





RMD-X V4 Series Planetary Actuator

Special Series For Robot

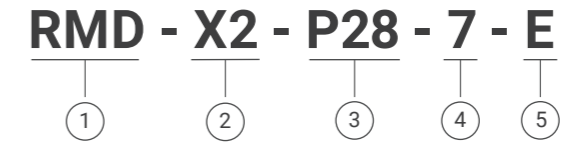


* The pictures of this series of products are subject to the actual products.

RMD-X V4 Series Product Features

- 
 EtherCAT & CAN BUS
- 
 Crossed Roller Bearings
- 
 Dual Encoder
- 
 High Torque Density
- 
 High Precision
- 
 Hollow Design

RMD-X V4 Series Naming Conventions



- ① **RMD:** Brand Name R-Reducer M-Motor D-Drive
- ② **X2:** X Stands For The Series Name: Integrated Planetary Actuator, 2 represent motor model number e.g:X2 X4 X6 X8 etc
- ③ **P28:** Planetary gear ratio e.g:P12 P28 P32 etc
- ④ **7:** Peak torque 7N.m
- ⑤ **E:** EtherCAT & CAN BUS

For example

Model	RMD-X8-P20-120-E
Illustrate	RMD: Brand Name
	X8: Motor model name
	P20: Planetary gear ratio 20:1
	120: Peak torque
	E: EtherCAT & CAN BUS

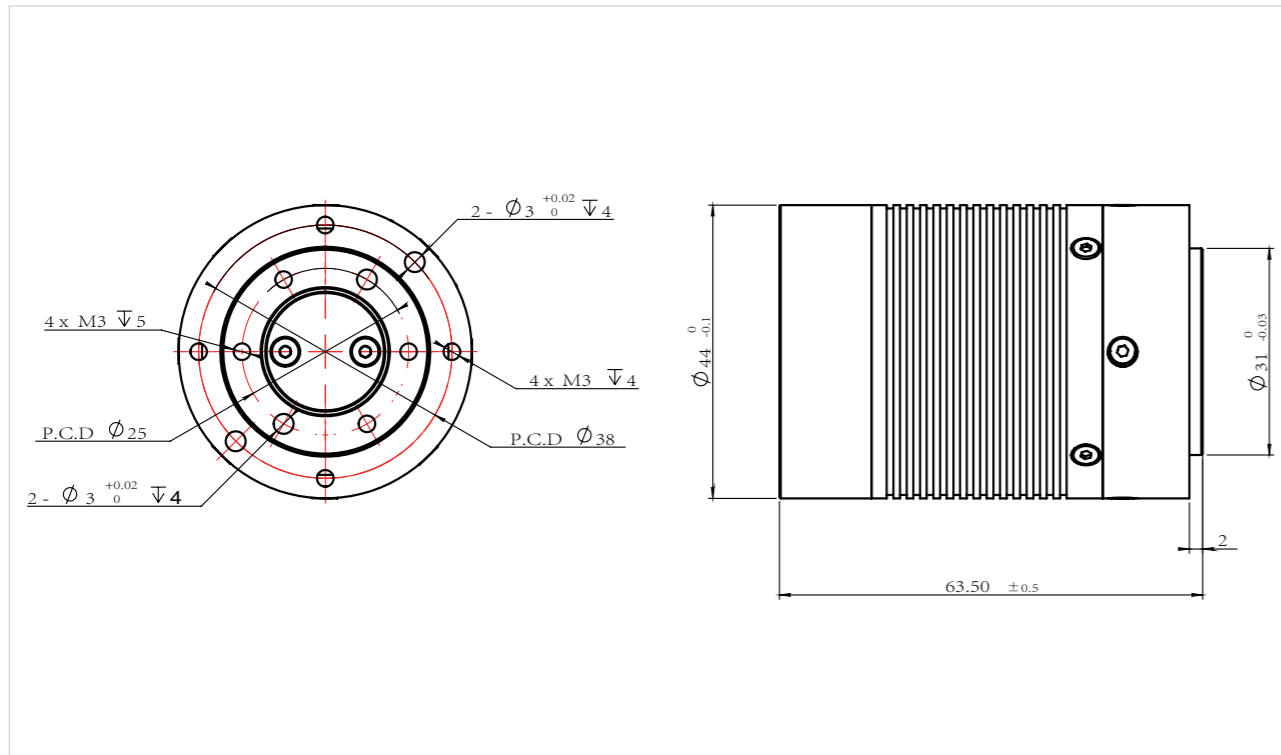
Series Name
RMD-X
Motor Simplified Name
X2-7



Dual encoder

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

Installation Drawing



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 Power	W	37	
Rated Current	A	3	
Peak Torque	N.m	7	
Peak Current	A	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	≤15	
Output Bearing Type	—	Deep Groove Ball Bearings	
Axial Load	Tensile load	KN	0.25
	Compressive load	KN	0.25
Radial Load	KN	1	
Inertia	Kg.cm ²	0.17	
Encoder Type & Interface	—	Dual Encoder ABS-17BIT(Input) / 18BIT(Output)	
Control Accuracy	Degree	<0.01	
Communication	—	EtherCAT & CAN BUS	
Weight	Kg	0.26	
Insulation Grade	—	F	

Stall Torque Data

	Torque (N.m)	Temperature Rise (°C)	Stall 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

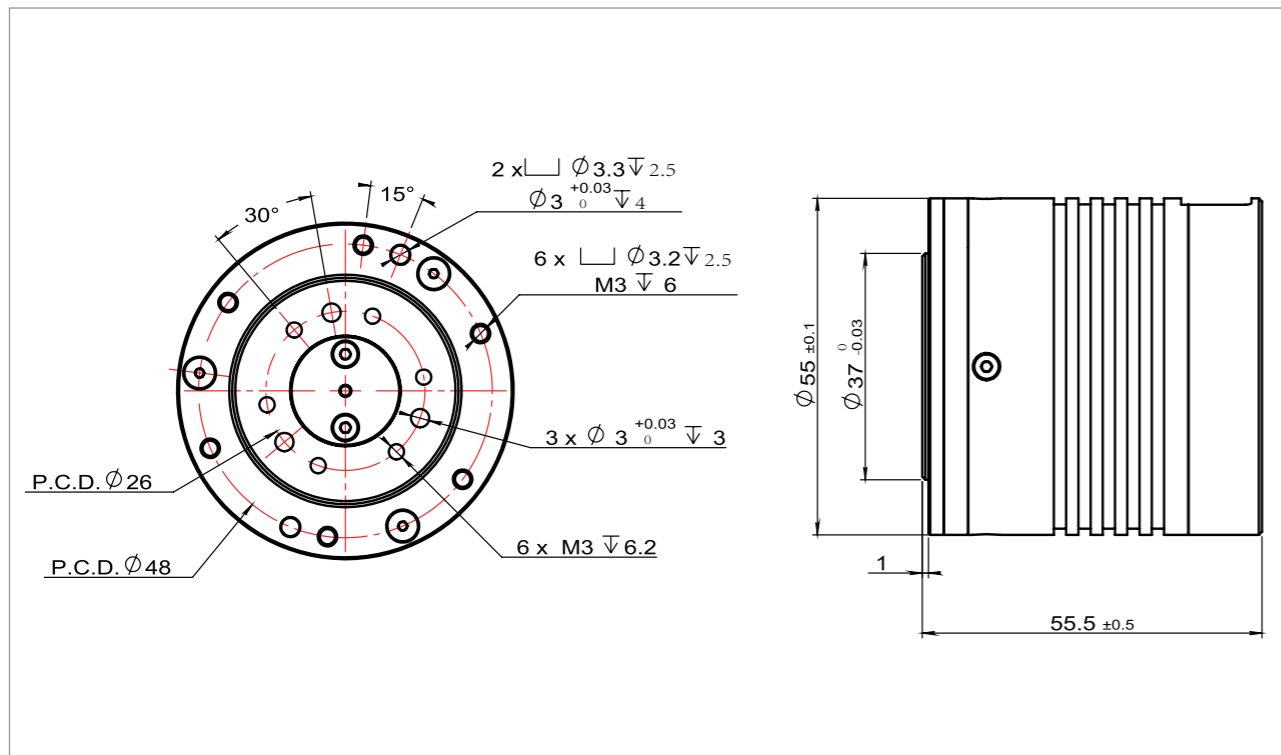
Series Name
RMD-X
Motor Simplified Name
X4-10



Dual encoder

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

Installation Drawing



Product Parameters

Parameters	Unit	X4-10	
Gear Ratio	—	12.5	
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	≤ 15	
Output Bearing Type	—	Deep Groove Ball Bearings	
Axial Load	Tensile load	KN	1.2
	Compressive load	KN	1.2
Radial Load	KN	1.2	
Inertia	Kg.cm ²	0.25	
Encoder Type & Interface	—	Dual Encoder ABS-17BIT (Input) / 18BIT (Output)	
Control Accuracy	Degree	<0.01	
Communication	—	EtherCAT & CAN BUS	
Weight	Kg	0.33	
Insulation Grade	—	F	

Stall Torque Data

	Torque (N.m)	Temperature Rise (°C)	Stall 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

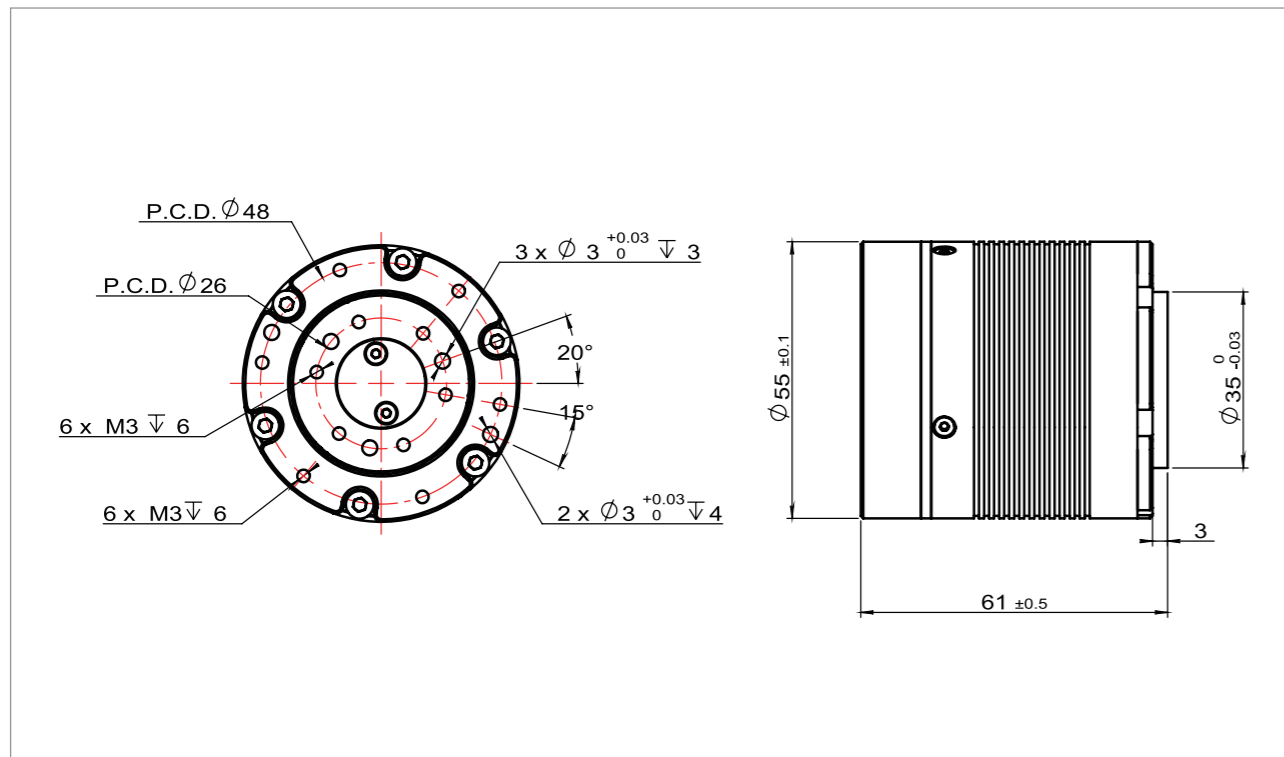
Series Name
RMD-X
Motor Simplified Name
X4-36



Dual encoder

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

Installation Drawing



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	
Module Torque Constant	N.m/A	1.9	
Motor Phase Resistance	Ω	0.39	
Motor Phase Inductance	mH	0.07	
Pole Pair	—	11	
3 Phase Connection	—	Y	
Back Drive Torque	N.m	1.14	
Backlash	Arcmin	≤15	
Output Bearing Type	—	Crossed Roller Bearings	
Axial Load	Tensile load	KN	1.3
	Compressive load	KN	1.3
Radial Load	KN	1.5	
Inertia	Kg.cm ²	0.3	
Encoder Type & Interface	—	Dual Encoder ABS-17BIT (Input) / 18BIT (Output)	
Control Accuracy	Degree	<0.01	
Communication	—	EtherCAT & CAN BUS	
Weight	Kg	0.36	
Insulation Grade	—	F	

Stall Torque Data

	Torque (N.m)	Temperature Rise (°C)	Stall 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

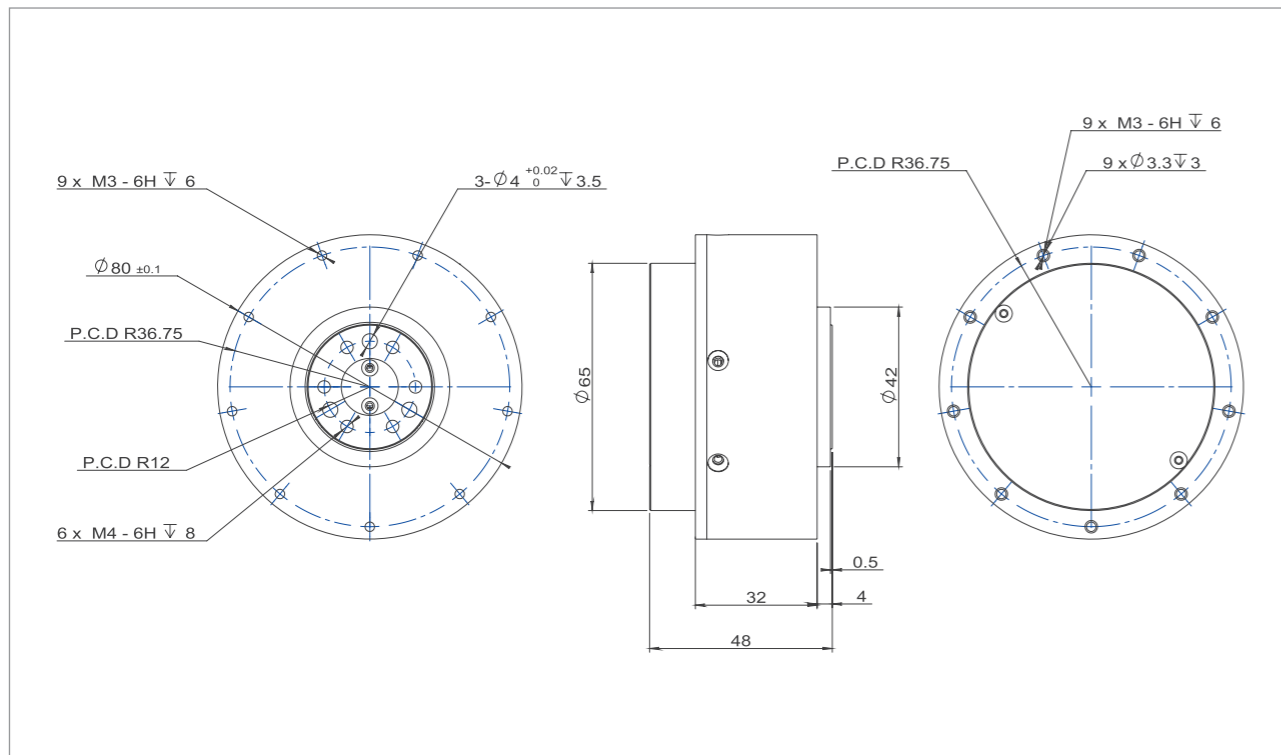
Series Name
RMD-X
Motor Simplified Name
X6-8



Dual encoder

Actuator Full Name	With Brake/Without Brake	Communication
RMD-X6-P8-8-C	N (without Brake)	CAN BUS

Installation Drawing



Product Parameters

Parameters	Unit	X6-8	
Gear Ratio	—	8	
Input Voltage	V	48	
No Load Speed	RPM	387	
No-Load Input Current	A	1.1	
Rated Speed	RPM	310	
Rated Torque	N.m	4.5	
Rated Output Power	W	135	
Rated Phase Current	A(rms)	3.6	
Peak Torque	N.m	8	
Peak Phase Current	A(rms)	7.2	
Efficiency	%	78	
Motor Back-EMF Constant	Vdc/Krpm	19.4	
Module Torque Constant	N.m/A	1.3	
Motor Phase Resistance	Ω	1.1	
Motor Phase Inductance	mH	0.57	
Pole Pair	—	14	
3 Phase Connection	—	Y	
Back Drive Torque	N.m	0.8	
Backlash	Arcmin	10	
Output Bearing Type	—	Deep Groove Ball Bearings	
Axial Load	Tensile load	KN	0.85
	Compressive load	KN	0.775
Radial Load	KN	1.04	
Inertia	Kg.cm ²	0.61	
Encoder Type & Interface	—	Dual Encoder ABS-17BIT(Input) / 18BIT(Output)	
Control Accuracy	Degree	<0.01	
Communication	—	CAN BUS	
Weight	Kg	0.49	
Insulation Grade	—	F	

Stall Torque Data

	Torque (N.m)	Temperature Rise (°C)	Stall Time (s)	Phase Current (Arms)
X6-8	6.75	30	10	7
	9	49	8	9.5
	11.25	31	5	11.3
	13.5	19	3	12.7

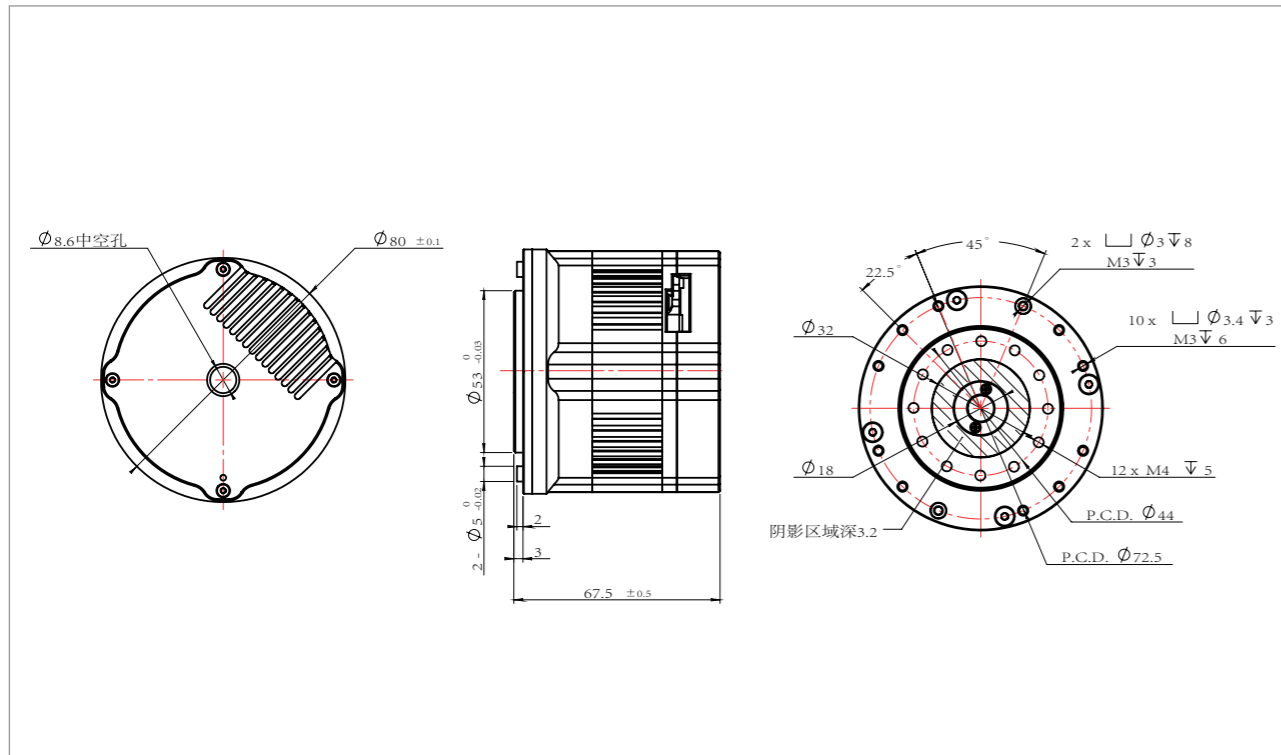
Series Name
RMD-X
Motor Simplified Name
X6-60



Dual encoder

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

Installation Drawing



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	≤15	
Output Bearing Type	—	Crossed Roller Bearings	
Axial Load	Tensile load	KN	1.8
	Compressive load	KN	0.8
Radial Load	KN	2	
Inertia	Kg.cm ²	0.66	
Encoder Type & Interface	—	Dual Encoder ABS-17BIT(Input) / 17BIT(Output)	
Control Accuracy	Degree	<0.01	
Communication	—	EtherCAT & CAN BUS	
Weight	Kg	0.82	
Insulation Grade	—	F	

Stall Torque Data

	Torque (N.m)	Temperature Rise (°C)	Stall 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

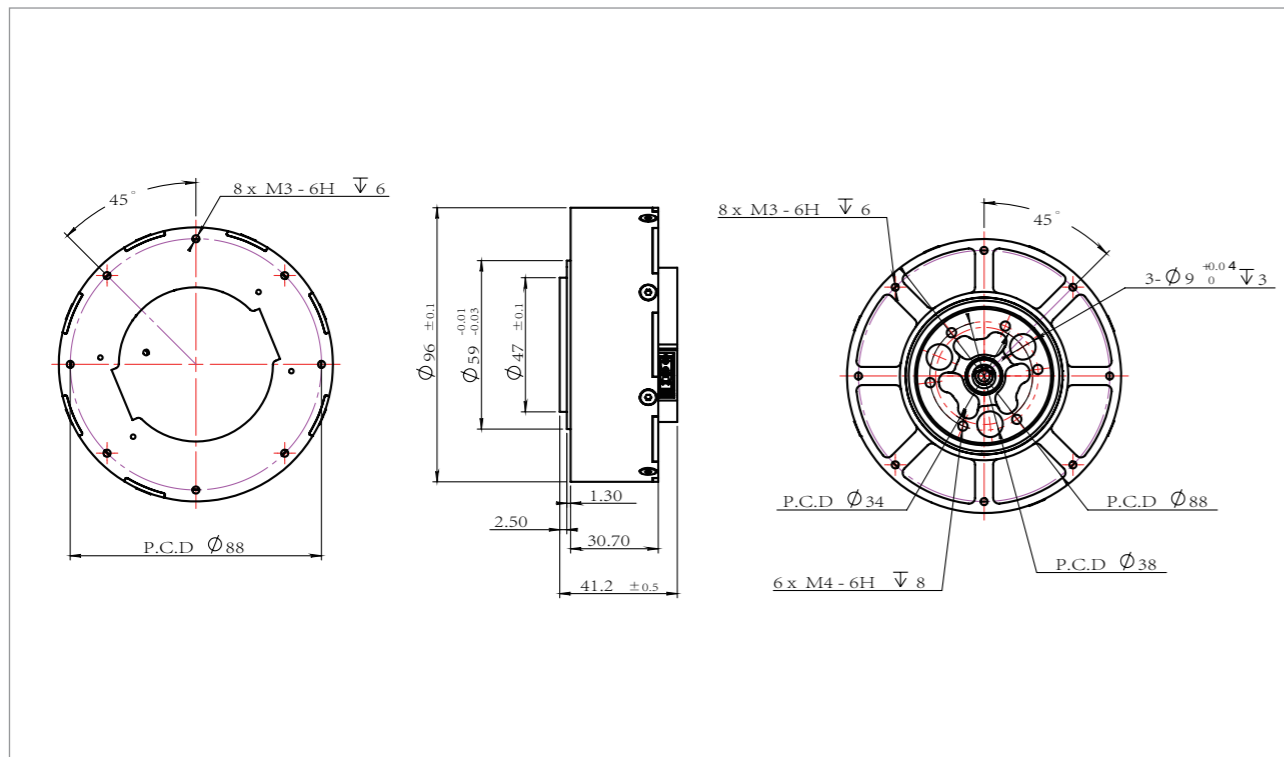
Series Name
RMD-X
Motor Simplified Name
X8-32



Single Encoder

Actuator Full Name	With Brake/Without Brake	Communication
RMD-X8-P9-32-R	N (without Brake)	RS485

Installation Drawing



Product Parameters

Parameters	Unit	X8-32	
Gear Ratio	—	9	
Input Voltage	V	24	
No Load Speed	RPM	277	
No-Load Input Current	A	0.9	
Rated Speed	RPM	244	
Rated Torque	N.m	8	
Rated Output Power	W	204	
Rated Phase Current	A(rms)	6.2	
Peak Torque	N.m	32	
Peak Phase Current	A(rms)	30	
Efficiency	%	82	
Motor Back-EMF Constant	Vdc/Krpm	10.9	
Module Torque Constant	N.m/A	1.3	
Phase Resistance	Ω	0.13	
Phase Inductance	mH	0.08	
Pole Pair	—	21	
3 Phase Connection	—	△	
Back Drive Torque	N.m	0.8	
Backlash	Arcmin	≤10	
Output Bearing Type	—	Deep Groove Ball Bearings	
Axial Load	Tensile load	KN	0.6
	Compressive load	KN	0.6
Radial Load	KN	2	
Inertia	Kg.cm ²	1.43	
Encoder Type & Interface	—	Single Encoder ABS-18BIT	
Control Accuracy	Degree	<0.01	
Communication	—	RS485	
Weight	Kg	0.55	
Insulation Grade	—	F	

Stall Torque Data

	Torque (N.m)	Temperature Rise (°C)	Stall Time (s)	Phase Current (Arms)
X8-32	15.6	6	10	18.4
	18	11	8	21.2
	24	36	5	29
	30	54	3	38.2

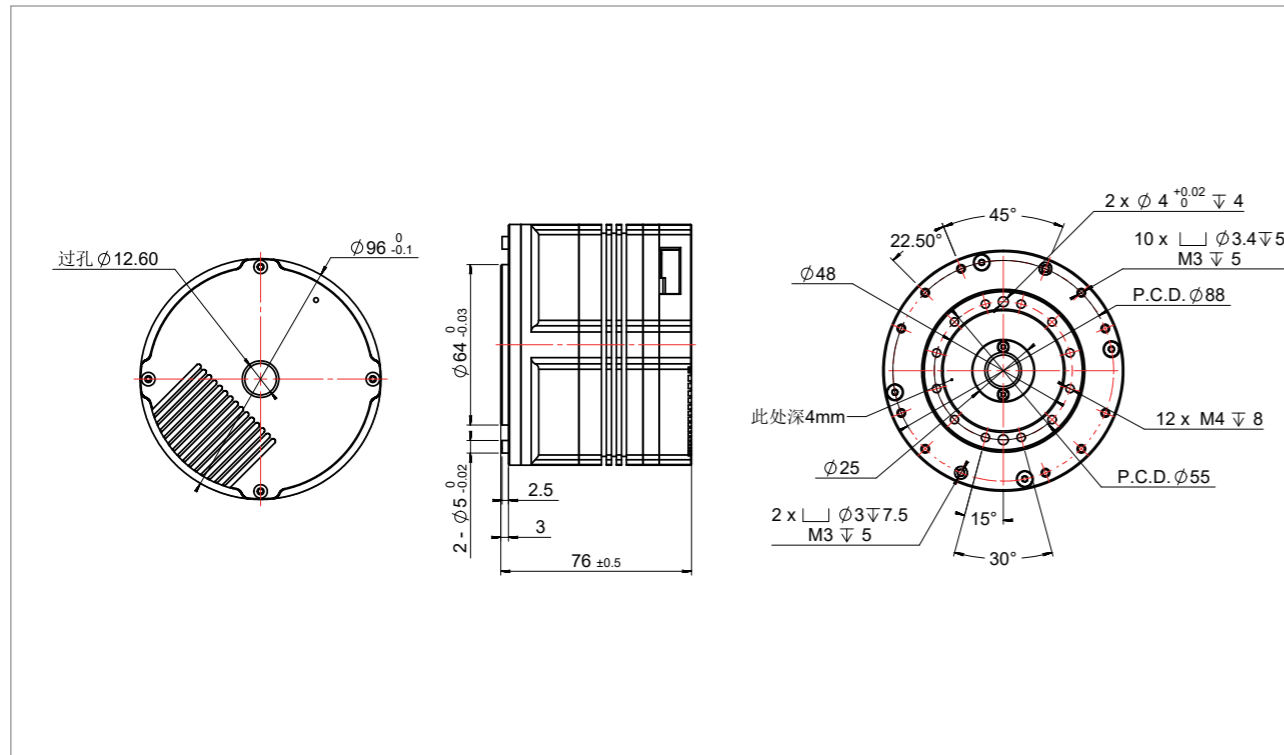
Series Name
RMD-X
Motor Simplified Name
X8-120



Dual encoder

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

Installation Drawing



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	1.5	
Backlash	Arcmin	≤15	
Output Bearing Type	—	Crossed Roller Bearings	
Axial Load	Tensile load	KN	4
	Compressive load	KN	1
Radial Load	KN	4.5	
Inertia	Kg.cm ²	1.5	
Encoder Type & Interface	—	Dual Encoder ABS-17BIT (Input) / 17BIT (Output)	
Control Accuracy	Degree	<0.01	
Communication	—	EtherCAT & CAN BUS	
Weight	Kg	1.40	
Insulation Grade	—	F	

Stall Torque Data

	Torque (N.m)	Temperature Rise (°C)	Stall 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

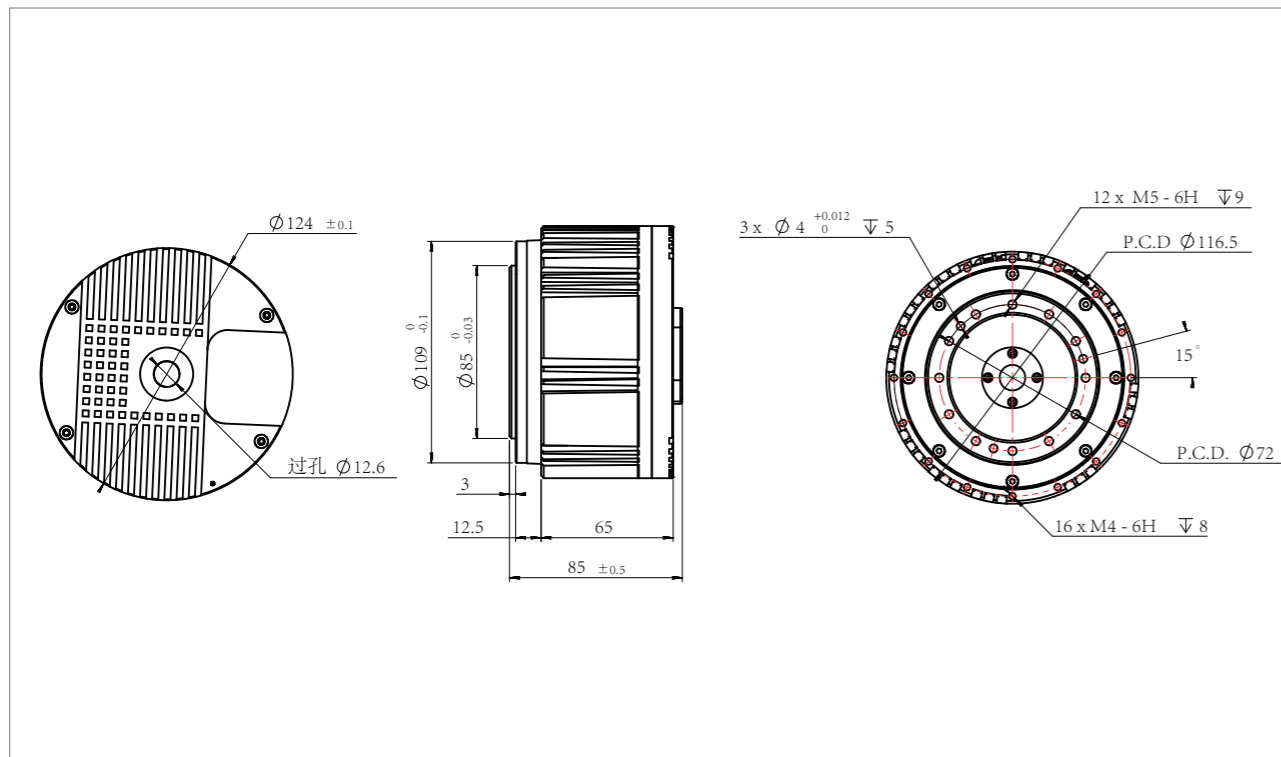
Series Name
RMD-X
Motor Simplified Name
X12-320



Dual encoder

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

Installation Drawing



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	≤15	
Output Bearing Type	—	Crossed Roller Bearings	
Axial Load	Tensile load	KN	4.5
	Compressive load	KN	4.5
Radial Load	KN	5	
Inertia	Kg.cm ²	12.9	
Encoder Type & Interface	—	Dual Encoder ABS-17BIT (Input) /17BIT (Output)	
Control Accuracy	Degree	<0.01	
Communication	—	EtherCAT & CAN BUS	
Weight	Kg	2.37	
Insulation Grade	—	F	

Stall Torque Data

	Torque (N.m)	Temperature Rise (°C)	Stall 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

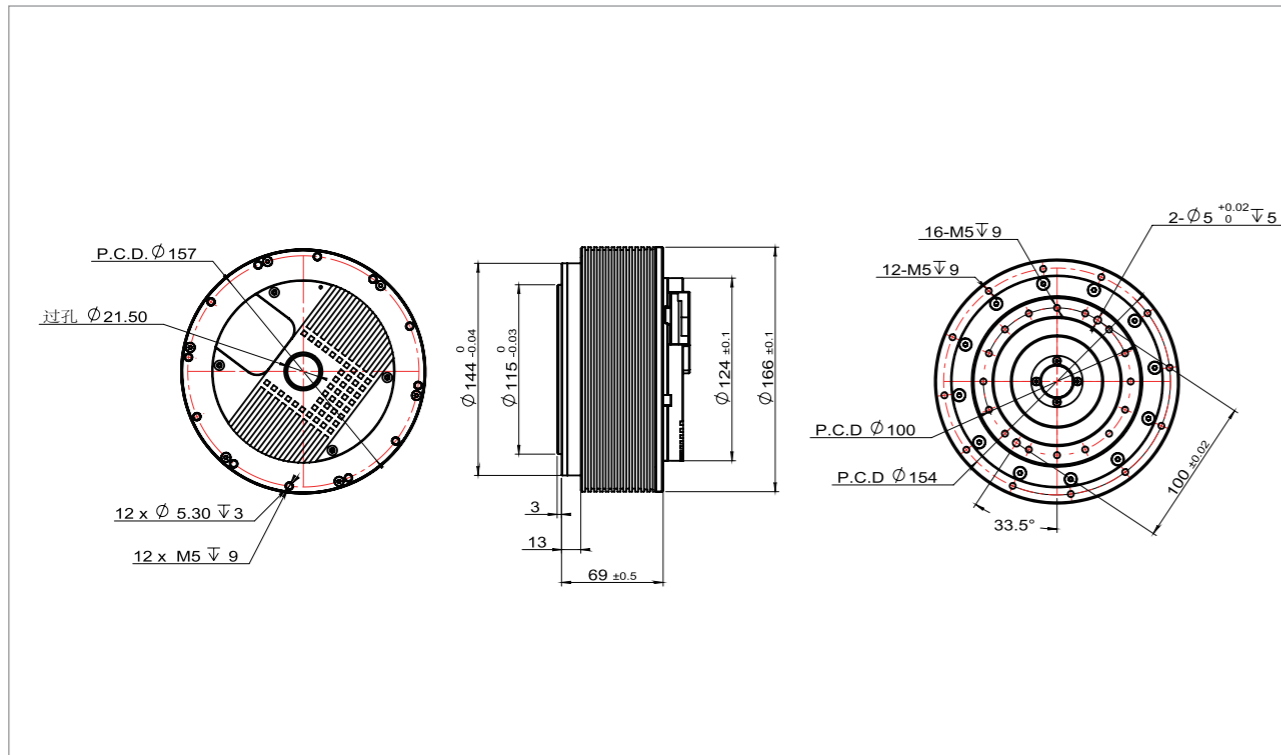
Series Name
RMD-X
Motor Simplified Name
X15-450



Dual encoder

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

Installation Drawing



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	≤15	
Output Bearing Type	—	Crossed Roller Bearings	
Axial Load	Tensile load	KN	5.4
	Compressive load	KN	5.4
Radial Load	KN	6	
Inertia	Kg.cm ²	31.6	
Encoder Type & Interface	—	Dual Encoder ABS-17BIT (Input) / 17BIT (Output)	
Control Accuracy	Degree	<0.01	
Communication	—	EtherCAT & CAN BUS	
Weight	Kg	3.50	
Insulation Grade	—	F	

Stall Torque Data

	Torque (N.m)	Temperature Rise (°C)	Stall 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