

RMD-X 系列

一体化行星模组

HIGH INTEGRATION PLANETARY ACTUATORS
Integrated Planetary Actuator

体积小 | 重量轻 | 集成度高
SMALL SIZE | LIGHT WEIGHT | HIGH INTEGRATION

RMD-X V2



RMD-X V3



RMD-X Design for Bionic Robot



RMD-X V3系列和RMD-X仿生系列

RMD-X V3 series and RMD-X Bionic series

均支持第二编码器

Both support a second encoder

- 第一编码器记录多圈位置，第二编码器记录输出轴位置。
The first encoder records the multiturn position, and the second encoder records the output shaft position.
- RMD-X行星系列，具有高转速、高动态响应性和大扭矩密度，适合仿生机器人高灵敏性的需求。
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.
- 过流保护、过温保护、过压保护等多重保护，使得产品使用更安全放心。
Multiple protections such as over-current protection, over-temperature protection, and over voltage protection make the product safer and more secure.

第二编码器
(随时随地精确读取角度)
Second encoder (accurate angle reading anytime, anywhere)

大扭矩密度
Large torque density

过压保护
Overvoltage protection

过温保护
Over temperature protection

过流保护
Overcurrent protection

高动态响应性
High dynamic responsiveness

高转速
High rotational speed



RMD-X系列产品命名规则
RMD-X SERIES NAMING CONVENTIONS

产品应用广泛
Products widely used

广泛应用于足式机器人 / 机械臂 / SCARA 机器人 等
Widely Used In Humanoid Robot/Legged Robots/Robot Arm/SCARA/AGV/AMR etc.



机械臂
Robotic Arm



人形机器人
Humanoid Robot



外骨骼机器人
Exoskeleton Robot



四足机器人
Quadruped Robot



AGV智能车
AGV Smart Car



ARU机器人
ARU Robot

RMD-X4-P6-3-C-N

① ② ③ ④ ⑤ ⑥

- ① 品牌名称: RMD (Reducer Motor Drive)
Brand Name R-Reducer M-Motor D-Drive
- ② X代表系列名: 一体化行星减速模组, 4代表基座号 例如: X4 X6 X8 X10等
X Stands For The Series Name: Integrated Planetary Actuator, 4 represent motor model number e.g:X4 X6 X8 X10 etc
- ③ 行星减速比 例如: P6 P7 P8等
Planetary gear ratio e.g:P6 P7 P8 etc
- ④ 峰值扭矩 3N.m
Peak torque 3N.m
- ⑤ 通信方式 C: CAN BUS R: RS485
Communication C: CAN BUS R: RS485
- ⑥ N: 无抱闸
N: Without Brake

例如 For example

型号 RMD-X6-P6-7-C-N

说明 RMD: 品牌名
X6: 电机型号名
P6: 行星减速比6:1
7: 峰值扭矩
C: CAN bus 通信
N: 无抱闸

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

系列名 Series Name

RMD-X V2

曾用名 Previous Name

RMD-X4 1:6 V3

电机简称 Motor Simplified Name

X4-3



单编码器 Single Encoder

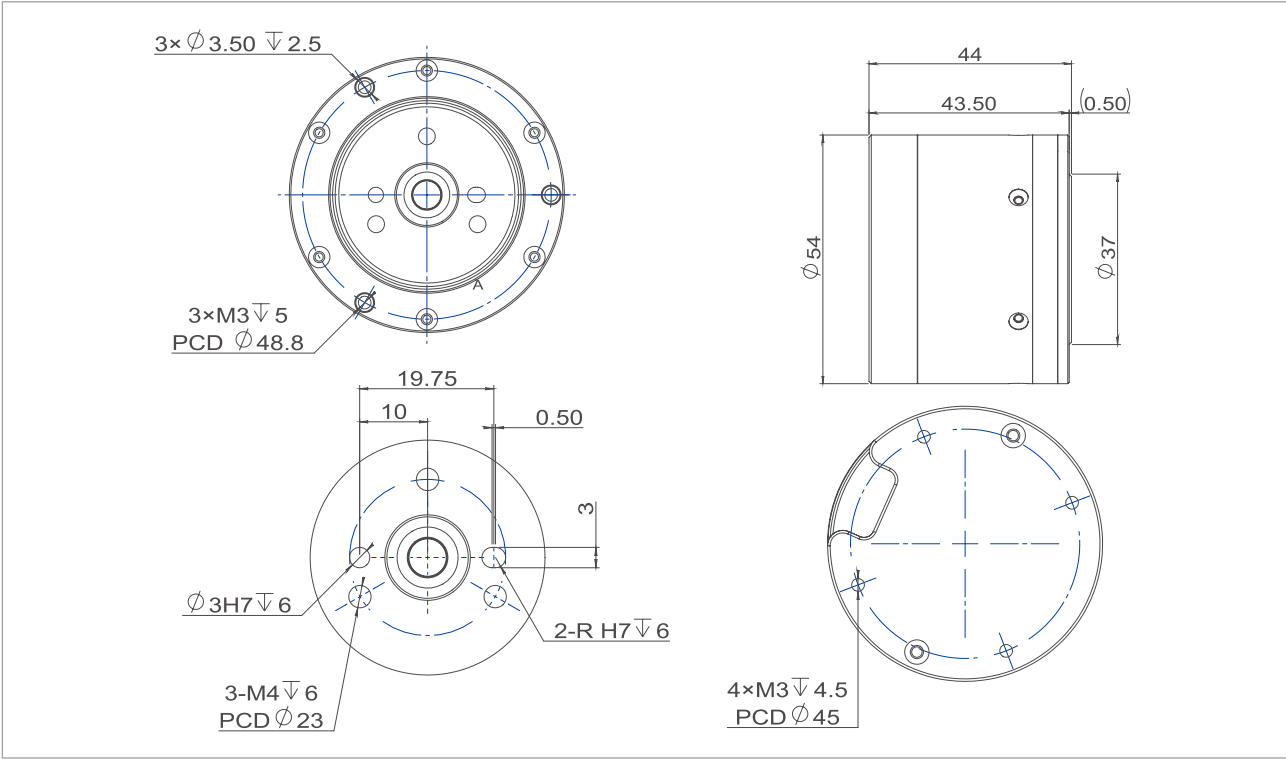
型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X4-P6-3-R-N	1102010060230100	N (without brake)
RMD-X4-P6-3-C-N	1102010060130100	N (without brake)

* 1. 标准品电机不支持抱闸，如需可定制抱闸。The standard motor doesn't support brake, support customization.

* 2. 标准品电机不支防水，如需可定制品IP54。The standard motor doesn't support IP54, support customization.

* 3. 标准品电机支持CAN BUS和RS485。The standard motor support CAN BUS and RS485.

尺寸安装图 Installation Drawing



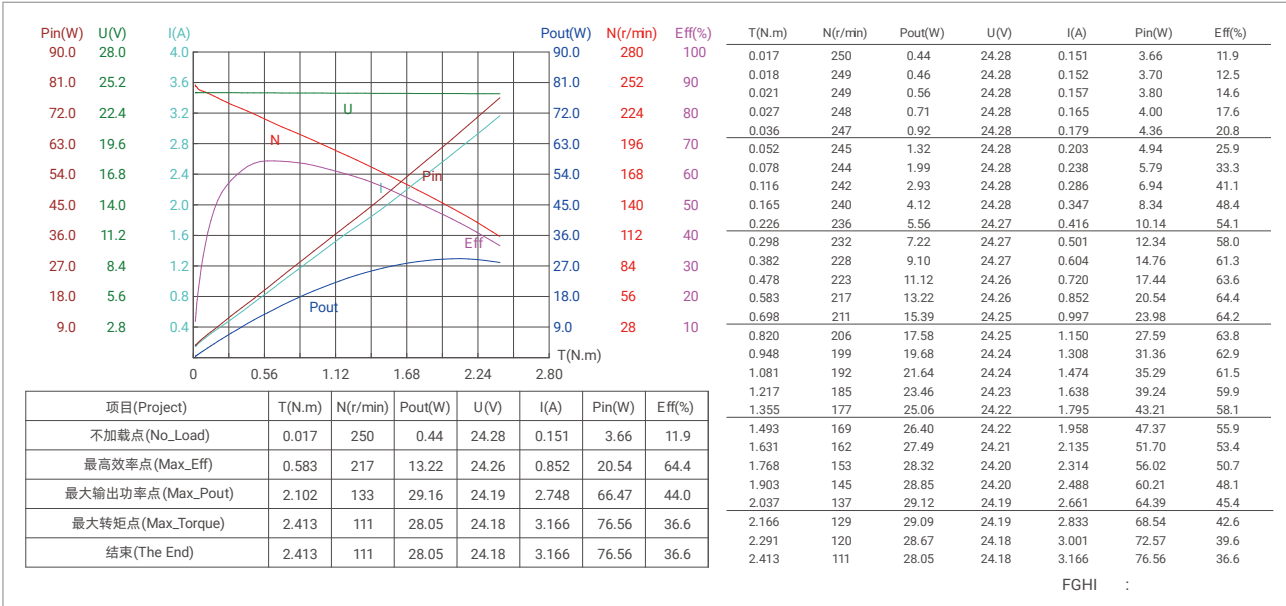
产品参数 Product Parameters

参数 Parameters	单位 Unit	X4-3
减速比 Gear ratio		6
输入电压 Input Voltage	V	24
额定转速Rated Speed	RPM	200
额定转矩Rated Torque	N.m	1.5
额定功率Rated Power	W	30
额定电流 Rated Current	A	2
峰值扭矩Peak Torque	N.m	3
峰值电流Peak Current	A	4
效率 Efficiency	%	60
极对数 Pole Pair	—	14
反驱力矩 Anti-Force Torque	N.m	0.06
背隙 Backlash	Arcmin	10
轴向负载 Axial Payload	N	300
径向负载 Radial Payload	N	550
转动惯量 Inertia	Kg.cm ²	1.2
编码器类型 Encoder Type	bit	18
通信方式 Communication	—	CAN:1M/RS485:115200/500K/1M/2.5M
重量 Weight	kg	0.3

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



FGHI :

系列名 Series Name

RMD-X V2

曾用名 Previous Name

RMD-X6 1:6 V2

电机简称 Motor Simplified Name

X6-7



单编码器 Single Encoder

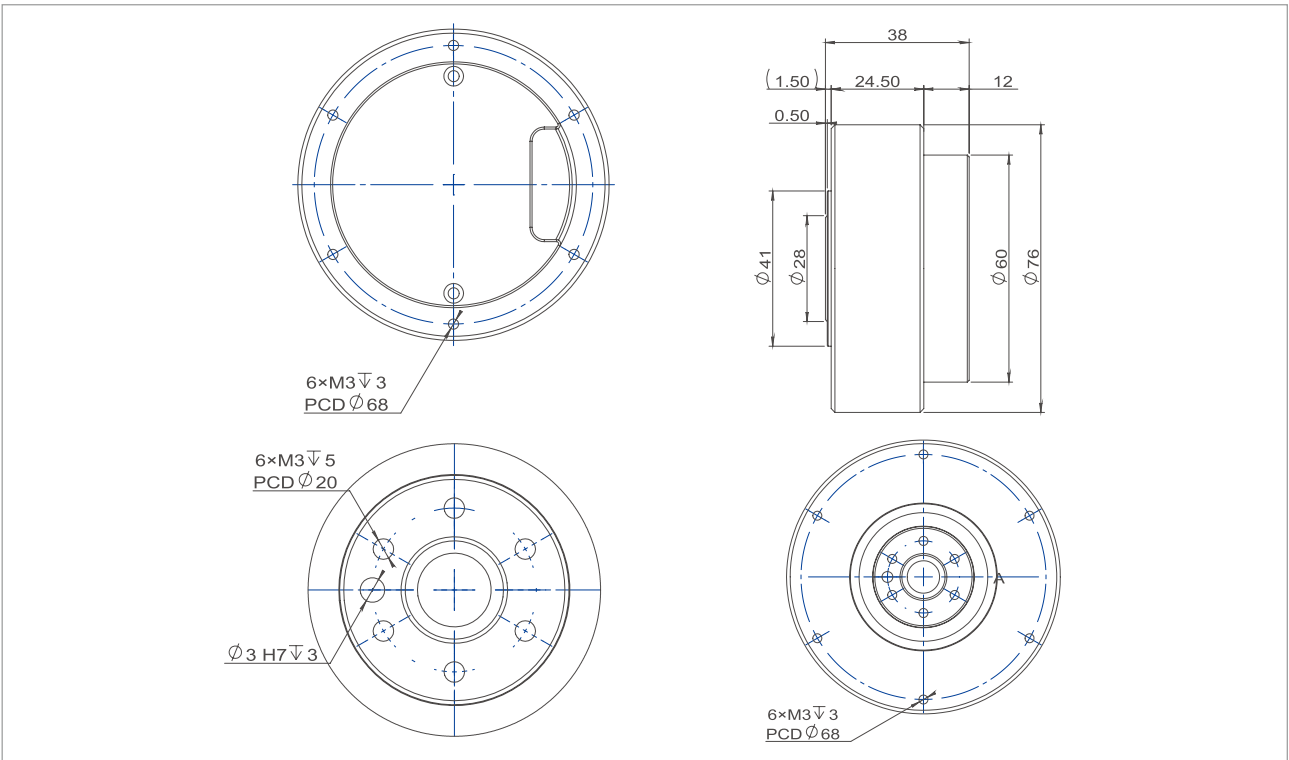
型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X6-P6-7-R-N	1102150060230100	N (without brake)
RMD-X6-P6-7-C-N	1102150060130100	N (without brake)

* 1. 标准品电机不支持抱闸，如需可定制抱闸。The standard motor doesn't support brake, support customization.

* 2. 标准品电机不支防水，如需可定制品IP54。The standard motor doesn't support IP54, support customization.

* 3. 标准品电机支持CAN BUS和RS485。The standard motor support CAN BUS and RS485.

尺寸安装图 Installation Drawing



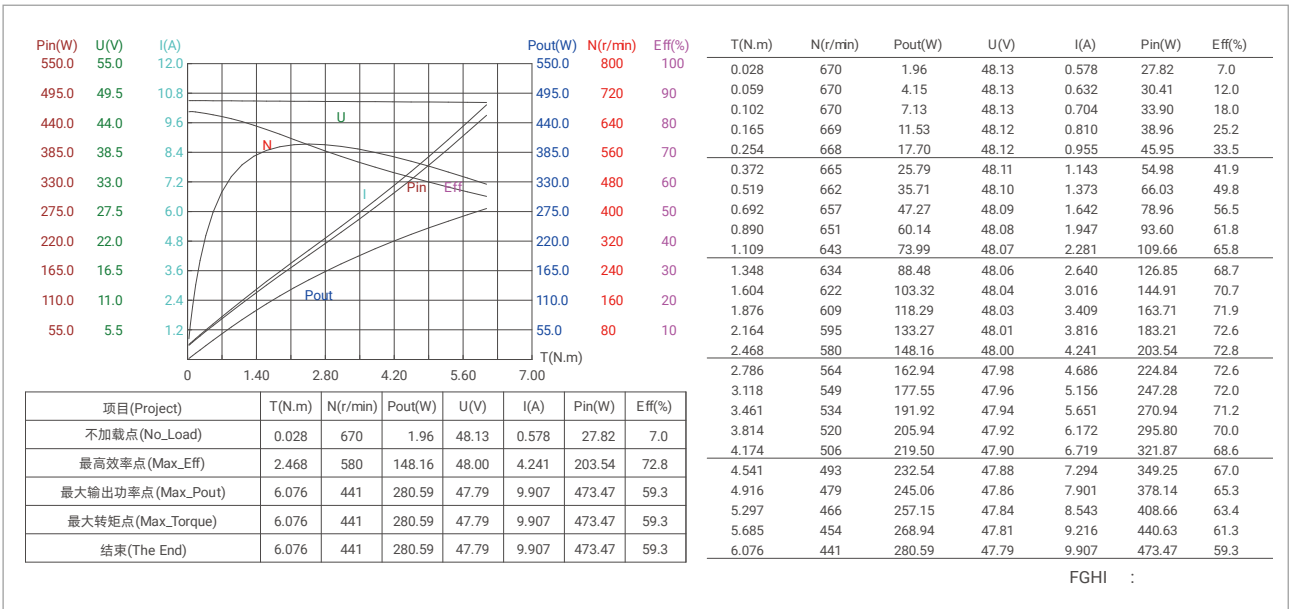
产品参数 Product Parameters

参数 Parameters	单位 Unit	X6-7
减速比 Gear ratio		6
输入电压 Input Voltage	V	48
额定转速Rated Speed	RPM	400
额定转矩Rated Torque	N.m	3.5
额定功率Rated Power	W	150
额定电流 Rated Current	A	4
峰值扭矩Peak Torque	N.m	7
峰值电流Peak Current	A	9
效率 Efficiency	%	70
极对数 Pole Pair	—	14
反驱力矩 Anti-Force Torque	N.m	0.08
背隙 Backlash	Arcmin	10
轴向负载 Axial Payload	N	775
径向负载 Radial Payload	N	1250
转动惯量 Inertia	Kg.cm ²	4.8
编码器类型 Encoder Type	bit	18
通信方式 Communication	—	CAN:1M/RS485:115200/500K/1M/2.5M
重量 Weight	kg	0.35

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



FGHI

系列名 Series Name

RMD-X V2

曾用名 Previous Name

RMD-X6 S2 1:36 V2

电机简称 Motor Simplified Name

X6-40



单编码器 Single Encoder

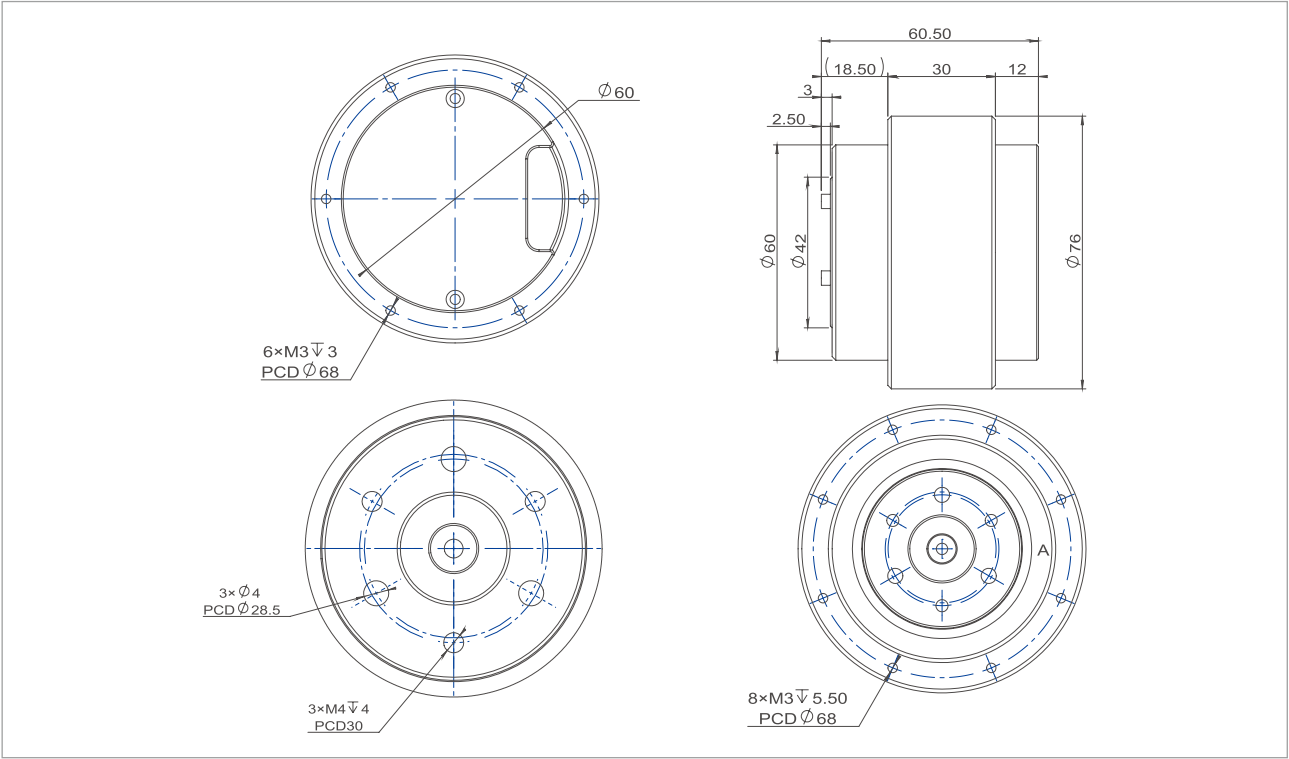
型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X6-P36-40-R-N	1102050360230100	N (without brake)
RMD-X6-P36-40-C-N	1102050360130100	N (without brake)

* 1. 标准品电机不支持抱闸，如需可定制抱闸。The standard motor doesn't support brake, support customization.

* 2. 标准品电机不支防水，如需可定制品IP54。The standard motor doesn't support IP54, support customization.

* 3. 标准品电机支持CAN BUS和RS485。The standard motor support CAN BUS and RS485.

尺寸安装图 Installation Drawing



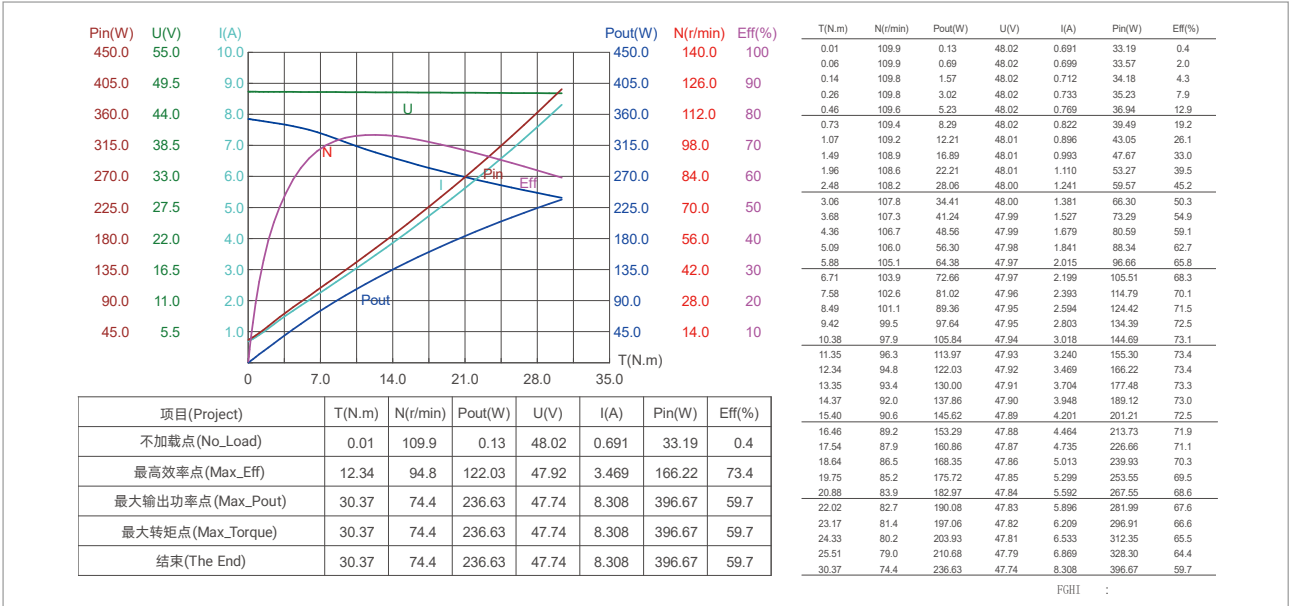
产品参数 Product Parameters

参数 Parameters	单位 Unit	X6-40
减速比 Gear ratio		36
输入电压 Input Voltage	V	48
额定转速Rated Speed	RPM	90
额定转矩Rated Torque	N.m	18
额定功率Rated Power	W	170
额定电流 Rated Current	A	5.2
峰值扭矩Peak Torque	N.m	40
峰值电流Peak Current	A	10.5
效率 Efficiency	%	70
极对数 Pole Pair	—	14
反驱力矩 Anti-Force Torque	N.m	0.91
背隙 Backlash	Arcmin	15
轴向负载 Axial Payload	N	775
径向负载 Radial Payload	N	1250
转动惯量 Inertia	Kg.cm ²	28.8
编码器类型 Encoder Type	bit	18
通信方式 Communication	—	CAN:1M/RS485:115200/500K/1M/2.5M
重量 Weight	kg	0.59

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



系列名 Series Name

RMD-X V2

曾用名 Previous Name

RMD-X8-Pro 1:9 V2

电机简称 Motor Simplified Name

X8-25



单编码器 Single Encoder

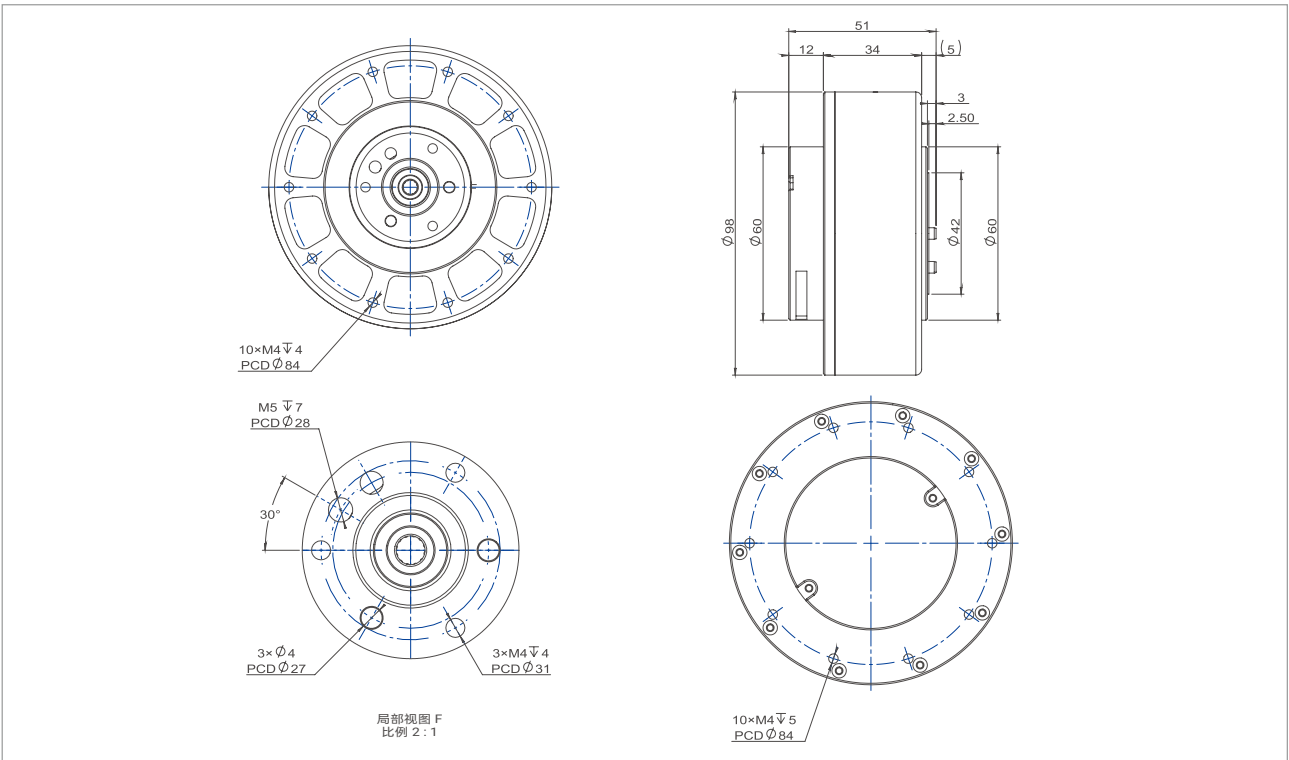
型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X8-P9-25-R-N	1102030090230100	N (without brake)
RMD-X8-P9-25-C-N	1102030090130100	N (without brake)

* 1. 标准品电机不支持抱闸，如需可定制抱闸。The standard motor doesn't support brake, support customization.

* 2. 标准品电机不支防水，如需可定制品IP54。The standard motor doesn't support IP54, support customization.

* 3. 标准品电机支持CAN BUS和RS485。The standard motor support CAN BUS and RS485.

尺寸安装图 Installation Drawing



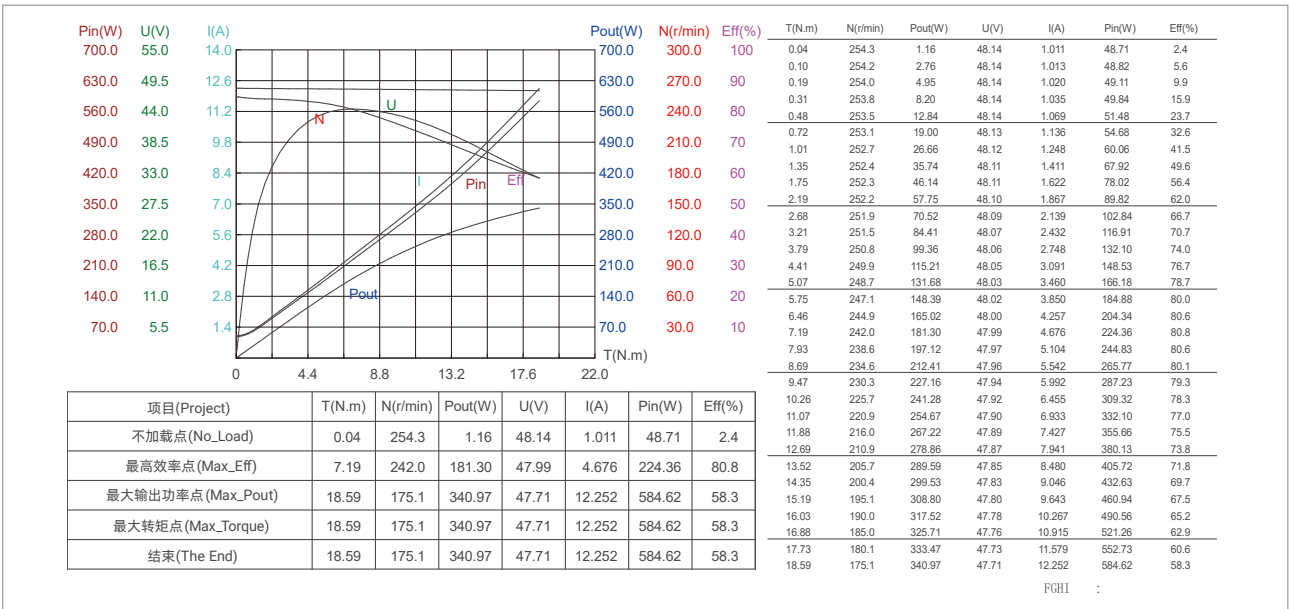
产品参数 Product Parameters

参数 Parameters	单位 Unit	X8-25
减速比 Gear ratio		9
输入电压 Input Voltage	V	48
额定转速Rated Speed	RPM	110
额定转矩Rated Torque	N.m	10
额定功率Rated Power	W	125
额定电流 Rated Current	A	3.2
峰值扭矩Peak Torque	N.m	25
峰值电流Peak Current	A	8
效率 Efficiency	%	80
极对数 Pole Pair	—	21
反驱力矩 Anti-Force Torque	N.m	0.61
背隙 Backlash	Arcmin	10
轴向负载 Axial Payload	N	985
径向负载 Radial Payload	N	1250
转动惯量 Inertia	Kg.cm ²	30.6
编码器类型 Encoder Type	bit	18
通信方式 Communication	—	CAN:1M/RS485:115200/500K/1M/2.5M
重量 Weight	kg	0.71

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



FGHI :

系列名 Series Name

RMD-X V3

曾用名 Previous Name

RMD-X6 1:8 V3

电机简称 Motor Simplified Name

X6-8



双编码器 Dual Encoder

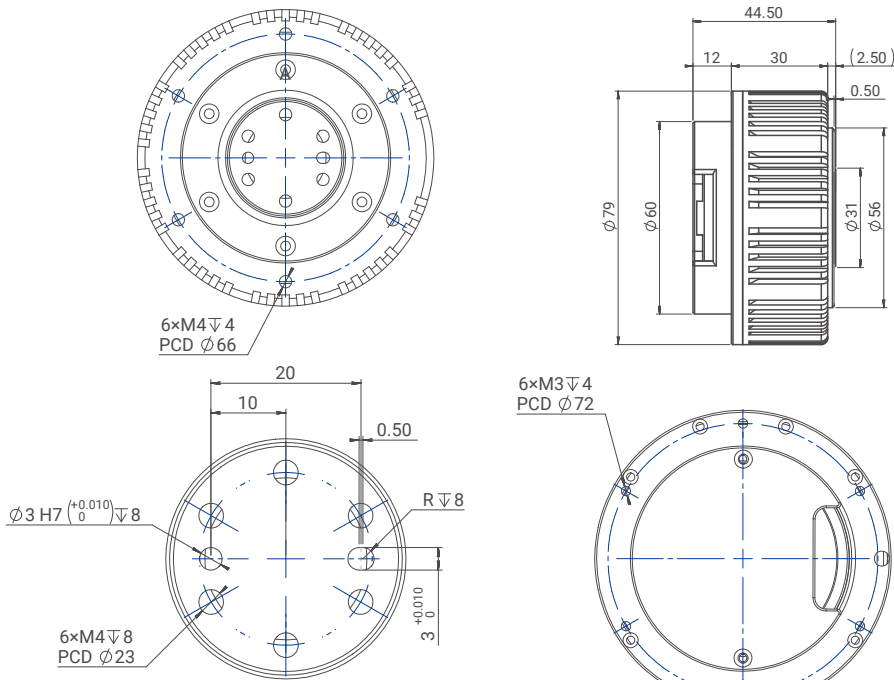
型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X6-P8-8-R-N	1102020080230200	N (without brake)
RMD-X6-P8-8-C-N	1102020080130200	N (without brake)

* 1. 标准品电机不支持抱闸，如需可定制抱闸。The standard motor doesn't support brake, support customization.

* 2. 标准品电机不支防水，如需可定制品IP54。The standard motor doesn't support IP54, support customization.

* 3. 标准品电机支持CAN BUS和RS485。The standard motor support CAN BUS and RS485.

尺寸安装图 Installation Drawing



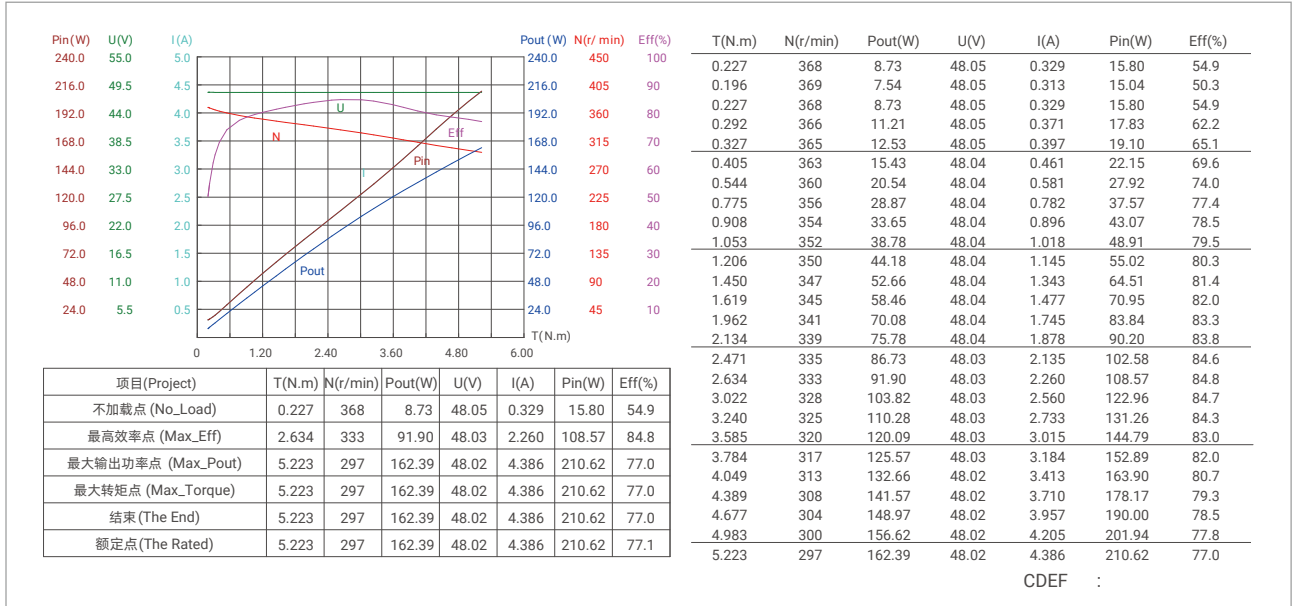
产品参数 Product Parameters

参数 Parameters	单位 Unit	X6-8
减速比 Gear ratio		8
输入电压 Input Voltage	V	48
额定转速 Rated Speed	RPM	310
额定转矩 Rated Torque	N.m	4.5
额定功率 Rated Power	W	135
额定电流 Rated Current	A	3.6
峰值扭矩 Peak Torque	N.m	8
峰值电流 Peak Current	A	7.2
效率 Efficiency	%	78
极对数 Pole Pair	—	14
反驱力矩 Anti-Force Torque	N.m	0.1
背隙 Backlash	Arcmin	10
轴向负载 Axial Payload	N	775
径向负载 Radial Payload	N	1040
转动惯量 Inertia	Kg.cm ²	6.8
编码器类型 Encoder Type	bit	14 / 14
通信方式 Communication	—	CAN:1M/RS485:115200/500K/1M/2.5M
重量 Weight	kg	0.49

* 额定转矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



CDEF :

系列名 Series Name

RMD-X V3

曾用名 Previous Name

RMD-X8-Pro-H 1:6 V3

电机简称 Motor Simplified Name

X8-20



双编码器 Dual Encoder

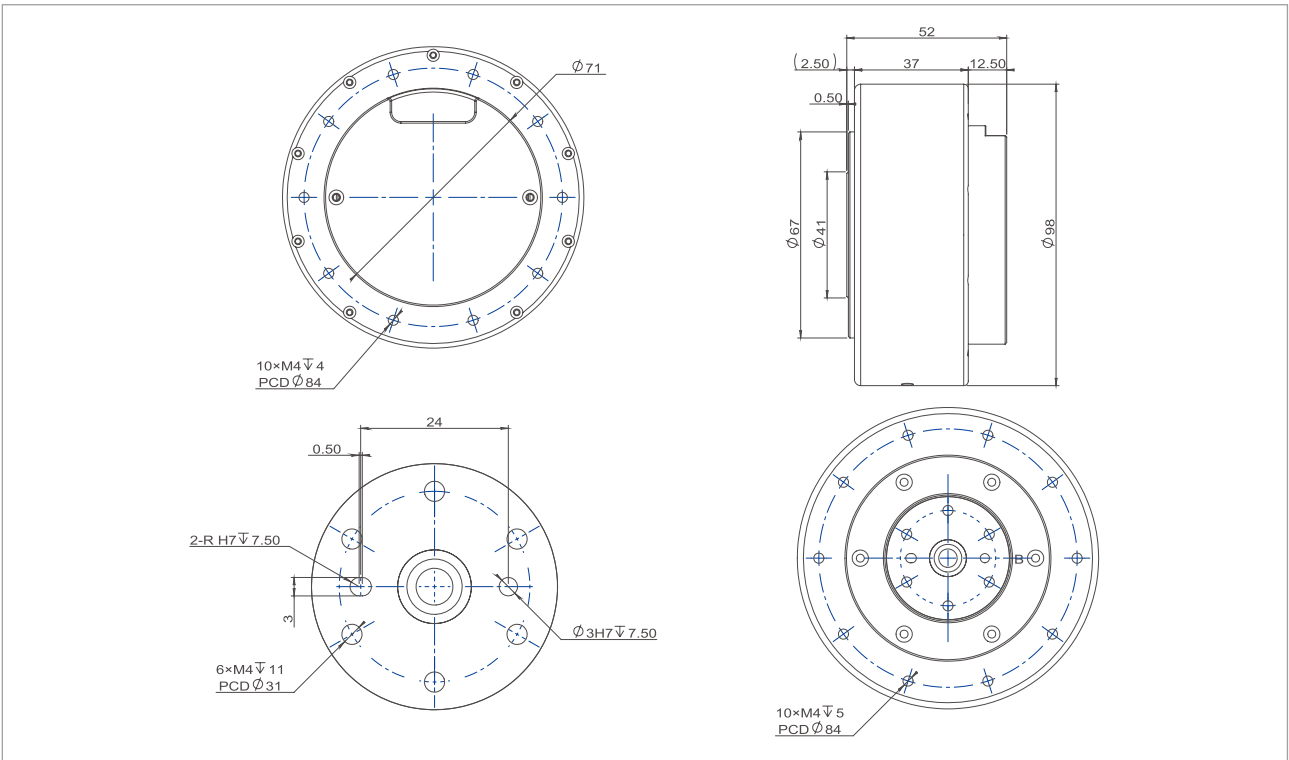
型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X8-P6-20-R-N	1102140060230200	N (without brake)
RMD-X8-P6-20-C-N	1102140060130200	N (without brake)

* 1. 标准品电机不支持抱闸，如需可定制抱闸。The standard motor doesn't support brake, support customization.

* 2. 标准品电机不支防水，如需可定制品IP54。The standard motor doesn't support IP54, support customization.

* 3. 标准品电机支持CAN BUS和RS485。The standard motor support CAN BUS and RS485.

尺寸安装图 Installation Drawing



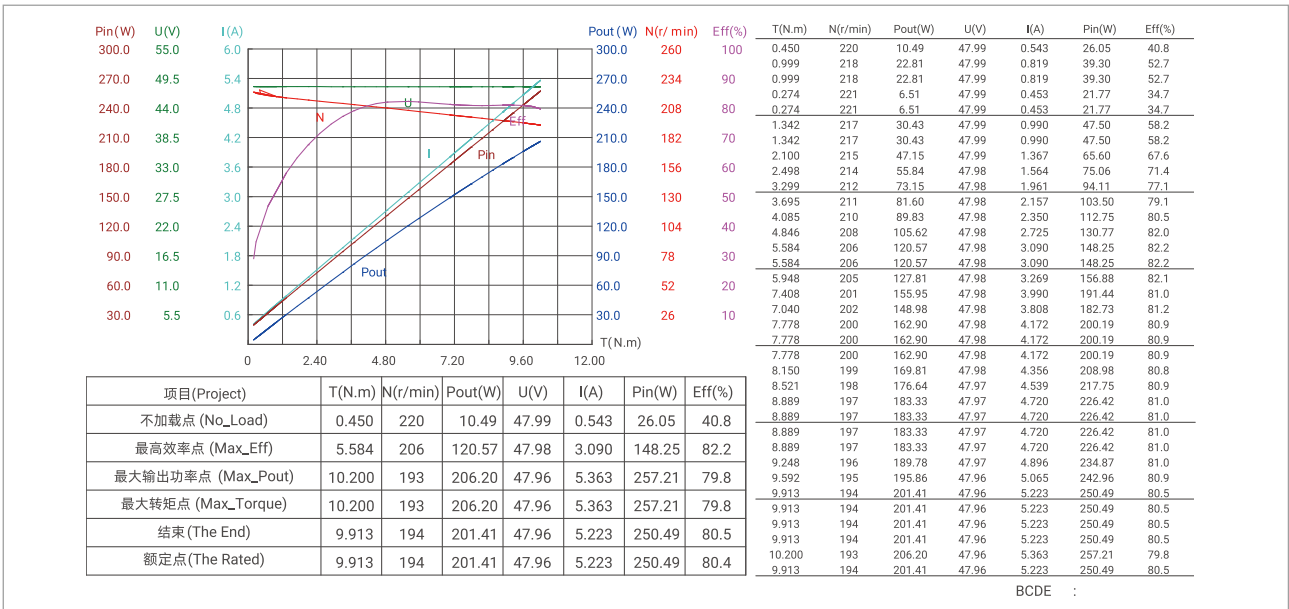
产品参数 Product Parameters

参数 Parameters	单位 Unit	X8-20
减速比 Gear ratio		6
输入电压 Input Voltage	V	48
额定转速Rated Speed	RPM	190
额定转矩Rated Torque	N.m	10
额定功率Rated Power	W	200
额定电流 Rated Current	A	5.2
峰值扭矩Peak Torque	N.m	20
峰值电流Peak Current	A	10.5
效率 Efficiency	%	80
极对数 Pole Pair	—	20
反驱力矩 Anti-Force Torque	N.m	0.4
背隙 Backlash	Arcmin	10
轴向负载 Axial Payload	N	985
径向负载 Radial Payload	N	1250
转动惯量 Inertia	Kg.cm ²	20
编码器类型 Encoder Type	bit	14 / 14
通信方式 Communication	—	CAN:1M/RS485:115200/500K/1M/2.5M
重量 Weight	kg	0.78

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



BCDE

:

系列名 Series Name

RMD-X V3

曾用名 Previous Name

RMD-X8 S2 1:36 V3

电机简称 Motor Simplified Name

X8-60



双编码器 Dual Encoder

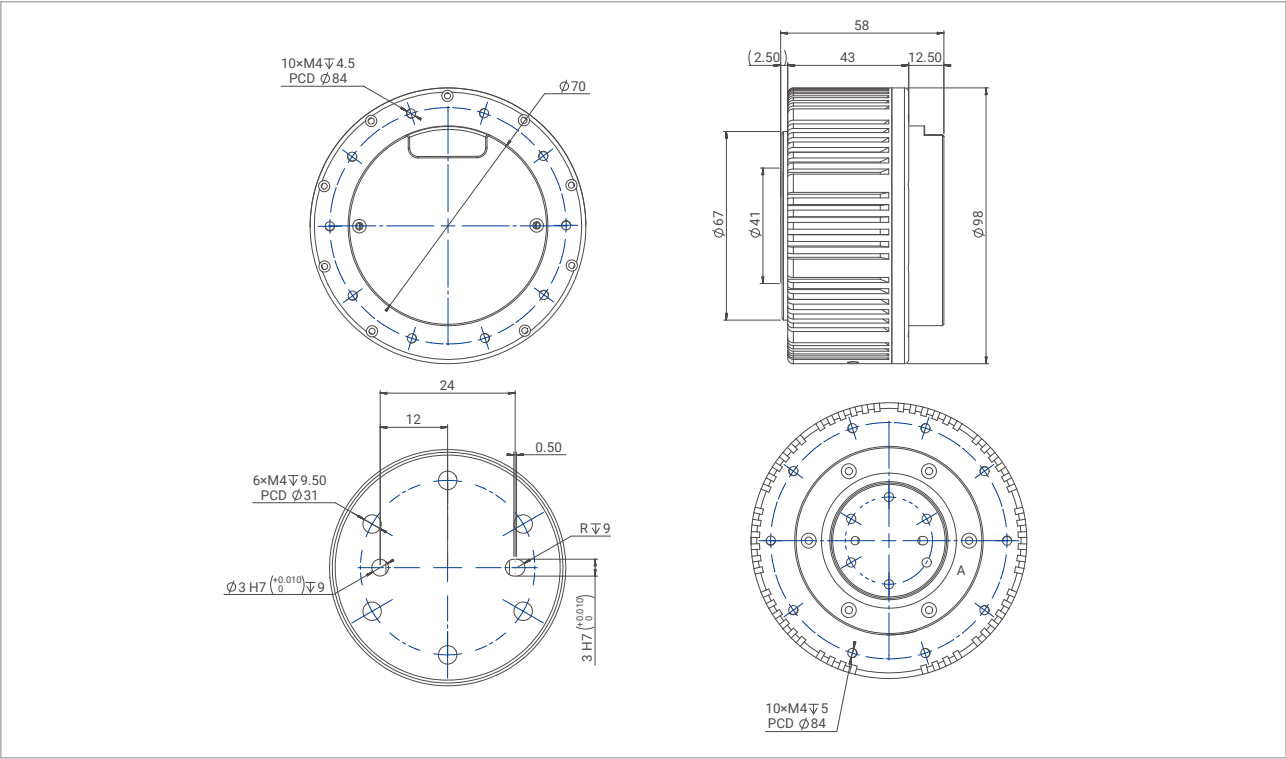
型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X8-P36-60-R-N	1102060360230200	N (without brake)
RMD-X8-P36-60-C-N	1102060360130200	N (without brake)

* 1. 标准品电机不支持抱闸，如需可定制抱闸。The standard motor doesn't support brake, support customization.

* 2. 标准品电机不支防水，如需可定制品IP54。The standard motor doesn't support IP54, support customization.

* 3. 标准品电机支持CAN BUS和RS485。The standard motor support CAN BUS and RS485.

尺寸安装图 Installation Drawing



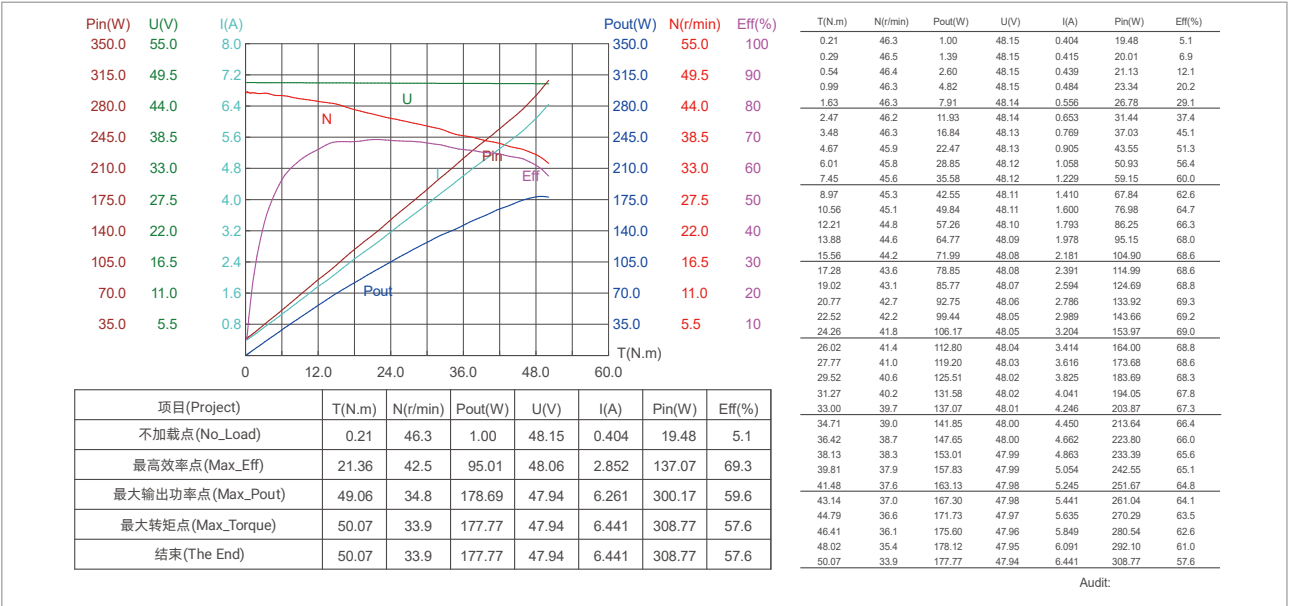
产品参数 Product Parameters

参数 Parameters	单位 Unit	X8-60
减速比 Gear ratio		36
输入电压 Input Voltage	V	48
额定转速 Rated Speed	RPM	40
额定转矩 Rated Torque	N.m	30
额定功率 Rated Power	W	130
额定电流 Rated Current	A	4
峰值扭矩 Peak Torque	N.m	60
峰值电流 Peak Current	A	8
效率 Efficiency	%	69
极对数 Pole Pair	—	20
反驱动力矩 Anti-Force Torque	N.m	1
背隙 Backlash	Arcmin	15
轴向负载 Axial Payload	N	985
径向负载 Radial Payload	N	1250
转动惯量 Inertia	Kg.cm ²	96
编码器类型 Encoder Type	bit	14 / 14
通信方式 Communication	—	CAN:1M/RS485:115200/500K/1M/2.5M
重量 Weight	kg	0.9

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



Audit:

系列名 Series Name

RMD-X V3

曾用名 Previous Name

RMD-X10 1:7 V3

电机简称 Motor Simplified Name

X10-40



双编码器 Dual Encoder

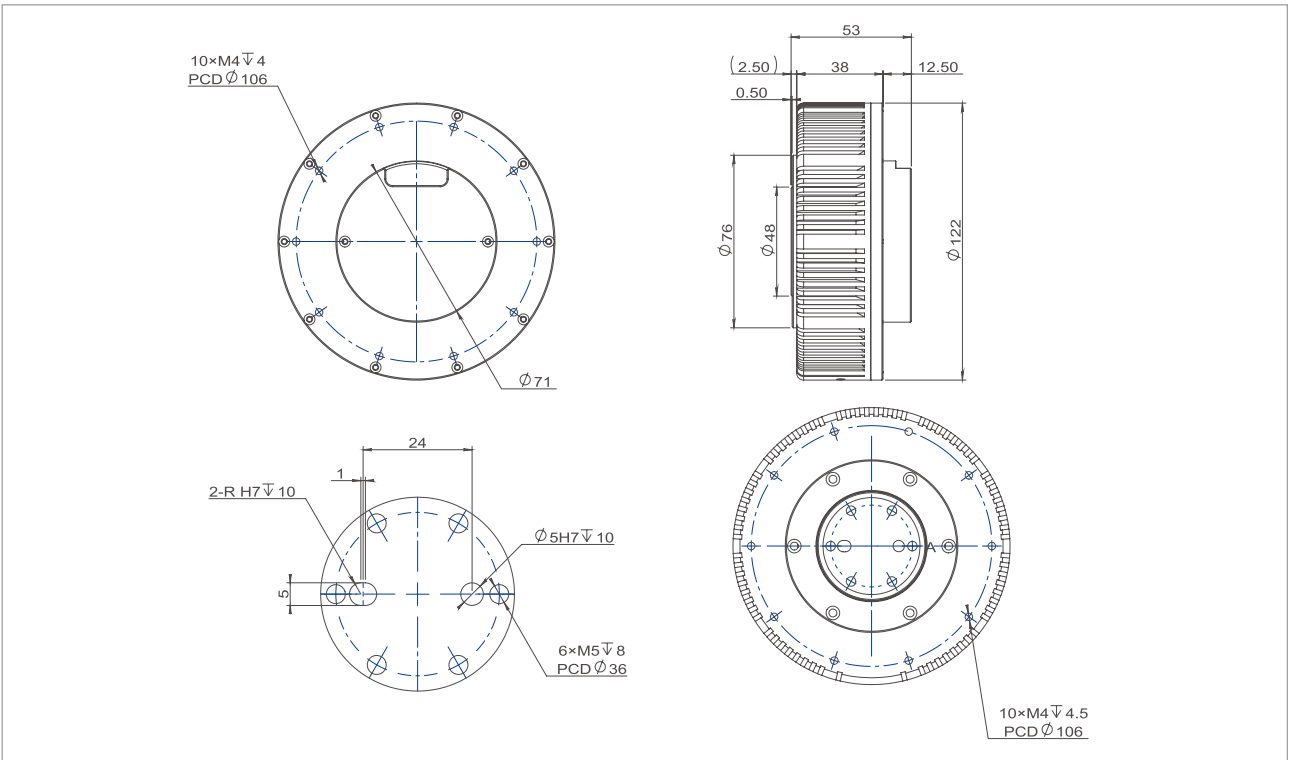
型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X10-P7-40-R-N	1102040070230200	N (without brake)
RMD-X10-P7-40-C-N	1102040070130200	N (without brake)

* 1. 标准品电机不支持抱闸，如需可定制抱闸。The standard motor doesn't support brake, support customization.

* 2. 标准品电机不支防水，如需可定制品IP54。The standard motor doesn't support IP54, support customization.

* 3. 标准品电机支持CAN BUS和RS485。The standard motor support CAN BUS and RS485.

尺寸安装图 Installation Drawing



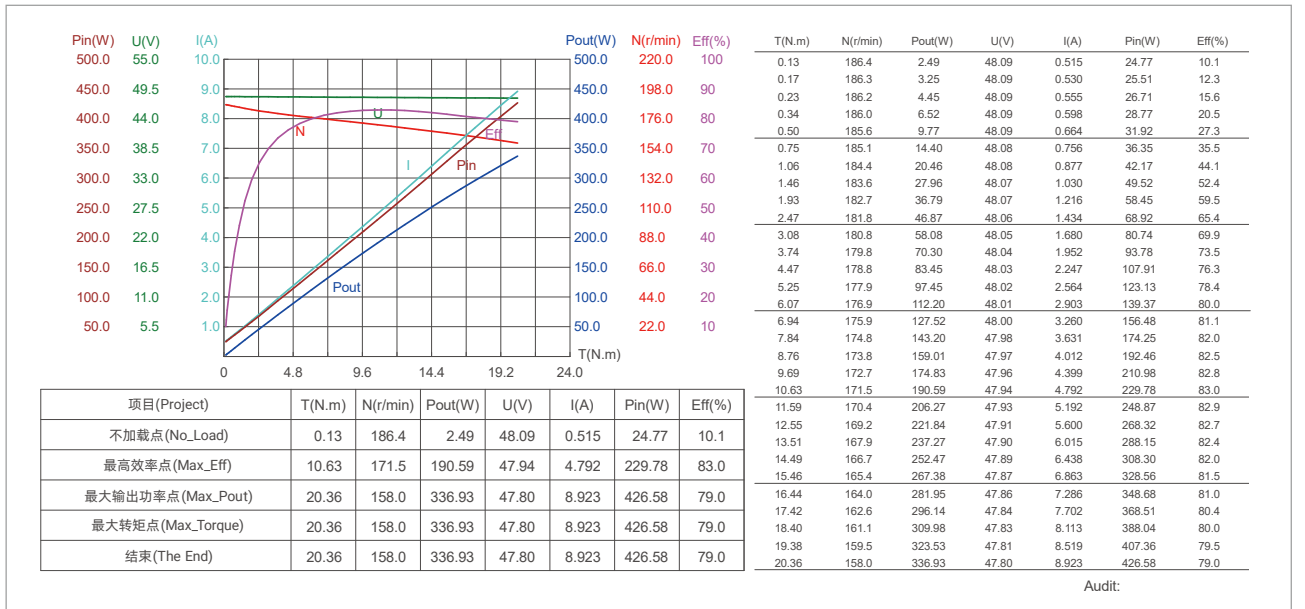
产品参数 Product Parameters

参数 Parameters	单位 Unit	X10-40
减速比 Gear ratio		7
输入电压 Input Voltage	V	48
额定转速Rated Speed	RPM	165
额定转矩Rated Torque	N.m	15
额定功率Rated Power	W	265
额定电流 Rated Current	A	6.5
峰值扭矩Peak Torque	N.m	40
峰值电流Peak Current	A	15
效率 Efficiency	%	82
极对数 Pole Pair	—	21
反驱力矩 Anti-Force Torque	N.m	0.62
背隙 Backlash	Arcmin	10
轴向负载 Axial Payload	N	1625
径向负载 Radial Payload	N	2250
转动惯量 Inertia	Kg.cm ²	39.7
编码器类型 Encoder Type	bit	14 / 14
通信方式 Communication	—	CAN:1M/RS485:115200/500K/1M/2.5M
重量 Weight	kg	1.15

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



Audit:

系列名 Series Name

RMD-X V3

曾用名 Previous Name

RMD-X10 S2 1:35 V3

电机简称 Motor Simplified Name

X10-100



双编码器 Dual Encoder

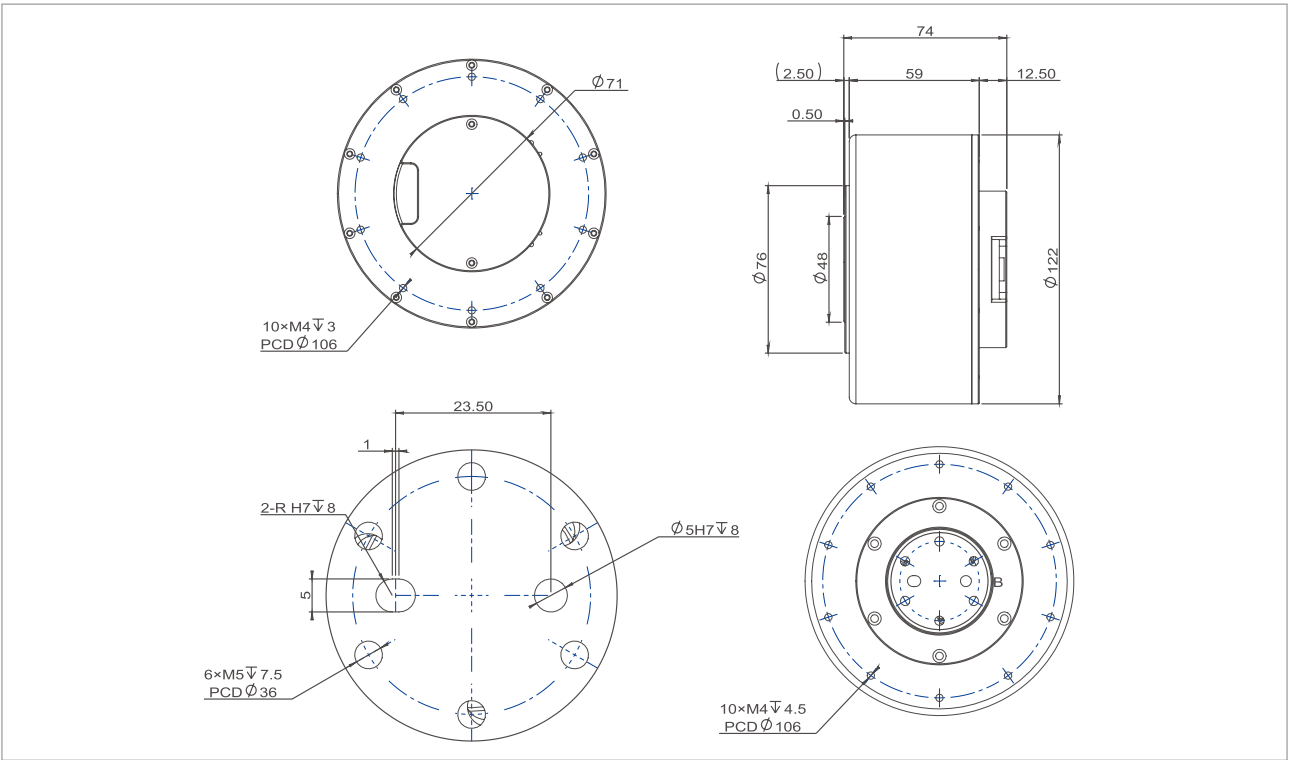
型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X10-P35-100-R-N	1102070350230200	N (without brake)
RMD-X10-P35-100-C-N	1102070350130200	N (without brake)

* 1. 标准品电机不支持抱闸，如需可定制抱闸。The standard motor doesn't support brake, support customization.

* 2. 标准品电机不支防水，如需可制品IP54。The standard motor doesn't support IP54, support customization.

* 3. 标准品电机支持CAN BUS和RS485。The standard motor support CAN BUS and RS485.

尺寸安装图 Installation Drawing



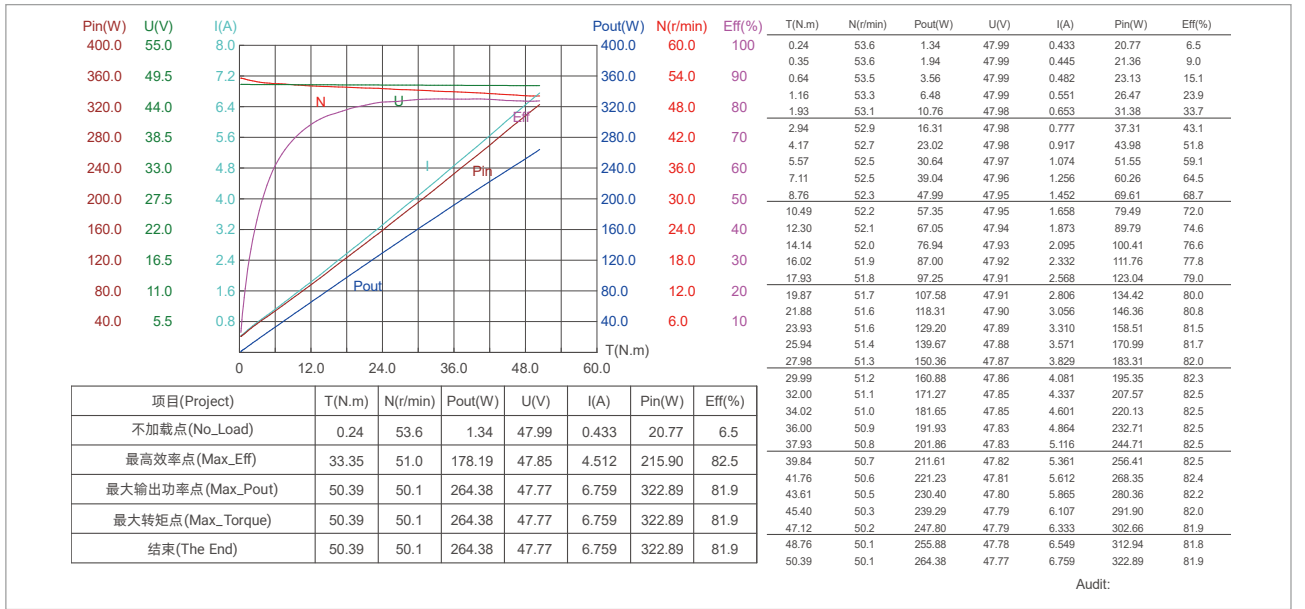
产品参数 Product Parameters

参数 Parameters	单位 Unit	X10-100
减速比 Gear ratio		35
输入电压 Input Voltage	V	48
额定转速 Rated Speed	RPM	50
额定转矩 Rated Torque	N.m	50
额定功率 Rated Power	W	265
额定电流 Rated Current	A	6.7
峰值扭矩 Peak Torque	N.m	100
峰值电流 Peak Current	A	13.5
效率 Efficiency	%	82
极对数 Pole Pair	—	21
反驱力矩 Anti-Force Torque	N.m	2.88
背隙 Backlash	Arcmin	15
轴向负载 Axial Payload	N	1625
径向负载 Radial Payload	N	2250
转动惯量 Inertia	Kg.cm ²	198.6
编码器类型 Encoder Type	bit	14 / 14
通信方式 Communication	—	CAN:1M/RS485:115200/500K/1M/2.5M
重量 Weight	kg	1.7

* 额定转矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



Audit:

Design for Bionic Robot

系列名 Series Name

RMD-X Series

电机简称 Motor Simplified Name

X4-24

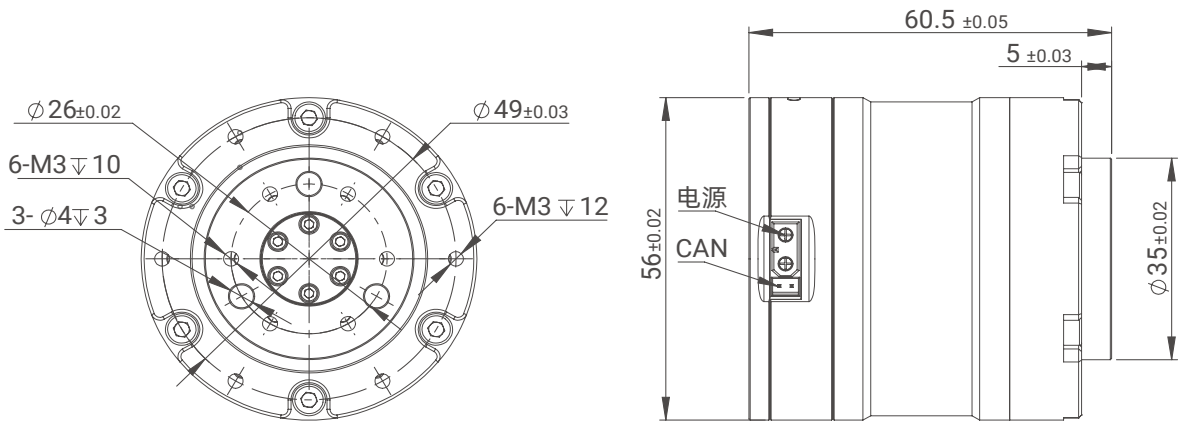


双编码器 Dual Encoder

型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X4-P36-24-C-N	1102120360140200	N (without brake)

* 标准品电机只支持CAN BUS。The standard motor only support CAN bus communication.

尺寸安装图 Installation Drawing



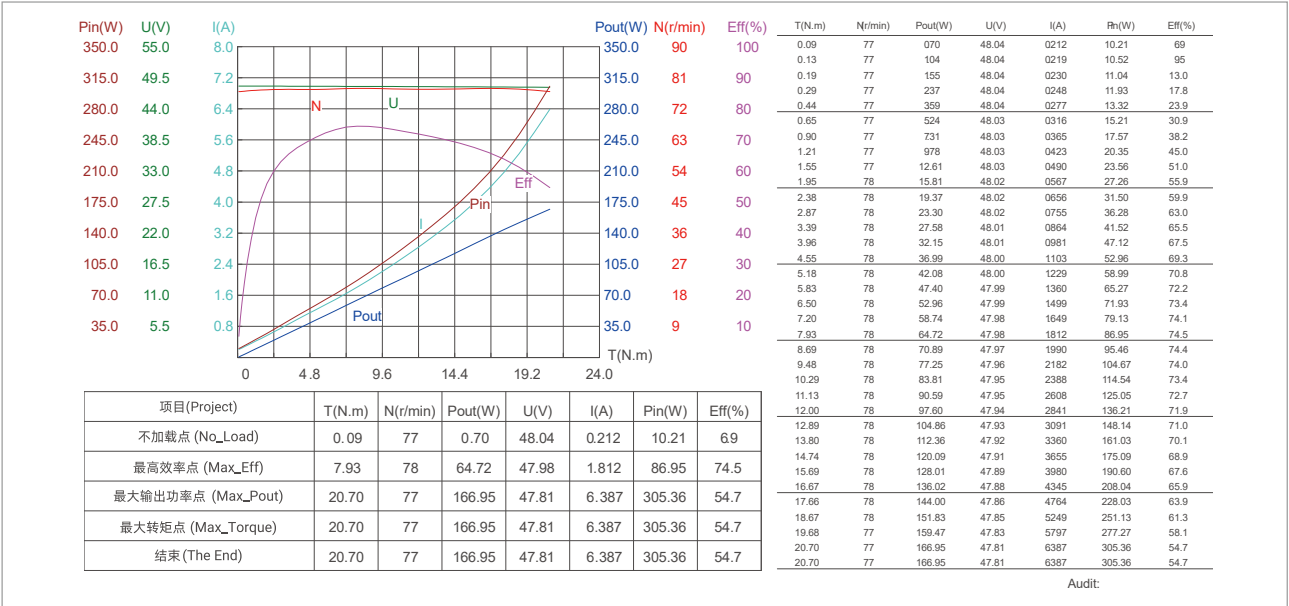
产品参数 Product Parameters

参数 Parameters	单位 Unit	X4-24
减速比 Gear ratio		36
输入电压 Input Voltage	V	48
额定转速 Rated Speed	RPM	100
额定转矩 Rated Torque	N.m	9
额定功率 Rated Power	W	150
额定电流 Rated Current	A	3.5
峰值扭矩 Peak Torque	N.m	24
峰值电流 Peak Current	A	10
效率 Efficiency	%	75
极对数 Pole Pair	—	14
反驱力矩 Anti-Force Torque	N.m	0.87
背隙 Backlash	Arcmin	15
轴向负载 Axial Payload	N	1900
径向负载 Radial Payload	N	1900
转动惯量 Inertia	Kg.cm ²	6.8
编码器类型 Encoder Type	bit	14 / 14
通信方式 Communication	—	CAN:1M
重量 Weight	kg	0.38

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



Design for Bionic Robot

系列名 Series Name

RMD-X Series

电机简称 Motor Simplified Name

X8-90

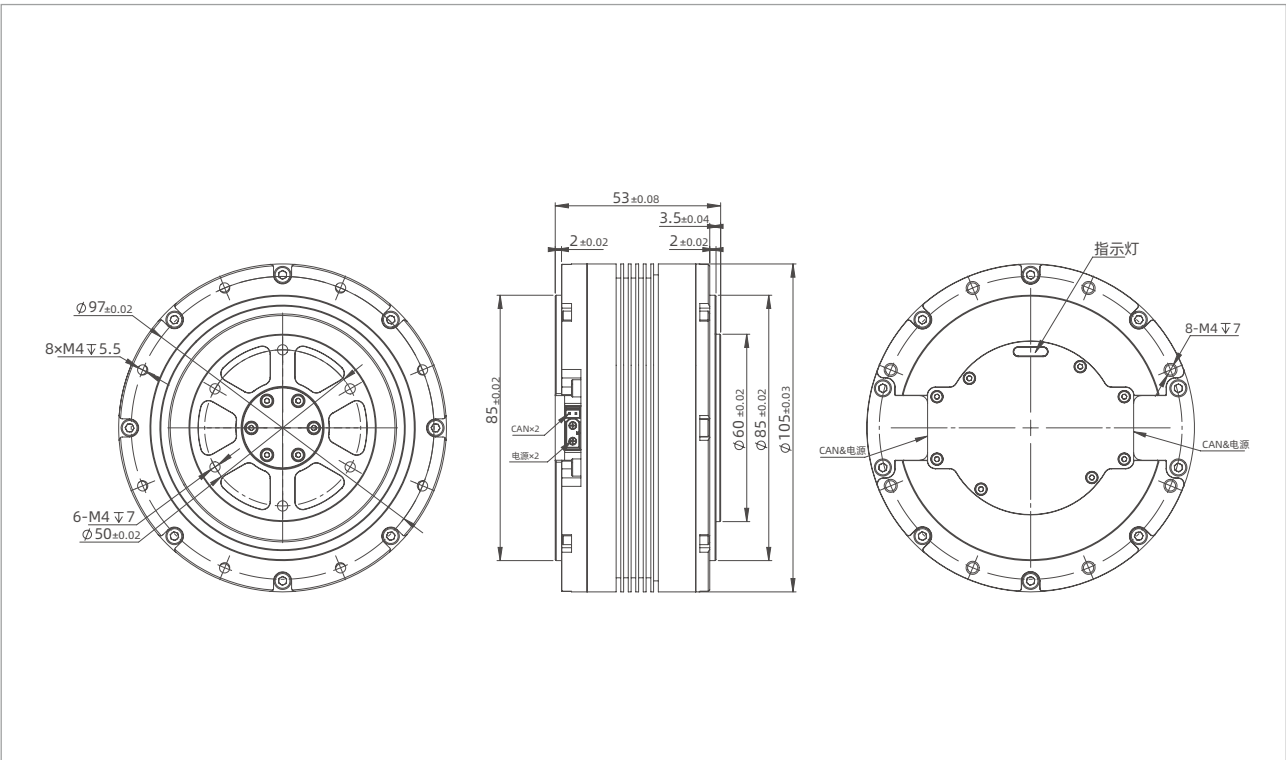


双编码器 Dual Encoder

型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X8-P18-90-C-N	1102130180140200	N (without brake)

* 标准品电机只支持CAN BUS。The standard motor only support CAN bus communication.

尺寸安装图 Installation Drawing



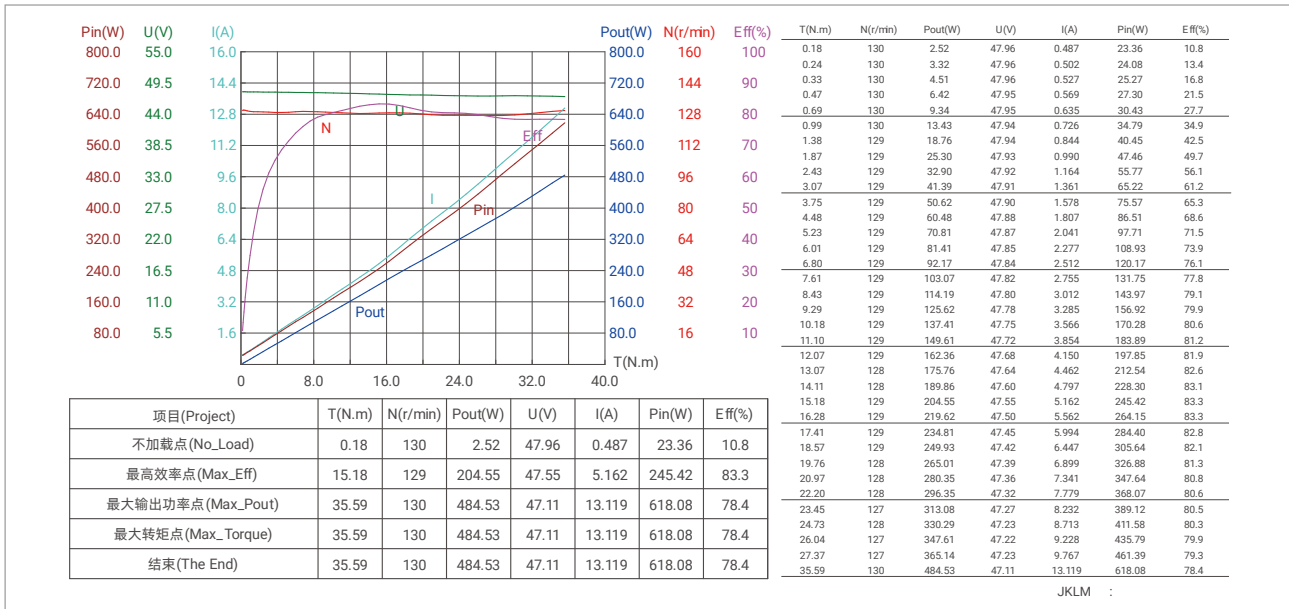
产品参数 Product Parameters

参数 Parameters	单位 Unit	X8-90
减速比 Gear ratio		18
输入电压 Input Voltage	V	48
额定转速Rated Speed	RPM	130
额定转矩Rated Torque	N.m	25
额定功率Rated Power	W	500
额定电流 Rated Current	A	10
峰值扭矩Peak Torque	N.m	90
峰值电流Peak Current	A	30
效率 Efficiency	%	80
极对数 Pole Pair	—	21
反驱力矩 Anti-Force Torque	N.m	0.65
背隙 Backlash	Arcmin	10
轴向负载 Axial Payload	N	2800
径向负载 Radial Payload	N	2800
转动惯量 Inertia	Kg.cm ²	26
编码器类型 Encoder Type	bit	14 / 14
通信方式 Communication	—	CAN:1M
重量 Weight	kg	0.85

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



JKLM

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Design for Bionic Robot

系列名 Series Name

RMD-X Series

电机简称 Motor Simplified Name

X12-150

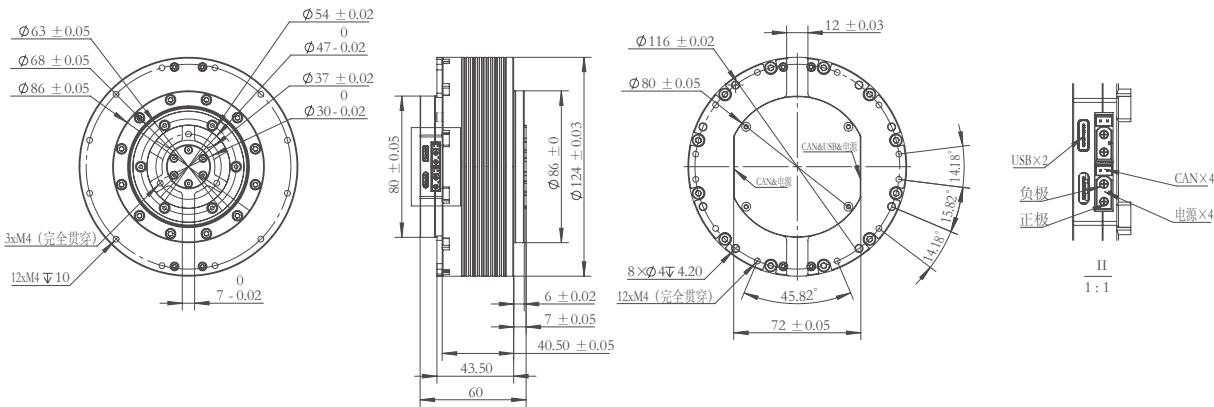


双编码器 Dual Encoder

型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X12-P12-150-C-N	1102080120130200	N (without brake)

* 标准品电机只支持CAN BUS。The standard motor only support CAN bus communication.

尺寸安装图 Installation Drawing



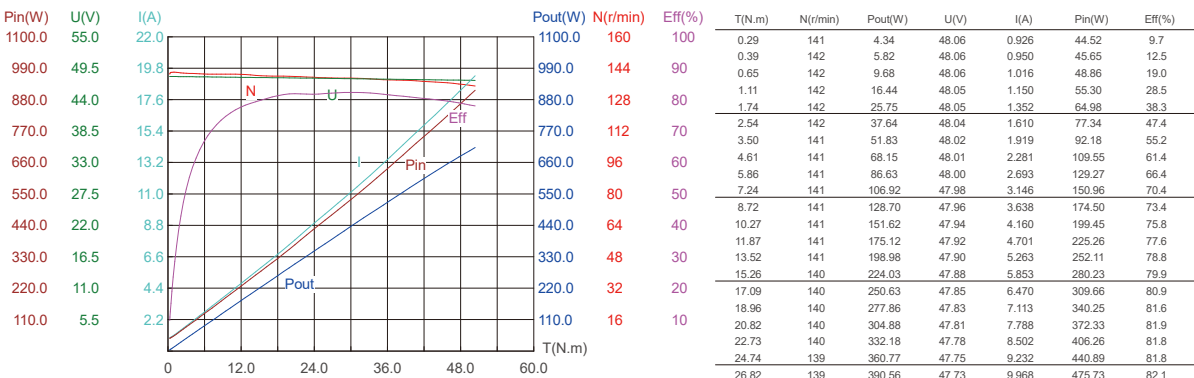
产品参数 Product Parameters

参数 Parameters	单位 Unit	X12-150
减速比 Gear ratio		12
输入电压 Input Voltage	V	48
额定转速 Rated Speed	RPM	100
额定转矩 Rated Torque	N.m	50
额定功率 Rated Power	W	780
额定电流 Rated Current	A	15
峰值扭矩 Peak Torque	N.m	150
峰值电流 Peak Current	A	45
效率 Efficiency	%	78
极对数 Pole Pair	—	21
反驱力矩 Anti-Force Torque	N.m	1.26
背隙 Backlash	Arcmin	10
轴向负载 Axial Payload	N	2600
径向负载 Radial Payload	N	2600
转动惯量 Inertia	Kg.cm ²	59
编码器类型 Encoder Type	bit	14 / 14
通信方式 Communication	—	CAN:1M
重量 Weight	kg	1.3

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve



项目(Project)	T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
不加载点(No_Load)	0.29	141	4.34	48.06	0.926	44.52	9.7
最高效率点(Max_Eff)	29.97	139	436.18	47.68	11.111	529.83	82.3
最大输出功率点(Max_Pout)	50.39	135	712.40	47.38	19.272	913.16	78.0
最大转矩点(Max_Torque)	50.39	135	712.40	47.38	19.272	913.16	78.0
结束(The End)	50.39	135	712.40	47.38	19.272	913.16	78.0

T(N.m)	N(r/min)	Pout(W)	U(V)	I(A)	Pin(W)	Eff(%)
0.29	141	4.34	48.06	0.926	44.52	9.7
0.39	142	5.82	48.06	0.950	45.65	12.5
0.65	142	9.68	48.06	1.016	48.86	19.0
1.11	142	16.44	48.05	1.150	55.30	28.5
1.74	142	25.75	48.05	1.352	64.98	38.3
2.54	142	37.64	48.04	1.610	77.34	47.4
3.50	141	51.83	48.02	1.919	92.18	55.2
4.61	141	68.15	48.01	2.281	109.55	61.4
5.86	141	86.63	48.00	2.693	129.27	66.4
7.24	141	106.92	47.98	3.146	150.96	70.4
8.72	141	128.70	47.96	3.638	174.50	73.4
10.27	141	151.62	47.94	4.160	199.45	75.8
11.87	141	175.12	47.92	4.701	225.26	77.6
13.52	141	198.98	47.90	5.263	252.11	78.8
15.26	140	224.03	47.88	5.853	280.23	79.9
17.09	140	250.63	47.85	6.470	309.66	80.9
18.96	140	277.86	47.83	7.113	340.25	81.6
20.82	140	304.88	47.81	7.788	372.33	81.9
22.73	140	332.18	47.78	8.502	406.26	81.8
24.74	139	360.77	47.75	9.232	440.89	81.8
26.82	139	390.56	47.73	9.968	475.73	82.1
28.92	139	420.93	47.70	10.724	511.52	82.3
31.03	139	451.37	47.67	11.504	548.38	82.3
33.17	139	481.35	47.64	12.307	586.29	82.1
35.33	138	511.26	47.61	13.143	625.73	81.7
37.49	138	541.83	47.57	14.011	666.61	81.3
39.65	138	572.08	47.54	14.879	707.41	80.9
41.77	137	600.98	47.51	15.726	747.22	80.4
43.84	137	628.93	47.48	16.555	786.09	80.0
45.82	137	655.37	47.45	17.362	823.89	79.6
47.71	136	679.38	47.42	18.143	860.43	79.0
49.51	135	701.60	47.39	18.899	895.76	78.3

JKLM :

Design for Bionic Robot

系列名 Series Name

RMD-X Series

电机简称 Motor Simplified Name

X15-400

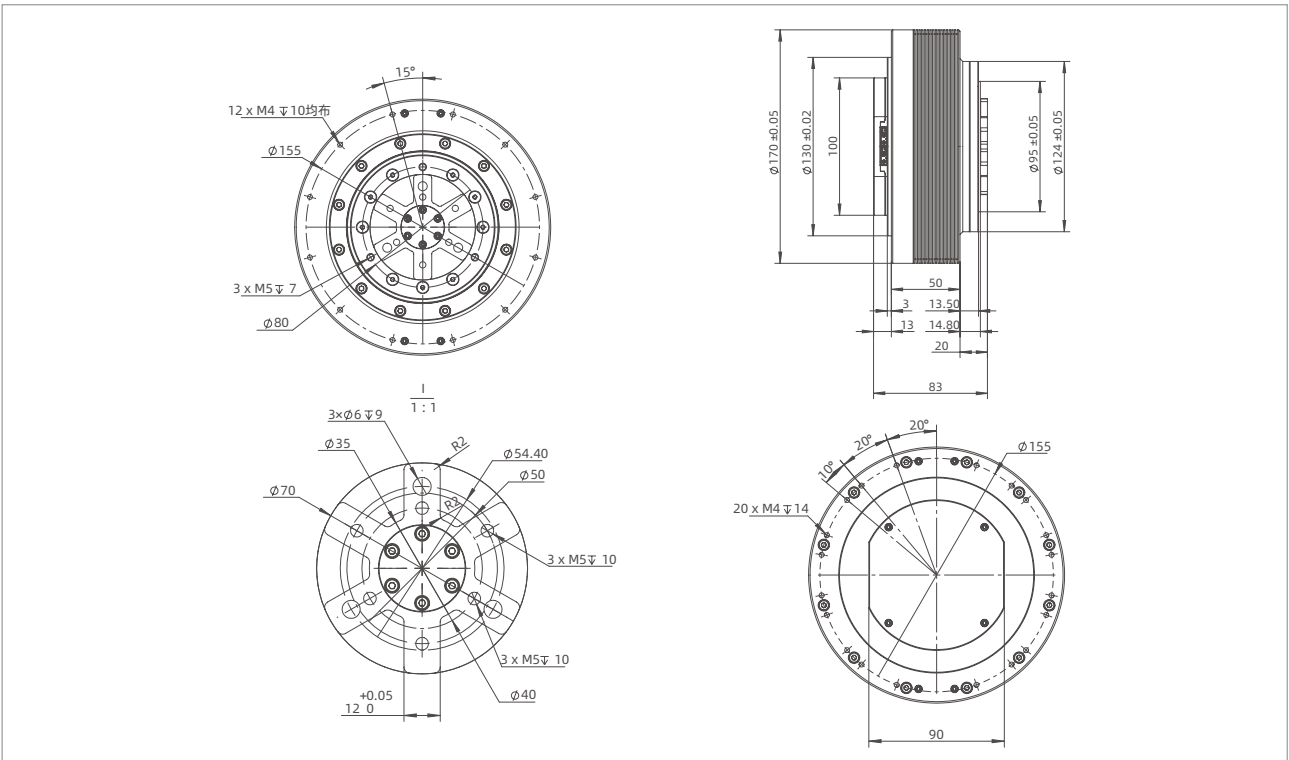


双编码器 Dual Encoder

型号 Actuator Full Name	货品编码 Product Code	抱闸/非抱闸 With Brake/Without Brake
RMD-X15-P12-400-C-N	1102110120130200	N (without brake)

* 标准品电机只支持CAN BUS。The standard motor only support CAN bus communication.

尺寸安装图 Installation Drawing



产品参数 Product Parameters

参数 Parameters	单位 Unit	X15-400
减速比 Gear ratio		11.4
输入电压 Input Voltage	V	60
额定转速 Rated Speed	RPM	80
额定转矩 Rated Torque	N.m	130
额定功率 Rated Power	W	1500
额定电流 Rated Current	A	23
峰值扭矩 Peak Torque	N.m	380
峰值电流 Peak Current	A	65
效率 Efficiency	%	83
极对数 Pole Pair	—	21
反驱力矩 Anti-Force Torque	N.m	2.15
背隙 Backlash	Arcmin	10
轴向负载 Axial Payload	N	6700
径向负载 Radial Payload	N	6700
转动惯量 Inertia	Kg.cm ²	175
编码器类型 Encoder Type	bit	14 / 14
通信方式 Communication	—	CAN:1M
重量 Weight	kg	3.1

* 额定扭矩测试方法：在环境温度摄氏24度（无其他散热方式）下，在额定转速下进行测试，电机扭矩在温升60度条件下达到温度平衡、可长时间工作点为该电机额定扭矩值。

* 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.

电机特征曲线 Motor Characteristic Curve

