

ALL IN ONE CUSTOMIZABLE PANCAKE BRUSHLESS SERVOMOTOR



RMD-X SERIES

HIGH INTEGRATION PLANETARY SERVOMOTORS

V1.2.1

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.



Maximize the performance of your applications while saving space.



Exploration Robot



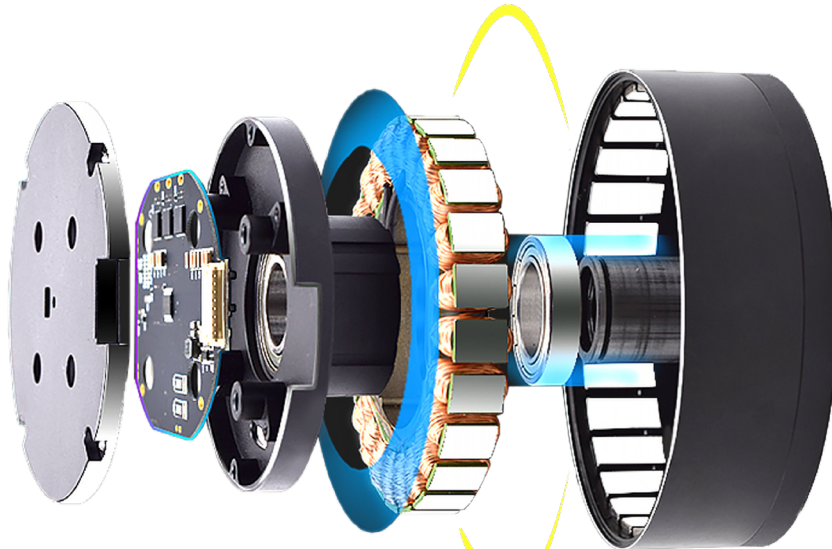
Robotic Arm



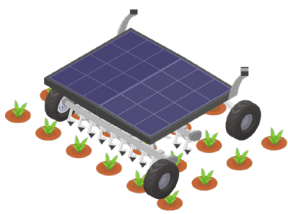
AGV



Quadruped Robot



Agricultural Robot



Drone



Exoskeleton Robot



Medical Robot



PRODUCT NAME RULES

RMD-X4-P6-3-C-B

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 ration e.g : P6 P7 P8 etc
- ④ Peak torque 3N.m
- ⑤ Communication C : CAN bus R : RS485 E : EtherCAT
- ⑥ Customizable Brakes : N : No Brake B : Brake

Series Name
RMD-X V2

Previous Name
RMD-X4 1:6 V2

Motor simplified Name

X4-3



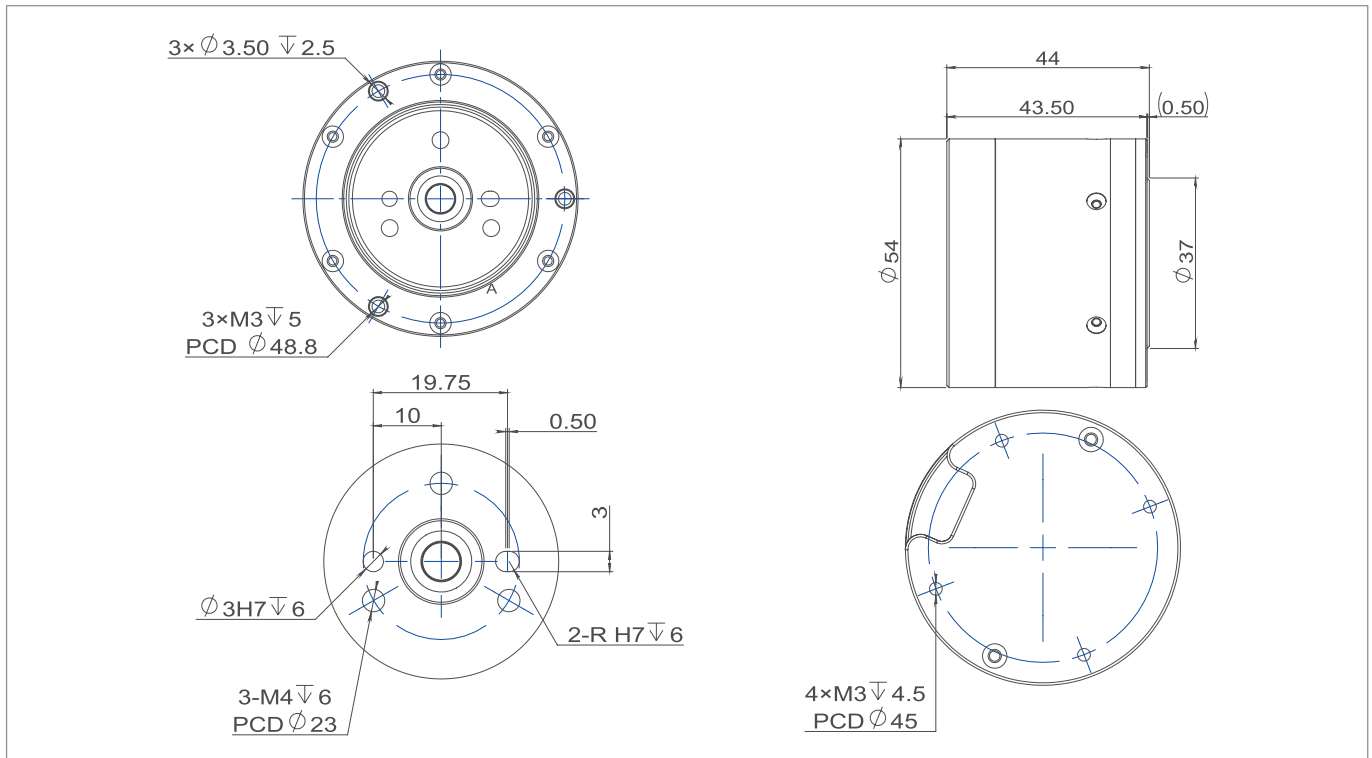
○ Single Encoder

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)

*This motor support brake customization

*This motor support IP54 customization

○ Installation Drawing

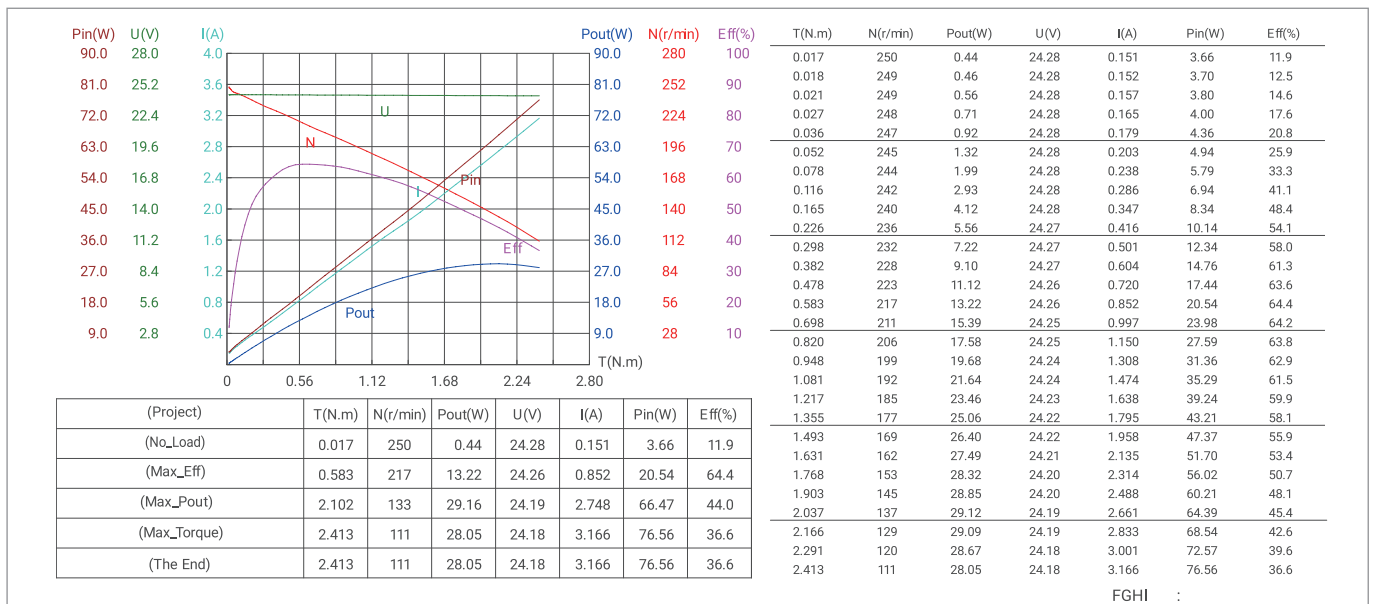


Product Parameters

Item Name		Units	X4-3
Reducer Type		-	Planetary Reducer
Gear Ratio		-	6:1
Input Voltage		V	24
Rated Power		W	30
Rated Torque		N.m	1,5
Rated Speed		RPM	200
Rated Current		A	2
Peak Torque		N.m	3
Peak Current		A	4
Efficiency		%	60
Input Encoder		-	16 bit
Output Encoder		-	/
Communication Method & Baudrate		-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Axial Payload		N	300
Radial Payload		N	550
Inertia		Kg.cm ²	1,2
Pole Pair		-	14
Back Drive Torque		N.m	0,06
Backlash		arc min	10
Weight	N (without brake)	g	300
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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

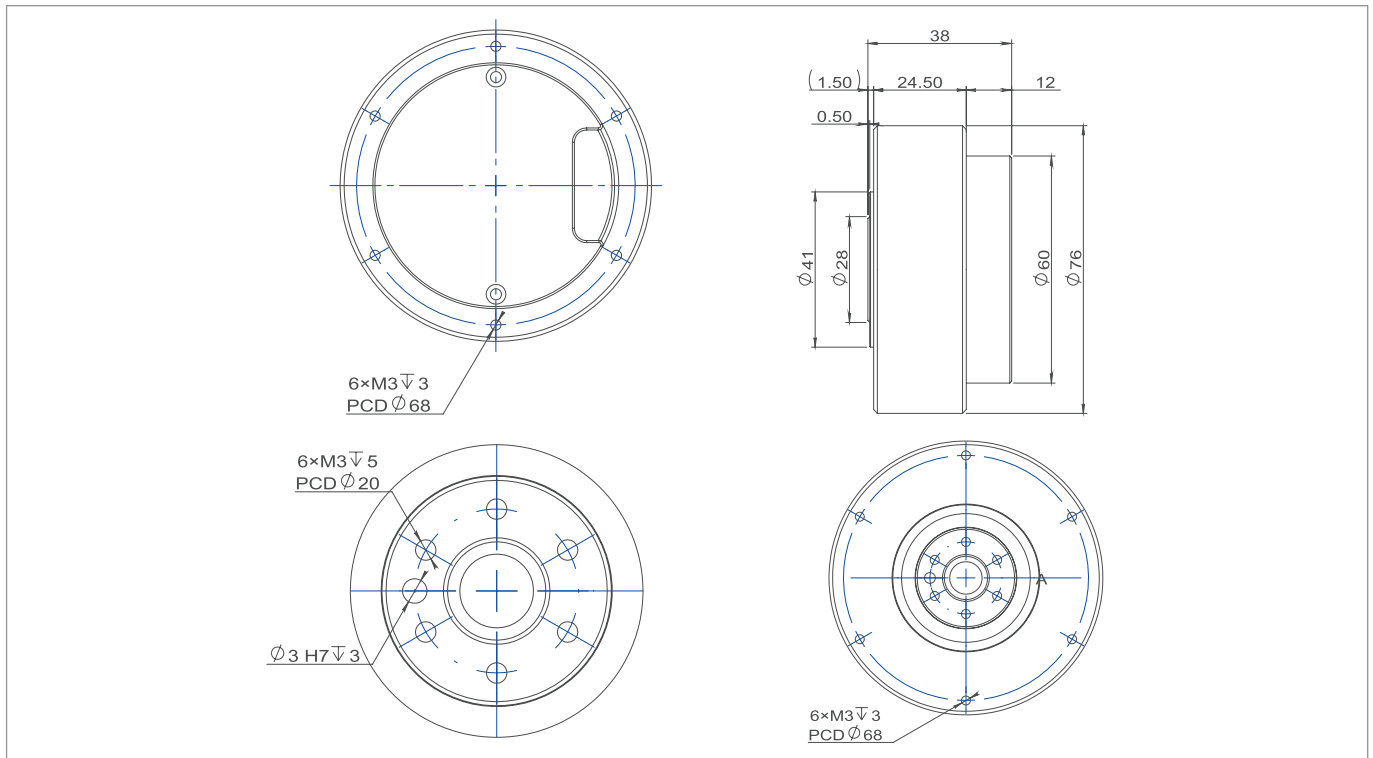


○ **Single Encoder**

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)

*This motor support brake customization
*This motor support IP54 customization

○ **Installation Drawing**

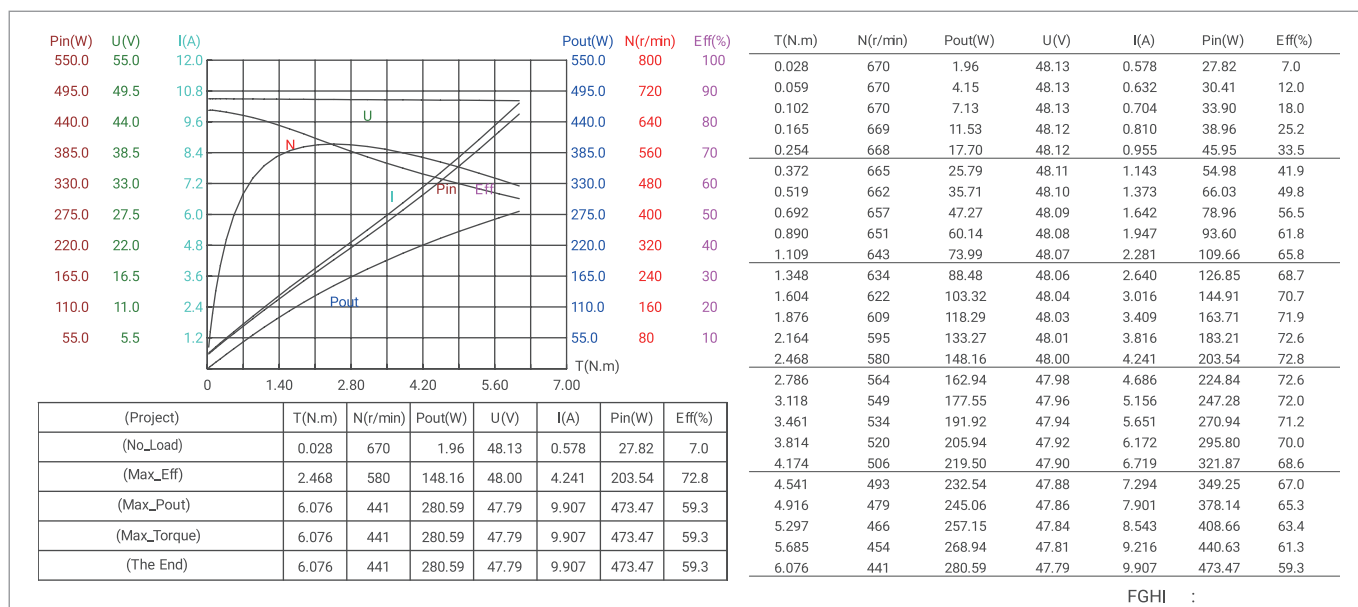


Product Parameters

Item Name		Units	X6-7
Reducer Type		-	Planetary Reducer
Gear Ratio		-	6:1
Input Voltage		V	48
Rated Power		W	150
Rated Torque		N.m	3,5
Rated Speed		RPM	400
Rated Current		A	4
Peak Torque		N.m	7
Peak Current		A	9
Efficiency		%	70
Input Encoder		-	16 bit
Output Encoder		-	/
Communication Method & Baudrate		-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Axial Payload		N	775
Radial Payload		N	1250
Inertia		Kg.cm ²	4,8
Pole Pair		-	14
Back Drive Torque		N.m	0,08
Backlash		arc min	10
Weight	N (without brake)	g	350
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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

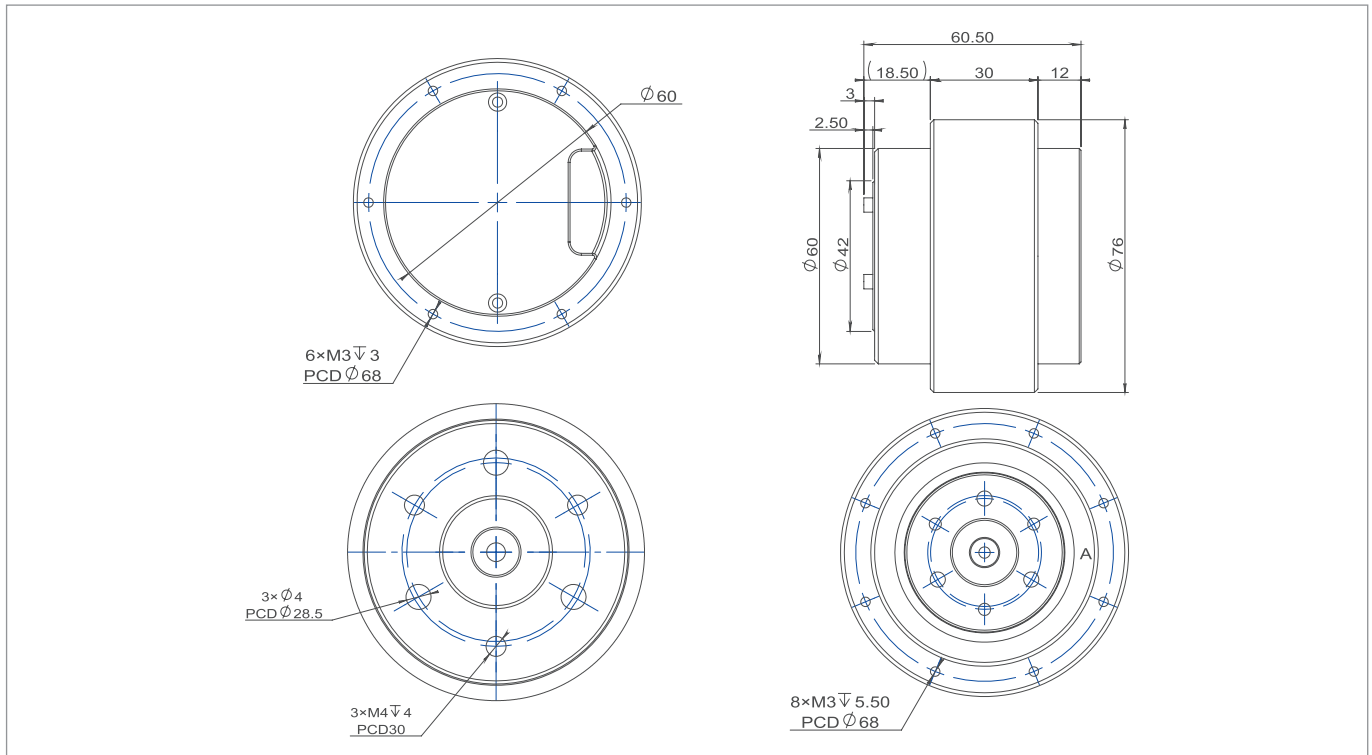


○ Single Encoder

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)

*This motor support brake customization
*This motor support IP54 customization

○ Installation Drawing

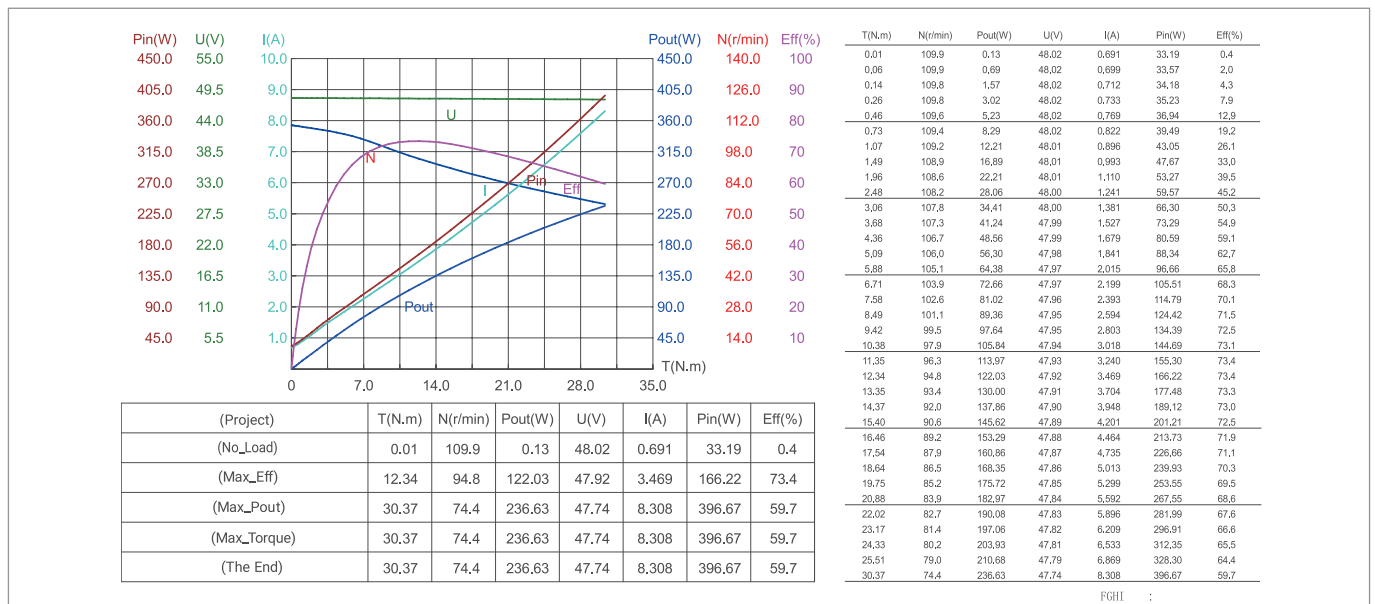


Product Parameters

Item Name		Units	X6-40
Reducer Type		-	Planetary Reducer
Gear Ratio		-	36:1
Input Voltage		V	48
Rated Power		W	170
Rated Torque		N.m	18
Rated Speed		RPM	90
Rated Current		A	5,2
Peak Torque		N.m	40
Peak Current		A	10,5
Efficiency		%	70
Input Encoder		-	16 bit
Output Encoder		-	/
Communication Method & Baudrate		-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Axial Payload		N	775
Radial Payload		N	1250
Inertia		Kg.cm ²	28,8
Pole Pair		-	14
Back Drive Torque		N.m	0,91
Backlash		arc min	15
Weight	N (without brake)	g	590
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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



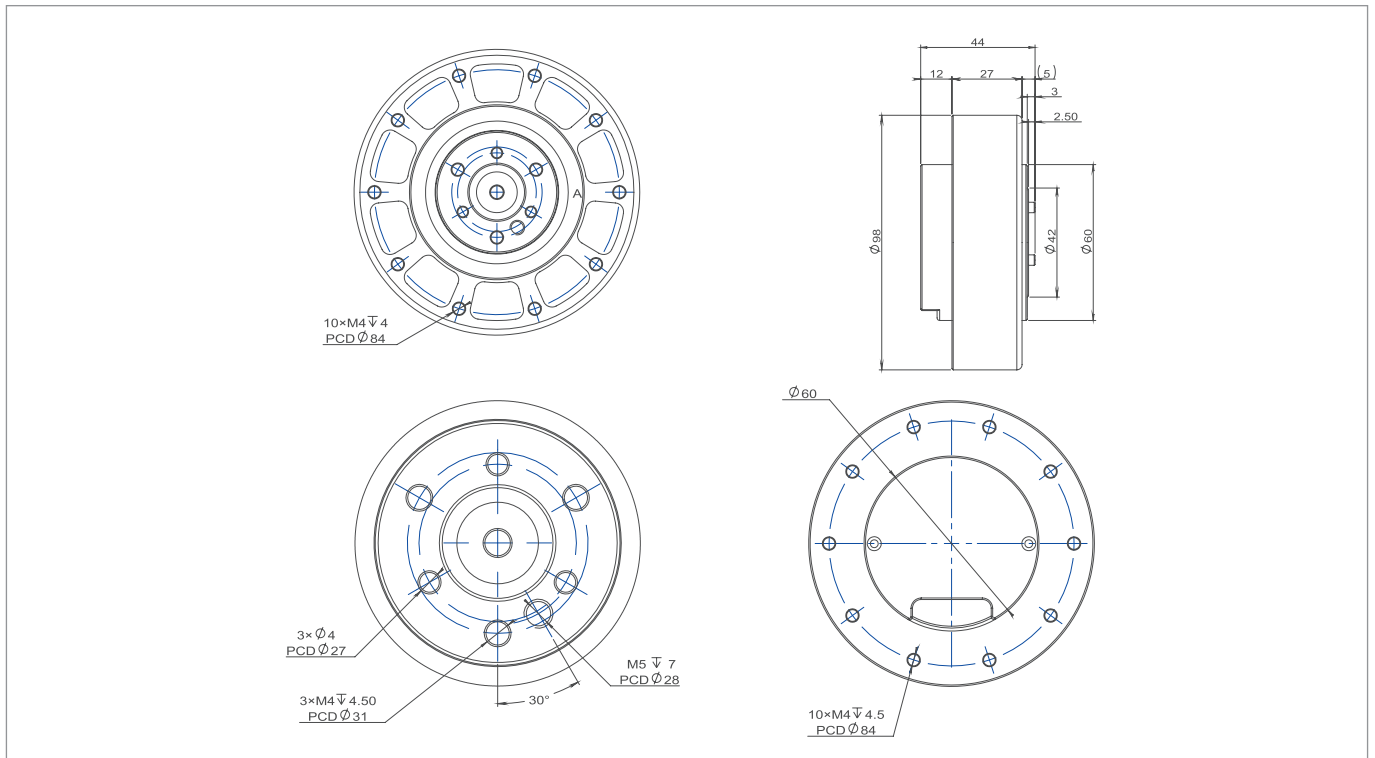
Single Encoder

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)

*This motor support brake customization

*This motor support IP54 customization

Installation Drawing

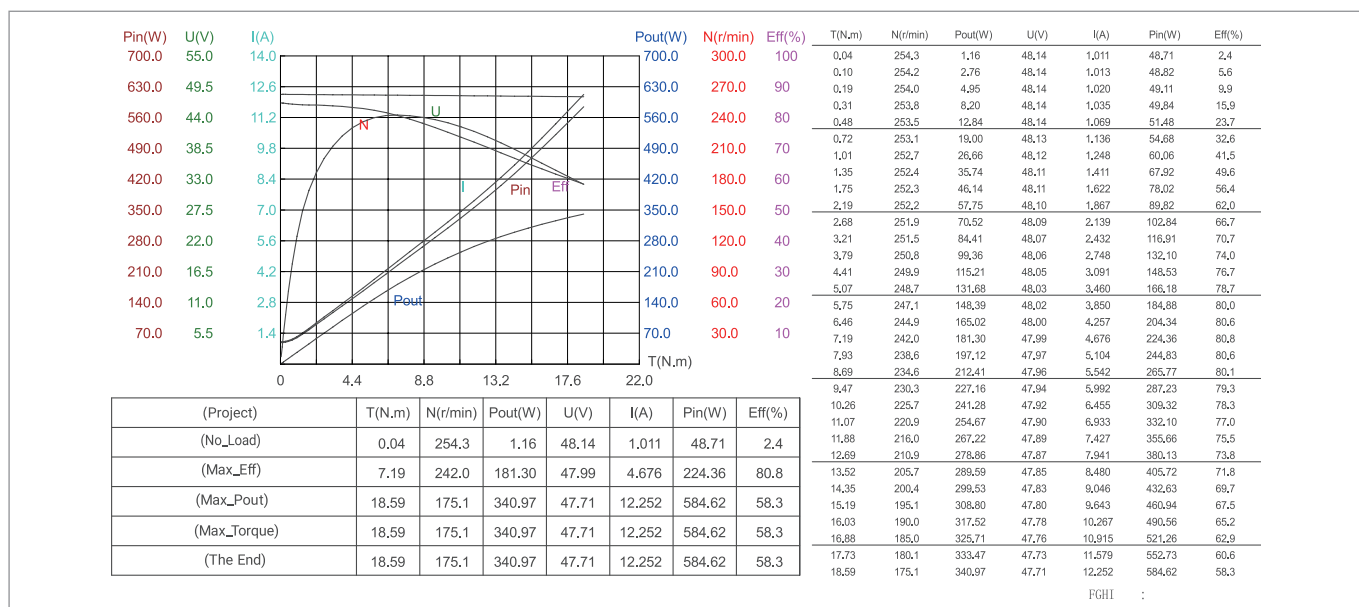


Product Parameters

Item Name		Units	X8-25
Reducer Type		-	Planetary Reducer
Gear Ratio		-	9:1
Input Voltage		V	48
Rated Power		W	125
Rated Torque		N.m	10
Rated Speed		RPM	110
Rated Current		A	3,2
Peak Torque		N.m	25
Peak Current		A	8
Efficiency		%	80
Input Encoder		-	16 bit
Output Encoder		-	/
Communication Method & Baudrate		-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Axial Payload		N	985
Radial Payload		N	1250
Inertia		Kg.cm ²	30,6
Pole Pair		-	21
Back Drive Torque		N.m	0,61
Backlash		arc min	10
Weight	N (without brake)	g	710
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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

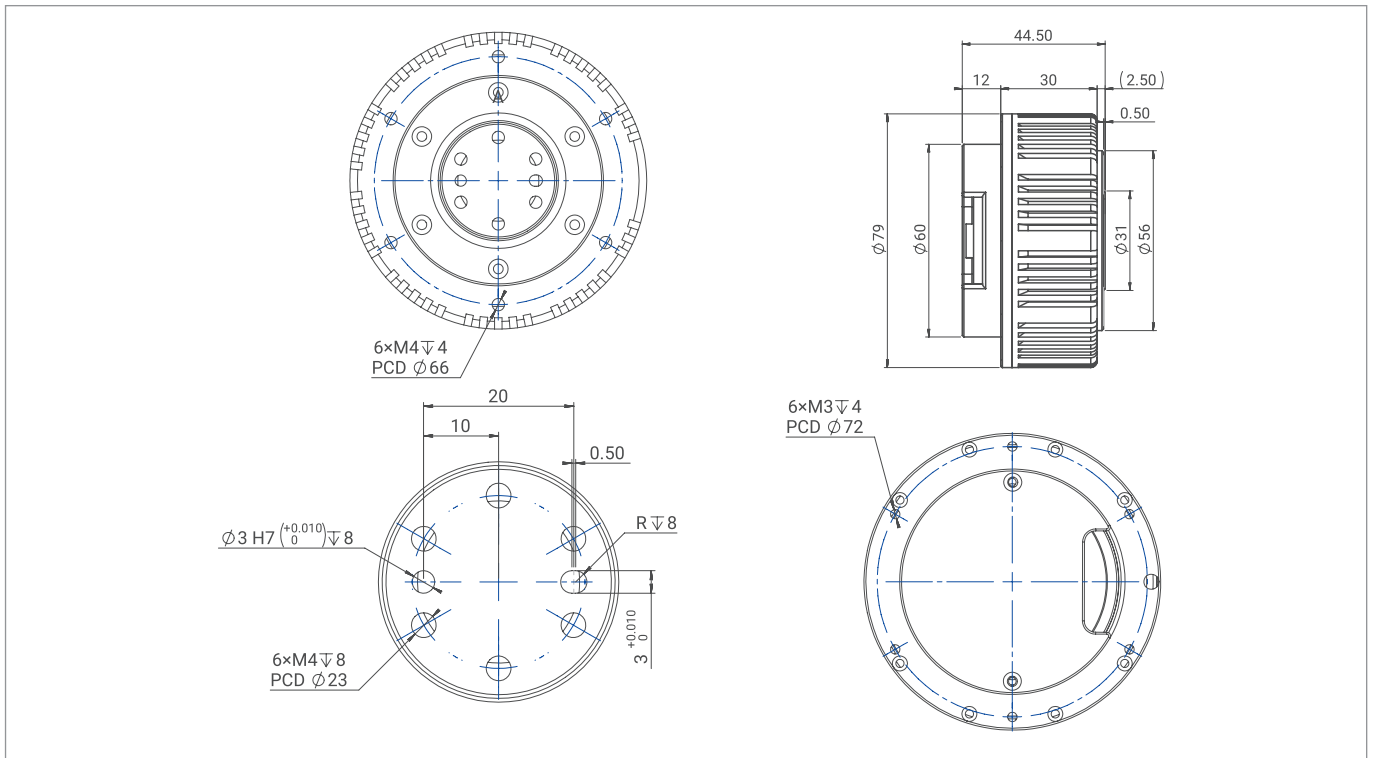


○ **Single Encoder**

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)

*This motor support brake customization
*This motor support IP54 customization

○ **Installation Drawing**

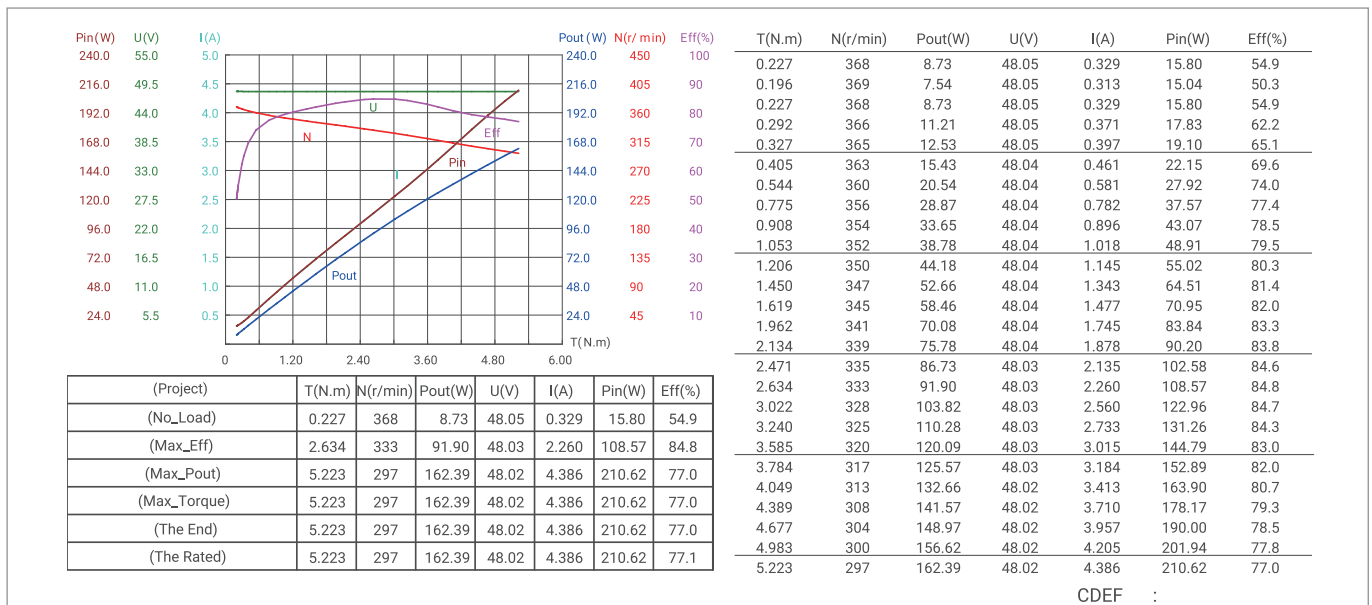


Product Parameters

Item Name		Units	X6-8
Reducer Type		-	Planetary Reducer
Gear Ratio		-	8:1
Input Voltage		V	48
Rated Power		W	135
Rated Torque		N.m	4,5
Rated Speed		RPM	310
Rated Current		A	3,6
Peak Torque		N.m	8
Peak Current		A	7,2
Efficiency		%	78
Input Encoder		-	16 bit
Output Encoder		-	14 bit
Communication Method & Baudrate		-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Axial Payload		N	775
Radial Payload		N	1040
Inertia		Kg.cm ²	6,8
Pole Pair		-	14
Back Drive Torque		N.m	0,1
Backlash		arc min	10
Weight	N (without brake)	g	490
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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-Pro-H 1:6 V3

Motor simplified Name
X8-20

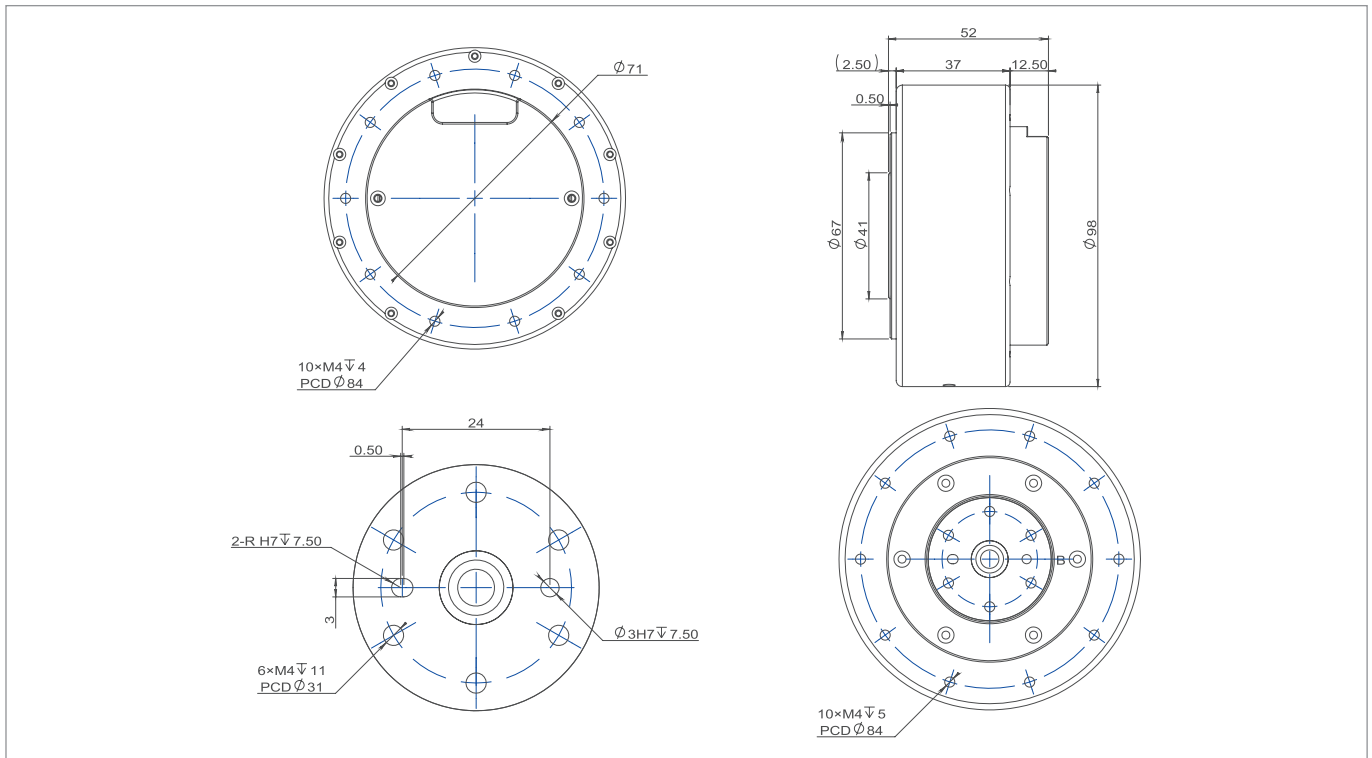


○ **Single Encoder**

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)

*This motor support brake customization
 *This motor support IP54 customization

○ **Installation Drawing**

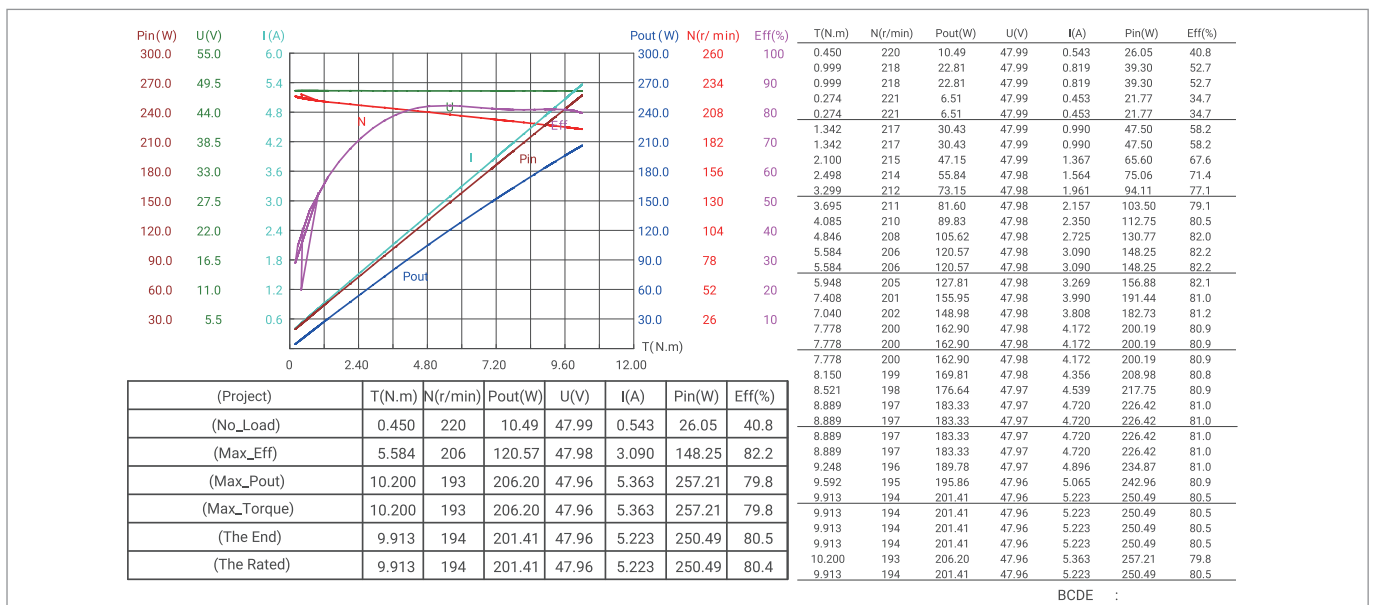


Product Parameters

Item Name		Units	X8-20
Reducer Type		-	Planetary Reducer
Gear Ratio		-	6:1
Input Voltage		V	48
Rated Power		W	200
Rated Torque		N.m	10
Rated Speed		RPM	190
Rated Current		A	5,2
Peak Torque		N.m	20
Peak Current		A	10,5
Efficiency		%	80
Input Encoder		-	16 bit
Output Encoder		-	14 bit
Communication Method & Baudrate		-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Axial Payload		N	985
Radial Payload		N	1250
Inertia		Kg.cm ²	20
Pole Pair		-	20
Back Drive Torque		N.m	0,4
Backlash		arc min	10
Weight	N (without brake)	g	780
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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

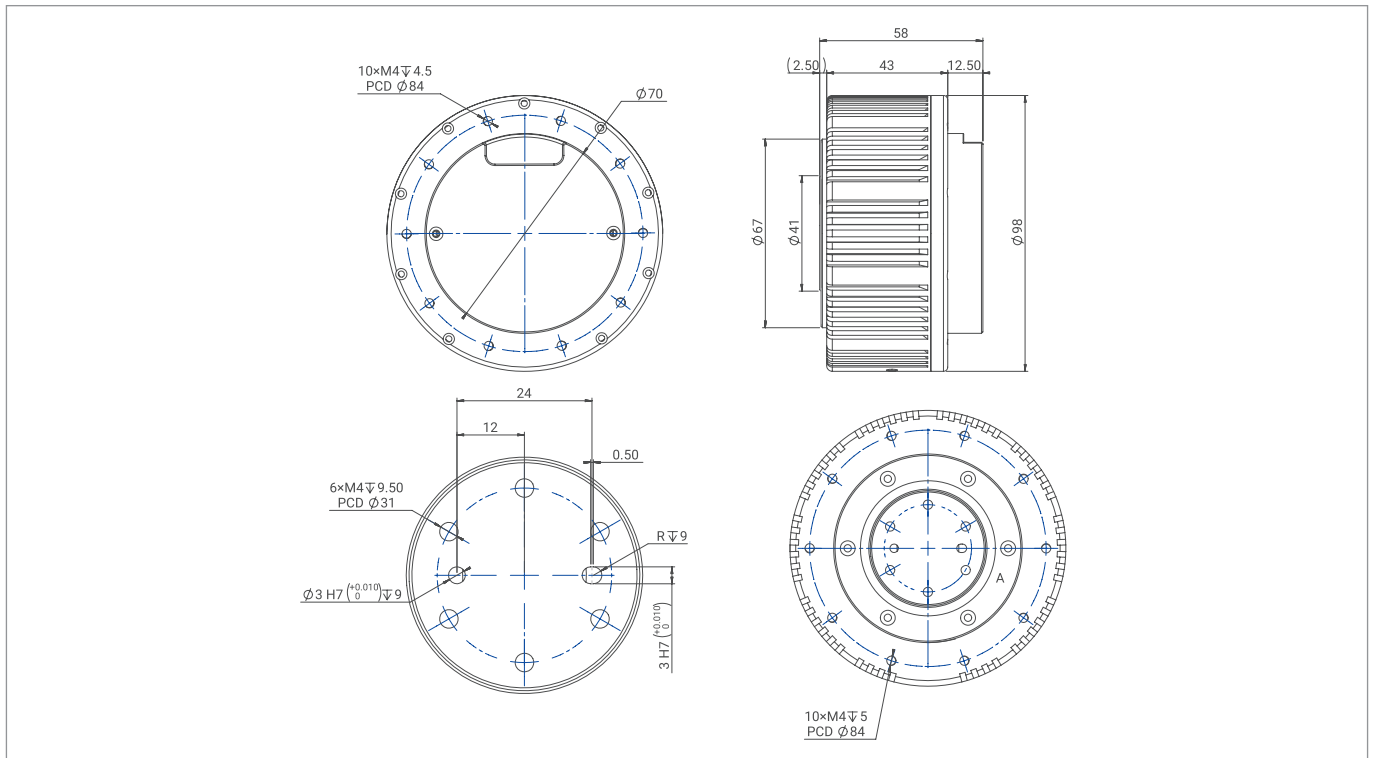


○ **Single Encoder**

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)

*This motor support brake customization
*This motor support IP54 customization

○ **Installation Drawing**

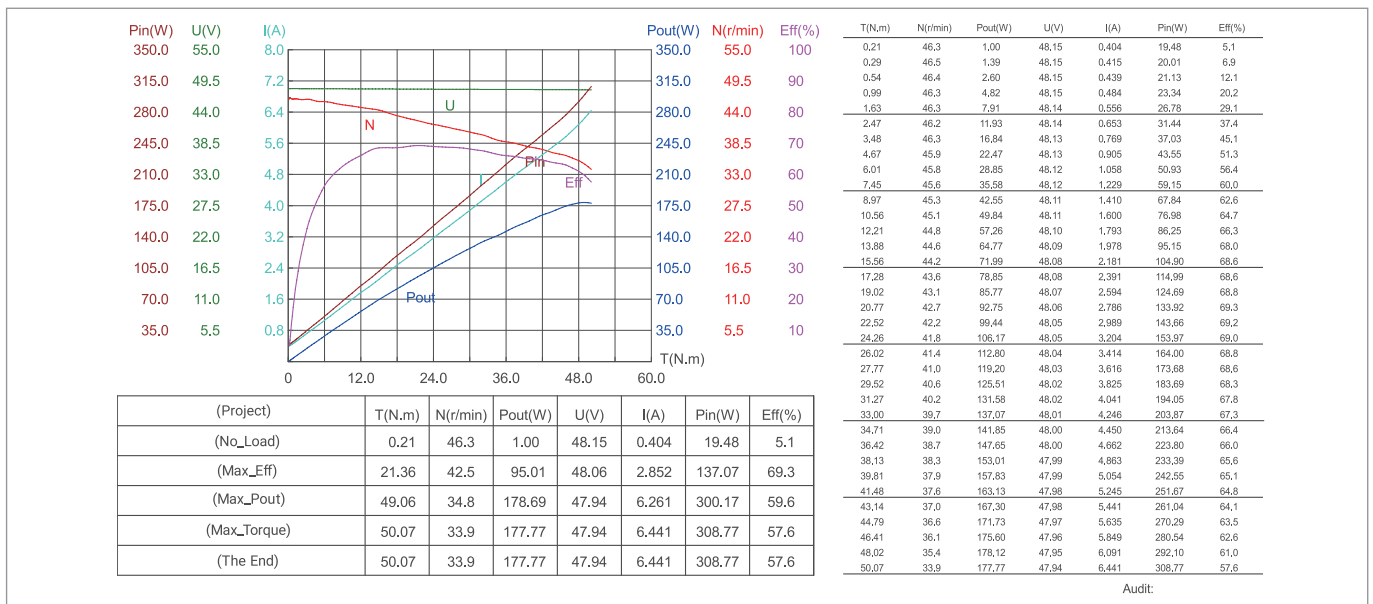


Product Parameters

Item Name		Units	X8-60
Reducer Type		-	Planetary Reducer
Gear Ratio		-	36:1
Input Voltage		V	48
Rated Power		W	130
Rated Torque		N.m	30
Rated Speed		RPM	40
Rated Current		A	4
Peak Torque		N.m	60
Peak Current		A	8
Efficiency		%	69
Input Encoder		-	16 bit
Output Encoder		-	14 bit
Communication Method & Baudrate		-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Axial Payload		N	985
Radial Payload		N	1250
Inertia		Kg.cm ²	96
Pole Pair		-	20
Back Drive Torque		N.m	1
Backlash		arc min	15
Weight	N (without brake)	g	900
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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

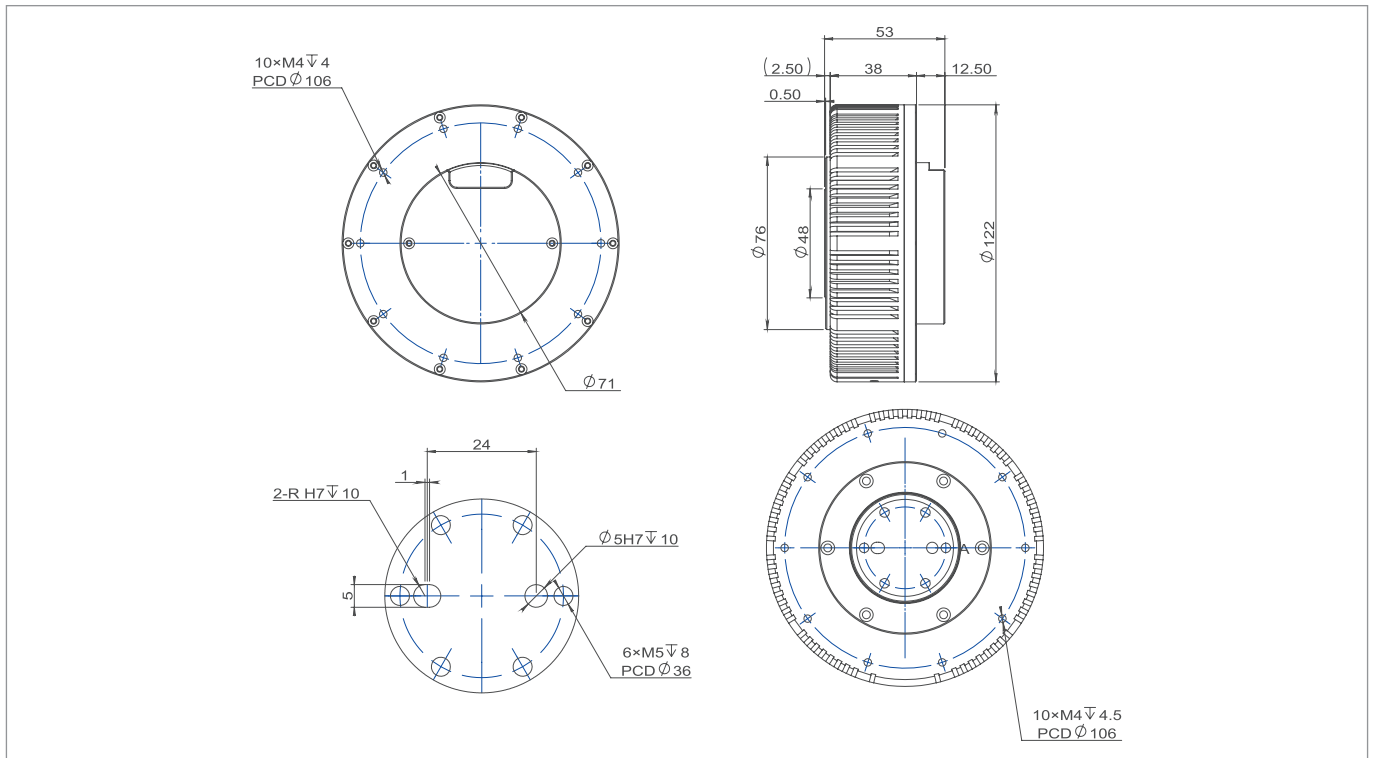


○ Single Encoder

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)

*This motor support brake customization
*This motor support IP54 customization

○ Installation Drawing

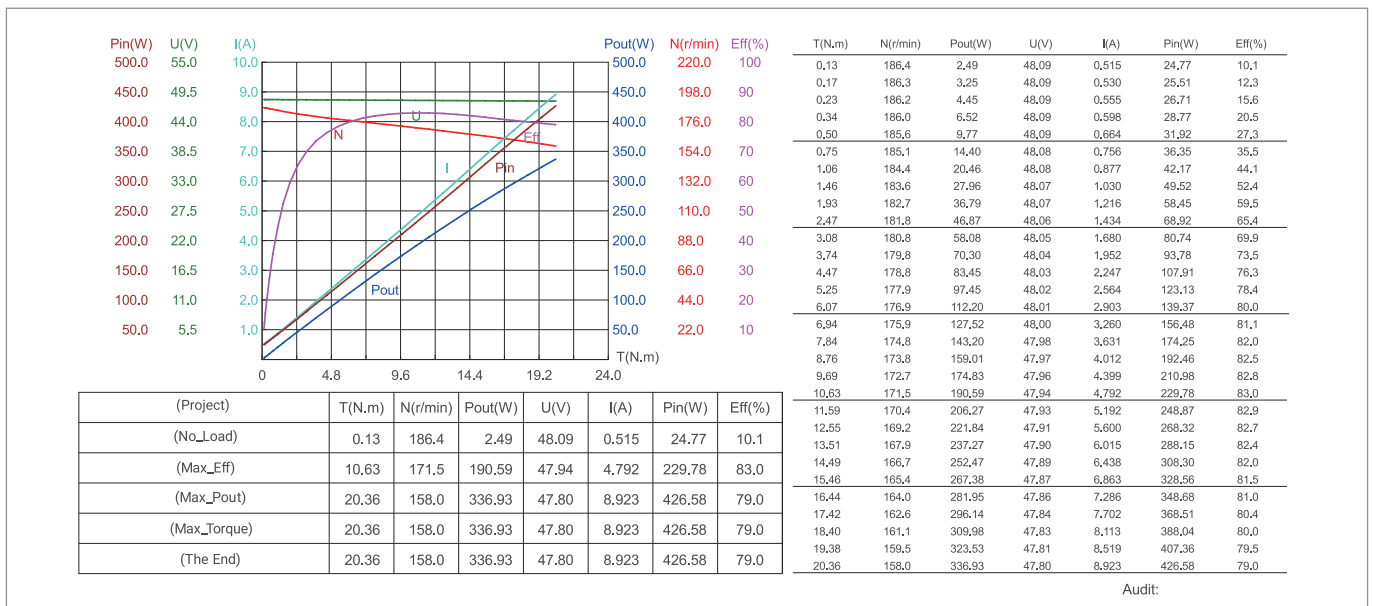


Product Parameters

Item Name		Units	X10-40
Reducer Type		-	Planetary Reducer
Gear Ratio		-	7:1
Input Voltage		V	48
Rated Power		W	265
Rated Torque		N.m	15
Rated Speed		RPM	165
Rated Current		A	6,5
Peak Torque		N.m	40
Peak Current		A	15
Efficiency		%	82
Input Encoder		-	16 bit
Output Encoder		-	14 bit
Communication Method & Baudrate		-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Axial Payload		N	1625
Radial Payload		N	2250
Inertia		Kg.cm ²	39,7
Pole Pair		-	21
Back Drive Torque		N.m	0,62
Backlash		arc min	10
Weight	N (without brake)	g	1150
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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-X10 S2 1:35 V3

Motor simplified Name
X10-100

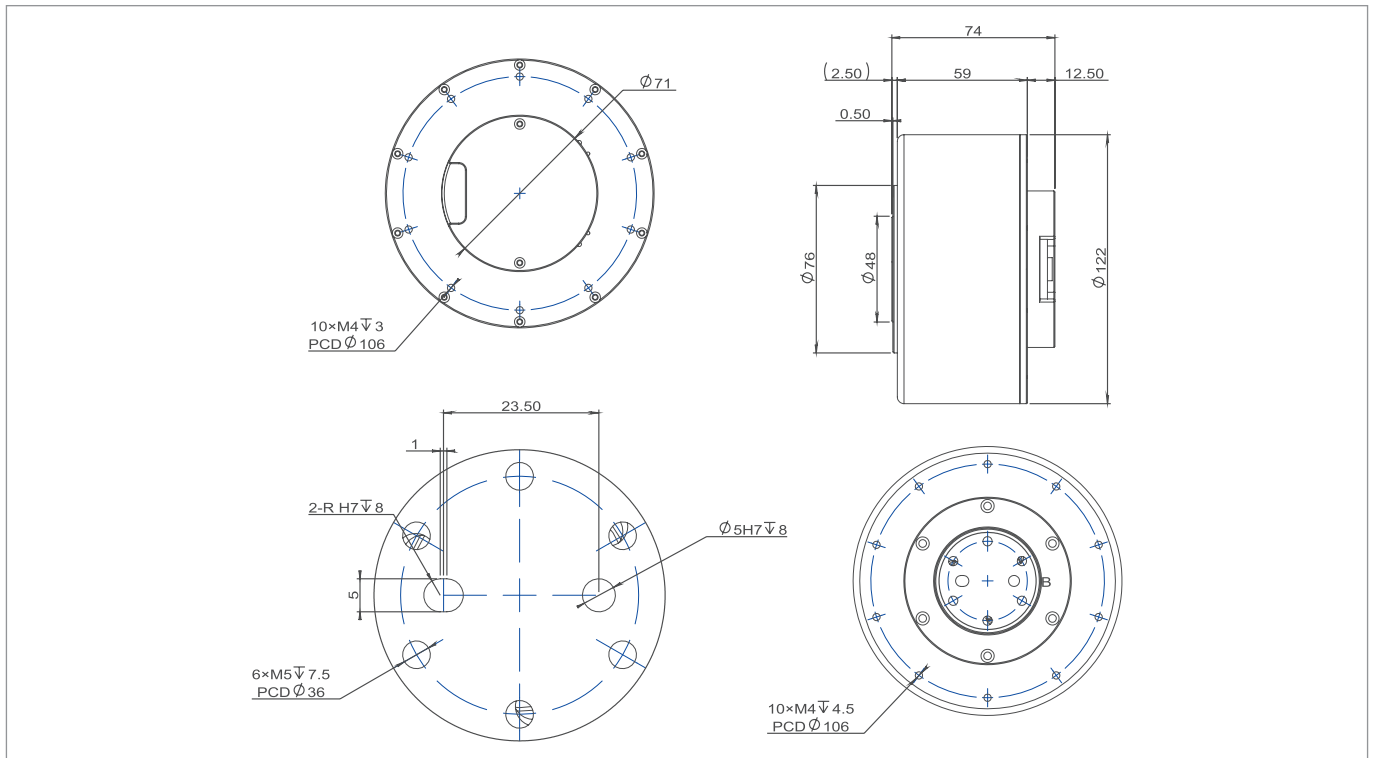


○ **Single Encoder**

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)

*This motor support brake customization
 *This motor support IP54 customization

○ **Installation Drawing**

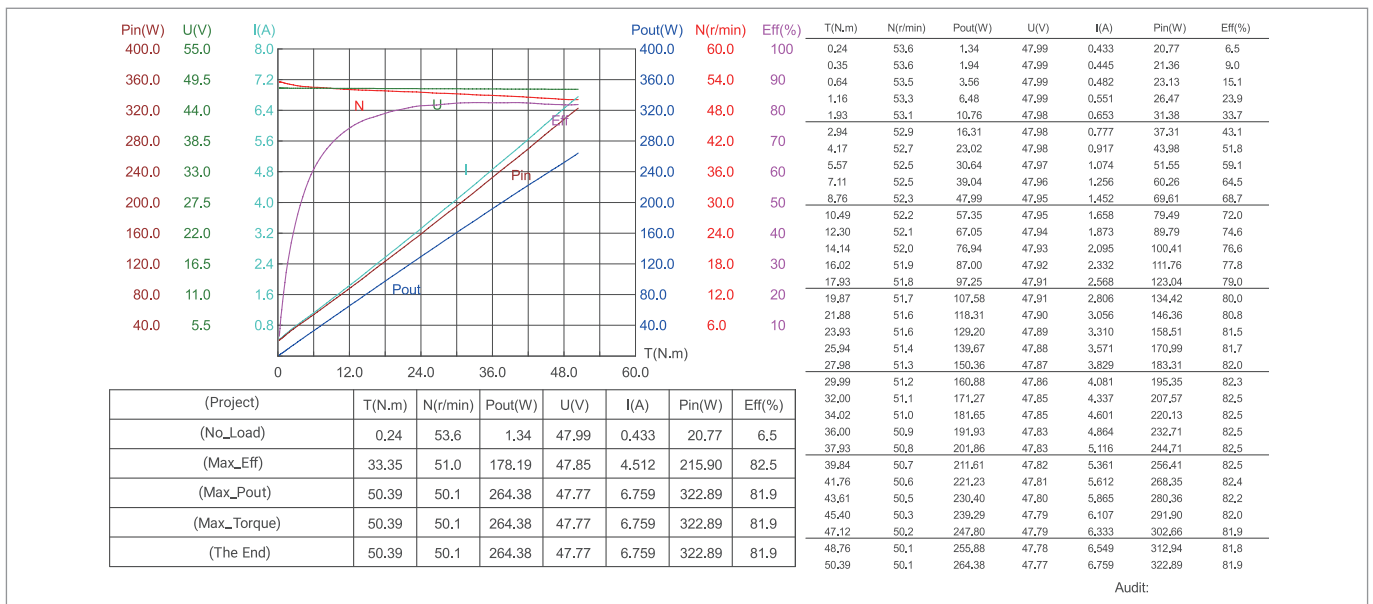


Product Parameters

Item Name		Units	X10-100
Reducer Type		-	Planetary Reducer
Gear Ratio		-	35:1
Input Voltage		V	48
Rated Power		W	265
Rated Torque		N.m	50
Rated Speed		RPM	50
Rated Current		A	6,7
Peak Torque		N.m	100
Peak Current		A	13,5
Efficiency		%	82
Input Encoder		-	16 bit
Output Encoder		-	14 bit
Communication Method & Baudrate		-	CAN : 1M RS485 : 115200 / 500K / 1M / 2.5M
Axial Payload		N	1625
Radial Payload		N	2250
Inertia		Kg.cm ²	198,6
Pole Pair		-	21
Back Drive Torque		N.m	2,88
Backlash		arc min	15
Weight	N (without brake)	g	1700
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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:

Design for Bionic Robot

Series Name
RMD-X V3

Motor simplified Name
X4-24

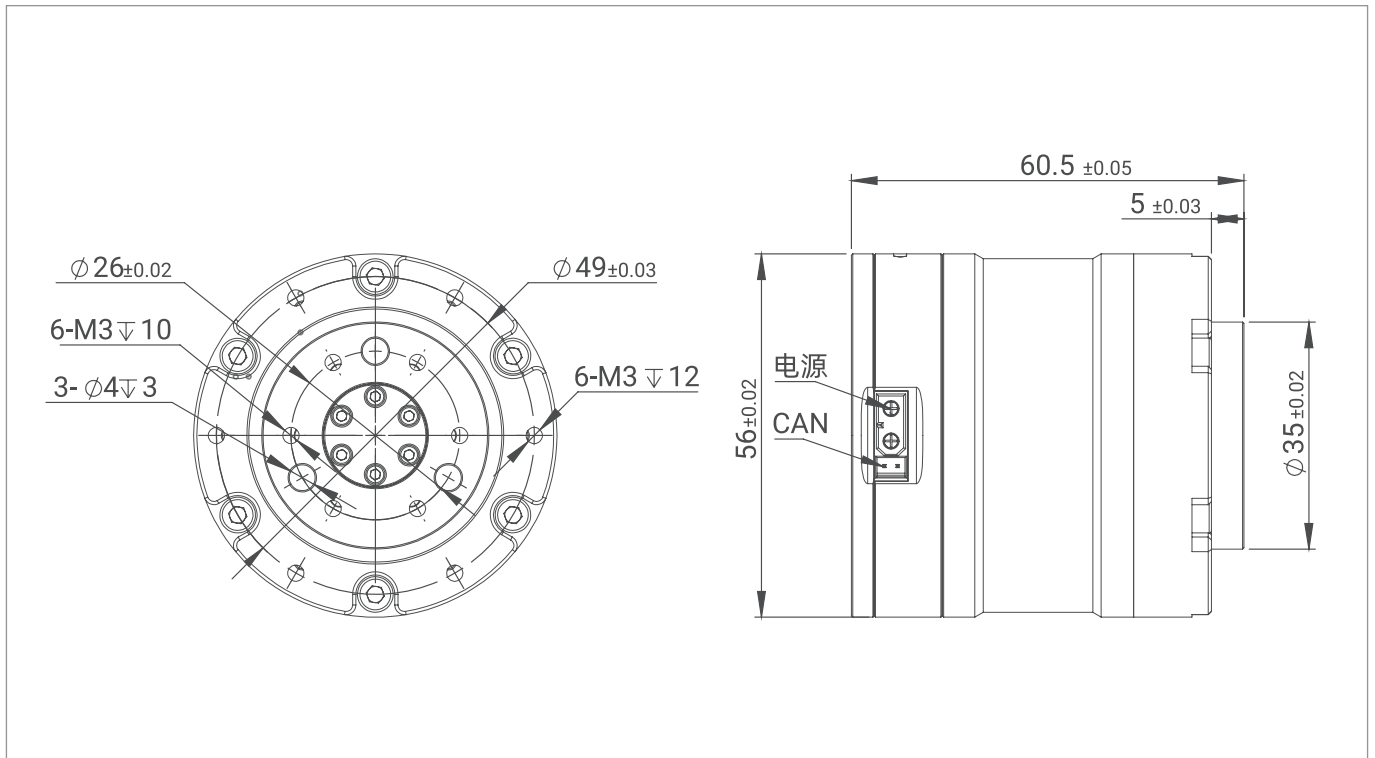


○ Single Encoder

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

*This motor support brake customization
*This motor support IP54 customization

○ Installation Drawing



Product Parameters

Item Name		Units	X4-24
Reducer Type		-	Planetary Reducer
Gear Ratio		-	36:1
Input Voltage		V	48
Rated Power		W	150
Rated Torque		N.m	9
Rated Speed		RPM	100
Rated Current		A	3,5
Peak Torque		N.m	24
Peak Current		A	10
Efficiency		%	75
Input Encoder		-	14 bit
Output Encoder		-	14 bit
Communication Method & Baudrate		-	CAN : 1M
Axial Payload		N	1900
Radial Payload		N	1900
Inertia		Kg.cm ²	6,8
Pole Pair		-	14
Back Drive Torque		N.m	0,87
Backlash		arc min	15
Weight	N (without brake)	g	380
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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.

Design for Bionic Robot

Series Name
RMD-X V3

Motor simplified Name
X8-90

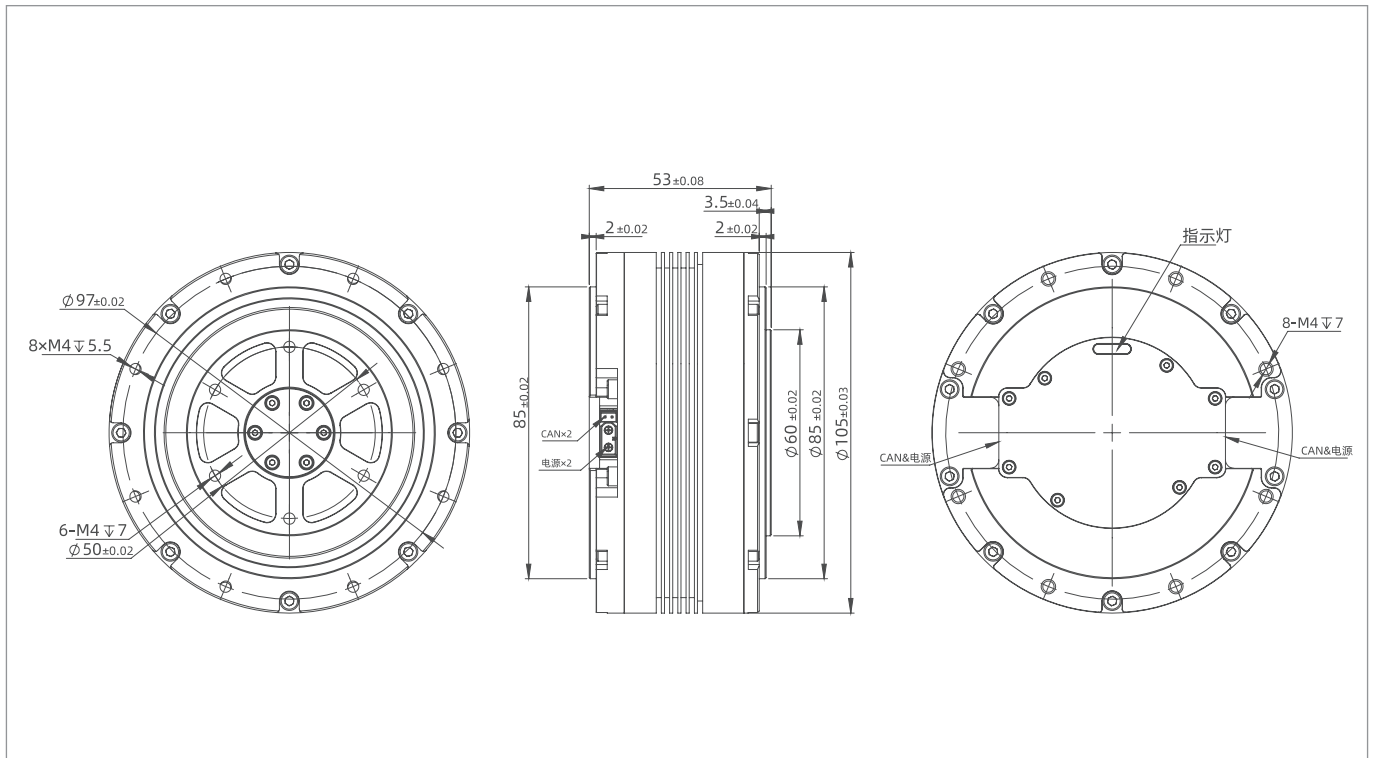


Single Encoder

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

*This motor support brake customization
*This motor support IP54 customization

Installation Drawing

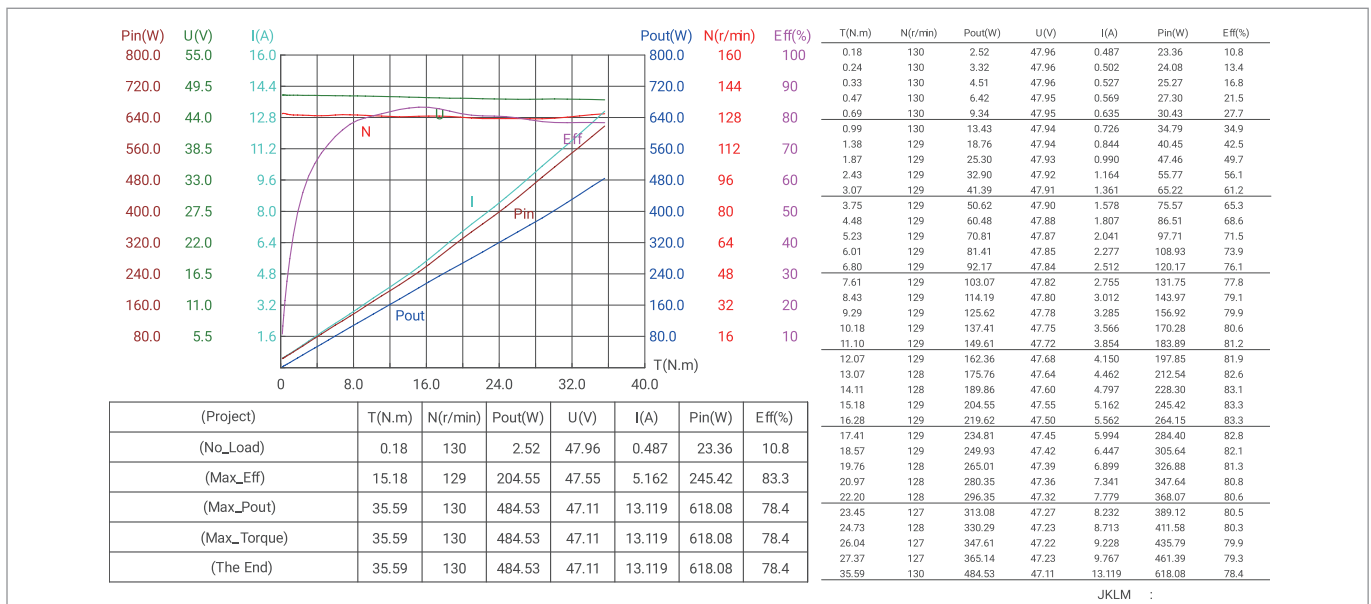


Product Parameters

Item Name		Units	X8-90
Reducer Type		-	Planetary Reducer
Gear Ratio		-	18:1
Input Voltage		V	48
Rated Power		W	500
Rated Torque		N.m	25
Rated Speed		RPM	130
Rated Current		A	10
Peak Torque		N.m	90
Peak Current		A	30
Efficiency		%	80
Input Encoder		-	14 bit
Output Encoder		-	14 bit
Communication Method & Baudrate		-	CAN : 1M
Axial Payload		N	2800
Radial Payload		N	2800
Inertia		Kg.cm ²	26
Pole Pair		-	21
Back Drive Torque		N.m	0,65
Backlash		arc min	10
Weight	N (without brake)	g	850
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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 V3

Motor simplified Name
X12-150

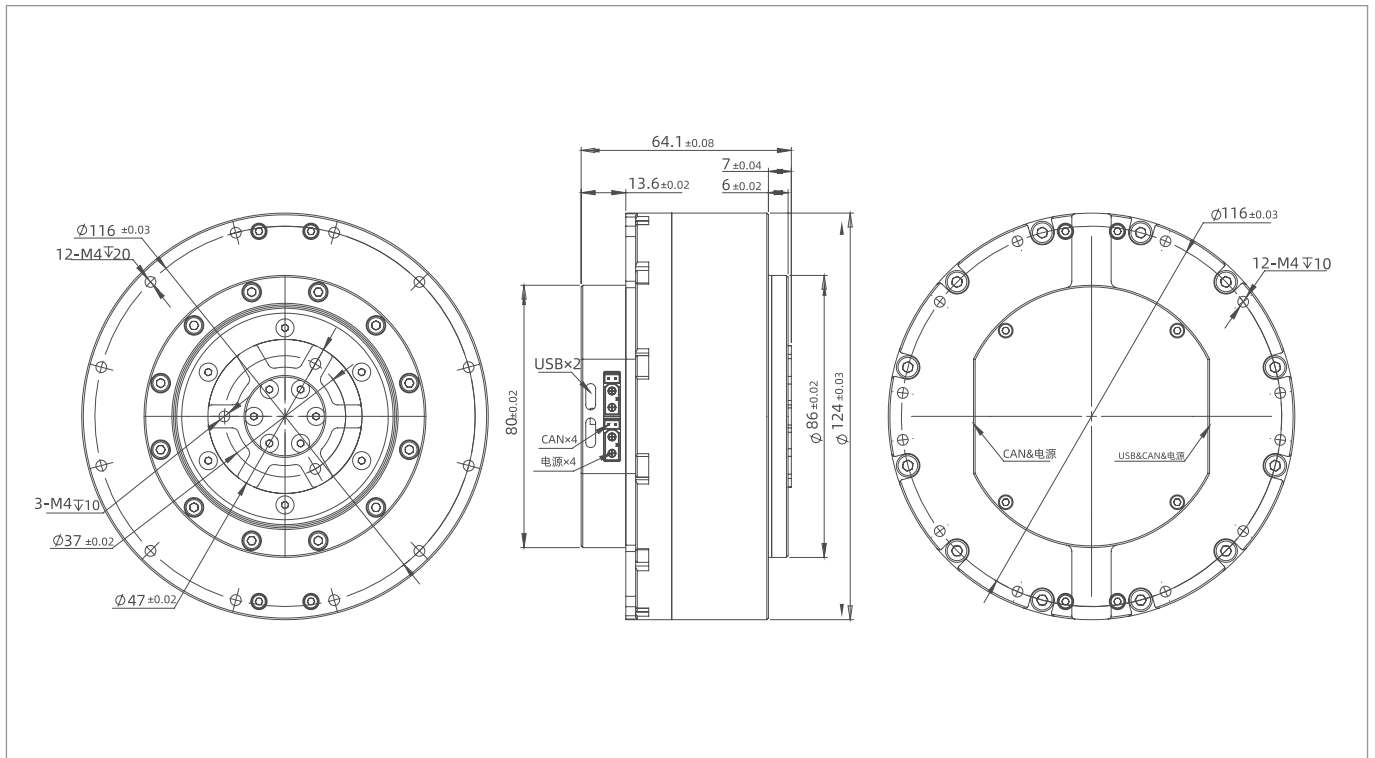


Single Encoder

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

*This motor support brake customization
*This motor support IP54 customization

Installation Drawing

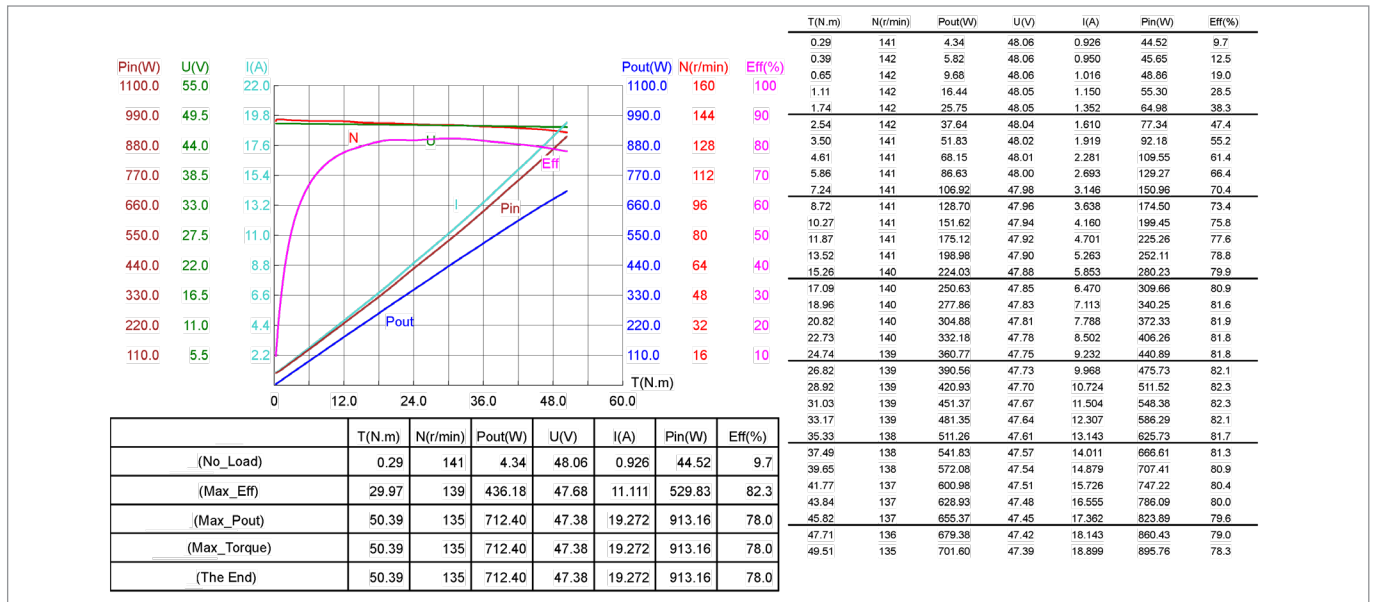


Product Parameters

Item Name		Units	X12-150
Reducer Type		-	Planetary Reducer
Gear Ratio		-	12:1
Input Voltage		V	48
Rated Power		W	780
Rated Torque		N.m	50
Rated Speed		RPM	100
Rated Current		A	15
Peak Torque		N.m	150
Peak Current		A	45
Efficiency		%	78
Input Encoder		-	14 bit
Output Encoder		-	14 bit
Communication Method & Baudrate		-	CAN : 1M
Axial Payload		N	2600
Radial Payload		N	2600
Inertia		Kg.cm ²	59
Pole Pair		-	21
Back Drive Torque		N.m	1,26
Backlash		arc min	10
Weight	N (without brake)	g	1300
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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.

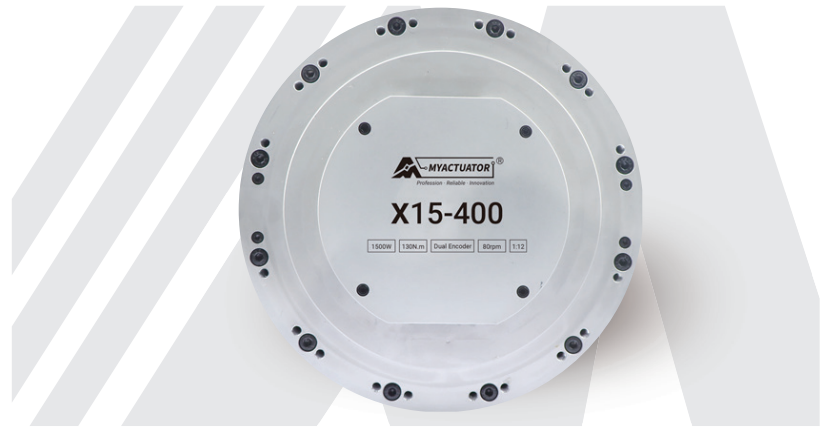
Motor Characteristic Curve



Design for Bionic Robot

Series Name
RMD-X V3

Motor simplified Name
X15-400

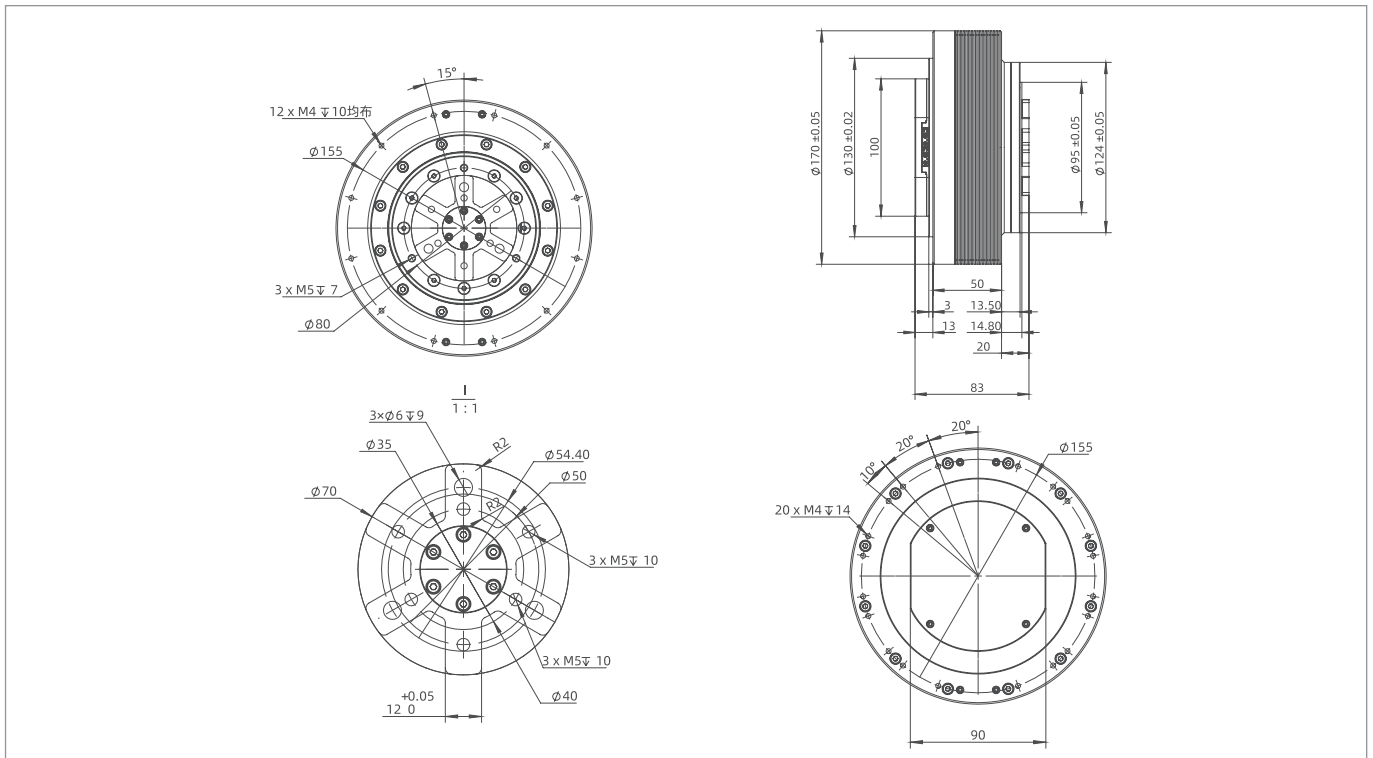


Single Encoder

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

*This motor support brake customization
*This motor support IP54 customization

Installation Drawing



Product Parameters

Item Name		Units	X15-400
Reducer Type		-	Planetary Reducer
Gear Ratio		-	11,4:1
Input Voltage		V	60
Rated Power		W	1500
Rated Torque		N.m	130
Rated Speed		RPM	80
Rated Current		A	23
Peak Torque		N.m	380
Peak Current		A	65
Efficiency		%	83
Input Encoder		-	14 bit
Output Encoder		-	14 bit
Communication Method & Baudrate		-	CAN : 1M
Axial Payload		N	6700
Radial Payload		N	6700
Inertia		Kg.cm ²	175
Pole Pair		-	21
Back Drive Torque		N.m	2,15
Backlash		arc min	10
Weight	N (without brake)	g	3100
	B (with brake)	-	/

* Rated torque test method : When the ambient temperature is 24 degrees Celsius (no other 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.



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