUE PERFORMANCE CURVE



PRODUCT PARAMETERS

Parameters	Unit	X4-10	
Gear Ratio	-	12.6	
Input Voltage	V	24	
No Load Speed	RPM	317	
No Load Input Current	A	1	
Rated Speed	RPM	238	
Rated Torque	N.m	4	
Rated Output Power	W	100	
Rated Phase Current	A (rms)	7.8	
Peak Torque	N.m	10	
Peak Phase Current	A (rms)	19.5	
Efficiency	%	69.5	
Motor Back-EMF Constant	Vdc/Krpm	6	
Module Torque Constant	N.m/A	0.8	
Motor Phase Resistance	Ω	0.32	
Motor Phase Inductance	mH	0.14	
Pole Pair	-	13	
3 Phase Connection	-	Y	
Back Drive Torque	N.m	0.8	
Backlash	Arcmin	10	
Output Bearing Type	-	Deep Groove Ball Bearings	
Axial Load	Tension	KN	1.2
	Compression	KN	1.2
Radial Load	KN	1.2	
Inertia	Kg.cm ²	0.25	
Encoder Type & Interface	-	Dual Encoder ABS-17BIT [Input] / 18BIT [Output]	
Repeat Position Accuracy	Degree	<0.01	
Communication	-	CAN / EtherCAT	
Weight	kg	0.26	
Insulation Grade	-	F	

STALL TORQUE DATA

	Torque (N.m)	Temperature rise (°C)	Rotation time (s)	Phase current (Arms)
X4-10	5.2	41	10	7.8
	6	16	8	9.1
	7.2	26	5	11
	8	30	3	12.1

Series Name
RMD-X V4

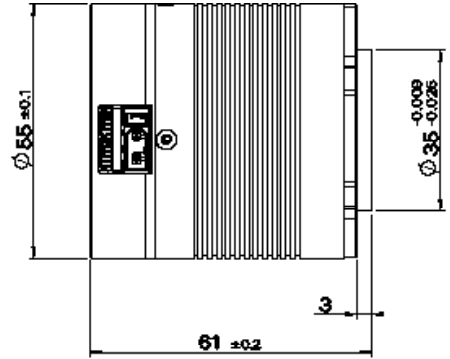
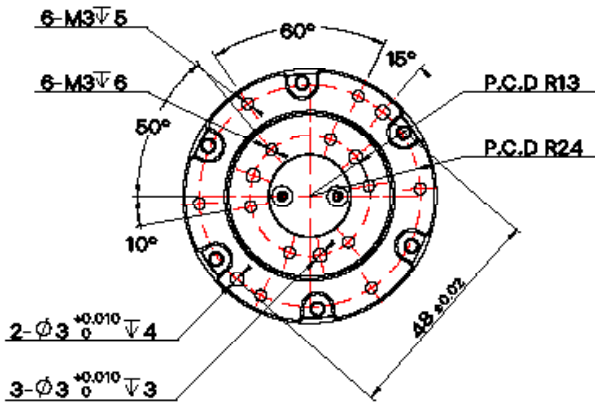
Motor Simplified Name
X4-36



DUAL ENCODER

Actuator Full Name	With Brake / Without Brake	Communication
RMD-X4-P36-36-C	N (without brake)	CAN BUS
RMD-X4-P36-36-E	N (without brake)	EtherCAT

INSTALLATION DRAWING

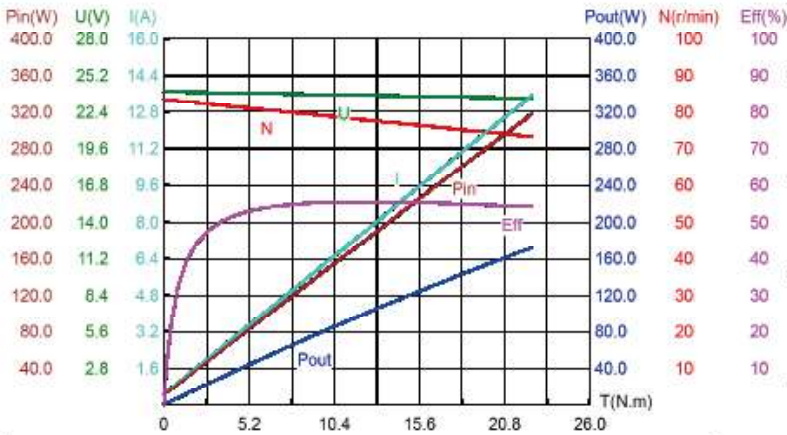


TORQUE PERFORMANCE CURVE

No: MT2412180005

Motor Type: ODM-X4-P36
Customer: BOT
Rated Volt: 48.0(V)
Feature: Test

Direct: 顺时针(CW) TestDate: 2024/12/18



T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
0.00	83	0.00	23.97	0.467	11.19	0.0
0.02	83	0.18	23.97	0.479	11.47	1.5
0.03	83	0.26	23.97	0.484	11.81	2.3
0.18	83	1.58	23.97	0.572	13.71	11.5
0.48	83	4.20	23.96	0.747	17.91	23.5
0.87	83	7.60	23.95	0.975	23.36	32.6
1.37	83	11.85	23.94	1.262	30.20	39.2
1.99	83	17.20	23.93	1.624	38.86	44.3
2.70	82	23.27	23.91	2.039	48.75	47.7
3.43	82	29.38	23.89	2.460	58.78	50.0
4.31	82	36.78	23.88	2.974	71.01	51.8
5.22	81	44.36	23.86	3.506	83.64	53.0
6.22	81	52.51	23.83	4.085	97.35	53.9
7.32	80	61.45	23.81	4.728	112.56	54.6
8.46	80	70.51	23.78	5.388	128.15	55.0
9.69	79	80.23	23.76	6.107	145.09	55.3
10.93	78	89.81	23.73	6.826	161.98	55.4
12.27	78	100.08	23.70	7.609	180.34	55.5
13.65	77	110.40	23.67	8.410	199.07	55.5
15.02	77	120.46	23.64	9.205	217.61	55.4
16.45	76	130.84	23.61	10.041	237.05	55.2
17.91	75	141.17	23.58	10.888	256.71	55.0
19.37	75	151.37	23.55	11.742	276.46	54.8
20.82	74	161.90	23.51	12.642	297.22	54.5
22.48	73	172.26	23.48	13.548	318.06	54.2

Audit:

Description	T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
No_Load	0.00	83	0.00	23.97	0.467	11.19	0.0
Max_Eff	12.27	78	100.08	23.70	7.609	180.34	55.5
Max_Pout	22.48	73	172.26	23.48	13.548	318.06	54.2
Max_Torque	22.48	73	172.26	23.48	13.548	318.06	54.2
The End	22.48	73	172.26	23.48	13.548	318.06	54.2

PRODUCT PARAMETERS

Parameters	Unit	X4-36	
Gear Ratio	-	36	
Input Voltage	V	24	
No Load Speed	RPM	111	
No Load Input Current	A	0.9	
Rated Speed	RPM	83	
Rated Torque	N.m	10.5	
Rated Output Power	W	100	
Rated Phase Current	A (rms)	6.1	
Peak Torque	N.m	34	
Peak Phase Current	A (rms)	21.5	
Efficiency	%	63.1	
Motor Back-EMF Constant	Vdc/Krpm	6.0	
Module Torque Constant	N.m/A	1.9	
Motor Phase Resistance	Ω	0.35	
Motor Phase Inductance	mH	0.17	
Pole Pair	-	13	
3 Phase Connection	-	Y	
Back Drive Torque	N.m	1.14	
Backlash	Arcmin	10	
Output Bearing Type	-	Crossed Roller Bearings	
Axial Load	Tension	KN	1.3
	Compression	KN	1.3
Radial Load	KN	1.5	
Inertia	Kg.cm ²	0.3	
Encoder Type & Interface	-	Dual Encoder ABS-17BIT [Input] / 18BIT [Output]	
Repeat Position Accuracy	Degree	<0.01	
Communication	-	CAN / EtherCAT	
Weight	kg	0.36	
Insulation Grade	-	F	

STALL TORQUE DATA

	Torque (N.m)	Temperature rise (°C)	Rotation time (s)	Phase current (Arms)
X4-36	17.25	30	15	9.2
	23	58	10	12.7
	28.75	41	5	16.3
	34.5	50	3	21.2

Series Name
RMD-X V4

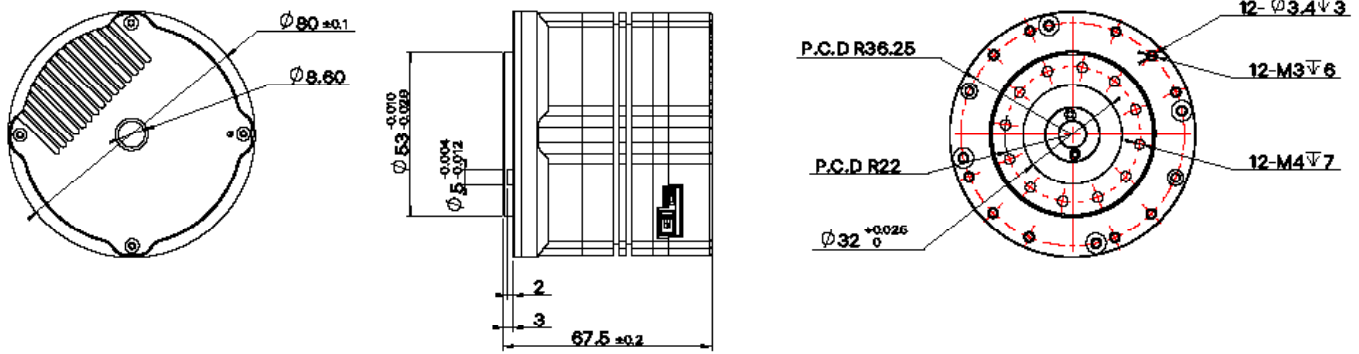
Motor Simplified Name
X6-60



DUAL ENCODER

Actuator Full Name	With Brake / Without Brake	Communication
RMD-X6-P20-60-C	N (without brake)	CAN BUS
RMD-X6-P20-60-E	N (without brake)	EtherCAT

INSTALLATION DRAWING

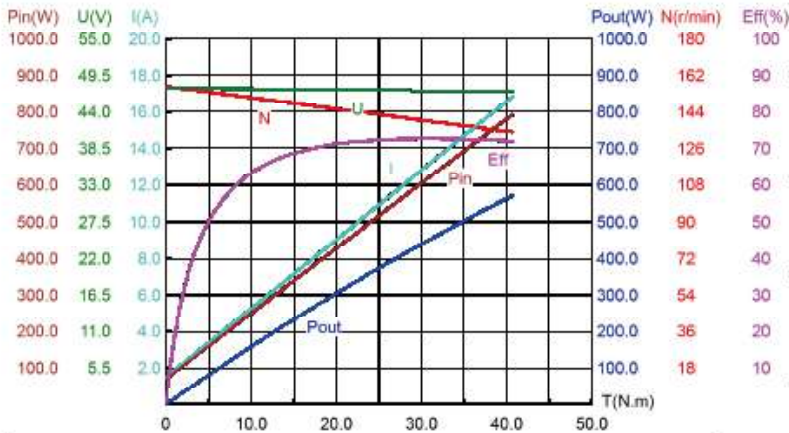


TORQUE PERFORMANCE CURVE

No: MT2412240003

Motor Type: X6
Customer: Unknown
Rated Volt: 48.0(V)
Feature: Test

Direct: 顺时针(CW) TestDate: 2024/12/24



T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
0.02	157	0.33	47.66	1.502	71.59	0.5
0.05	157	0.83	47.66	1.513	72.13	1.1
0.27	157	4.47	47.66	1.597	76.12	5.9
0.74	156	12.05	47.65	1.772	84.44	14.3
1.44	156	23.55	47.64	2.038	97.11	24.2
2.38	155	38.74	47.63	2.392	113.94	34.0
3.37	155	54.63	47.61	2.765	131.65	41.5
4.50	154	72.65	47.60	3.191	151.89	47.8
5.90	153	94.81	47.58	3.720	176.99	53.6
7.37	153	117.83	47.56	4.275	203.32	58.0
8.86	152	140.76	47.54	4.835	229.82	61.2
10.57	151	166.96	47.51	5.481	260.42	64.1
12.36	150	193.87	47.49	6.155	292.26	66.3
14.22	149	221.80	47.46	6.858	325.50	68.1
16.15	148	249.80	47.43	7.585	359.77	69.4
18.22	147	279.59	47.40	8.365	396.52	70.5
20.25	145	308.31	47.37	9.130	432.50	71.3
22.40	144	338.23	47.34	9.840	470.56	71.9
24.58	143	368.15	47.31	10.766	509.33	72.3
26.80	142	397.91	47.28	11.603	548.56	72.5
29.09	140	428.02	47.25	12.466	588.96	72.7
31.38	139	457.52	47.21	13.330	629.34	72.7
33.71	138	486.91	47.18	14.209	670.36	72.6
36.01	137	515.29	47.15	15.076	710.79	72.5
38.38	135	543.90	47.11	15.970	752.40	72.3
40.66	134	570.80	47.08	16.830	792.36	72.0

Audit:

Description	T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
No_Load	0.02	157	0.33	47.66	1.502	71.59	0.5
Max_Eff	31.38	139	457.52	47.21	13.330	629.34	72.7
Max_Pout	40.66	134	570.80	47.08	16.830	792.36	72.0
Max_Torque	40.66	134	570.80	47.08	16.830	792.36	72.0
The End	40.66	134	570.80	47.08	16.830	792.36	72.0

PRODUCT PARAMETERS

Parameters	Unit	X6-60	
Gear Ratio	-	19.612	
Input Voltage	V	48	
No Load Speed	RPM	176	
No Load Input Current	A	0.9	
Rated Speed	RPM	153	
Rated Torque	N.m	20	
Rated Output Power	W	320	
Rated Phase Current	A (rms)	9.5	
Peak Torque	N.m	60	
Peak Phase Current	A (rms)	29.1	
Efficiency	%	72.7	
Motor Back-EMF Constant	Vdc/Krpm	16	
Module Torque Constant	N.m/A	2.1	
Motor Phase Resistance	Ω	0.41	
Motor Phase Inductance	mH	0.51	
Pole Pair	-	10	
3 Phase Connection	-	Y	
Back Drive Torque	N.m	1.6	
Backlash	Arcmin	10	
Output Bearing Type	-	Crossed Roller Bearings	
Axial Load	Tension	KN	1.8
	Compression	KN	0.8
Radial Load	KN	2	
Inertia	Kg.cm ²	0.66	
Encoder Type & Interface	-	Dual Encoder ABS-17BIT [Input] / 17BIT [Output]	
Repeat Position Accuracy	Degree	<0.01	
Communication	-	CAN / EtherCAT	
Weight	kg	0.82	
Insulation Grade	-	F	

STALL TORQUE DATA

	Torque (N.m)	Temperature rise (°C)	Rotation time (s)	Phase current (Arms)
X6-60	30	17	15	12.7
	40	29	10	17.7
	50	37	8	22.6
	60	24	5	28.3

Series Name
RMD-X V4

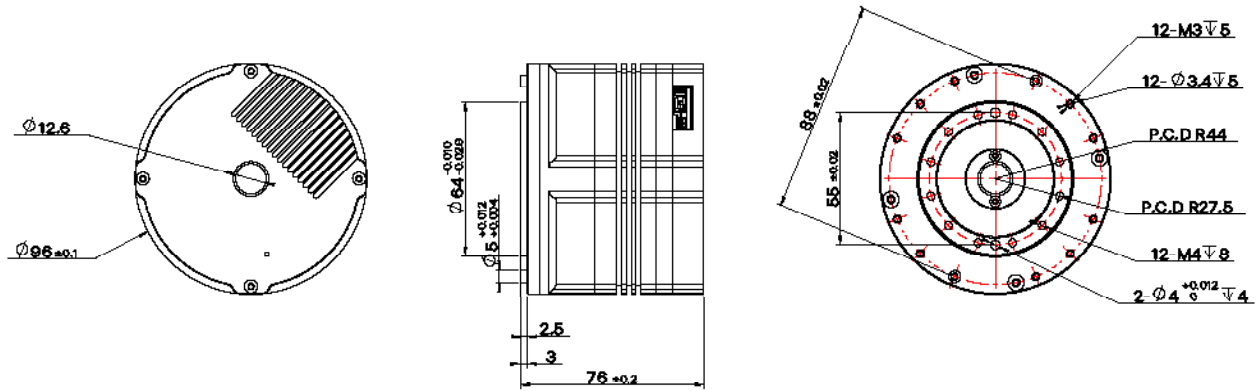
Motor Simplified Name
X8-120



DUAL ENCODER

Actuator Full Name	With Brake / Without Brake	Communication
RMD-X8-P20-120-C	N (without brake)	CAN BUS
RMD-X8-P20-120-E	N (without brake)	EtherCAT

INSTALLATION DRAWING

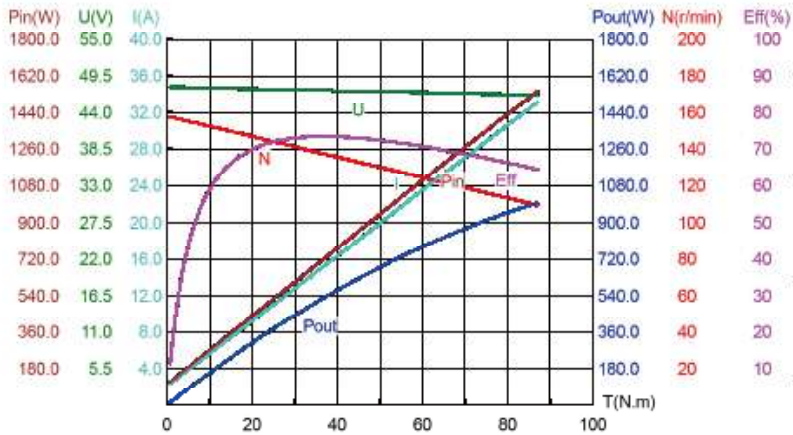


TORQUE PERFORMANCE CURVE

No: MA2412060015

Motor Type: X8 Rated Volt: 48.0(V)
Customer: Unknown Feature: Test

Direct: 顺时针(CW) TestDate: 2024/12/06



T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
0.8	158	13.18	47.88	2.385	114.22	11.5
0.8	158	13.18	47.88	2.385	114.22	11.5
1.0	158	16.47	47.88	2.457	117.62	14.0
1.4	157	23.02	47.87	2.599	124.43	18.5
2.0	157	32.82	47.86	2.813	134.63	24.4
3.0	156	49.05	47.85	3.189	151.62	32.4
4.1	156	66.78	47.84	3.560	170.30	39.2
5.5	155	89.13	47.82	4.058	194.06	45.9
7.3	154	117.53	47.79	4.699	224.57	52.3
9.2	153	147.09	47.76	5.376	256.75	57.3
11.5	152	182.32	47.73	6.194	295.65	61.7
14.0	150	219.91	47.69	7.094	337.88	65.1
16.8	149	261.13	47.65	8.081	385.09	67.8
19.7	147	302.87	47.61	9.113	433.91	69.8
22.7	145	345.00	47.57	10.181	484.32	71.2
26.0	144	391.48	47.52	11.391	541.35	72.3
29.4	142	436.61	47.47	12.602	598.26	73.0
33.1	140	484.18	47.42	13.919	660.05	73.4
36.7	138	528.92	47.37	15.200	720.04	73.5
40.7	135	576.86	47.31	16.624	786.55	73.3
44.7	133	622.93	47.26	18.048	852.69	73.0
48.7	131	667.12	47.20	19.472	919.07	72.6
52.8	129	710.47	47.14	20.931	986.74	72.0
56.9	126	751.86	47.08	22.391	1054.24	71.3
61.2	124	793.15	47.02	23.921	1124.85	70.5
65.4	121	831.39	46.96	25.416	1193.64	69.7
69.8	119	869.23	46.90	26.982	1265.51	68.7
74.0	117	903.24	46.84	28.478	1333.93	67.7
78.3	114	936.66	46.78	30.044	1405.42	66.6
82.7	112	967.81	46.72	31.610	1476.71	65.5
86.9	109	995.43	46.66	33.105	1544.58	64.4

Description	T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
No_Load	0.8	158	13.18	47.88	2.385	114.22	11.5
Max_Eff	36.7	138	528.92	47.37	15.200	720.04	73.5
Max_Pout	86.9	109	995.43	46.66	33.105	1544.58	64.4
Max_Torque	86.9	109	995.43	46.66	33.105	1544.58	64.4
The End	86.9	109	995.43	46.66	33.105	1544.58	64.4

Audit:

PRODUCT PARAMETERS

Parameters	Unit	X8-120	
Gear Ratio	-	19.612	
Input Voltage	V	48	
No Load Speed	RPM	158	
No Load Input Current	A	1.6	
Rated Speed	RPM	127	
Rated Torque	N.m	43	
Rated Output Power	W	574	
Rated Phase Current	A (rms)	17.6	
Peak Torque	N.m	120	
Peak Phase Current	A (rms)	43.8	
Efficiency	%	79	
Motor Back-EMF Constant	Vdc/Krpm	19.2	
Module Torque Constant	N.m/A	2.4	
Motor Phase Resistance	Ω	0.18	
Motor Phase Inductance	mH	0.31	
Pole Pair	-	10	
3 Phase Connection	-	Y	
Back Drive Torque	N.m	3.21	
Backlash	Arcmin	10	
Output Bearing Type	-	Crossed Roller Bearings	
Axial Load	Tension	KN	4
	Compression	KN	1
Radial Load	KN	4.5	
Inertia	Kg.cm ²	1.5	
Encoder Type & Interface	-	Dual Encoder ABS-17BIT [Input] / 17BIT [Output]	
Repeat Position Accuracy	Degree	<0.01	
Communication	-	CAN/EtherCAT	
Weight	kg	1.4	
Insulation Grade	-	F	

STALL TORQUE DATA

	Torque (N.m)	Temperature rise (°C)	Rotation time (s)	Phase current (Arms)
X8-120	64.5	7	15	23.3
	86	10	10	31.1
	107.5	26	8	38.9
	129	30	5	43.8

Series Name
RMD-X V4

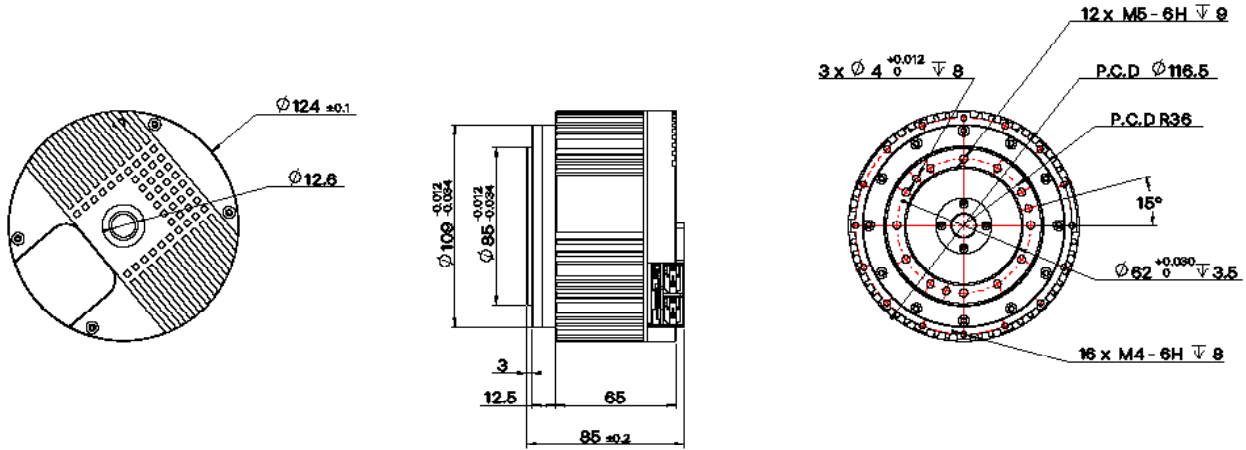
Motor Simplified Name
X12-320



DUAL ENCODER

Actuator Full Name	With Brake / Without Brake	Communication
RMD-X12-P20-320-C	N (without brake)	CAN BUS
RMD-X12-P20-320-E	N (without brake)	EtherCAT

INSTALLATION DRAWING

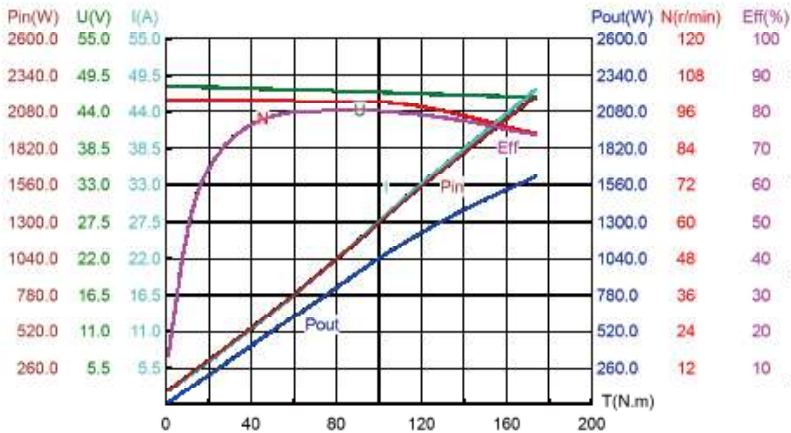


TORQUE PERFORMANCE CURVE

No: MA2502200003

Motor Type: RMD-X12-P20 Rated Volt: 48.0(V)
Customer: Unknown Feature: Test

TestDate: 2025/02/20



T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
1.3	100	13.59	47.96	2.098	100.66	13.5
4.8	100	49.80	47.93	2.937	140.74	28.4
8.1	100	84.27	47.90	3.730	178.66	41.1
11.3	100	117.71	47.88	4.492	215.01	50.6
14.6	100	152.95	47.85	5.287	252.90	57.5
18.5	100	192.99	47.81	6.188	295.75	62.8
22.8	100	238.93	47.77	7.225	345.04	67.1
27.8	100	290.65	47.73	8.403	400.93	70.8
33.2	100	347.43	47.68	9.712	462.87	73.8
39.0	100	408.81	47.63	11.144	530.53	76.1
45.1	100	472.44	47.57	12.667	602.35	77.9
51.3	100	536.35	47.51	14.232	675.98	79.0
57.2	100	597.31	47.46	15.769	748.18	79.7
62.7	100	653.65	47.40	17.230	816.62	80.0
67.8	99	705.19	47.35	18.590	880.18	80.1
72.5	99	753.60	47.31	19.865	939.68	80.2
77.0	99	800.87	47.26	21.092	996.77	80.3
81.5	99	848.55	47.22	22.217	1053.63	80.5
86.0	100	896.77	47.17	23.571	1111.70	80.6
90.6	100	945.06	47.12	24.869	1171.69	80.7
95.3	100	992.87	47.07	26.209	1233.52	80.7
100.0	99	1040.11	47.02	27.576	1296.40	80.3
104.8	99	1086.68	46.96	28.941	1359.09	80.0
109.5	99	1132.28	46.91	30.281	1420.52	79.7
114.3	98	1178.90	46.86	31.604	1481.00	79.5
119.4	98	1221.59	46.81	32.962	1542.90	79.2
124.9	97	1268.19	46.76	34.431	1606.69	78.9
131.1	96	1317.90	46.69	36.065	1683.75	78.4
137.8	95	1369.91	46.63	37.848	1764.37	77.8
144.8	94	1421.34	46.55	39.696	1847.70	77.0
151.6	93	1469.12	46.48	41.500	1928.82	76.3
158.0	92	1511.58	46.42	43.174	2003.83	75.5
163.6	91	1549.32	46.36	44.689	2071.52	74.9
168.8	90	1584.06	46.30	46.066	2132.89	74.3

Description	T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
No_Load	1.3	100	13.59	47.96	2.098	100.66	13.5
Max_Eff	90.6	100	945.06	47.12	24.869	1171.69	80.7
Max_Pout	173.6	89	1617.57	46.25	47.366	2190.78	73.8
Max_Torque	173.6	89	1617.57	46.25	47.366	2190.78	73.8
The End	173.6	89	1617.57	46.25	47.366	2190.78	73.8

PRODUCT PARAMETERS

Parameters	Unit	X12-320	
Gear Ratio	-	20	
Input Voltage	V	48	
No Load Speed	RPM	125	
No Load Input Current	A	2.7	
Rated Speed	RPM	100	
Rated Torque	N.m	85	
Rated Output Power	W	900	
Rated Phase Current	A (rms)	30	
Peak Torque	N.m	320	
Peak Phase Current	A (rms)	100	
Efficiency	%	75	
Motor Back-EMF Constant	Vdc/Krpm	17.9	
Module Torque Constant	N.m/A	3.3	
Motor Phase Resistance	Ω	0.12	
Motor Phase Inductance	mH	0.05	
Pole Pair	-	20	
3 Phase Connection	-	Y	
Back Drive Torque	N.m	3.8	
Backlash	Arcmin	10	
Output Bearing Type	-	Crossed Roller Bearings	
Axial Load	Tension	KN	4.5
	Compression	KN	4.5
Radial Load	KN	5	
Inertia	Kg.cm ²	12.9	
Encoder Type & Interface	-	Dual Encoder ABS-17BIT [Input] / 17BIT [Output]	
Repeat Position Accuracy	Degree	<0.01	
Communication	-	CAN / EtherCAT	
Weight	kg	2.6	
Insulation Grade	-	F	

STALL TORQUE DATA

	Torque (N.m)	Temperature rise (°C)	Rotation time (s)	Phase current (Arms)
X12-320	150	13	10	37.5
	200	5	8	49.5
	250	7	7	61.5
	300	43	3	75.3

Series Name
RMD-X V4

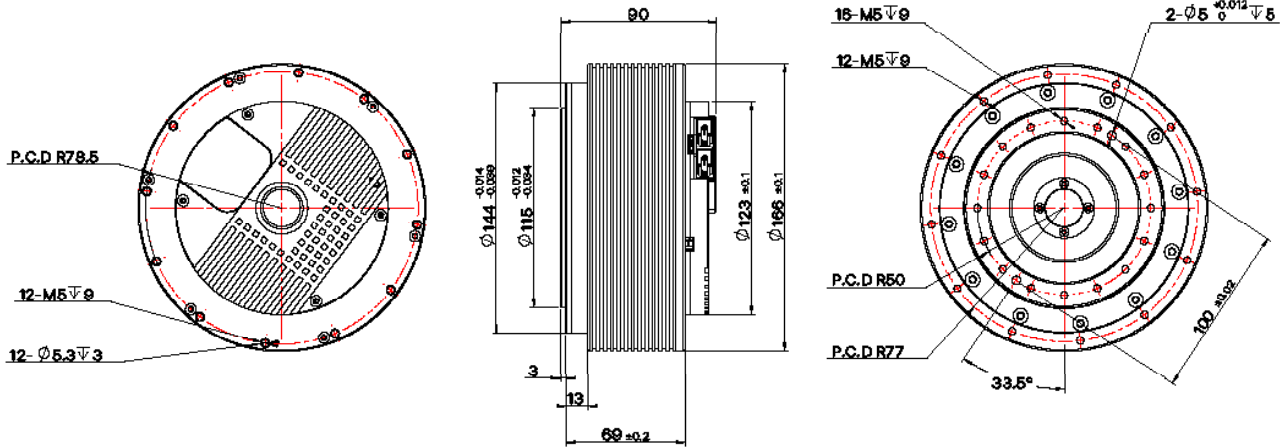
Motor Simplified Name
X15-450



DUAL ENCODER

Actuator Full Name	With Brake / Without Brake	Communication
RMD-X15-P20-450-C	N (without brake)	CAN BUS
RMD-X15-P20-450-E	N (without brake)	EtherCAT

INSTALLATION DRAWING

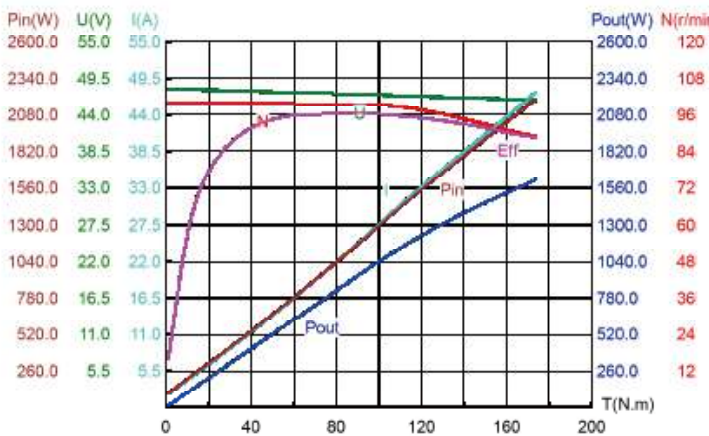


TORQUE PERFORMANCE CURVE

No: MA250220003

Motor Type: RMD-X12-P20 Rated Volt: 48.0(V)
Customer: Unknown Feature: Test

TestDate: 2025/02/20



T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
1.3	100	13.59	47.96	2.098	100.66	13.5
4.8	100	49.80	47.93	2.937	140.74	28.4
8.1	100	84.27	47.90	3.730	178.66	41.1
11.3	100	117.71	47.88	4.492	215.01	50.8
14.6	100	152.95	47.85	5.287	252.90	57.5
18.5	100	192.99	47.81	6.188	295.75	62.8
22.8	100	238.93	47.77	7.225	345.04	67.1
27.8	100	290.65	47.73	8.403	400.93	70.8
33.2	100	347.43	47.68	9.712	462.87	73.8
39.0	100	408.81	47.63	11.144	530.53	76.1
45.1	100	472.44	47.57	12.667	602.35	77.9
51.3	100	536.35	47.51	14.232	675.98	79.0
57.2	100	597.31	47.46	15.769	748.18	79.7
62.7	100	653.65	47.40	17.230	816.62	80.0
67.8	99	705.19	47.35	18.590	880.18	80.1
72.5	99	753.60	47.31	19.865	939.68	80.2
77.0	99	800.87	47.26	21.092	996.77	80.3
81.5	99	845.55	47.22	22.317	1053.63	80.5
86.0	100	896.77	47.17	23.571	1111.70	80.6
90.6	100	945.06	47.12	24.859	1171.69	80.7
95.3	100	992.87	47.07	26.209	1233.52	80.6
100.0	99	1040.11	47.02	27.576	1296.40	80.3
104.8	99	1086.68	46.96	28.941	1359.09	80.0
109.5	99	1132.28	46.91	30.281	1420.52	79.7
114.3	98	1178.90	46.86	31.604	1481.00	79.5
119.4	98	1221.59	46.81	32.962	1542.90	79.2
124.9	97	1268.19	46.76	34.431	1606.69	78.9
131.1	96	1317.90	46.69	36.065	1683.75	78.4
137.8	95	1369.91	46.63	37.848	1764.37	77.8
144.8	94	1421.34	46.55	39.696	1847.70	77.0
151.6	93	1469.12	46.48	41.500	1928.82	76.3
158.0	92	1511.58	46.42	43.174	2003.83	75.5
163.6	91	1549.32	46.36	44.689	2071.52	74.9
168.8	90	1584.06	46.30	46.066	2132.89	74.3

Description	T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
No_Load	1.3	100	13.59	47.96	2.098	100.66	13.5
Max_Eff	90.6	100	945.06	47.12	24.869	1171.69	80.7
Max_Pout	173.6	89	1617.57	46.25	47.366	2190.78	73.8
Max_Torque	173.6	89	1617.57	46.25	47.366	2190.78	73.8
The End	173.6	89	1617.57	46.25	47.366	2190.78	73.8

PRODUCT PARAMETERS

Parameters	Unit	X15-450	
Gear Ratio	-	20.25	
Input Voltage	V	72	
No Load Speed	RPM	108	
No Load Input Current	A	3.5	
Rated Speed	RPM	98	
Rated Torque	N.m	145	
Rated Output Power	W	1480	
Rated Phase Current	A (rms)	25	
Peak Torque	N.m	450	
Peak Phase Current	A (rms)	69.2	
Efficiency	%	82.4	
Motor Back-EMF Constant	Vdc/Krpm	29.9	
Module Torque Constant	N.m/A	5.8	
Motor Phase Resistance	Ω	0.08	
Motor Phase Inductance	mH	0.14	
Pole Pair	-	20	
3 Phase Connection	-	Y	
Back Drive Torque	N.m	4	
Backlash	Arcmin	10	
Output Bearing Type	-	Crossed Roller Bearings	
Axial Load	Tension	KN	5.4
	Compression	KN	5.4
Radial Load	KN	6	
Inertia	Kg.cm ²	31.6	
Encoder Type & Interface	-	Dual Encoder ABS-17BIT [Input] / 17BIT [Output]	
Repeat Position Accuracy	Degree	<0.01	
Communication	-	CAN / EtherCAT	
Weight	kg	3.5	
Insulation Grade	-	F	

STALL TORQUE DATA

	Torque (N.m)	Temperature rise (°C)	Rotation time (s)	Phase current (Arms)
X15-450	217.5	15	15	31.1
	290	15	10	41
	362.5	20	8	51.6
	435	25	5	67.2

METICULOUSLY CRAFTED

14-bit singleturn absolute encoder

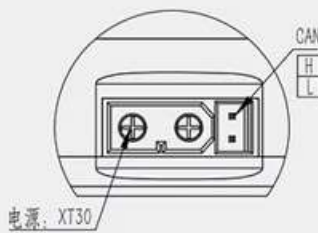
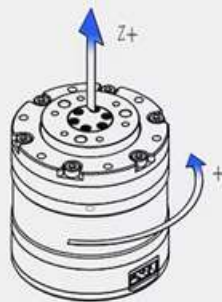
To provide you with a better experience



- CAN bus communication

- Configure double coding, and the zero point will not be lost after power failure

Product interface, coordinate system definition and accessory description



Facing the output shaft of the module, the counterclockwise rotation speed is positive, and the angle increases;
The clockwise rotation speed is negative and the angle decreases.



Both support a second encoder

1. The first encoder records the multiturn position, and the second encoder records the output shaft position.

2. RMD-X planetary series, with high speed, high dynamic response and high torque density, is suitable for the needs of bionic robots with high sensitivity.

3. Multiple protections such as over-current protection, over-temperature protection, and over-voltage protection make the product safer and more secure.



Compatible with host computer software for parameter tuning /test/firmware upgrade

Support open source development platforms, such as PC/MCU/ PLC/industrial computer/Raspberry Pi

- Speed control mode
- Position control mode
- Current control mode
- Regenerative braking control
- Energy consumption brake control

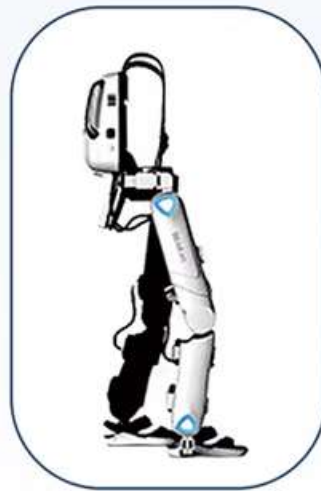


Fields of application

It is widely used in foot-type robots/robotic arms/SCARA robots, etc



Robotic arm



Exoskeleton Robot



Humanoid Robot



Quadruped Robot



AGV Smart Car



ARU Robot

Design for Bionic Robot

Series Name

RMD-X Series

Motor Simplified Name

X4-24

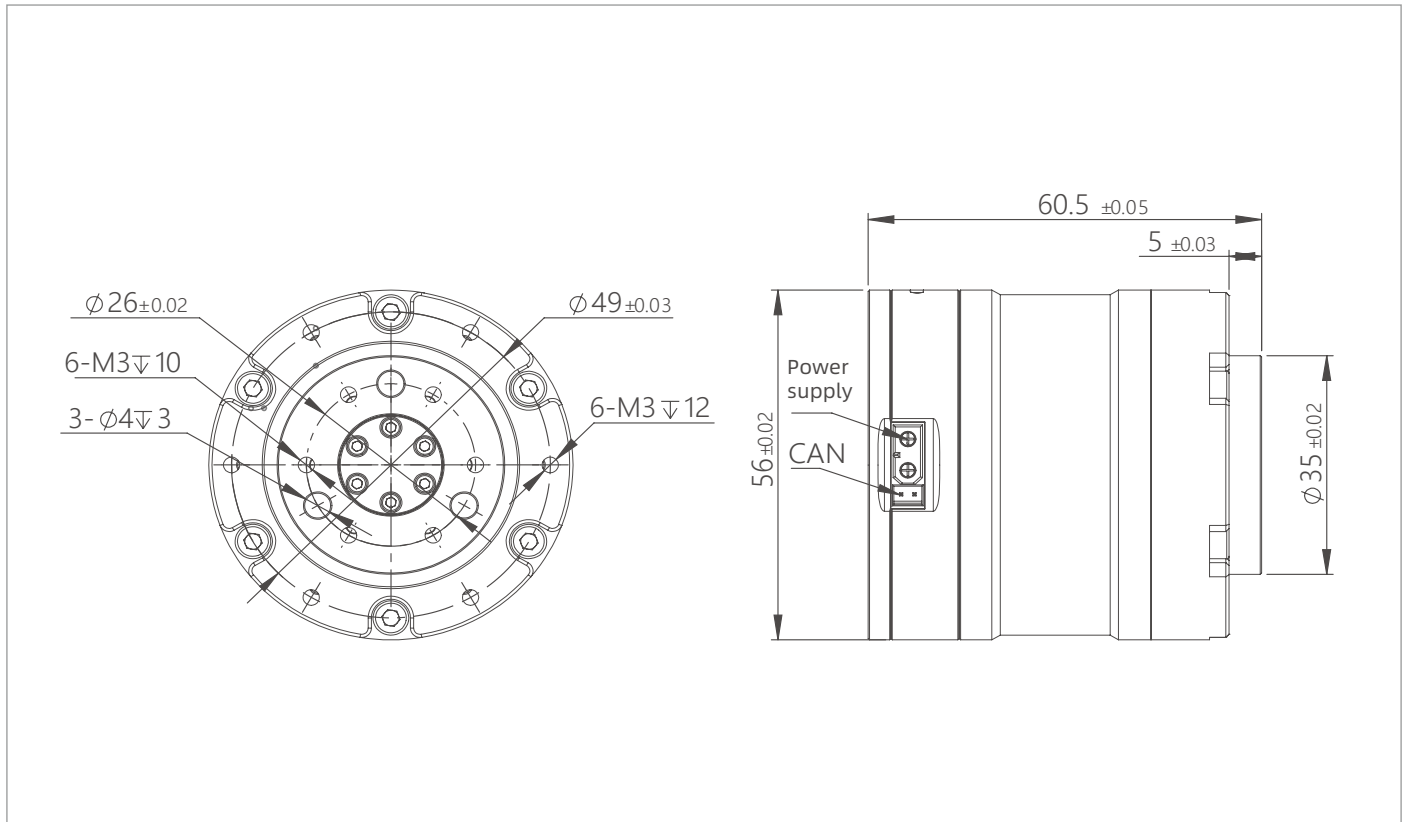


DUAL ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X4-P36-24-C-N	1102120360140200	N (without brake)

* 1. The standard motor only support CAN BUS communication.

INSTALLATION DRAWING

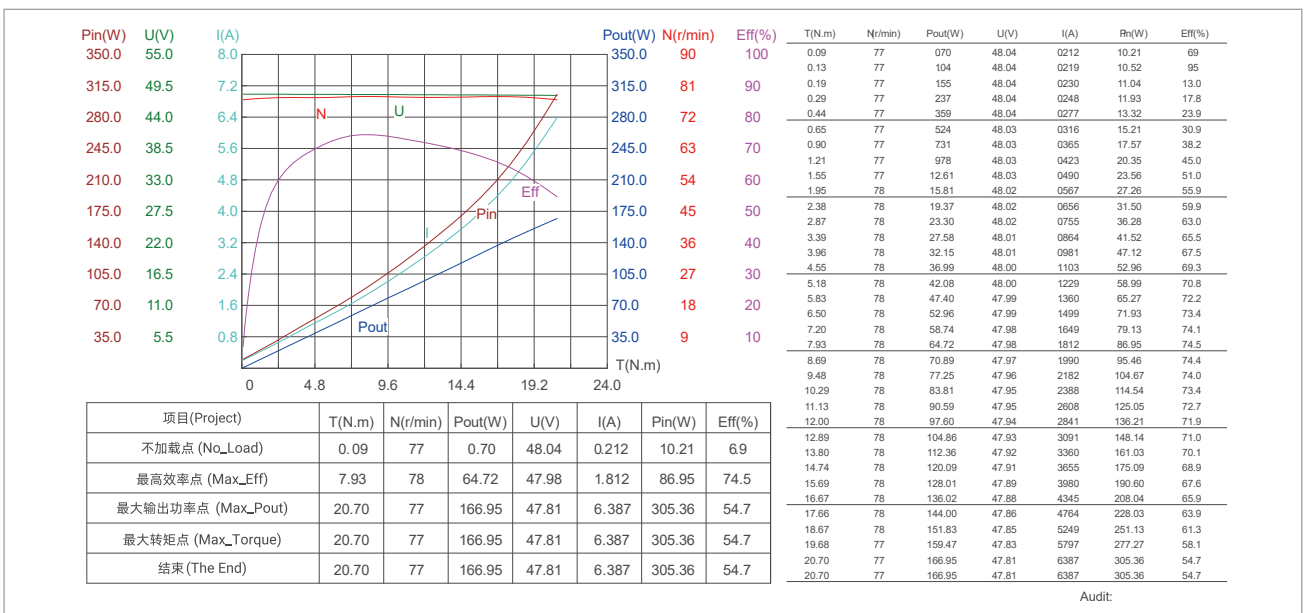


PRODUCT PARAMETERS

Item Name	Unit	X4-24
Gear Ratio	-	36
Input Voltage	V	48
Rated Speed	RPM	100
Rated Torque	N.m	9
Rated Power	W	150
Rated Current	A	3.5
Peak Torque	N.m	24
Peak Current	A	10
Efficiency	%	75
Pole Pair	-	14
Anti-Force Torque	N.m	0.87
Backlash	Arcmin	15
Axial Payload	N	1900
Radial Payload	N	1900
Inertia	Kg.cm ²	6.8
Encoder Type	bit	14 / 14
Communication	-	CAN : 1M
Weight	kg	0.38

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



Design for Bionic Robot

Series Name

RMD-X Series

Motor Simplified Name

X8-90

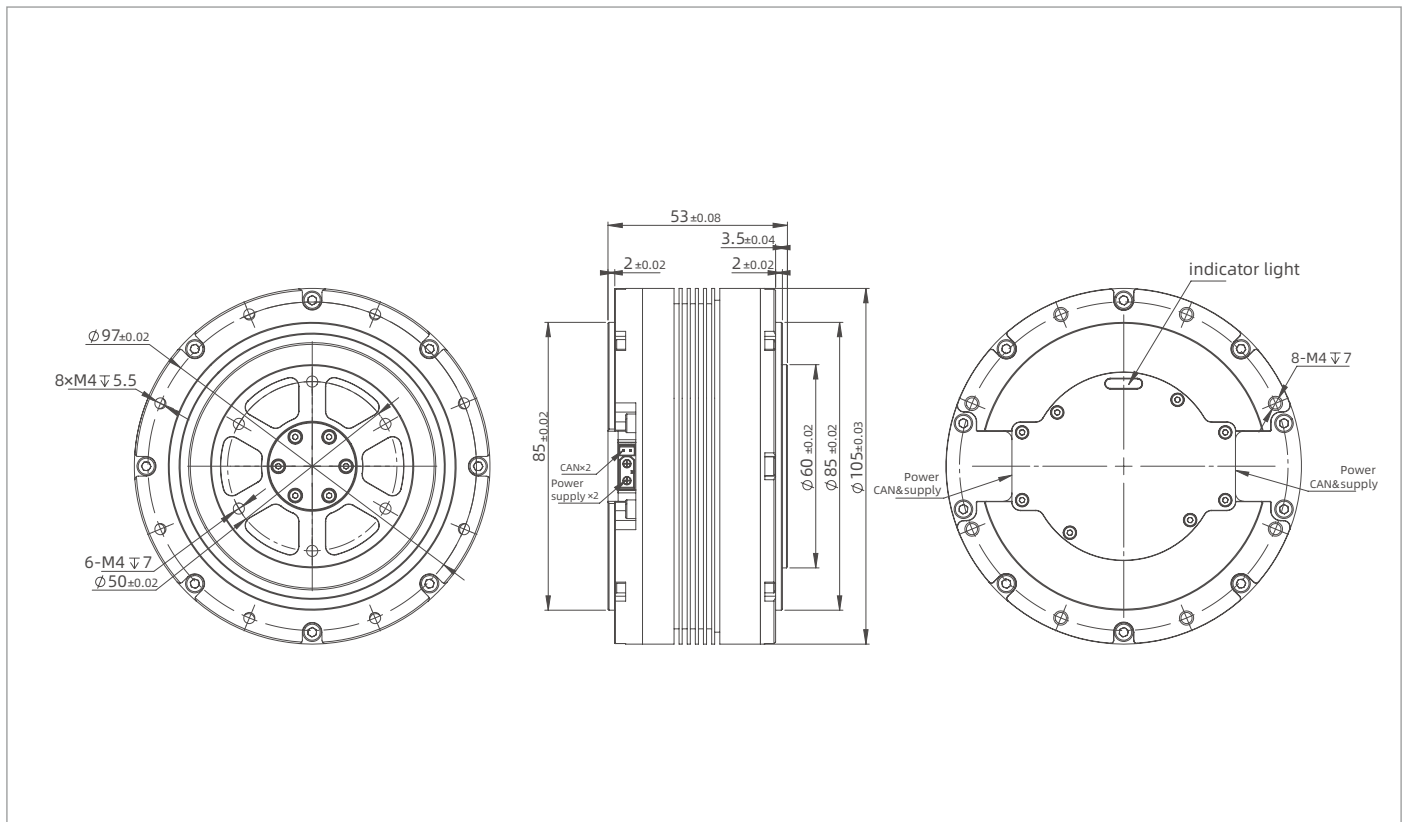


DUAL ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X8-P18-90-C-N	1102130180140200	N (without brake)

* 1. The standard motor only support CAN BUS communication.

INSTALLATION DRAWING

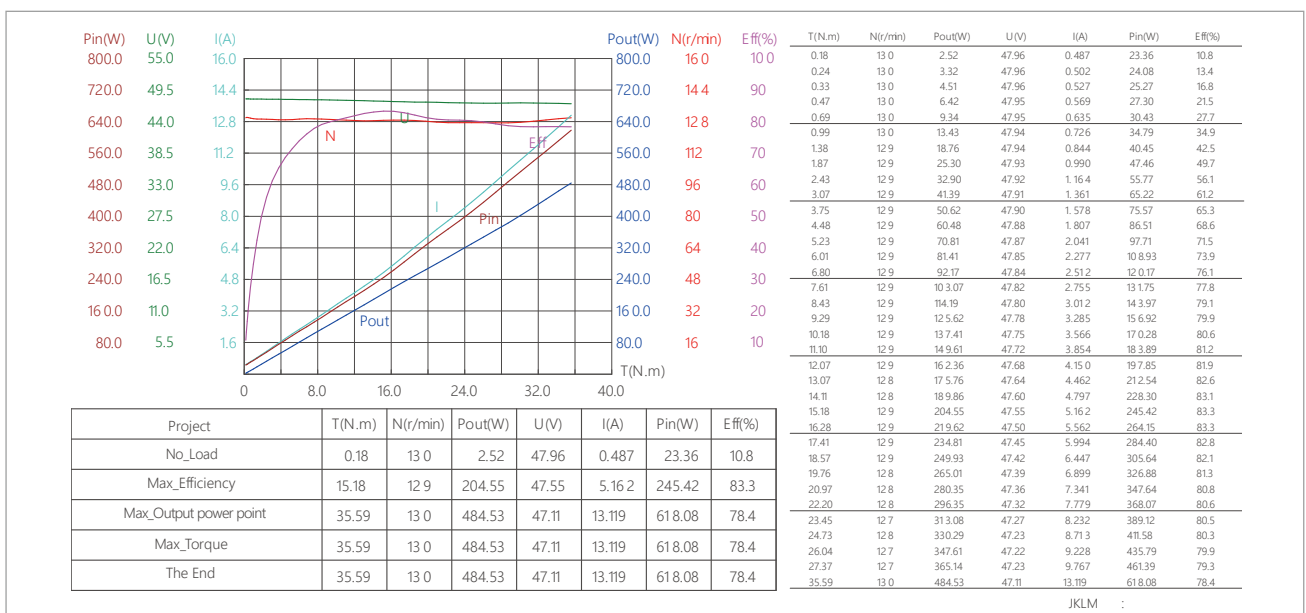


PRODUCT PARAMETERS

Item Name	Unit	X8-90
Gear Ratio	-	18
Input Voltage	V	48
Rated Speed	RPM	130
Rated Torque	N.m	25
Rated Power	W	500
Rated Current	A	10
Peak Torque	N.m	90
Peak Current	A	30
Efficiency	%	80
Pole Pair	-	21
Anti-Force Torque	N.m	0.65
Backlash	Arcmin	10
Axial Payload	N	2800
Radial Payload	N	2800
Inertia	Kg.cm ²	26
Encoder Type	bit	14 / 14
Communication	-	CAN : 1M
Weight	kg	0.85

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



JKLM :

Design for Bionic Robot

Series Name

RMD-X Series

Motor Simplified Name

X12-150

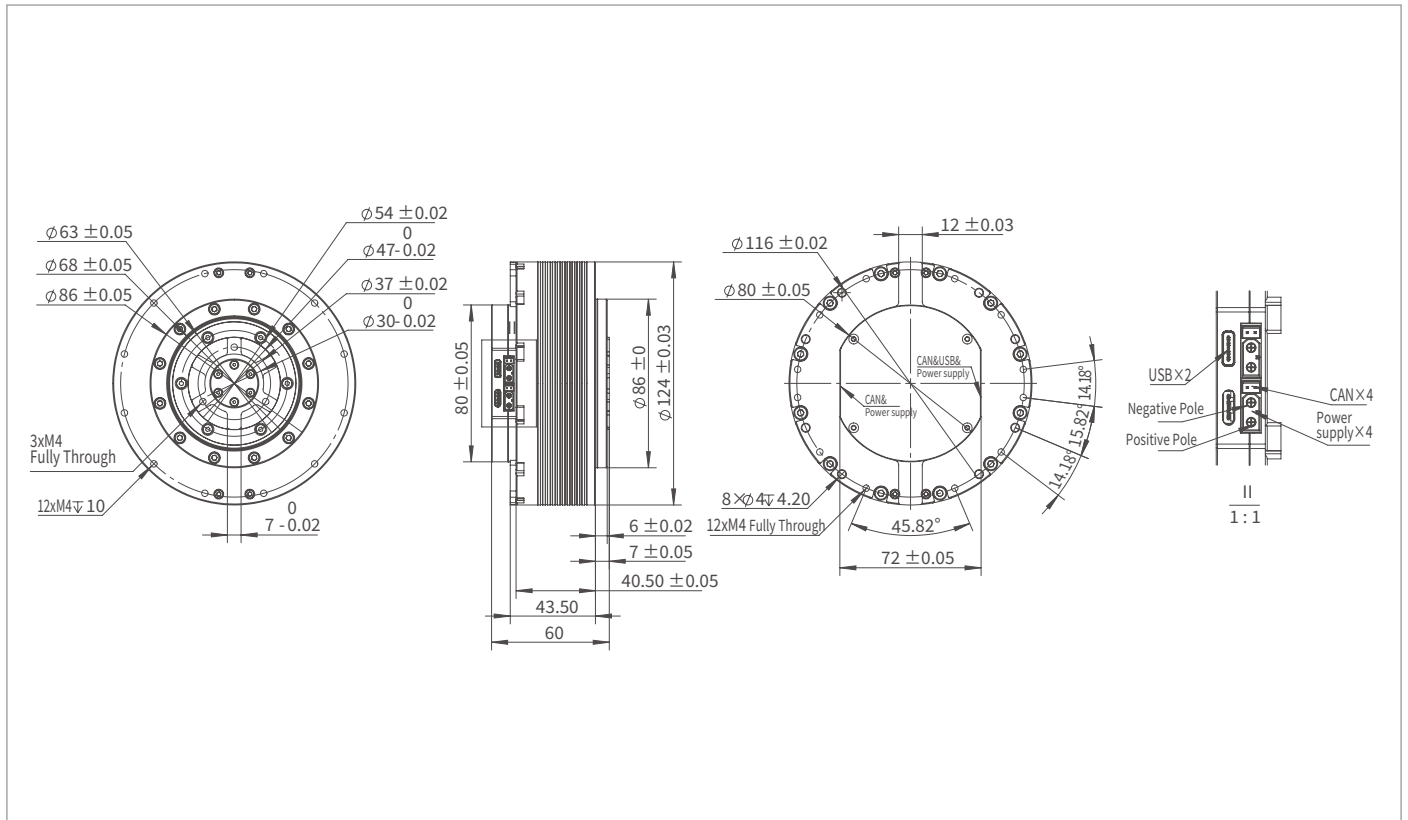


DUAL ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X12-P12-150-C-N	1102080120130200	N (without brake)

* 1. The standard motor only support CAN BUS communication.

INSTALLATION DRAWING

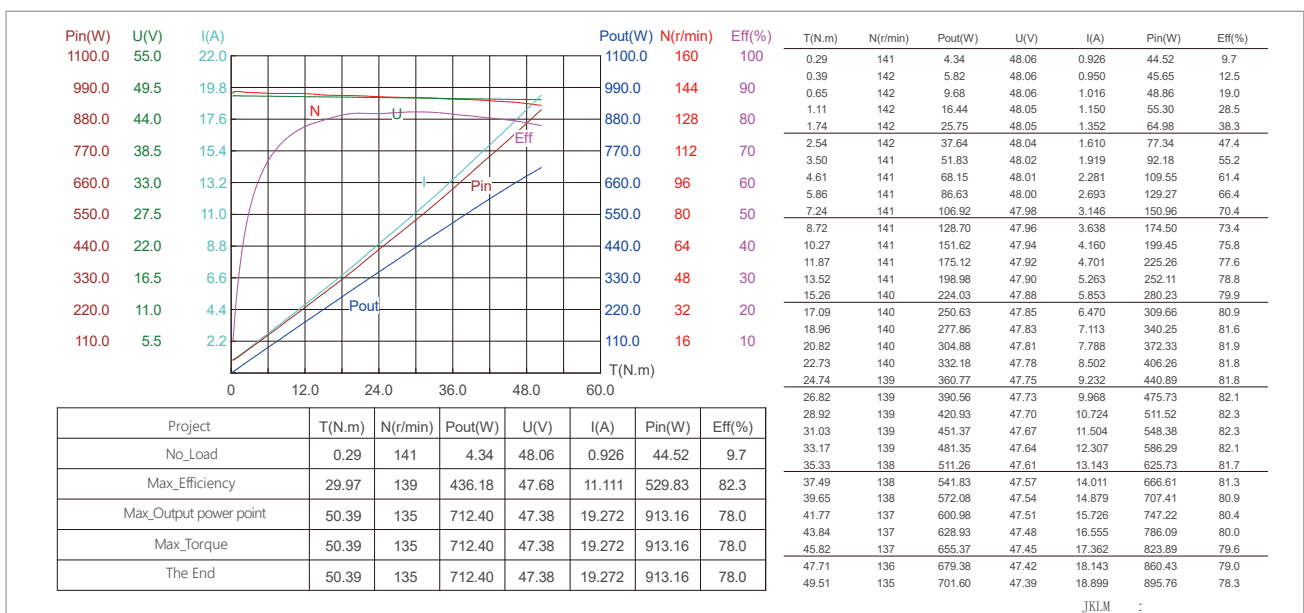


PRODUCT PARAMETERS

Item Name	Unit	X12-150
Gear Ratio	-	12
Input Voltage	V	48
Rated Speed	RPM	100
Rated Torque	N.m	50
Rated Power	W	780
Rated Current	A	15
Peak Torque	N.m	150
Peak Current	A	45
Efficiency	%	78
Pole Pair	-	21
Anti-Force Torque	N.m	1.26
Backlash	Arcmin	10
Axial Payload	N	2600
Radial Payload	N	2600
Inertia	Kg.cm ²	59
Encoder Type	bit	14 / 14
Communication	-	CAN : 1M
Weight	kg	1.3

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



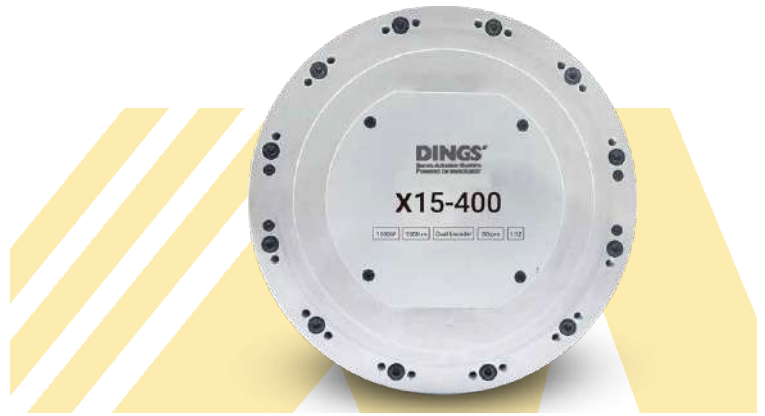
Design for Bionic Robot

Series Name

RMD-X Series

Motor Simplified Name

X15-400

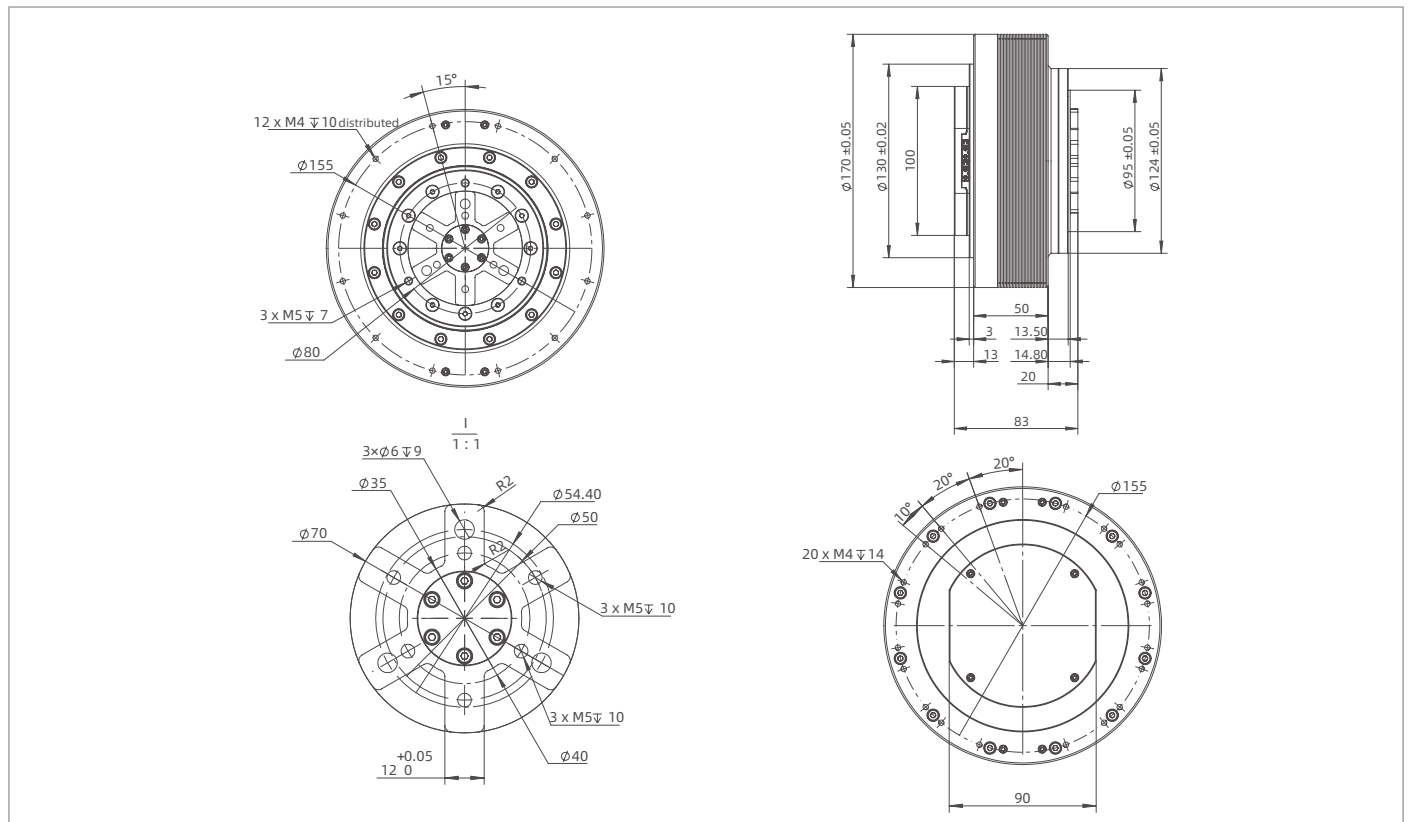


DUAL ENCODER

Actuator Full Name	Product Code	With Brake / Without Brake
RMD-X15-P12-400-C-N	1102110120130200	N (without brake)

* 1. The standard motor only support CAN BUS communication.

INSTALLATION DRAWING

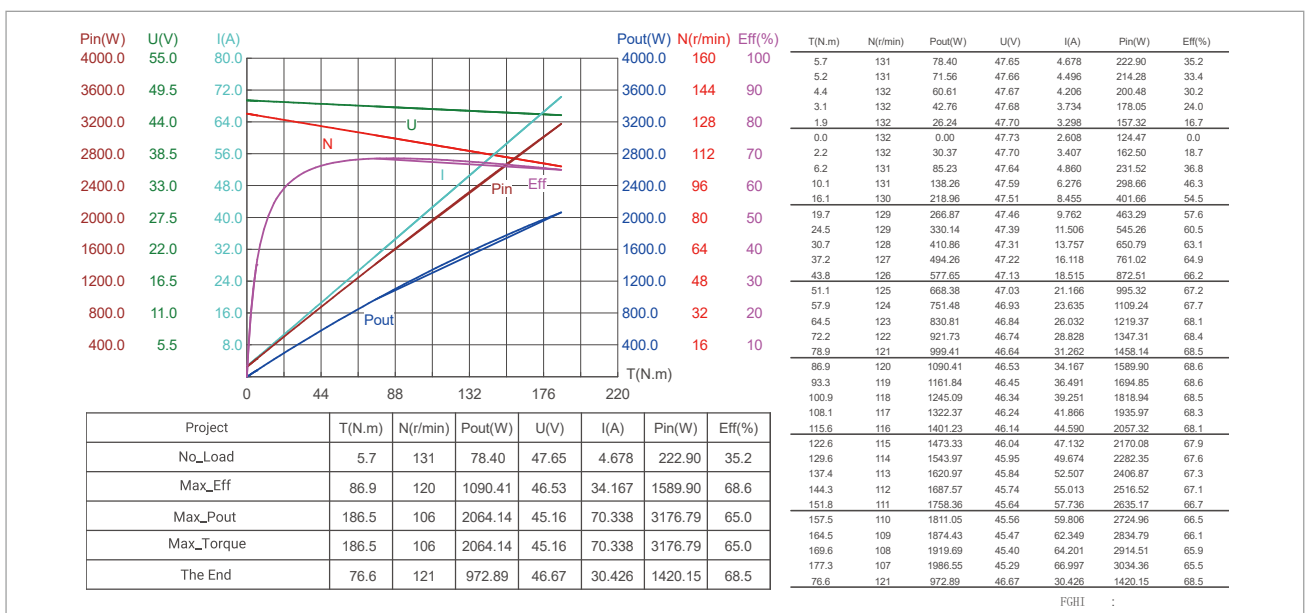


PRODUCT PARAMETERS

Item Name	Unit	X15-400
Gear Ratio	-	11.4
Input Voltage	V	60
Rated Speed	RPM	80
Rated Torque	N.m	130
Rated Power	W	1500
Rated Current	A	23
Peak Torque	N.m	380
Peak Current	A	65
Efficiency	%	83
Pole Pair	-	21
Anti-Force Torque	N.m	2.15
Backlash	Arcmin	10
Axial Payload	N	6700
Radial Payload	N	6700
Inertia	Kg.cm ²	175
Encoder Type	bit	14 / 14
Communication	-	CAN : 1M
Weight	kg	3.1

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

MOTOR CHARACTERISTIC CURVE



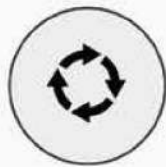
Integrated hollow direct drive module

RMD-H-Hollow Series

Drive integration / High precision / Large hollow / High speed



Understand what you need in heart and know how to make effort diligently



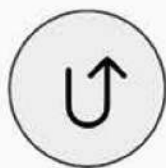
STABLE AT LOW SPEED



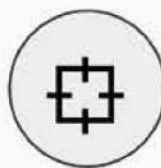
LOW NOISE



HIGH PRECISION



STRONG CARRYING CAPACITY



PRECISE CONTROL



EASY TO OPERATE

H SERIES DIVERSIFIED APPLICABLE SCENARIOS



Humanoid robots



Robotic arm



Exoskeleton robots



Quadruped robots



AGV smart truck



ARU robotics

RMD-H Series Part Number Construction

RMD-H-70-15-200-C

① ② ③ ④ ⑤ ⑥

- ① Brand Name : R-Reducer M-Motor D-Drive
- ② H Stands For The Series Name : Integrated Hollow Direct Drive Actuator
- ③ 70 represent motor model number e.g : 50 / 70 / 90 etc
- ④ Stator stack height 15
- ⑤ Motor power
- ⑥ Communication C: CAN BUS E: EtherCAT

For example

Model	RMD-H-90-15-400-C
Illustrate	RMD : Brand Name H : Hollow Direct Drive Series 90 : Motor Model Number 15 : Stator stack height 400 : Motor power C : Communication C: CAN BUS

Series Name

RMD-H

Motor Simplified Name

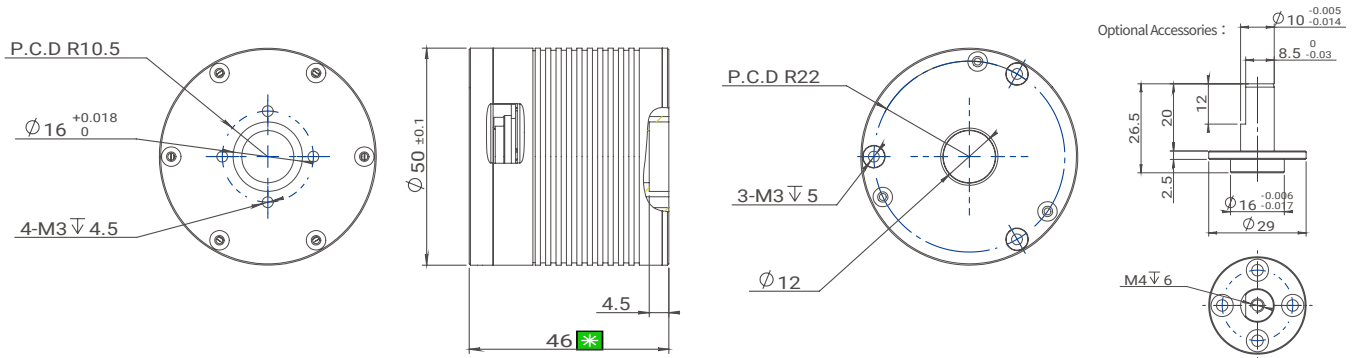
H-50-15



■ SINGLE ENCODER

Actuator Full Name	With Brake / Without Brake	Communication
RMD-H-50-15-100-C	N (without brake)	CAN BUS

■ INSTALLATION DRAWING



PRODUCT PARAMETERS

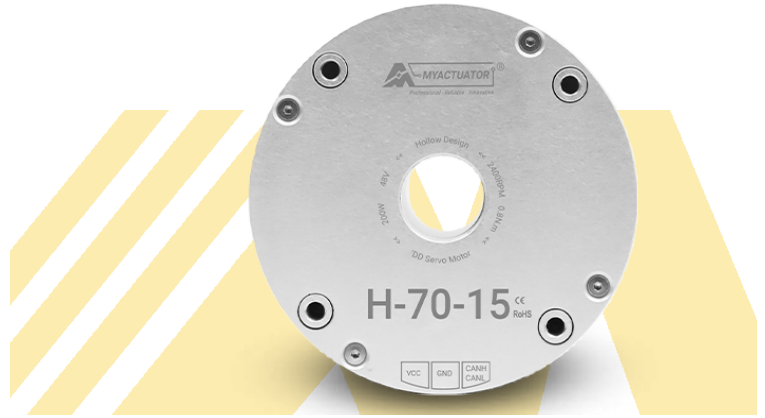
Item Name	Unit	H-50-15
Input Voltage	V	24
No Load Speed	RPM	3200
No Load Current	A	0.4
Rated Speed	RPM	2500
Rated Torque	N.m	0.35
Rated Power	W	91.6
Rated Current	A	4.9
Peak Torque	N.m	0.9
Peak Current	A	12.4
Efficiency	%	>83
Back-EMF Constant	Vdc/Krpm	7.93
Torque Constant	N.m/A	0.07
Phase Resistance	Ω	0.4
Phase Inductance	mH	0.19
Pole Pair	-	13
Cogging Torque	mN.m	12
3 Phase Connection	-	Y
Max Acial Payload	N	489
Max Radial Payload	N	100
Inertia	Kg.m ²	0.005
Encoder Type & Interface	-	ABS-17bit
Repeat Position Accuracy	Degree	< 0.01
Communication	-	CAN
Weight (N)	kg	0.24
Insulation Grade	-	F

Series Name

RMD-H

Motor Simplified Name

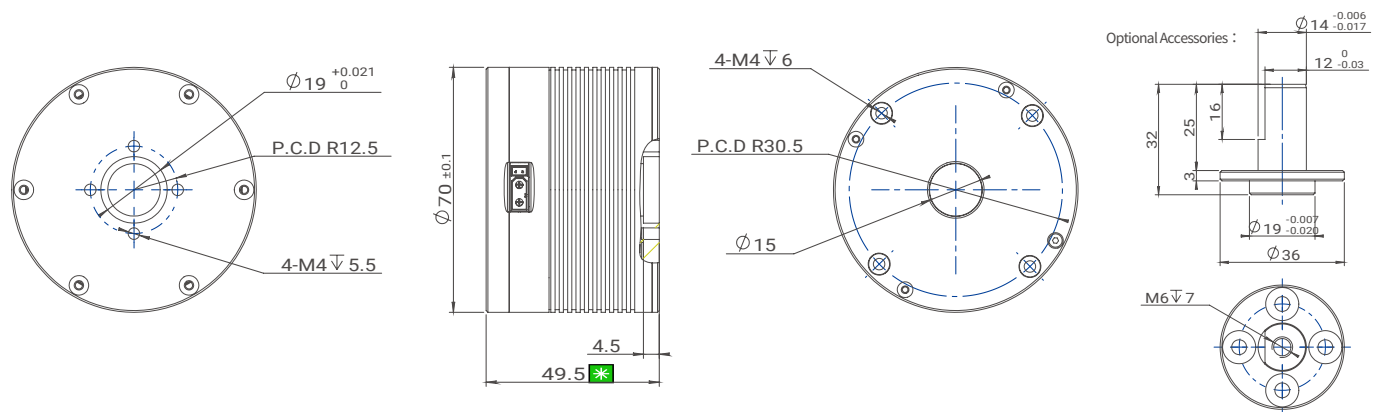
H-70-15



■ SINGLE ENCODER

Actuator Full Name	With Brake / Without Brake	Communication
RMD-H-70-15-200-C	N (without brake)	CAN BUS

■ INSTALLATION DRAWING



PRODUCT PARAMETERS

Item Name	Unit	H-70-15
Input Voltage	V	48
No Load Speed	RPM	2800
No Load Current	A	0.18
Rated Speed	RPM	2400
Rated Torque	N.m	0.8
Rated Power	W	200
Rated Current	A	4.4
Peak Torque	N.m	2
Peak Current	A	13.2
Efficiency	%	>84
Back-EMF Constant	Vdc/Krpm	17
Torque Constant	N.m/A	0.18
Phase Resistance	Ω	0.5
Phase Inductance	mH	0.55
Pole Pair	-	13
Cogging Torque	mN.m	30.83
3 Phase Connection	-	Y
Max Acial Payload	N	1870
Max Radial Payload	N	440
Inertia	Kg.m ²	0.01
Encoder Type & Interface	-	ABS-17bit
Repeat Position Accuracy	Degree	< 0.01
Communication	-	CAN
Weight (N)	kg	0.47
Insulation Grade	-	F

Series Name

RMD-H

Motor Simplified Name

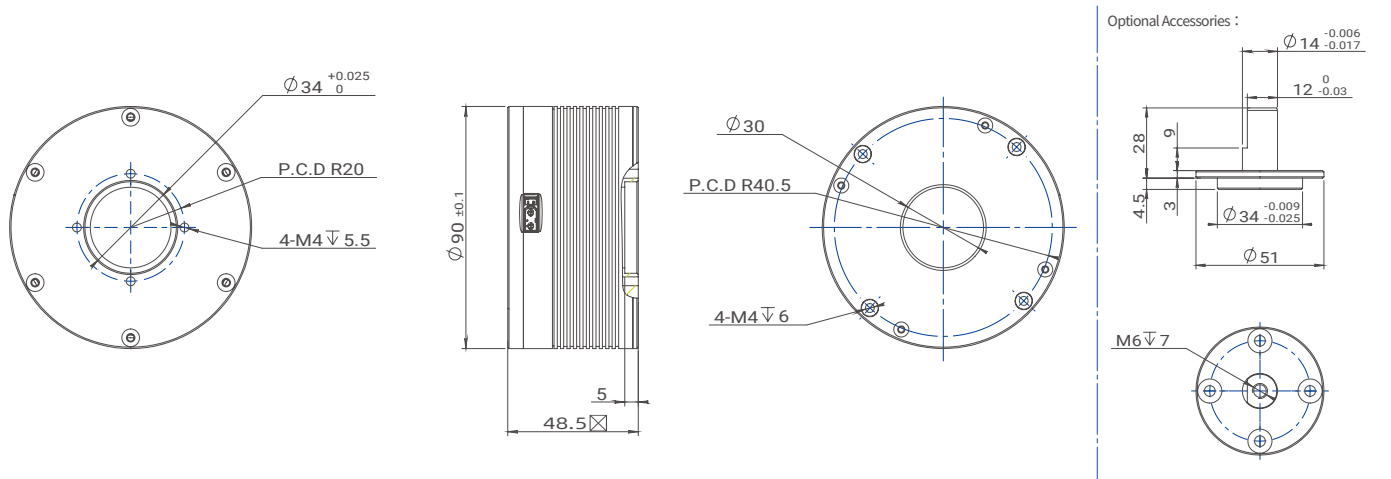
H-90-15



■ SINGLE ENCODER

Actuator Full Name	With Brake / Without Brake	Communication
RMD-H-90-15-400-C	N (without brake)	CAN BUS

■ INSTALLATION DRAWING



PRODUCT PARAMETERS

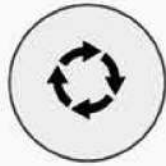
Item Name	Unit	H-90-15
Input Voltage	V	48
No Load Speed	RPM	2000
No Load Current	A	0.35
Rated Speed	RPM	1600
Rated Torque	N.m	1.5
Rated Power	W	252
Rated Current	A	6.6
Peak Torque	N.m	3.75
Peak Current	A	19.8
Efficiency	%	>83
Back-EMF Constant	Vdc/Krpm	21.1
Torque Constant	N.m/A	0.23
Phase Resistance	Ω	0.35
Phase Inductance	mH	0.28
Pole Pair	-	16
Cogging Torque	mN.m	64
3 Phase Connection	-	Y
Max Acial Payload	N	2350
Max Radial Payload	N	770
Inertia	Kg.m ²	0.05
Encoder Type & Interface	-	ABS-17bit
Repeat Position Accuracy	Degree	< 0.01
Communication	-	CAN
Weight (N)	kg	0.71
Insulation Grade	-	F

RMD-L SERIES

Integrated Drive with High Torque and High Speed



Six core advantages



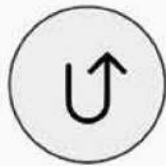
HIGH SMOOTHNESS



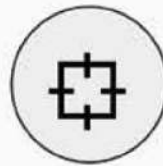
LOW NOISE



HIGH EFFICIENCY



STRONG CARRYING CAPACITY



PRECISE CONTROL



EASY TO OPERATE

DIVERSIFIED APPLICABLE SCENARIOS



Robotic Arm



Pipe Robot



Exoskeleton robots



Lidar



AGV smart truck



Gimbal

RMD-L Series Part Number Construction

RMD-L-4005-100-C

① ② ③ ④ ⑤

- ① Brand Name : R-Reducer M-Motor D-Drive
- ② L Stands For The Series Name
- ③ 4015 represent motor model number e.g : 4005 5005 7015 etc
- ④ Rated Power 100w
- ⑤ Communication C: CAN BUS R: RS485 E: EtherCAT

For example

Model RMD-L-5005-100-C

Illustrate RMD : Brand Name
 L : Direct Drive Series
 5005 : Motor Model Number
 100 : Rated Power
 C : Communication C: CAN BUS

Series Name

RMD-L

Motor Simplified Name

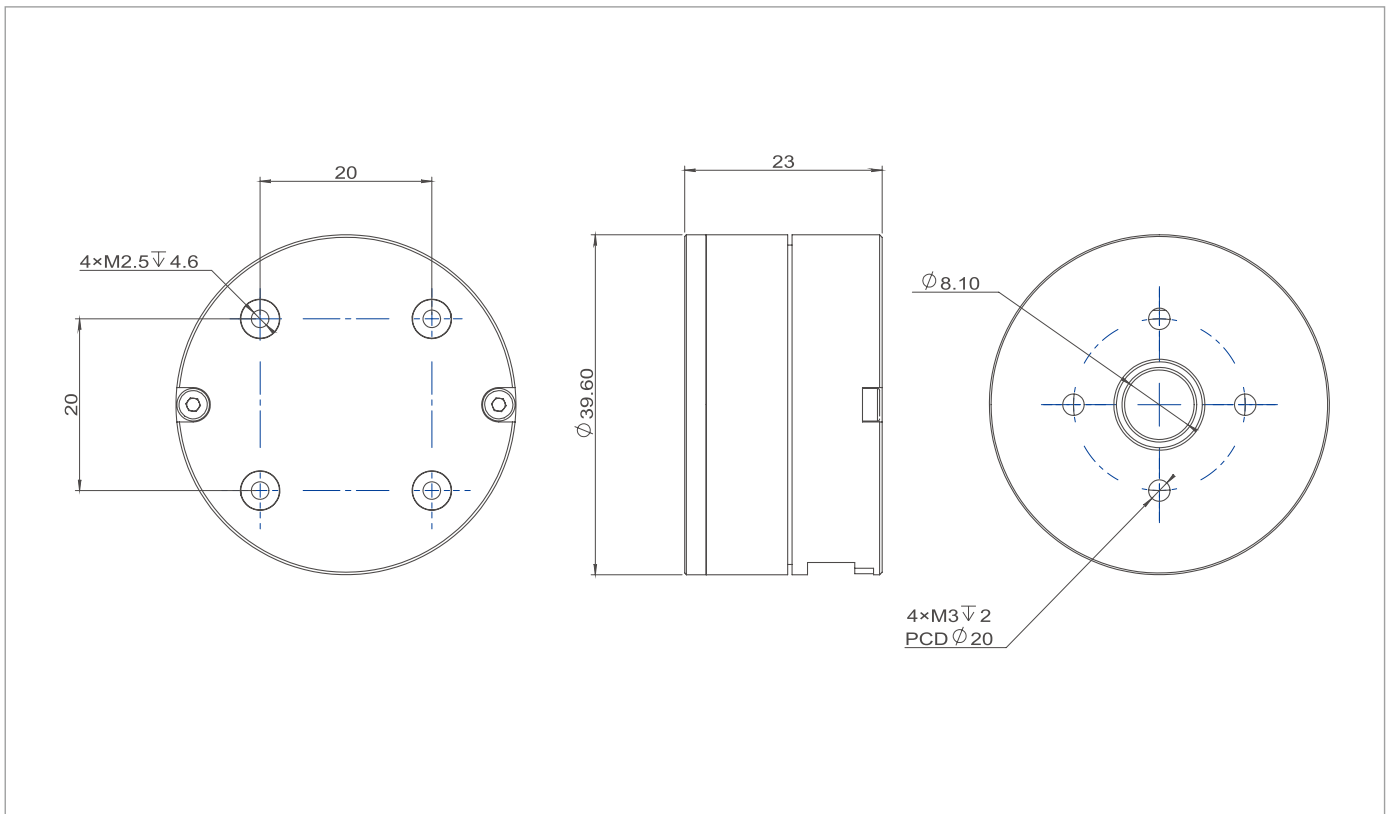
L-4005



■ SINGLE ENCODER

Actuator Full Name	Communication	Product Code
RMD-L-4005-100-C	CAN	110102062506
RMD-L-4005-100-R	RS485	110102062505

■ INSTALLATION DRAWING



PRODUCT PARAMETERS

Item Name	Unit	L-4005
Nominal Voltage	V	24
Nominal Current	A	1.44
Nominal Torque	N.M	0.07
Nominal Speed	RPM	1600
Max Speed	RPM	2390
Max Instant Torque	N.M	0.25
Max Instant Current	A	5.8
Line Resistance	Ω	1.9
Wire Connect	-	Y
Phase to Phase Indctance	mH	0.5
Speed Constant	RPM/V	199
Torque Constant	N.M/A	0.05
Rotor Inertia	g.cm ²	56
Number of Pole Pairs	-	13
Motor Weight	g	65
Working Temperature	°C	(-20 ~ 55°C)
Max Demagnetize Temperature	°C	120
Control Precision	°	0.001

Matched Driver

Drive	-	MC100
Input Voltage	V	12~24
Current	A	Normal : 5A Instant : 8A
Nominal Power	W	100
Encoder	-	18-bit Magnetic Encoder
Communication Method and Baud Rate	-	CAN BUS : 1M / RS485 : 115200 / 500k / 1M / 2.5M
Control Mode	-	Torque Loop (current loop) / Speed Loop / Position Loop
S-Curve	-	YES

MOTOR CHARACTERISTIC CURVE

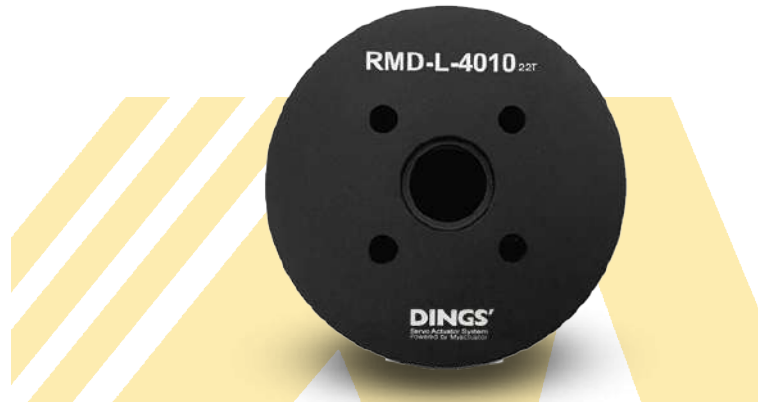


Series Name

RMD-L

Motor Simplified Name

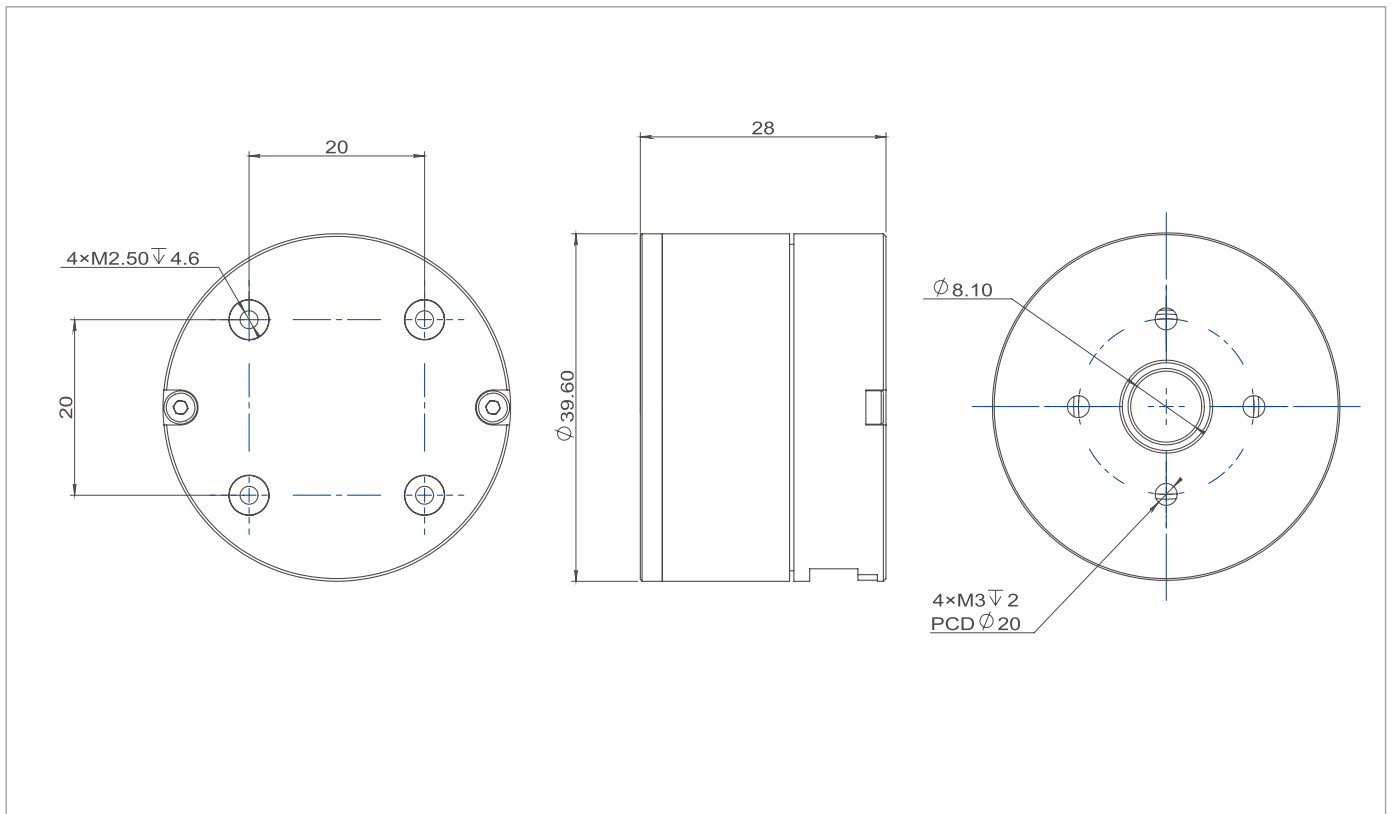
L-4010



■ SINGLE ENCODER

Actuator Full Name	Communication	Product Code
RMD-L-4010-100-C	CAN	110102072706
RMD-L-4010-100-R	RS485	110102072705

■ INSTALLATION DRAWING



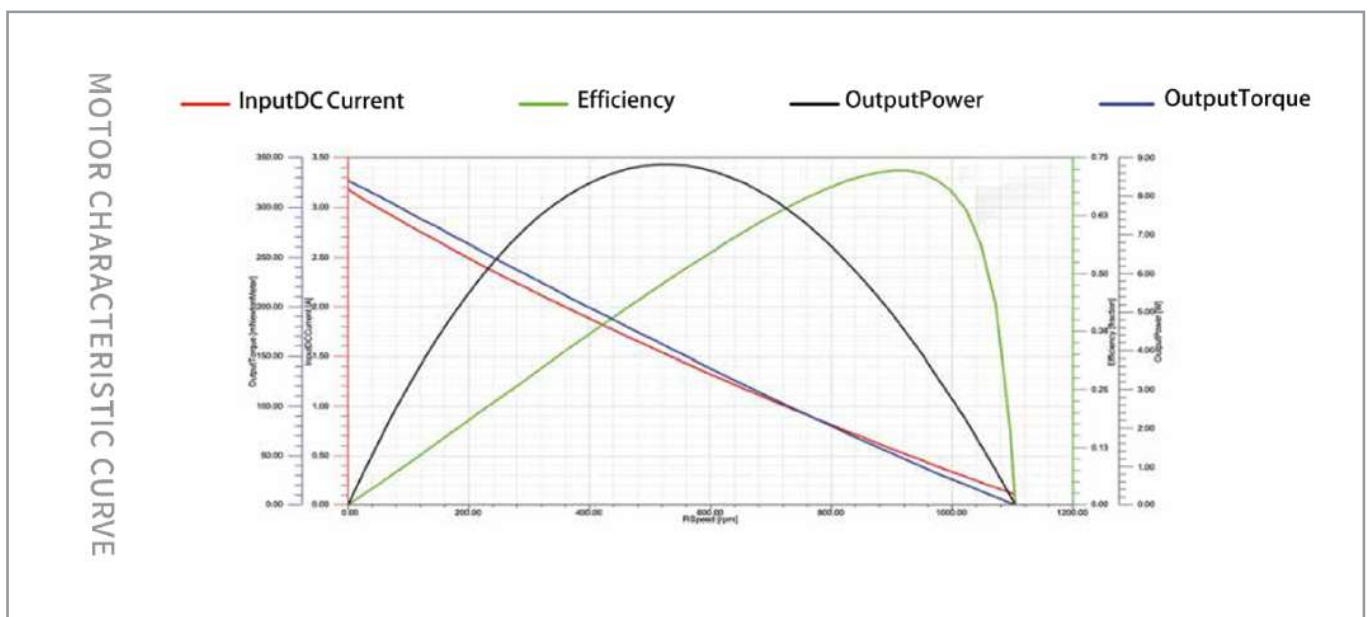
PRODUCT PARAMETERS

Item Name	Unit	L-4010
Nominal Voltage	V	24
Nominal Current	A	1.43
Nominal Torque	N.M	0.15
Nominal Speed	RPM	560
Max Speed	RPM	1120
Max Instant Torque	N.M	0.33
Max Instant Current	A	3.2
Line Resistance	Ω	3
Wire Connect	-	Y
Phase to Phase Indctance	mH	1
Speed Constant	RPM/V	93
Torque Constant	N.M/A	0.1
Rotor Inertia	g.cm ²	81
Number of Pole Pairs	-	13
Motor Weight	g	92
Working Temperature	$^{\circ}\text{C}$	(-20 ~ 55 $^{\circ}\text{C}$)
Max Demagnetize Temperature	$^{\circ}\text{C}$	120
Control Precision	$^{\circ}$	0.001

Matched Driver

Drive	-	MC100
Input Voltage	V	12~24
Current	A	Normal : 5A Instant : 8A
Nominal Power	W	100
Encoder	-	14-bit Magnetic Encoder
Communication Method and Baud Rate	-	CAN BUS : 1M / RS485 : 115200 / 500k / 1M / 2.5M
Control Mode	-	Torque Loop (current loop) / Speed Loop / Position Loop
S-Curve	-	YES

MOTOR CHARACTERISTIC CURVE



Series Name

RMD-L

Motor Simplified Name

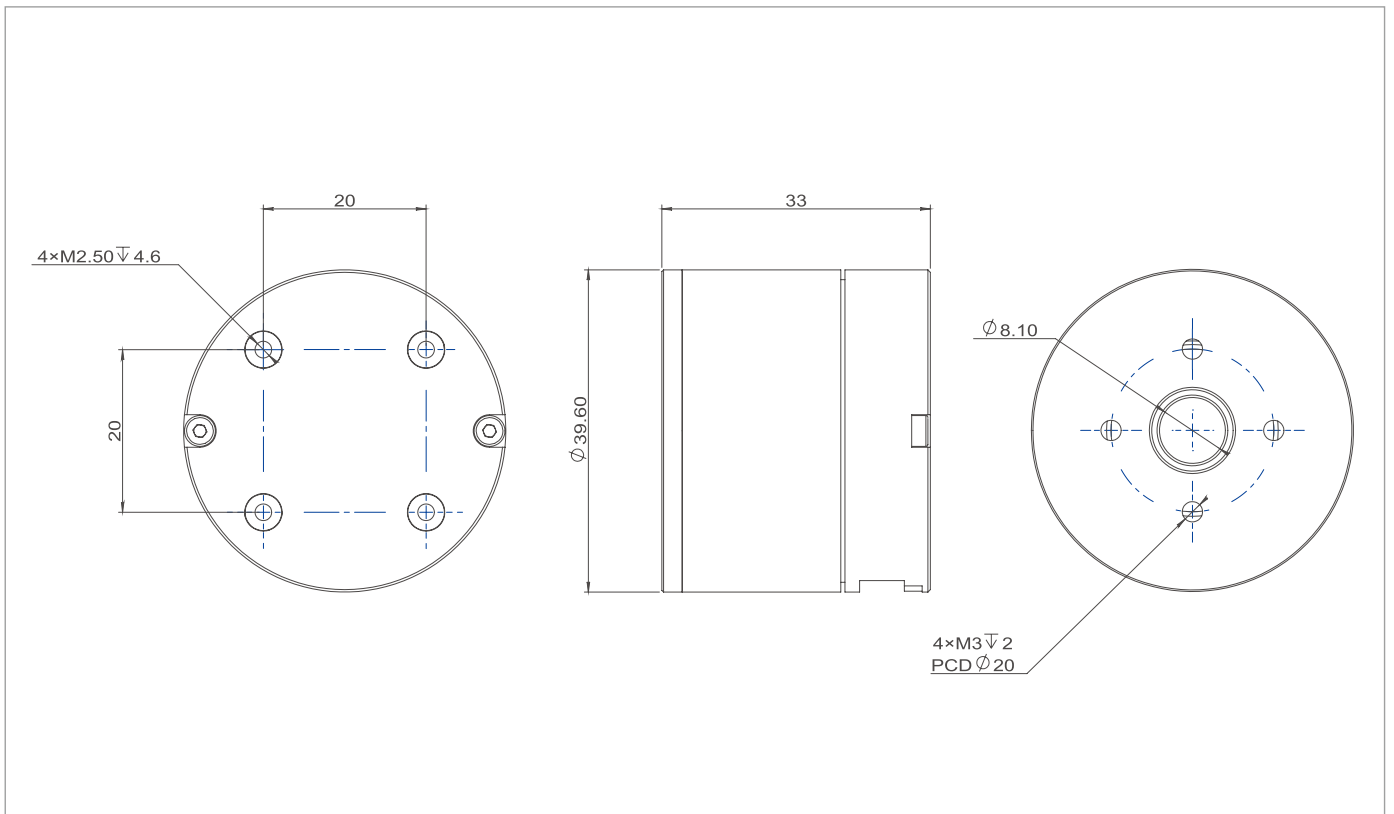
L-4015



■ SINGLE ENCODER

Actuator Full Name	Communication	Product Code
RMD-L-4015-100-C	CAN	110102082006
RMD-L-4015-100-R	RS485	110102082005

■ INSTALLATION DRAWING



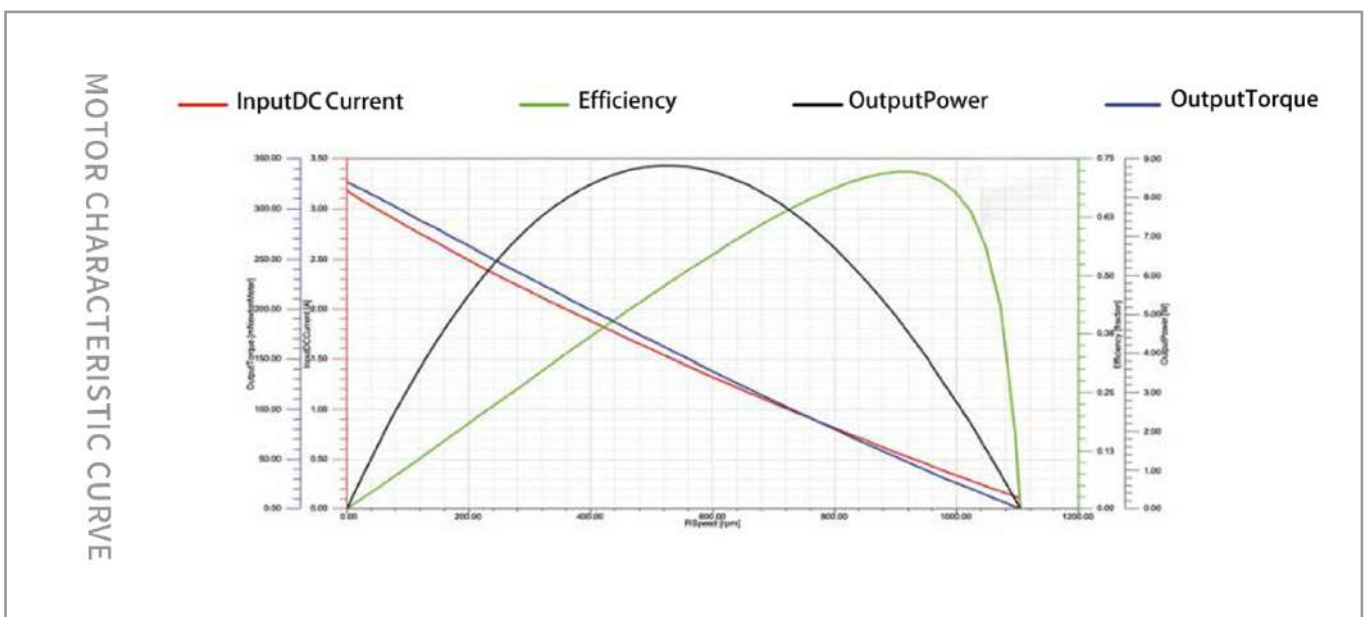
PRODUCT PARAMETERS

Item Name	Unit	L-4015
Nominal Voltage	V	24
Nominal Current	A	1.88
Nominal Torque	N.M	0.22
Nominal Speed	RPM	520
Max Speed	RPM	1010
Max Instant Torque	N.M	0.49
Max Instant Current	A	4.3
Line Resistance	Ω	3.3
Wire Connect	-	Y
Phase to Phase Indctance	mH	0.78
Speed Constant	RPM/V	63
Torque Constant	N.M/A	0.12
Rotor Inertia	g.cm ²	105
Number of Pole Pairs	-	13
Motor Weight	g	120
Working Temperature	$^{\circ}\text{C}$	(-20 ~ 55 $^{\circ}\text{C}$)
Max Demagnetize Temperature	$^{\circ}\text{C}$	120
Control Precision	$^{\circ}$	0.001

Matched Driver

Drive	-	MC100
Input Voltage	V	12~24
Current	A	Normal : 5A Instant : 8A
Nominal Power	W	100
Encoder	-	18-bit Magnetic Encoder
Communication Method and Baud Rate	-	CAN BUS : 1M / RS485 : 115200 / 500k / 1M / 2.5M
Control Mode	-	Torque Loop (current loop) / Speed Loop / Position Loop
S-Curve	-	YES

MOTOR CHARACTERISTIC CURVE



Series Name

RMD-L

Motor Simplified Name

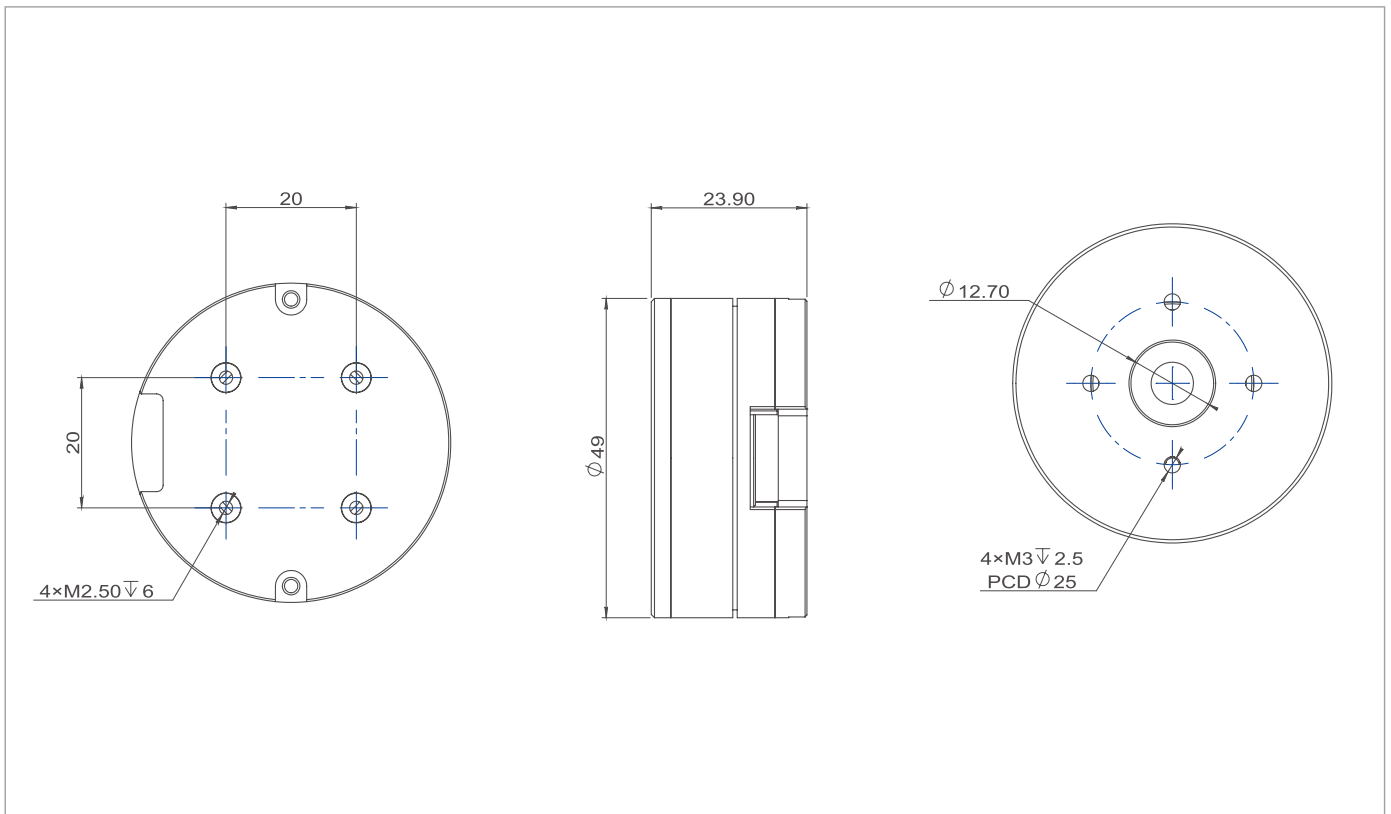
L-5005



■ SINGLE ENCODER

Actuator Full Name	Communication	Product Code
RMD-L-5005-100-C	CAN	110103013506
RMD-L-5005-100-R	RS485	110103013505

■ INSTALLATION DRAWING



PRODUCT PARAMETERS

Item Name	Unit	L-5005
Nominal Voltage	V	24
Nominal Current	A	1.67
Nominal Torque	N.M	0.13
Nominal Speed	RPM	1360
Max Speed	RPM	1970
Max Instant Torque	N.M	0.42
Max Instant Current	A	5
Line Resistance	Ω	2
Wire Connect	-	Y
Phase to Phase Indctance	mH	0.65
Speed Constant	RPM/V	123
Torque Constant	N.M/A	0.08
Rotor Inertia	g.cm ²	136
Number of Pole Pairs	-	14
Motor Weight	g	92
Working Temperature	$^{\circ}\text{C}$	(-20 ~ 55 $^{\circ}\text{C}$)
Max Demagnetize Temperature	$^{\circ}\text{C}$	120
Control Precision	$^{\circ}$	0.001

Matched Driver

Drive	-	MC100
Input Voltage	V	12~24
Current	A	Normal : 5A Instant : 8A
Nominal Power	W	100
Encoder	-	14-bit Magnetic Encoder
Communication Method and Baud Rate	-	CAN BUS : 1M / RS485 : 115200 / 500k / 1M / 2.5M
Control Mode	-	Torque Loop (current loop) / Speed Loop / Position Loop
S-Curve	-	YES

MOTOR CHARACTERISTIC CURVE



Series Name

RMD-L

Motor Simplified Name

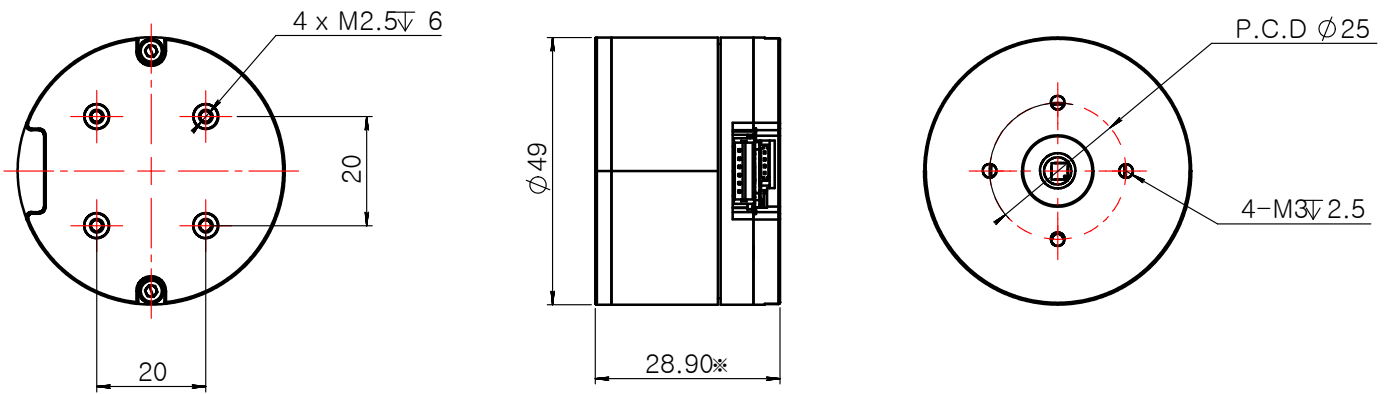
L-5010



■ SINGLE ENCODER

Actuator Full Name	Communication	Product Code
RMD-L-5010-100-C	CAN	110103023506
RMD-L-5010-100-R	RS485	110103023505

■ INSTALLATION DRAWING



PRODUCT PARAMETERS

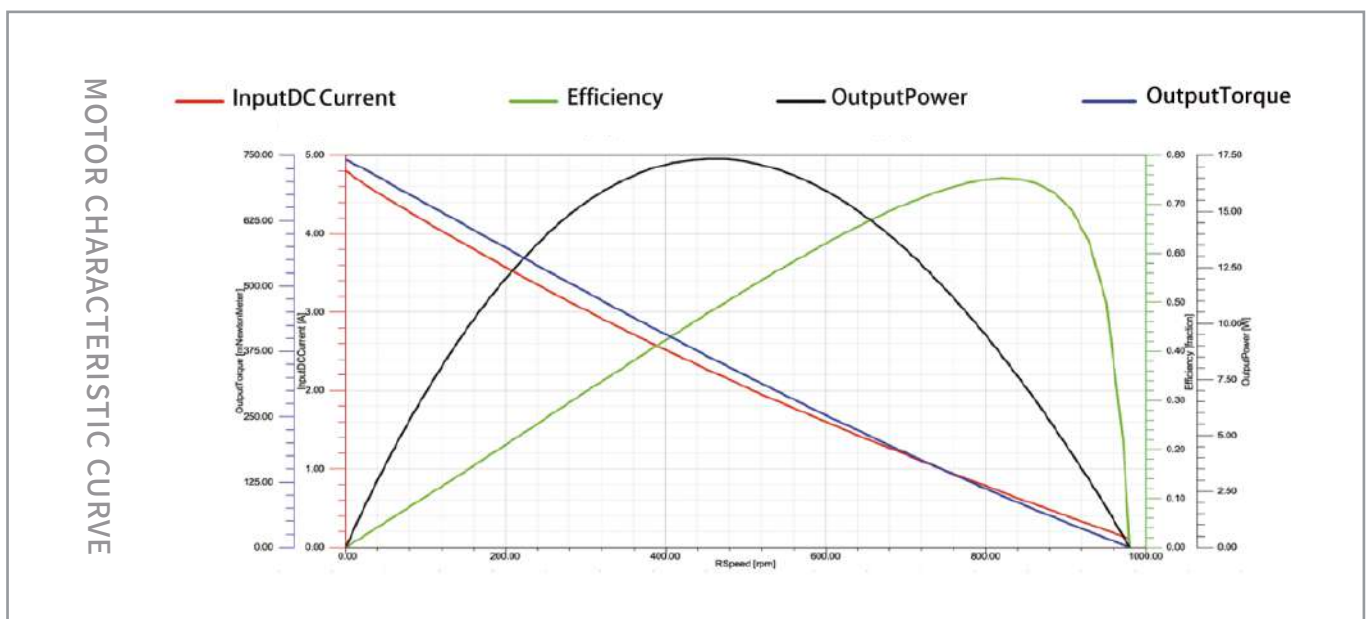
Item Name	Unit	L-5010
Nominal Voltage	V	18~24
Nominal Current	A	1.65
Nominal Torque	N.M	0.26
Nominal Speed	RPM	600
Max Speed	RPM	1600
Max Instant Torque	N.M	0.65
Max Instant Current	A	4.8
Line Resistance	Ω	3.2
Wire Connect	-	Y
Phase to Phase Indctance	mH	1.2
Speed Constant	RPM/V	63
Torque Constant	N.M/A	0.16
Rotor Inertia	g.cm ²	202
Number of Pole Pairs	-	14
Motor Weight	g	135
Working Temperature	$^{\circ}\text{C}$	(-20 ~ 80 $^{\circ}\text{C}$)
Max Demagnetize Temperature	$^{\circ}\text{C}$	120 $^{\circ}\text{C}$
Control Precision	$^{\circ}$	0.001 $^{\circ}$
Motor life time	Hours	8000

Matched Driver

Drive	-	MC100
Input Voltage	V	12~24
Current	A	Normal : 5A Instant : 8A
Nominal Power	W	100
Encoder	-	18-bit Magnetic Encoder
Communication Method and Baud Rate	-	CAN BUS : 1M / RS485 : 115200 / 500k / 1M / 2.5M
Control Mode	-	Torque Loop (current loop) / Speed Loop / Position Loop
S-Curve	-	YES

Motor life time : The motor life time mainly depends on the working conditions. By rated working condition, the motor can work 8,000 hours.

MOTOR CHARACTERISTIC CURVE



Series Name

RMD-L

Motor Simplified Name

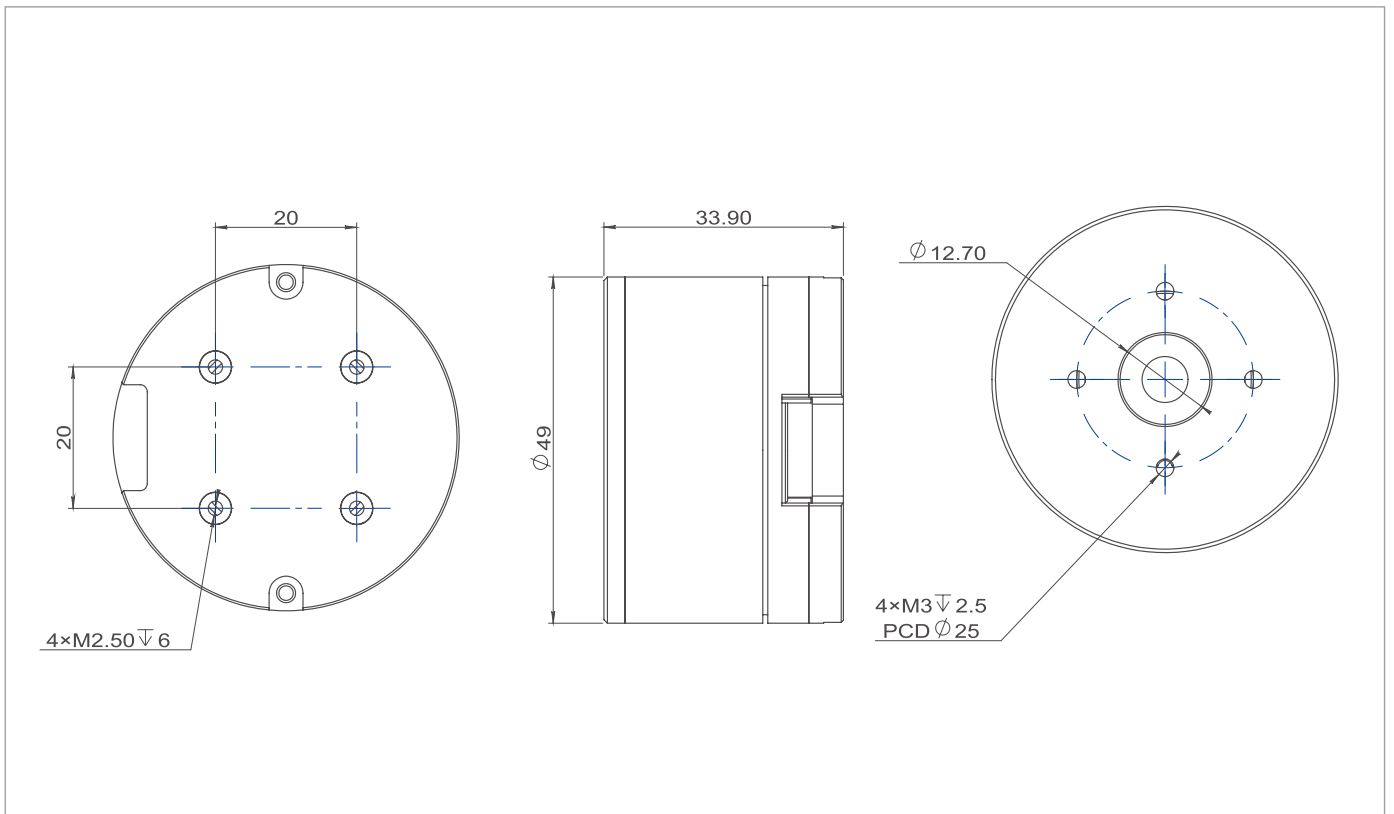
L-5015



■ SINGLE ENCODER

Actuator Full Name	Communication	Product Code
RMD-L-5015-100-C	CAN	110103033506
RMD-L-5015-100-R	RS485	110103033505

■ INSTALLATION DRAWING



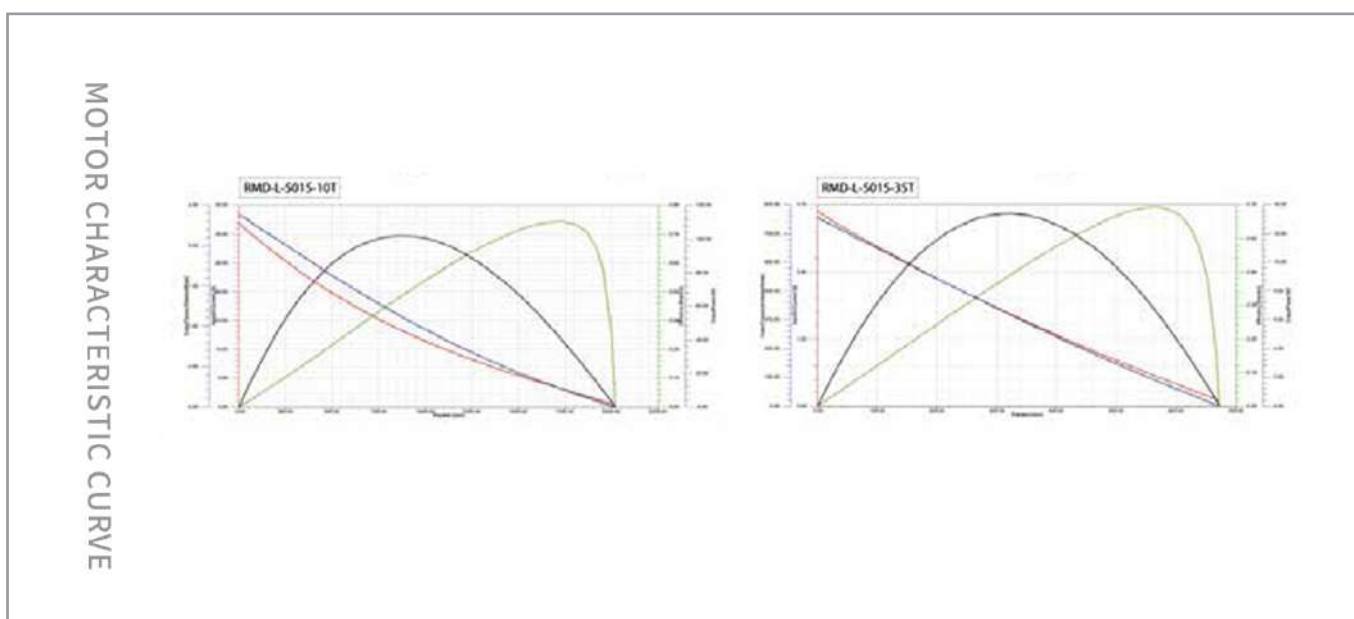
PRODUCT PARAMETERS

Item Name	Unit	L-5015
Nominal Voltage	V	24
Nominal Current	A	1.57
Nominal Torque	N.M	0.36
Nominal Speed	RPM	350
Max Speed	RPM	680
Max Instant Torque	N.M	0.82
Max Instant Current	A	3.62
Line Resistance	Ω	4
Wire Connect	-	Y
Phase to Phase Indctance	mH	1.76
Speed Constant	RPM/V	43
Torque Constant	N.M/A	0.23
Rotor Inertia	g.cm ²	268
Number of Pole Pairs	-	14
Motor Weight	g	174
Working Temperature	°C	(-20 ~ 55°C)
Max Demagnetize Temperature	°C	120
Control Precision	°	0.001

Matched Driver

Drive	-	MC100
Input Voltage	V	12~24
Current	A	Normal : 5A Instant : 8A
Nominal Power	W	100
Encoder	-	14-bit Magnetic Encoder
Communication Method and Baud Rate	-	CAN BUS : 1M / RS485 : 115200 / 500k / 1M / 2.5M
Control Mode	-	Torque Loop (current loop) / Speed Loop / Position Loop
S-Curve	-	YES

MOTOR CHARACTERISTIC CURVE



Series Name

RMD-L

Motor Simplified Name

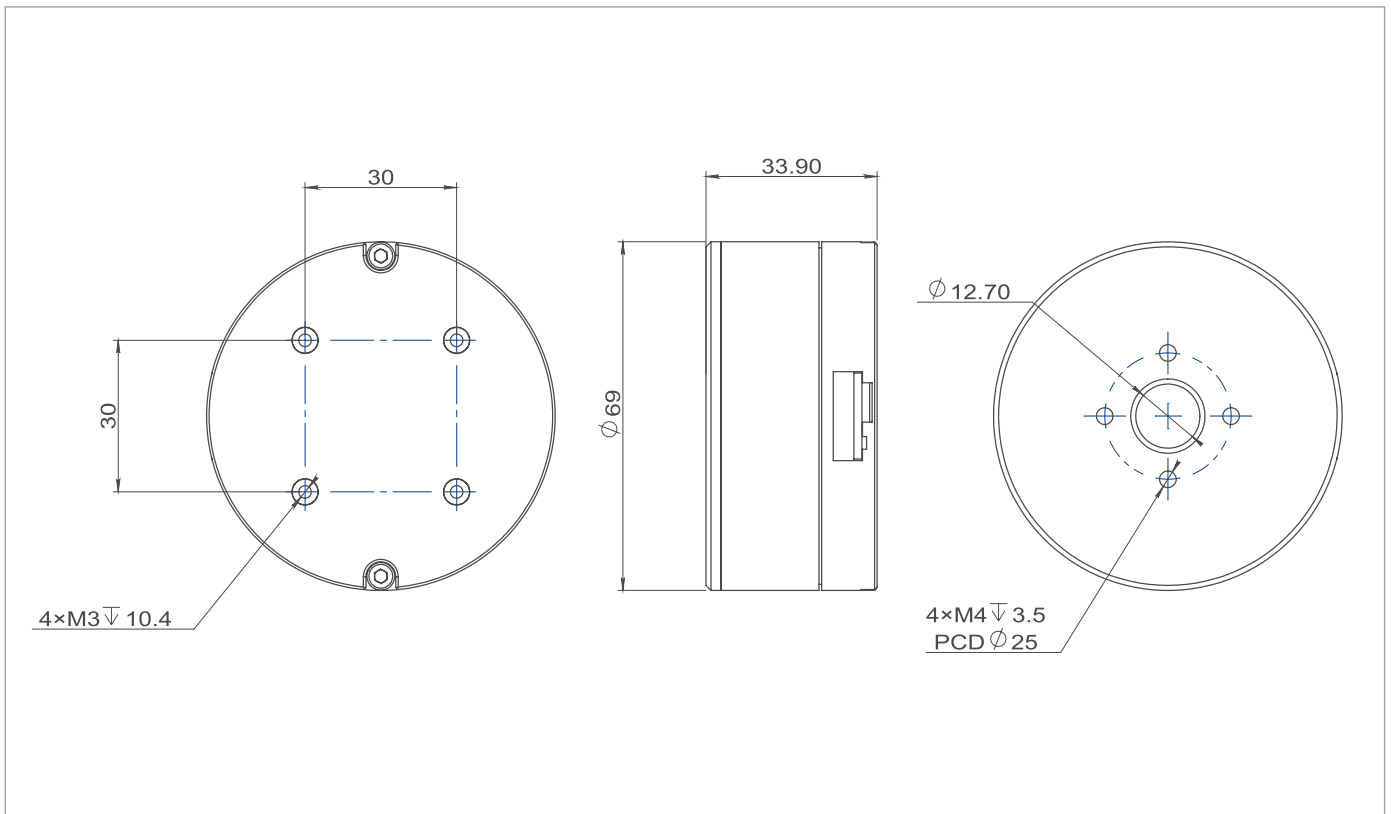
L-7015



■ SINGLE ENCODER

Actuator Full Name	Communication	Product Code
RMD-L-7015-200-C	CAN	110104022306
RMD-L-7015-200-R	RS485	110104022305

■ INSTALLATION DRAWING



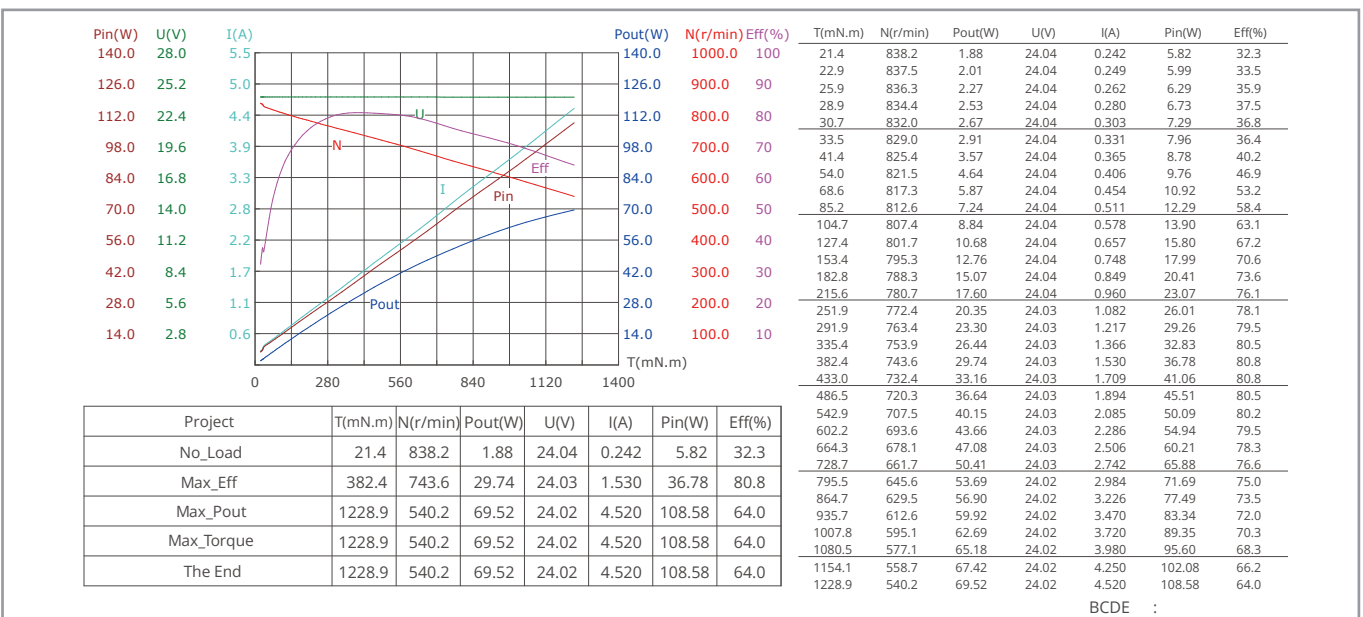
PRODUCT PARAMETERS

Item Name	Unit	L-7015
Nominal Voltage	V	24
Nominal Current	A	3.62
Nominal Torque	N.M	1
Nominal Speed	RPM	580
Max Speed	RPM	805
Max Instant Torque	N.M	3.8
Max Instant Current	A	15
Line Resistance	Ω	1.14
Wire Connect	-	Y
Phase to Phase Indctance	mH	1.25
Speed Constant	RPM/V	34
Torque Constant	N.M/A	0.28
Rotor Inertia	g.cm ²	933
Number of Pole Pairs	-	14
Motor Weight	g	360
Working Temperature	°C	(-20 ~ 55°C)
Max Demagnetize Temperature	°C	120
Control Precision	°	0.001

Matched Driver

Drive	-	MC200
Input Voltage	V	12~24
Current	A	Normal : 8A Instant : 15A
Nominal Power	W	200
Encoder	-	18-bit Magnetic Encoder
Communication Method and Baud Rate	-	CAN BUS : 1M / RS485 : 115200 / 500k / 1M / 2.5M
Control Mode	-	Torque Loop (current loop) / Speed Loop / Position Loop
S-Curve	-	YES

MOTOR CHARACTERISTIC CURVE



Series Name

RMD-L

Motor Simplified Name

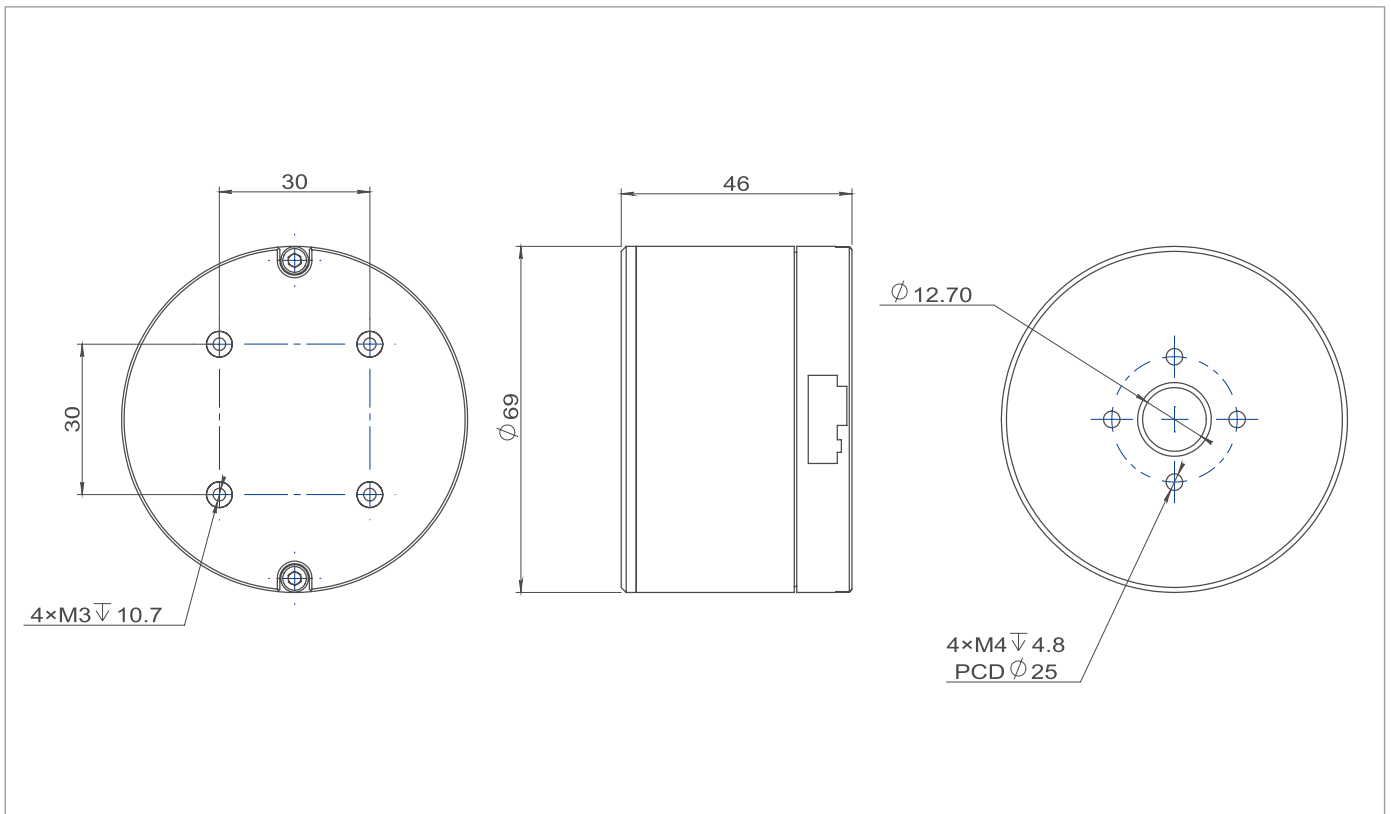
L-7025



■ SINGLE ENCODER

Actuator Full Name	Communication	Product Code
RMD-L-7025-200-C	CAN	110104032806
RMD-L-7025-200-R	RS485	110104032805

■ INSTALLATION DRAWING



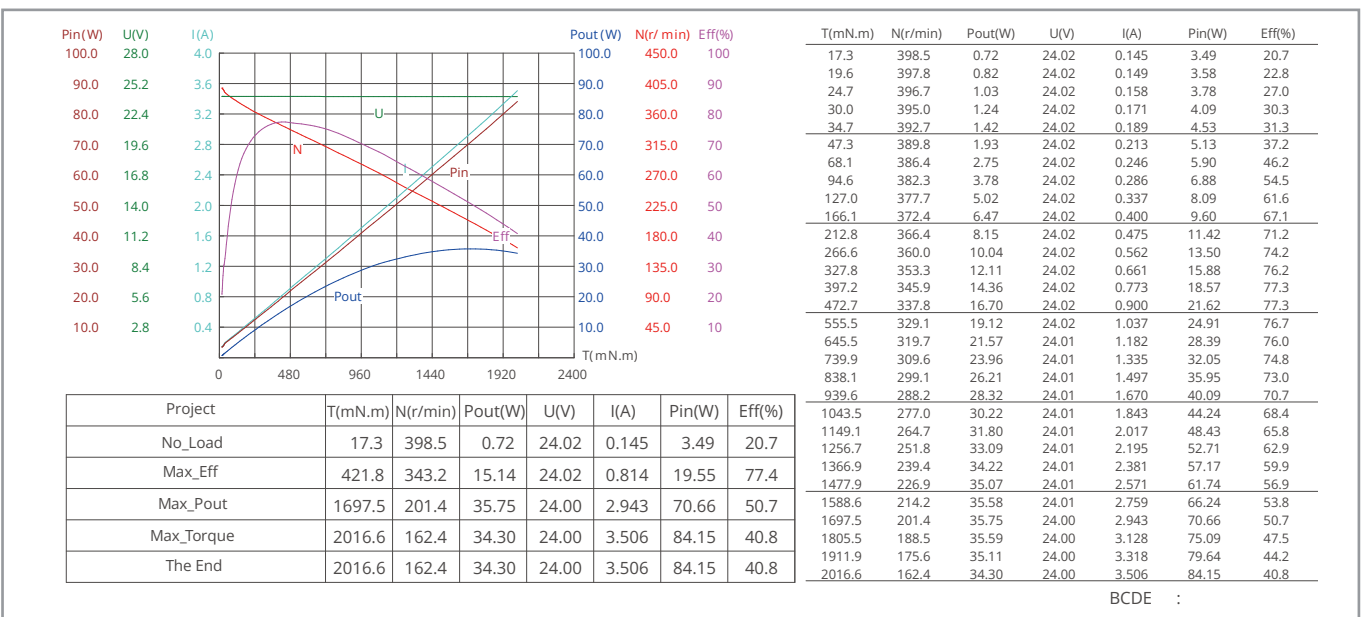
PRODUCT PARAMETERS

Item Name	Unit	L-7025
Nominal Voltage	V	24
Nominal Current	A	3
Nominal Torque	N.M	1.6
Nominal Speed	RPM	280
Max Speed	RPM	510
Max Instant Torque	N.M	4.1
Max Instant Current	A	8.5
Line Resistance	Ω	2.2
Wire Connect	-	Y
Phase to Phase Indctance	mH	2.95
Speed Constant	RPM/V	21
Torque Constant	N.M/A	0.53
Rotor Inertia	g.cm ²	1040
Number of Pole Pairs	-	14
Motor Weight	g	540
Working Temperature	°C	(-20 ~ 55°C)
Max Demagnetize Temperature	°C	120
Control Precision	°	0.001

Matched Driver

Drive	-	MC200
Input Voltage	V	12~24
Current	A	Normal : 8A Instant : 15A
Nominal Power	W	200
Encoder	-	18-bit Magnetic Encoder
Communication Method and Baud Rate	-	CAN BUS : 1M / RS485 : 115200 / 500k / 1M / 2.5M
Control Mode	-	Torque Loop (current loop) / Speed Loop / Position Loop
S-Curve	-	YES

MOTOR CHARACTERISTIC CURVE



BCDE :

Series Name

RMD-L

Motor Simplified Name

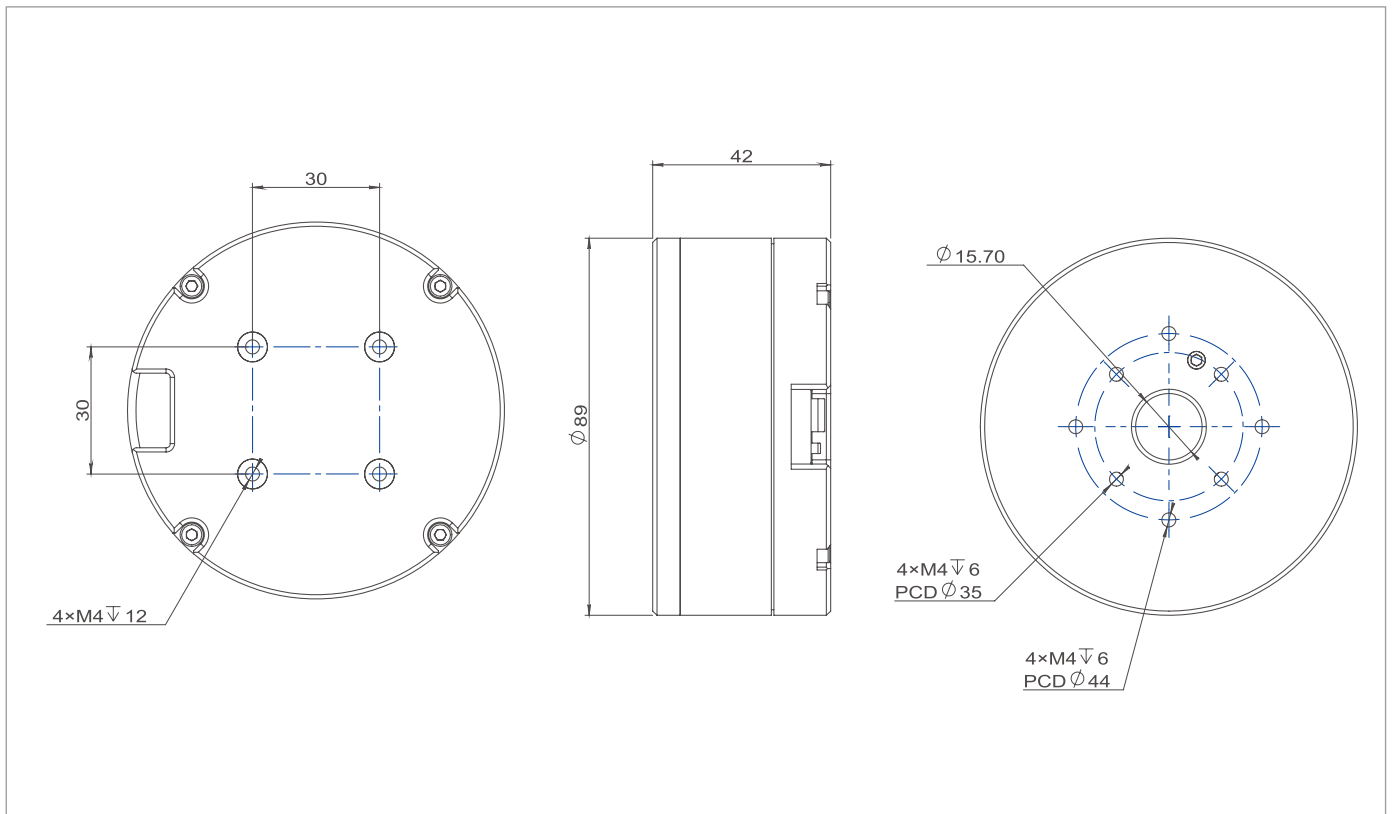
L-9015



■ SINGLE ENCODER

Actuator Full Name	Communication	Product Code
RMD-L-9015-200-C	CAN	110105023506
RMD-L-9015-200-R	RS485	110105023505

■ INSTALLATION DRAWING



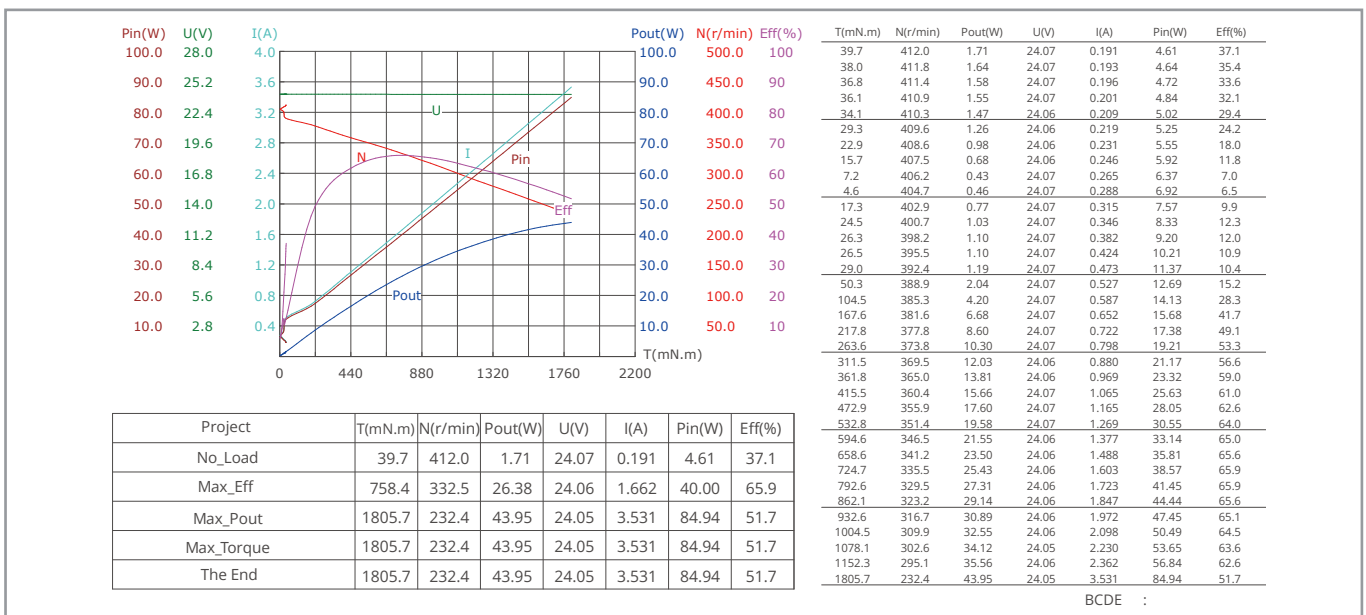
PRODUCT PARAMETERS

Item Name	Unit	L-9015
Nominal Voltage	V	24
Nominal Current	A	3.34
Nominal Torque	N.M	1.67
Nominal Speed	RPM	290
Max Speed	RPM	500
Max Instant Torque	N.M	5
Max Instant Current	A	11
Line Resistance	Ω	1.51
Wire Connect	-	Y
Phase to Phase Indctance	mH	1.05
Speed Constant	RPM/V	21
Torque Constant	N.M/A	0.45
Rotor Inertia	g.cm ²	3271
Number of Pole Pairs	-	14
Motor Weight	g	650
Working Temperature	°C	(-20 ~ 55°C)
Max Demagnetize Temperature	°C	120
Control Precision	°	0.001

Matched Driver

Drive	-	MC200
Input Voltage	V	12~24
Current	A	Normal : 8A Instant : 15A
Nominal Power	W	200
Encoder	-	14-bit Magnetic Encoder
Communication Method and Baud Rate	-	CAN BUS : 1M / RS485 : 115200 / 500k / 1M / 2.5M
Control Mode	-	Torque Loop (current loop) / Speed Loop / Position Loop
S-Curve	-	YES

MOTOR CHARACTERISTIC CURVE



BCDE :

Series Name

RMD-L

Motor Simplified Name

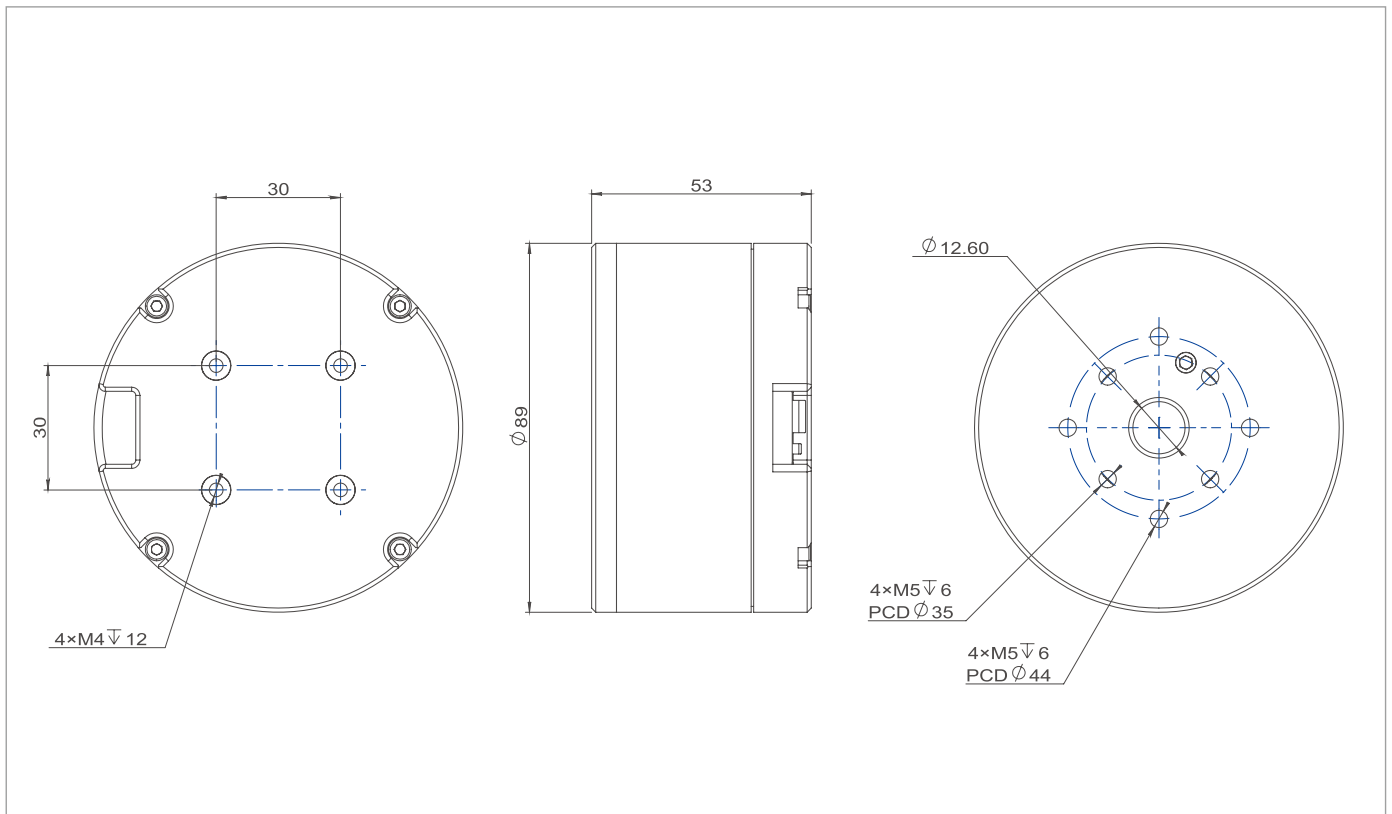
L-9025



■ SINGLE ENCODER

Actuator Full Name	Communication	Product Code
RMD-L-9025-200-C	CAN	110105033506
RMD-L-9025-200-R	RS485	110105033505

■ INSTALLATION DRAWING



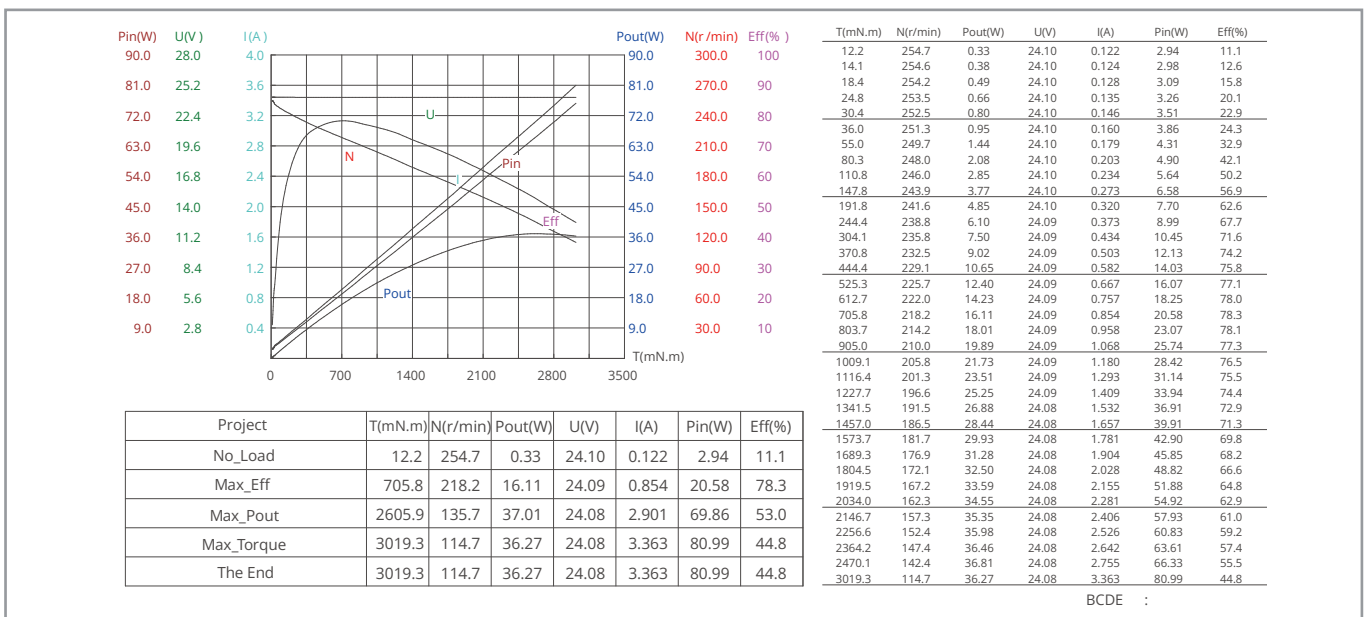
PRODUCT PARAMETERS

Item Name	Unit	L-9025
Nominal Voltage	V	24
Nominal Current	A	3.46
Nominal Torque	N.M	2.79
Nominal Speed	RPM	130
Max Speed	RPM	280
Max Instant Torque	N.M	5.8
Max Instant Current	A	7.6
Line Resistance	Ω	1.9
Wire Connect	-	Y
Phase to Phase Indctance	mH	4.71
Speed Constant	RPM/V	12
Torque Constant	N.M/A	0.76
Rotor Inertia	g.cm ²	4656
Number of Pole Pairs	-	14
Motor Weight	g	880
Working Temperature	°C	(-20 ~ 55°C)
Max Demagnetize Temperature	°C	120
Control Precision	°	0.001

Matched Driver

Drive	-	MC200
Input Voltage	V	12~24
Current	A	Normal : 8A Instant : 15A
Nominal Power	W	200
Encoder	-	14-bit Magnetic Encoder
Communication Method and Baud Rate	-	CAN BUS : 1M / RS485 : 115200 / 500k / 1M / 2.5M
Control Mode	-	Torque Loop (current loop) / Speed Loop / Position Loop
S-Curve	-	YES

MOTOR CHARACTERISTIC CURVE



BCDE :

RH Series Harmonic Actuator

(Dual encoder)





Understand What You Need In Heart
And Know How To Make Effort Diligently



Low Speed Steady



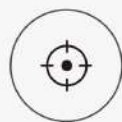
Low Noise



High Precision



High Load Capacity



Precise Control



Easy To Operate

Diversified Application Scenarios



Robotic Arm



Food Processing



Medical Equipment



CNC Bed



Shipbuilding Industry



Aviation Industry

EPS-RH Series Naming Conventions

EPS-RH-17-100-C-B-D

① ② ③ ④ ⑤ ⑥ ⑦

- ① Brand Name E-Efficiency P-Precision S-Smart
- ② RH Stands For The Series Name: Harmonic Actuator
- ③ Harmonic Model e.g: 14/17/20/25/32 etc
- ④ Reduction ratio 1:100
- ⑤ Communication C/E: CAN BUS and EtherCAT
- ⑥ N: Without Brake B: with Brake
- ⑦ D: Dual Encoder S: Single Encoder

For example

Model **EPS-RH-20-100-C-N-D**

Illustrate EPS: Brand Name
 RH: Harmonic Module
 20: Harmonic Model
 100: Harmonic gear ratio 100:1
 C: Communication C: CAN BUS
 N: Without Brake
 D: Dual encoder

Series Name

EPS-RH

Motor Simplified Name

RH-14



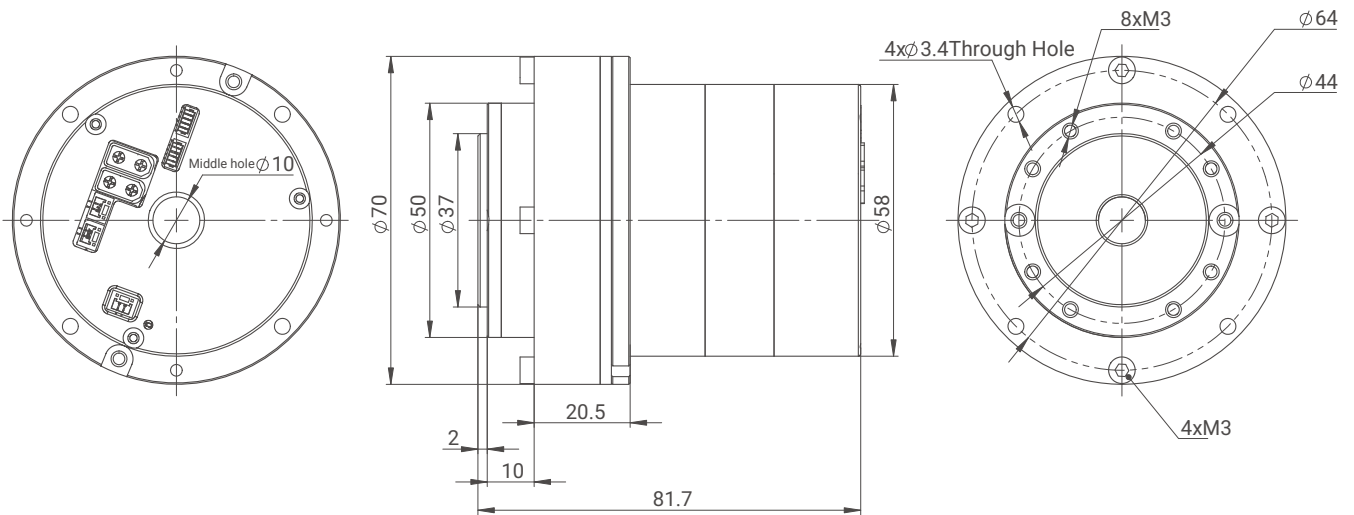
OFF AXIS ENCODER

Actuator Full Name	Communication	With Brake / Without Brake	Gear ratio
EPS-RH-14-100-E-N-D	CAN BUS and EtherCAT	N (without brake)	100

- * 1. The standard motor can support without brake.
- * 2. The standard motor no IP protection. If need IP54 please contact salesman before order.
- * 3. This product also supports a reduction ratio of 50:1.
Please contact sales to confirm the delivery time before ordering

INSTALLATION DRAWING

EPS-RH-14-100-E-N-D



PRODUCT PARAMETERS

Item Name	Unit	RH-14	
Gear Ratio	-	50 100	
Input Voltage	V	48	
No Load Speed	RPM	60 30	
No Load Current	A	0.4 0.4	
Rated Speed	RPM	50 25	
Rated Torque	N.m	5.5 11	
Rated Power	W	28	
Rated Current	A(rms)	2.8	
Peak Torque	N.m	14 28	
Peak Current	A(rms)	5.7	
Efficiency	%	-	
Motor Back-EMF Constant	Vdc/Krpm	19.2	
Module Torque Constant	N.m/A	2 4	
Motor Phase Resistance	Ω	0.62	
Motor Phase Inductance	mH	0.43	
Pole Pair	-	10	
Cogging Torque	N.m	-	
3 Phase Connection	-	Y	
Back Drive Torque	N.m	-	
Backlash	Arcsec	< 40	
Radial Load	Static load	KN	8.6
	Dynamic load	KN	5.8
Axial Load	Static load	KN	58.7
	Dynamic load	KN	16.2
Inertia	N	kg.m ²	0.11 0.29
	B	kg.m ²	- 0.32
Encoder Type	-	Dual Encoder ABS-17BIT (Input) ABS-17BIT (Output)	
Repeat Position Accuracy	Degree	< 0.01	
Communication	-	CAN BUS and Ether CAT	
Weight	N	kg	0.78
	B	kg	/
Insulation Grade	-	F	

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

Series Name

EPS-RH

Motor Simplified Name

RH-17



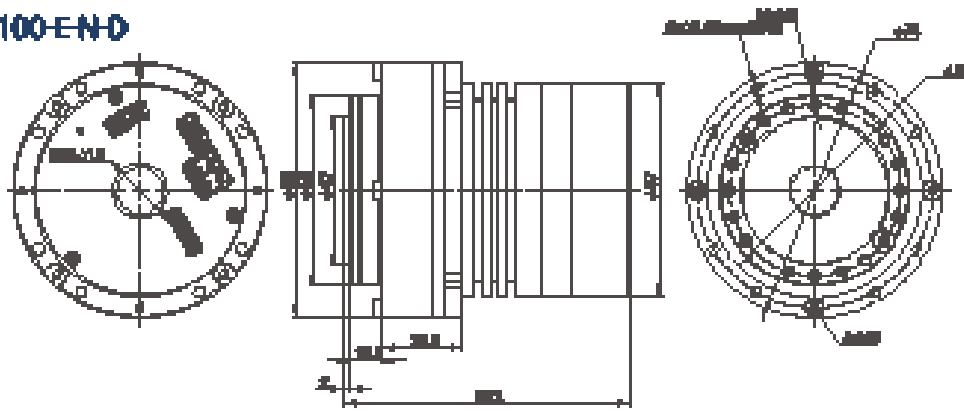
OFF AXIS ENCODER

Actuator Full Name	Communication	With Brake / Without Brake	Gear Ratio
EPS-RH-17-100-E-N-D	CAN BUS and EtherCAT	N (without brake)	100
EPS-RH-17-100-E-B-D	CAN BUS and EtherCAT	B (with brake)	100

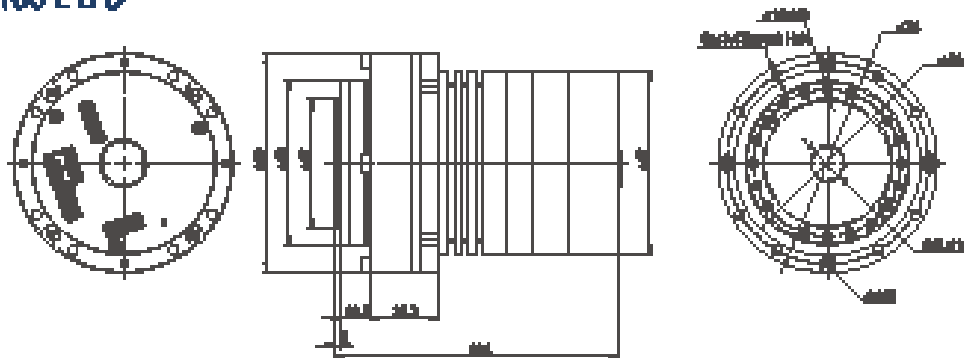
- * 1. The standard motor can support both brake or without brake.
- * 2. The standard motor support CAN BUS and EtherCAT.
- * 3. The standard motor no IP protection. If need IP54 please contact salesman before order.
- * 4. This product also supports a reduction ratio of 50:1.
Please contact sales to confirm the delivery time before ordering

INSTALLATION DRAWING

EPS-RH-17-100-E-N-D



EPS-RH-17-100-E-B-D



PRODUCT PARAMETERS

Item Name		Unit	RH-17
Gear Ratio		-	50 100
Input Voltage		V	48
No Load Speed		RPM	60 30
No Load Current		A	0.6 0.6
Rated Speed		RPM	50 25
Rated Torque		N.m	17.5 35
Rated Power		W	91
Rated Current		A(rms)	4.7
Peak Torque		N.m	27 54
Peak Current		A(rms)	7.4
Efficiency		%	-
Motor Back-EMF Constant		Vdc/Krpm	19.2
Module Torque Constant		N.m/A	3.7 7.4
Motor Phase Resistance		Ω	0.70
Motor Phase Inductance		mH	0.47
Pole Pair		-	10
Cogging Torque		N.m	-
3 Phase Connection		-	Y
Back Drive Torque		N.m	-
Backlash		Arcsec	< 40
Radial Load	Static load	KN	16.3
	Dynamic load	KN	10.4
Axial Load	Static load	KN	78.2
	Dynamic load	KN	20.8
Inertia	N	kg.m ²	0.16 0.52
	B	kg.m ²	0.18 0.56
Encoder Type		-	Dual Encoder ABS-17BIT (Input) ABS-17BIT (Output)
Repeat Position Accuracy		Degree	< 0.01
Communication		-	CAN BUS and Ether CAT
Weight	N	kg	1.11
	B	kg	1.28
Insulation Grade		-	F

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

Series Name

EPS-RH

Motor Simplified Name

RH-20



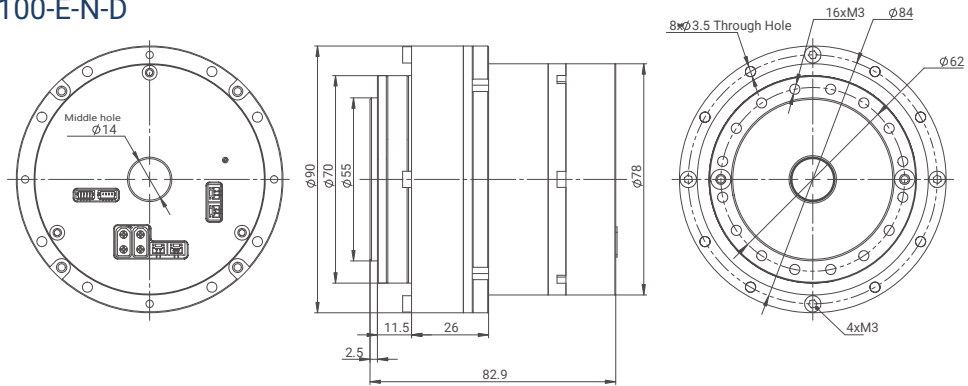
OFF AXIS ENCODER

Actuator Full Name	Communication	With Brake / Without Brake	Gear Ratio
EPS-RH-20-100-E-N-D	CAN BUS and EtherCAT	N (without brake)	100
EPS-RH-20-100-E-B-D	CAN BUS and EtherCAT	B (with brake)	100

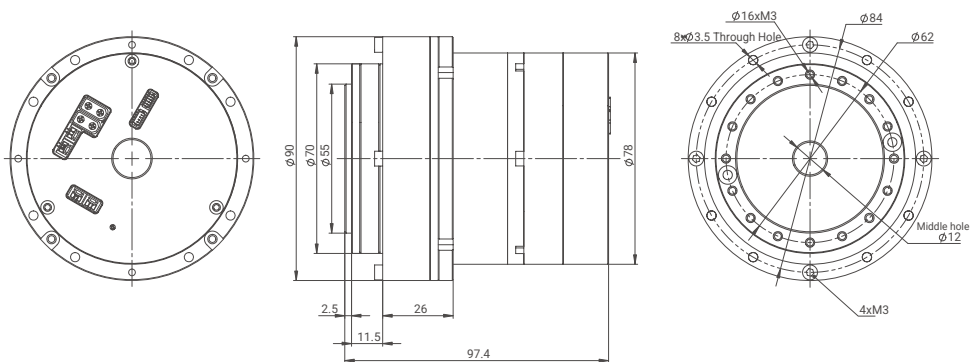
- * 1. The standard motor can support both brake or without brake.
- * 2. The standard motor support CAN BUS and EtherCAT.
- * 3. The standard motor no IP protection. If need IP54 please contact salesman before order.
- * 4. This product also supports a reduction ratio of 50:1.
Please contact sales to confirm the delivery time before ordering

INSTALLATION DRAWING

EPS-RH-20-100-E-N-D



EPS-RH-20-100-E-B-D



PRODUCT PARAMETERS

Item Name		Unit	RH-20
Gear Ratio		-	50 100
Input Voltage		V	48
No Load Speed		RPM	60 30
No Load Current		A	1.1 1.2
Rated Speed		RPM	50 25
Rated Torque		N.m	25 50
Rated Power		W	130
Rated Current		A(rms)	6.8
Peak Torque		N.m	40 80
Peak Current		A(rms)	10.6
Efficiency		%	-
Motor Back-EMF Constant		Vdc/Krpm	19.2
Module Torque Constant		N.m/A	3.65 7.3
Motor Phase Resistance		Ω	0.36
Motor Phase Inductance		mH	0.51
Pole Pair		-	10
Cogging Torque		N.m	-
3 Phase Connection		-	Y
Back Drive Torque		N.m	-
Backlash		Arcsec	< 40
Radial Load	Static load	KN	22
	Dynamic load	KN	14.6
Axial Load	Static load	KN	132.7
	Dynamic load	KN	34
Inertia	N	kg.m ²	0.21 0.87
	B	kg.m ²	0.24 0.95
Encoder Type		-	Dual Encoder ABS-17BIT (Input) ABS-17BIT (Output)
Repeat Position Accuracy		Degree	< 0.01
Communication		-	CAN BUS and Ether CAT
Weight	N	kg	1.45
	B	kg	1.75
Insulation Grade		-	F

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

Series Name

EPS-RH

Motor Simplified Name

RH-25



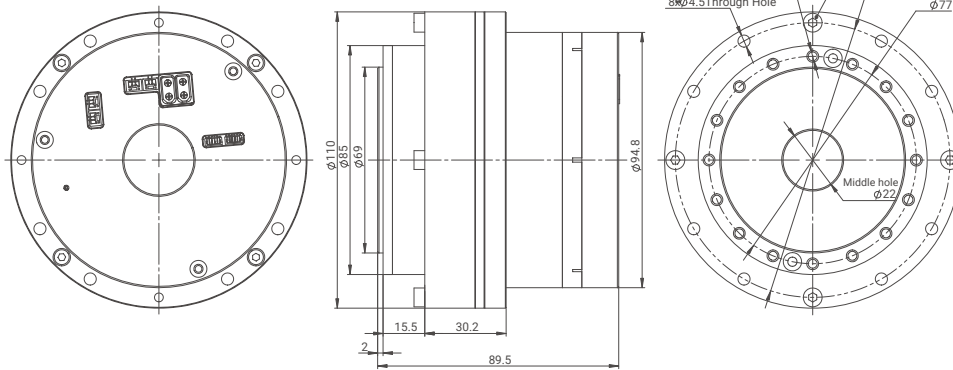
OFF AXIS ENCODER

Actuator Full Name	Communication	With Brake / Without Brake	Gear Ratio
EPS-RH-25-100-E-N-D	CAN BUS and EtherCAT	N (without brake)	100
EPS-RH-25-100-E-B-D	CAN BUS and EtherCAT	B (with brake)	100

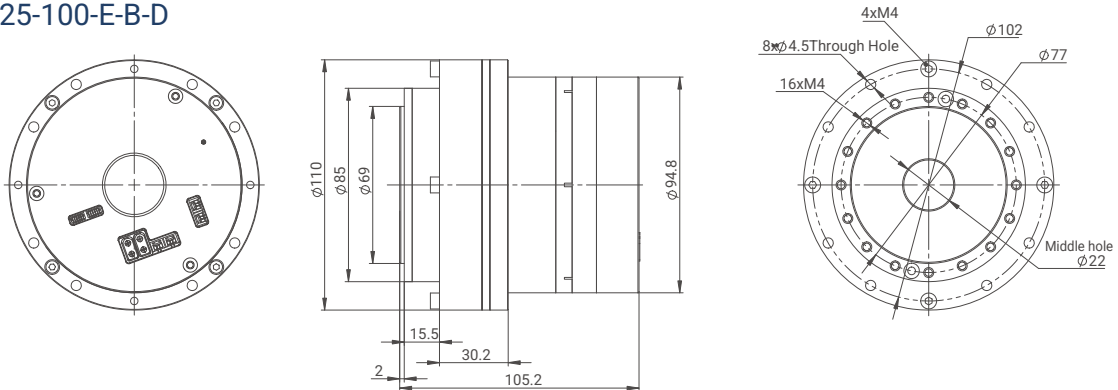
- * 1. The standard motor can support both brake or without brake.
 - * 2. The standard motor support CAN BUS and EtherCAT.
 - * 3. The standard motor no IP protection. If need IP54 please contact salesman before order.
 - * 4. This product also supports a reduction ratio of 50:1.
- Please contact sales to confirm the delivery time before ordering

INSTALLATION DRAWING

EPS-RH-25-100-E-N-D



EPS-RH-25-100-E-B-D



PRODUCT PARAMETERS

Item Name		Unit	RH-25
Gear Ratio		-	50 100
Input Voltage		V	48
No Load Speed		RPM	60 30
No Load Current		A	1.8 2.0
Rated Speed		RPM	50 25
Rated Torque		N.m	54 108
Rated Power		W	282
Rated Current		A(rms)	10.6
Peak Torque		N.m	78.5 157
Peak Current		A(rms)	14.1
Efficiency		%	-
Motor Back-EMF Constant		Vdc/Krpm	19.2
Module Torque Constant		N.m/A	5.05 10.1
Motor Phase Resistance		Ω	0.16
Motor Phase Inductance		mH	0.33
Pole Pair		-	10
Cogging Torque		N.m	-
3 Phase Connection		-	Y
Back Drive Torque		N.m	-
Backlash		Arcsec	< 40
Radial Load	Static load	KN	35.8
	Dynamic load	KN	21.8
Axial Load	Static load	KN	198.2
	Dynamic load	KN	49.1
Inertia	N	kg.m ²	0.51 1.94
	B	kg.m ²	0.59 2.32
Encoder Type		-	Dual Encoder ABS-17BIT (Input) ABS-17BIT (Output)
Repeat Position Accuracy		Degree	< 0.01
Communication		-	CAN BUS and Ether CAT
Weight	N	kg	2.42
	B	kg	2.74
Insulation Grade		-	F

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

Series Name

EPS-RH

Motor Simplified Name

RH-32



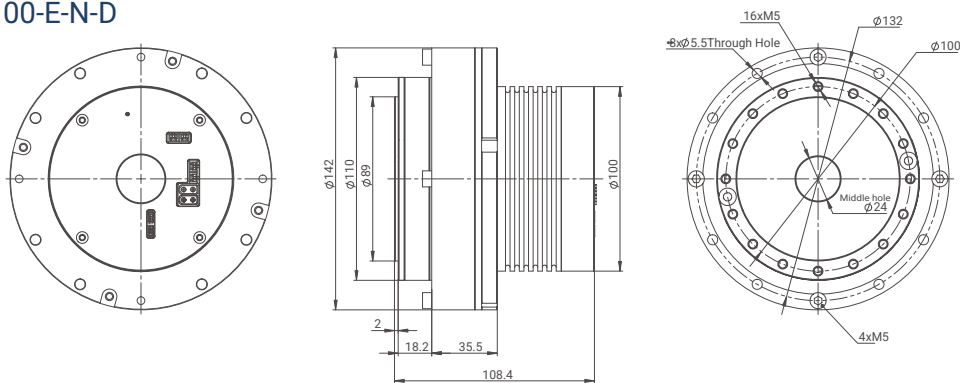
OFF AXIS ENCODER

Actuator Full Name	Communication	With Brake / Without Brake	Gear Ratio
EPS-RH-32-100-E-N-D	CAN BUS and EtherCAT	N (without brake)	100
EPS-RH32-100-E-B-D	CAN BUS and EtherCAT	B (with brake)	100

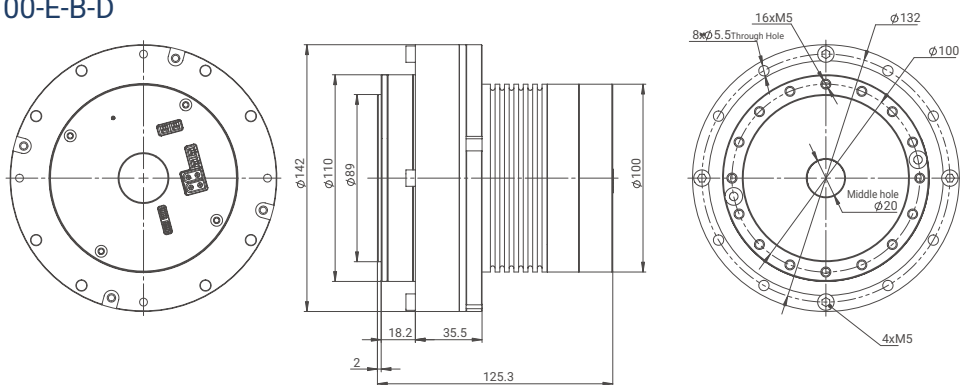
- * 1. The standard motor can support both brake or without brake.
- * 2. The standard motor support CAN BUS and EtherCAT.
- * 3. The standard motor no IP protection. If need IP54 please contact salesman before order.
- * 4. This product also supports a reduction ratio of 50:1.
Please contact sales to confirm the delivery time before ordering

INSTALLATION DRAWING

EPS-RH-32-100-E-N-D



EPS-RH-32-100-E-B-D



PRODUCT PARAMETERS

Item Name		Unit	RH-32
Gear Ratio		-	50 100
Input Voltage		V	48
No Load Speed		RPM	40 20
No Load Current		A	2.6 2.8
Rated Speed		RPM	36 18
Rated Torque		N.m	75 108
Rated Power		W	282
Rated Current		A(rms)	21.8
Peak Torque		N.m	114.5 229
Peak Current		A(rms)	32.1
Efficiency		%	-
Motor Back-EMF Constant		Vdc/Krpm	26.7
Module Torque Constant		N.m/A	3.45 6.9
Motor Phase Resistance		Ω	0.08
Motor Phase Inductance		mH	0.18
Pole Pair		-	10
Cogging Torque		N.m	-
3 Phase Connection		-	Y
Back Drive Torque		N.m	-
Backlash		Arcsec	< 40
Radial Load	Static load	KN	65.4
	Dynamic load	KN	38.2
Axial Load	Static load	KN	342.6
	Dynamic load	KN	81.8
Inertia	N	kg.m ²	0.82 6.86
	B	kg.m ²	2.05 8.32
Encoder Type		-	Dual Encoder ABS-17BIT (Input) ABS-17BIT (Output)
Repeat Position Accuracy		Degree	< 0.01
Communication		-	CAN BUS and Ether CAT
Weight	N	kg	4.32
	B	kg	4.74
Insulation Grade		-	F

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

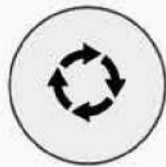
Integrated
Harmonic Module

RH - HARMONIC - SERIES

Integrated Design, Vibration Resistance



Understand what you need in heart and know how to make effort diligently



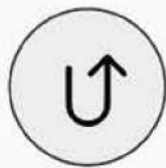
STABLE AT LOW SPEED



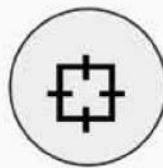
LOW NOISE



HIGH PRECISION



STRONG CARRYING CAPACITY



PRECISE CONTROL



EASY TO OPERATE

DIVERSIFIED APPLICABLE SCENARIOS



Robotic Arm



Food Processing



Medical Equipment



CNC Bed



Shipbuilding Industry



Aviation Industry

EPS-RH Series Part Number Construction

EPS-RH-17-100-C-B-S

① ② ③ ④ ⑤ ⑥ ⑦

- ① Brand Name : E-Efficiency P-Precision S-Smart
- ② RH Stands For The Series Name : Integrated Harmonic Actuator
- ③ Harmonic Model e.g:14 / 17 / 20 / 25 / 32 etc
- ④ Reduction Ratio 1:100
- ⑤ Communication C: CAN BUS
- ⑥ N: Without Brake B: with Brake
- ⑦ S: Single Encoder D: Dual Encoder

For example

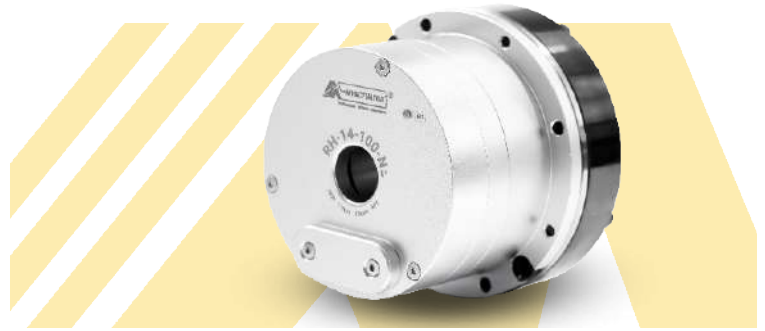
Model	EPS-RH-20-100-C-N-S
Illustrate	EPS : Brand name RH : Hollow harmonic module 20 : Harmonic model 100 : Harmonic gear ratio 100:1 C: Communication C : CAN BUS N : Without brake S : Single encoder

Series Name

EPS-RH

Motor Simplified Name

RH-14



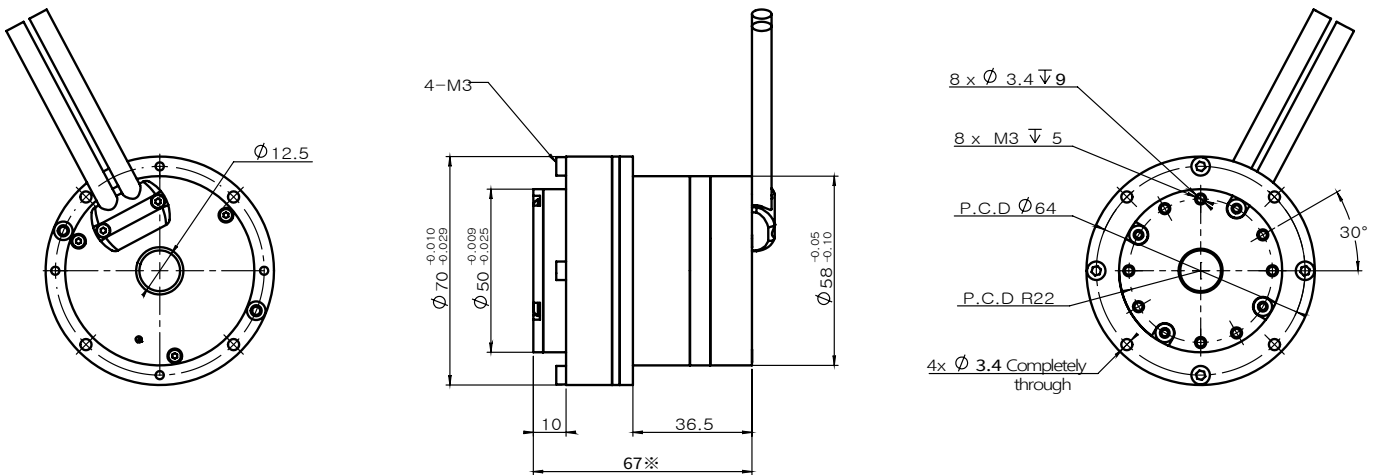
■ SINGLE ENCODER+CAN BUS / OFF AXIS ENCODER

Actuator Full Name	With Brake / Without Brake	Encoder
EPS-RH-14-100-C-N-S	N (without brake)	Single Encoder

- * 1. The standard motor can support both brake or without brake.
- * 2. The standard motor no IP protection. If need IP54 please contact salesman before order.
- * 3. The standard motor only support CAN BUS communication.

■ INSTALLATION DRAWING

EPS-RH-14-**-C-N



PRODUCT PARAMETERS

Item Name	Unit	RH-14
Gear Ratio	-	100
Input Voltage	V	48
No Load Speed	RPM	30
No Load Current	A	0.9
Rated Speed	RPM	25
Rated Torque	N.m	11
Rated Power	W	100
Rated Current	A	6.5
Peak Torque	N.m	28
Peak Current	A	16.25
Back-EMF Constant	Vdc/Krpm	1.39
Torque Constant	N.m/A	0.02
Phase Resistance	Ω	0.9
Phase Inductance	mH	0.4
Pole Pair	-	10
3 Phase Connection	-	Y
Backlash	Arcsec	< 20
Encoder Type & Interface	-	ABS-17bit
Repeat Position Accuracy	Degree	< 0.01
Communication	-	CAN BUS
Weight (N)	Kg	0.71
Weight (B)	Kg	/
Insulation Grade	-	F

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

Series Name

EPS-RH

Motor Simplified Name

RH-17



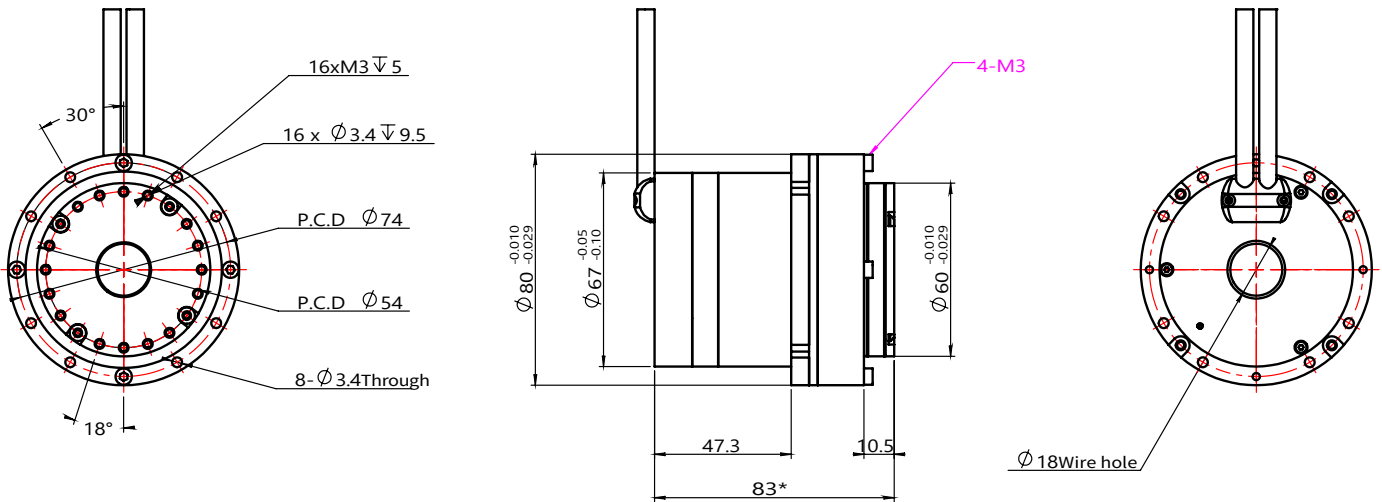
■ SINGLE ENCODER+CAN BUS / OFF AXIS ENCODER

Actuator Full Name	With Brake / Without Brake	Encoder
EPS-RH-17-100-C-N-S	N (without brake)	Single encoder
EPS-RH-17-100-C-B-S	B (with brake)	Single encoder

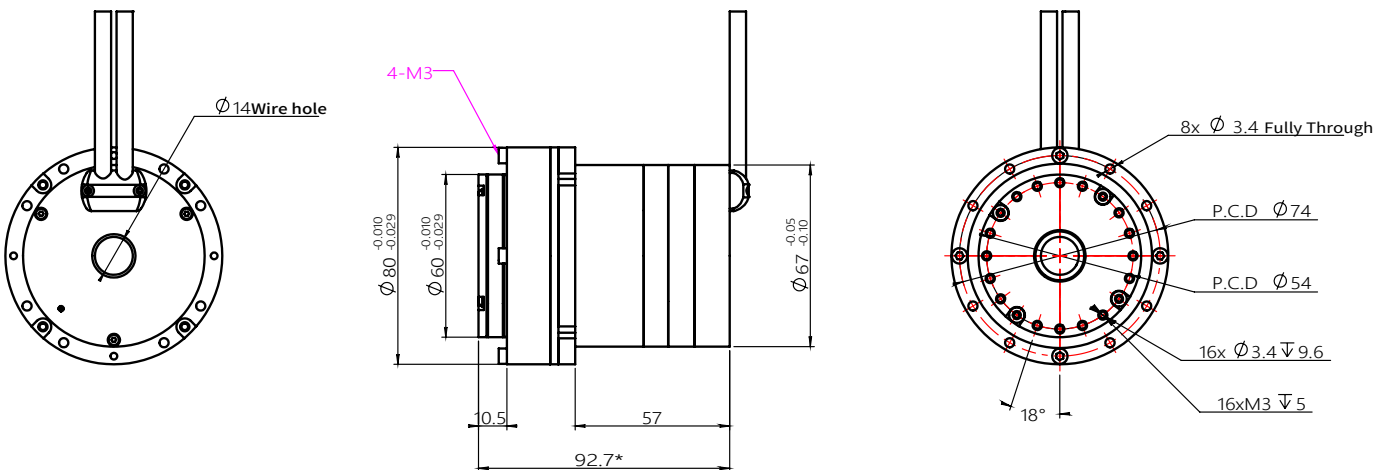
- * 1. The standard motor can support both brake or without brake.
- * 2. The standard motor no IP protection. If need IP54 please contact salesman before order.
- * 3. The standard motor only support CAN BUS communication.

■ INSTALLATION DRAWING

EPS-RH-17--C-N**



EPS-RH-17--C-B**



PRODUCT PARAMETERS

Item Name	Unit	RH-17
Gear Ratio	-	100
Input Voltage	V	48
No Load Speed	RPM	30
No Load Current	A	1.45
Rated Speed	RPM	25
Rated Torque	N.m	35
Rated Power	W	180
Rated Current	A	9
Peak Torque	N.m	54
Peak Current	A	13.86
Back-EMF Constant	Vdc/Krpm	2.79
Torque Constant	N.m/A	0.04
Phase Resistance	Ω	0.77
Phase Inductance	mH	0.38
Pole Pair	-	10
3 Phase Connection	-	Y
Backlash	Arcsec	< 20
Encoder Type & Interface	-	ABS-17bit
Repeat Position Accuracy	Degree	< 0.01
Communication	-	CAN BUS
Weight (N)	Kg	1.1
Weight (B)	Kg	1.25
Insulation Grade	-	F

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

Series Name

EPS-RH

Motor Simplified Name

RH-20



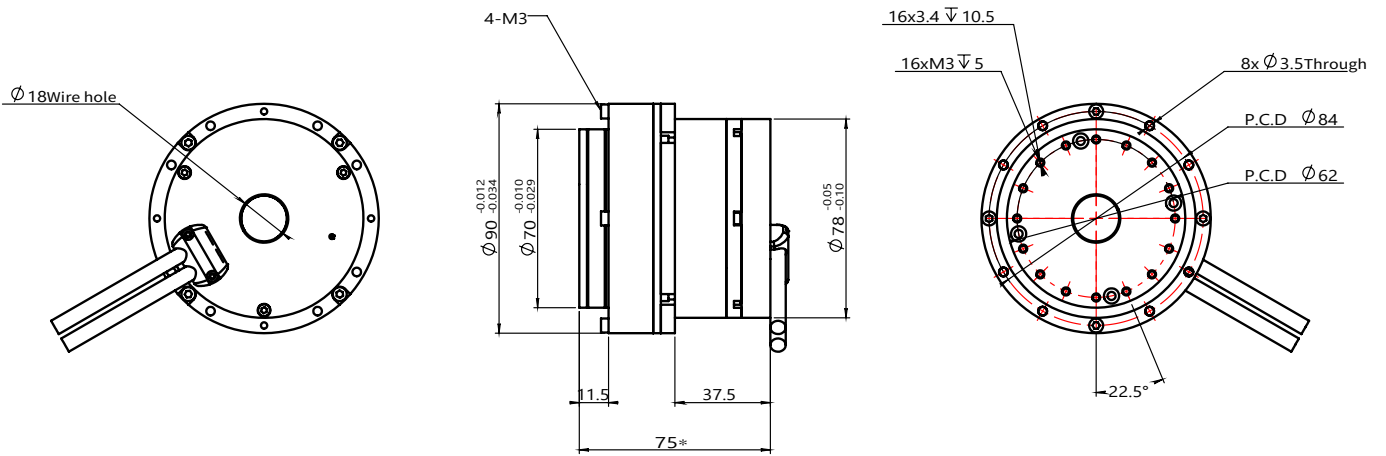
■ SINGLE ENCODER+CAN BUS / OFF AXIS ENCODER

Actuator Full Name	With Brake / Without Brake	Encoder
EPS-RH-20-100-C-N-S	N (without brake)	Single encoder
EPS-RH-20-100-C-B-S	B (with brake)	Single encoder

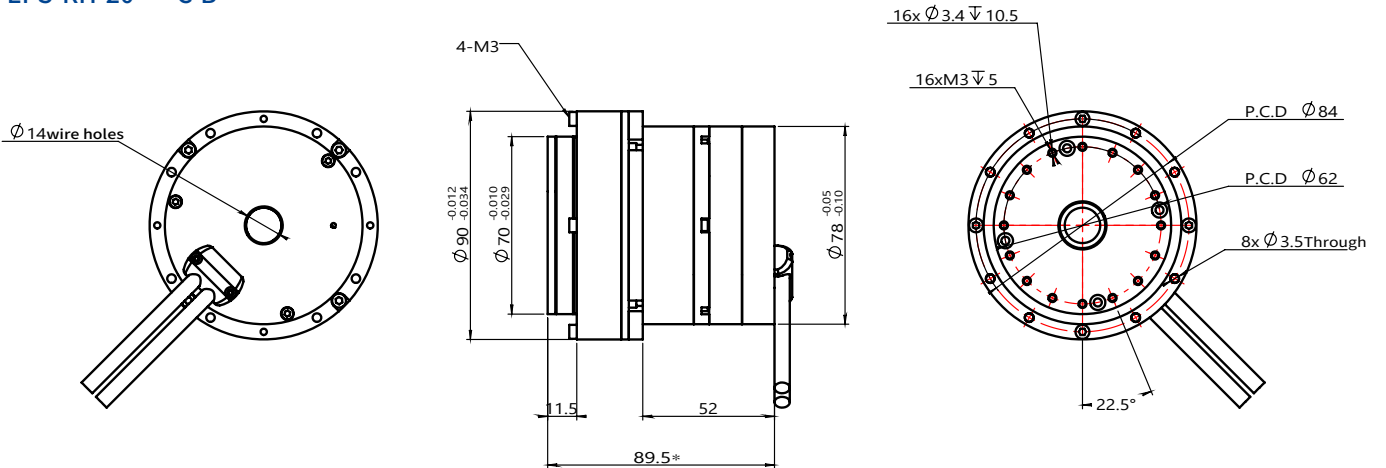
- * 1. The standard motor can support both brake or without brake.
- * 2. The standard motor no IP protection. If need IP54 please contact salesman before order.
- * 3. The standard motor only support CAN BUS communication.

■ INSTALLATION DRAWING

EPS-RH-20--C-N**



EPS-RH-20--C-B**



PRODUCT PARAMETERS

Item Name	Unit	RH-20
Gear Ratio	-	100
Input Voltage	V	48
No Load Speed	RPM	30
No Load Current	A	2.59
Rated Speed	RPM	25
Rated Torque	N.m	50
Rated Power	W	250
Rated Current	A	13
Peak Torque	N.m	80
Peak Current	A	20.8
Back-EMF Constant	Vdc/Krpm	2.79
Torque Constant	N.m/A	0.04
Phase Resistance	Ω	0.38
Phase Inductance	mH	0.33
Pole Pair	-	10
3 Phase Connection	-	Y
Backlash	Arcsec	< 20
Encoder Type & Interface	-	ABS-17bit
Repeat Position Accuracy	Degree	< 0.01
Communication	-	CAN BUS
Weight (N)	Kg	1.45
Weight (B)	Kg	1.6
Insulation Grade	-	F

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

Series Name

EPS-RH

Motor Simplified Name

RH-25



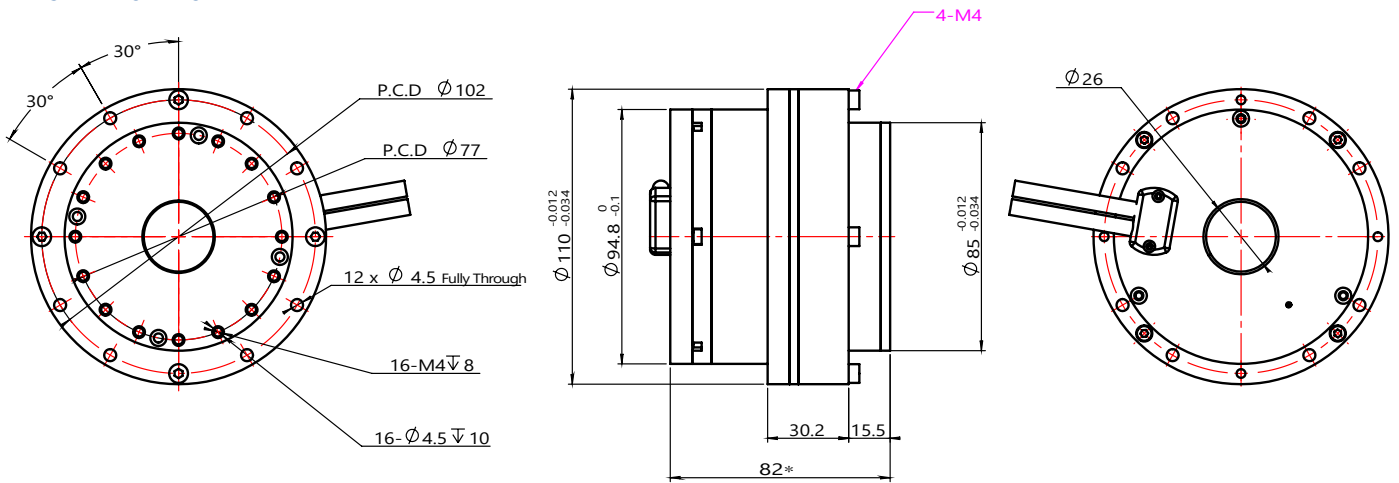
■ SINGLE ENCODER+CAN BUS / OFF AXIS ENCODER

Actuator Full Name	With Brake / Without Brake	Encoder
EPS-RH-25-100-C-N-S	N (without brake)	Single encoder
EPS-RH-25-100-C-B-S	B (with brake)	Single encoder

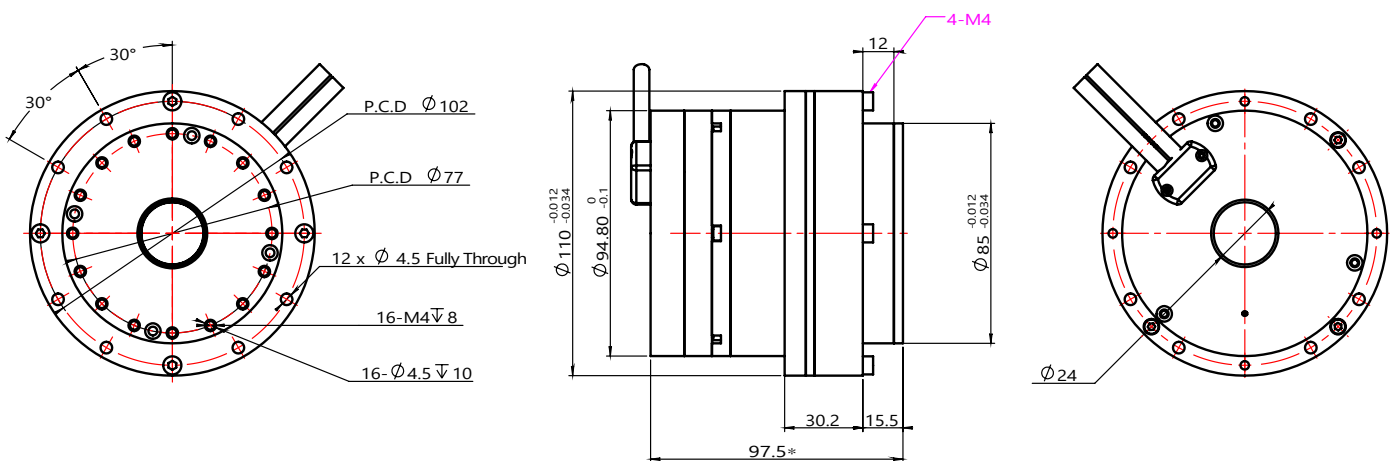
- * 1. The standard motor can support both brake or without brake.
- * 2. The standard motor no IP protection. If need IP54 please contact salesman before order.
- * 3. The standard motor only support CAN BUS communication.

■ INSTALLATION DRAWING

EPS-RH-25--C-N**



EPS-RH-25--C-B**



PRODUCT PARAMETERS

Item Name	Unit	RH-25
Gear Ratio	-	100
Input Voltage	V	48
No Load Speed	RPM	30
No Load Current	A	1.61
Rated Speed	RPM	25
Rated Torque	N.m	108
Rated Power	W	400
Rated Current	A	16
Peak Torque	N.m	157
Peak Current	A	23.2
Back-EMF Constant	Vdc/Krpm	4.89
Torque Constant	N.m/A	0.07
Phase Resistance	Ω	0.23
Phase Inductance	mH	0.3
Pole Pair	-	10
3 Phase Connection	-	Y
Backlash	Arcsec	< 20
Encoder Type & Interface	-	ABS-17bit
Repeat Position Accuracy	Degree	< 0.01
Communication	-	CAN BUS
Weight (N)	Kg	2.3
Weight (B)	Kg	2.82
Insulation Grade	-	F

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

Series Name

EPS-RH

Motor Simplified Name

RH-32



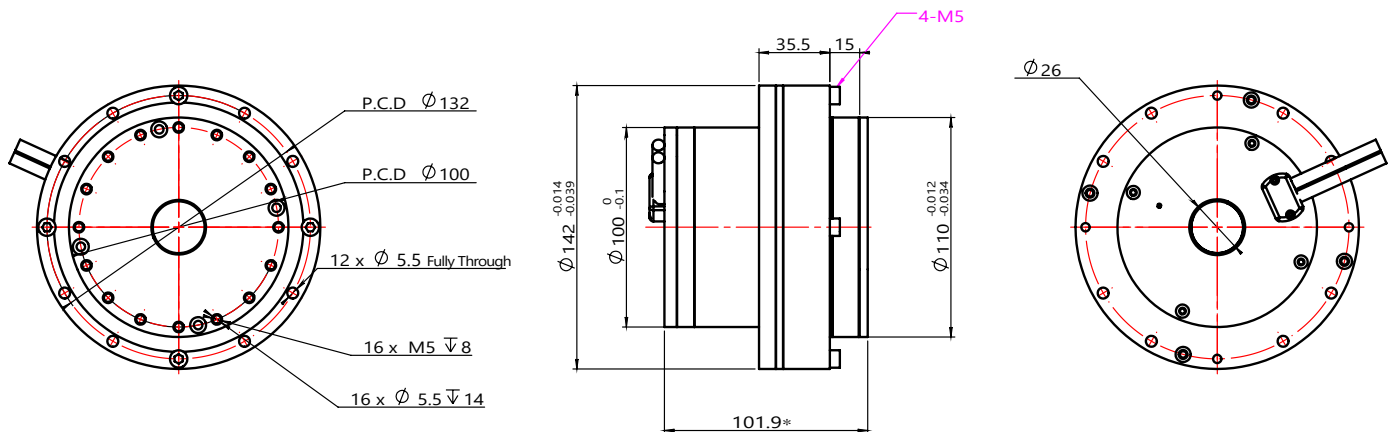
■ SINGLE ENCODER+CAN BUS / OFF AXIS ENCODER

Actuator Full Name	With Brake / Without Brake	Encoder
EPS-RH-32-100-C-N-S	N (without brake)	Single encoder
EPS-RH-32-100-C-B-S	B (with brake)	Single encoder

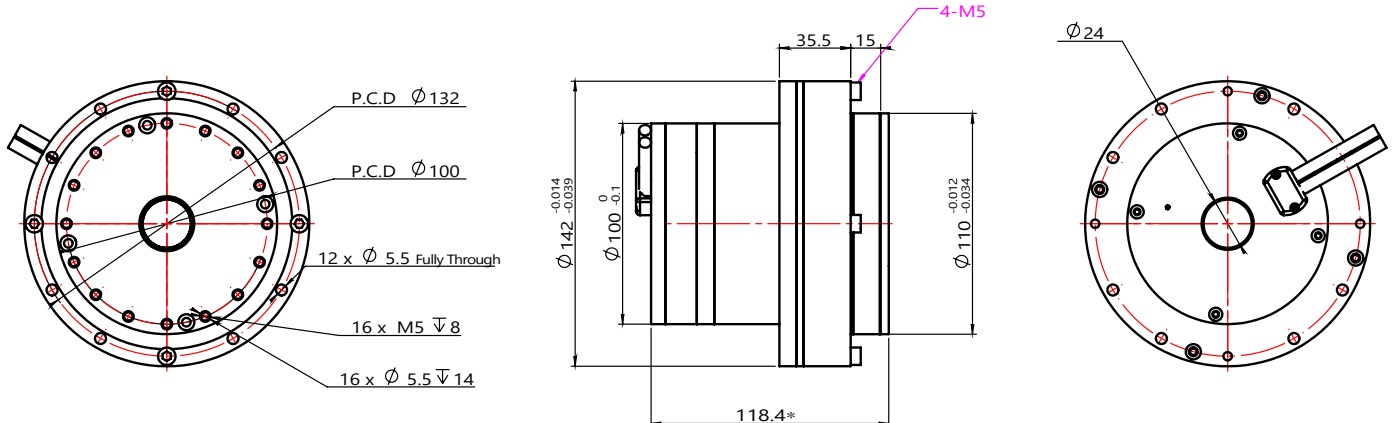
- * 1. The standard motor can support both brake or without brake.
- * 2. The standard motor no IP protection. If need IP54 please contact salesman before order.
- * 3. The standard motor only support CAN BUS communication.

■ INSTALLATION DRAWING

EPS-RH-32-**-C-N



EPS-RH-32-**-C-B



PRODUCT PARAMETERS

Item Name	Unit	RH-32
Gear Ratio	-	100
Input Voltage	V	48
No Load Speed	RPM	20
No Load Current	A	3.9
Rated Speed	RPM	18
Rated Torque	N.m	150
Rated Power	W	700
Rated Current	A	20
Peak Torque	N.m	229
Peak Current	A	33.44
Back-EMF Constant	Vdc/Krpm	6.28
Torque Constant	N.m/A	0.09
Phase Resistance	Ω	0.08
Phase Inductance	mH	0.13
Pole Pair	-	10
3 Phase Connection	-	Y
Backlash	Arcsec	< 20
Encoder Type & Interface	-	ABS-17bit
Repeat Position Accuracy	Degree	< 0.01
Communication	-	CAN BUS
Weight (N)	Kg	4.3
Weight (B)	Kg	4.7
Insulation Grade	-	F

*Rated torque test method When the ambient temperature is 24 degrees Celsius (no other heat dissipation methods), the test is performed at the rated speed. The motor torque reaches temperature balance under the condition of a temperature rise of 60 degrees Celsius, and the long-term working point is the rated torque value of the motor.

OUTER ROTOR
FRAMELESS TORQUE MOTOR MODULE

FRAMELESS MOTOR

Vacuum potting | Good heat dissipation | High efficiency | High power



FLO Series Part Number Construction

RMD-FLO-70-15-200

① ② ③ ④ ⑤

- ① Brand Name : R-Reducer M-Motor D-Drive
- ② FLO Stands For The Series Name: Outer rotor frameless torque motor actuator
- ③ Rotor outer diameter
- ④ Stator stack height
- ⑤ Rated power 200W

For example

Model RMD-FLO-90-15-400

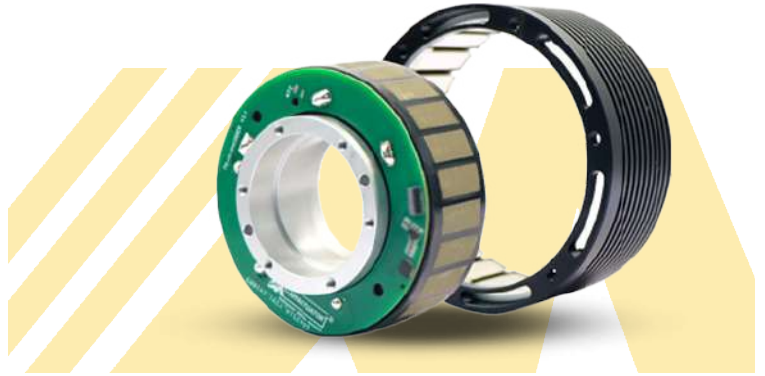
Illustrate RMD : Brand Name
 FLO : External Rotating Frameless Torque Series
 90 : Rotor outer diameter
 15 : Stator stack height
 400 : Rated power

PRODUCT PARAMETERS

Item Name	Unit	FLO-50-15
Input Voltage	V	24
No Load Current	A	0.32
Rated Speed	RPM	2500
Rated Torque	N.m	0.35
Rated Power	W	91.6
Rated Current	A	4.9
Peak Torque	N.m	0.87
Peak Current	A	14.7
Efficiency	%	>83
Back-EMF Constant	Vdc/Krpm	7.93
Torque Constant	N.m/A	0.07
Phase Resistance	Ω	0.4
Phase Inductance	mH	0.19
Pole Pair	-	13
Cogging Torque	N.m	12
3 Phase Connection	-	Y
Encoder Type & Interface	-	Absolute
Weight	kg	0.19
Insulation Grade	-	F

Series Name
RMD-FLO

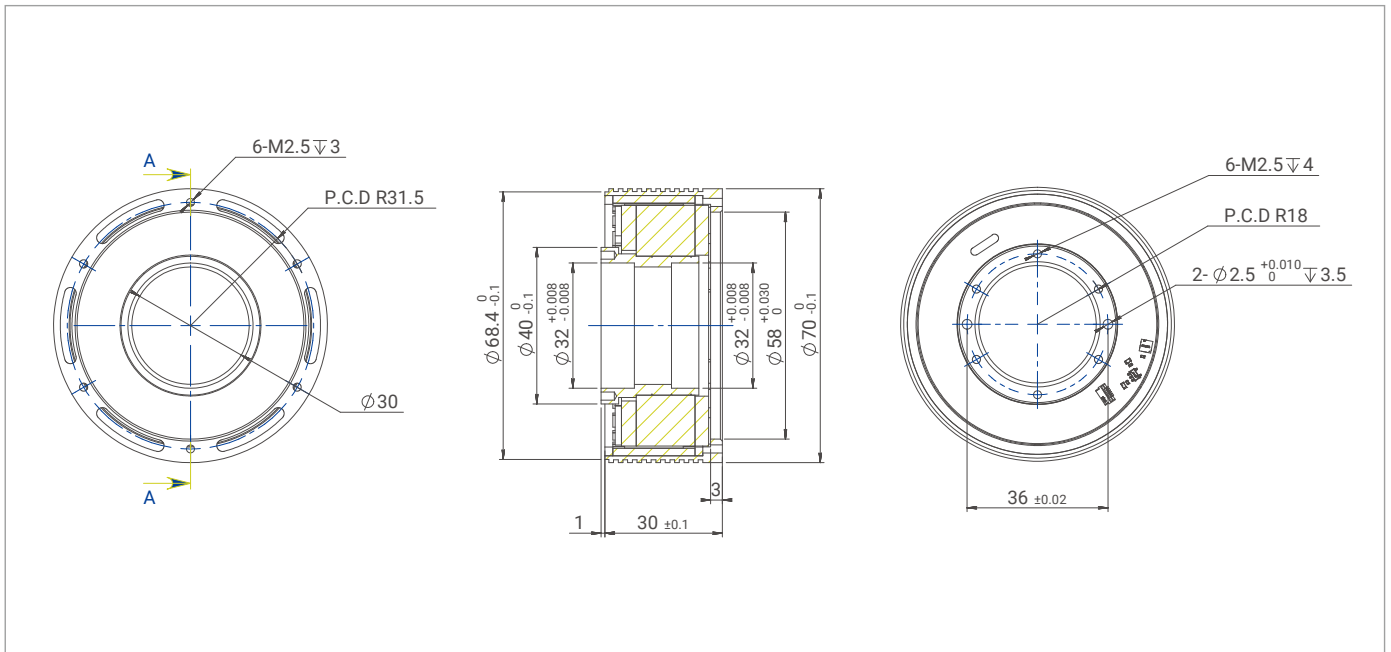
Motor Simplified Name
FLO-70-15



OUTER ROTOR

Actuator Full Name	Encoder
RMD-FLO-70-15-200	Absolute

INSTALLATION DRAWING

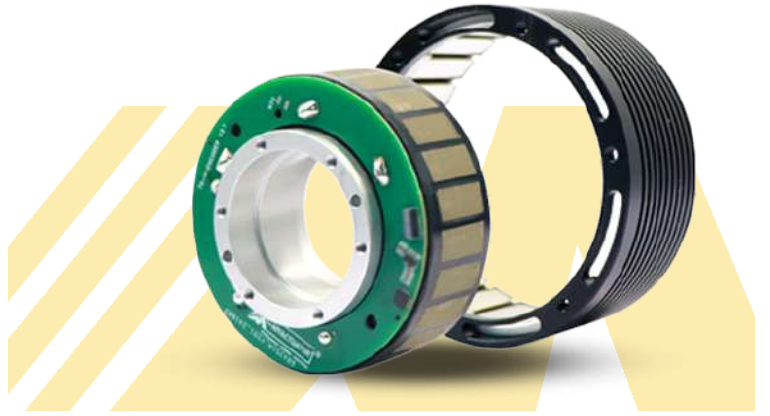


PRODUCT PARAMETERS

Item Name	Unit	FLO-70-15
Input Voltage	V	48
No Load Current	A	0.21
Rated Speed	RPM	2400
Rated Torque	N.m	0.8
Rated Power	W	200
Rated Current	A	4.4
Peak Torque	N.m	2
Peak Current	A	13.2
Efficiency	%	>84
Back-EMF Constant	Vdc/Krpm	17
Torque Constant	N.m/A	0.18
Phase Resistance	Ω	0.5
Phase Inductance	mH	0.55
Pole Pair	-	13
Cogging Torque	N.m	30.83
3 Phase Connection	-	Y
Encoder Type & Interface	-	Absolute
Weight	kg	0.33
Insulation Grade	-	F

Series Name
RMD-FLO

Motor Simplified Name
FLO-90-15

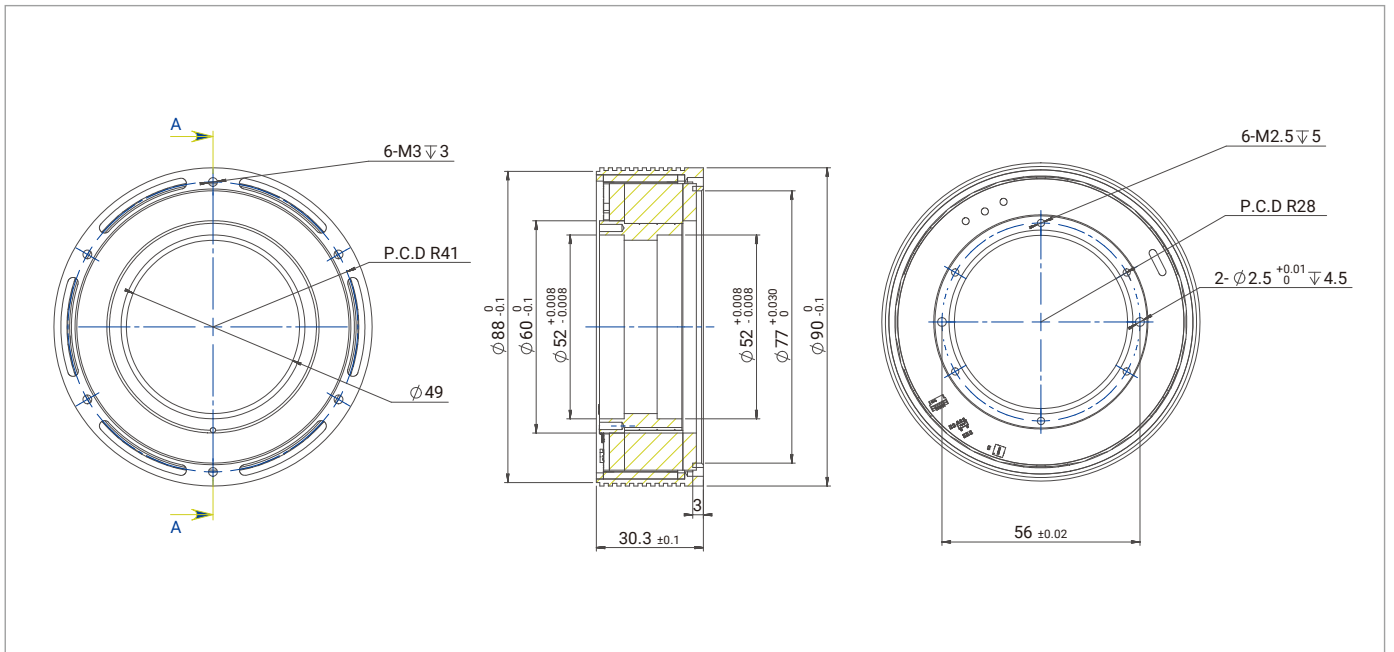


OUTER ROTOR

Actuator Full Name
RMD-FLO-90-15-400

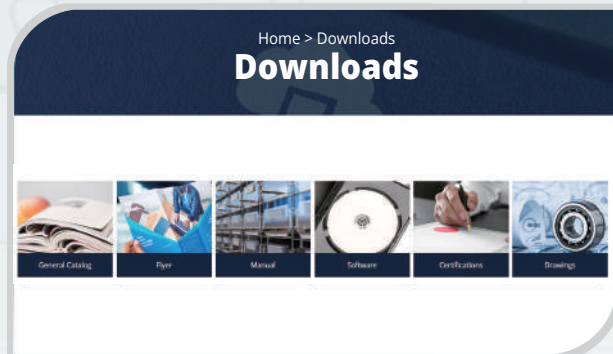
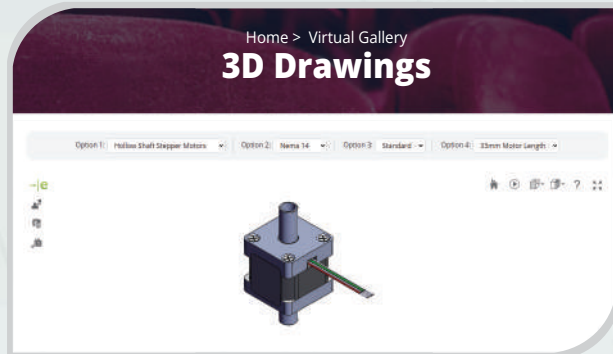
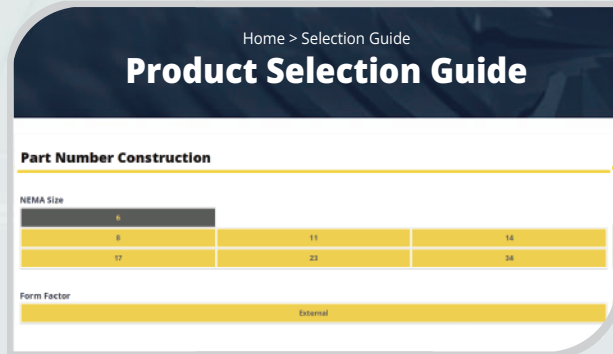
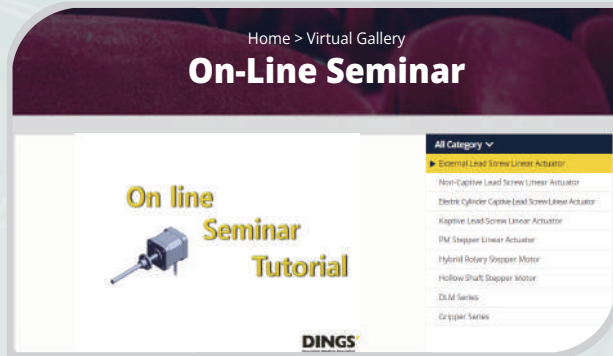
Encoder
Absolute

INSTALLATION DRAWING



PRODUCT PARAMETERS

Item Name	Unit	FLO-90-15
Input Voltage	V	48
No Load Current	A	0.35
Rated Speed	RPM	1600
Rated Torque	N.m	1.5
Rated Power	W	252
Rated Current	A	6.6
Peak Torque	N.m	3.75
Peak Current	A	19.8
Efficiency	%	>83
Back-EMF Constant	Vdc/Krpm	21.1
Torque Constant	N.m/A	0.23
Phase Resistance	Ω	0.35
Phase Inductance	mH	0.28
Pole Pair	-	17
Cogging Torque	N.m	64
3 Phase Connection	-	Y
Encoder Type & Interface	-	Absolute
Weight	kg	0.46
Insulation Grade	-	F



5th Floor, No. 599 Yuanchuang Road, Huaqiao District, Kunshan City, Jiangsu Province, China.

Phone : +86-400-998-9592
E-mail : tangxc@myactuator.com

www.myactuator.com

DINGS[®]

Precision Motion Specialist

Headquarter , CHINA

Jiangsu DINGS' Intelligent Control Technology Co., LTD

No. 2850 Luheng Road, Changzhou Economic Development Zone, Jiangsu Province, China

Phone : +86-519-85177826
Fax : +86-519-85177807
E-mail : info@dingsmotion.com
www.dingsmotion.com

Shenzhen Office

Room 1105, Block C, CIMC industry demonstration park, Qiaoming Road, Guangming district, Shenzhen City

E-mail : info@dingsmotion.com

International Office

DINGS' Motion USA

355 Cochrane Circle Morgan Hill, CA 95037

Phone : +1-408-612-4970
E-mail : sales@dingsmotionusa.com
www.dingsmotionusa.com

DINGS' Motion Europe

4 Avenue du Grand Trémoutier 44120 - Vertou - France

Phone : +33-(0)6-41-37-80-07
E-mail : sebastien@dingsmotion.com
<http://fr.dingsmotion.com>

DINGS' JAPAN

101, 2-27-18, Nishi-kojiya, Ota-ku, Tokyo 144-0034 JAPAN

Phone : +81-3-6811-1335
E-mail : tsukahara@dingsmotion.com

DINGS[®]

Precision Motion Specialist

DINGS' KOREA CO., Ltd.
MYACTUATOR Official Distributor In Korea

C-702, 158, Haneulmaeul-ro, Ilsandong-gu, Goyang-si, Gyeonggi-do, Republic of Korea

Phone : +82-31-994-0755
E-mail : daniel@dingsmotion.com

www.dingsmotion.kr / www.dkps.co.kr