

A new generation of planetary modules V4 series

(EtherCAT+CAN BUS)
(Dual encoder)



Special Series For Robot



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

X Series Product Features



Hollow Design



High Torque



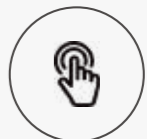
High Precision



Anti-bending Moment



High Load Capacity



Easy To Operate

Series Name

RMD-X

Motor Simplified Name

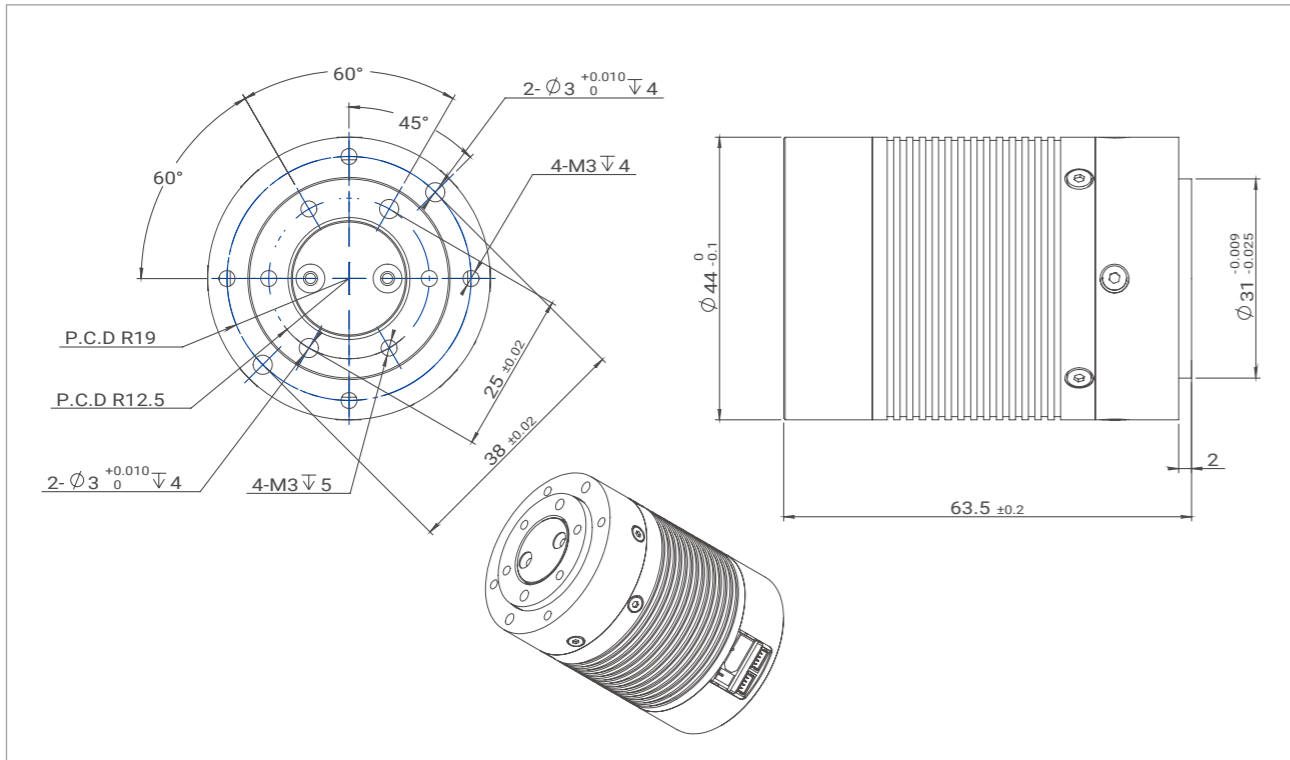
X2-7



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



Product Parameters

Parameters		单位 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
Cogging Torque		mN.m	20
3 Phase Connection		—	Y
Back Drive Torque		N.m	0.4
Backlash		Arcmin	12
Axial Load	Suffer	KN	0.25
	Stress	KN	0.25
Radial Load		KN	1
Inertia		Kg.cm²	0.17
Encoder Type & Interface		—	Dual Encoder ABS-17BIT (Input) /18BIT (Output)
Repeat Position Accuracy		Degree	<0.01
Communication		—	CAN BUS /EtherCAT
Weight		Kg	0.25
Insulation Grade		—	F

Stall torque data

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

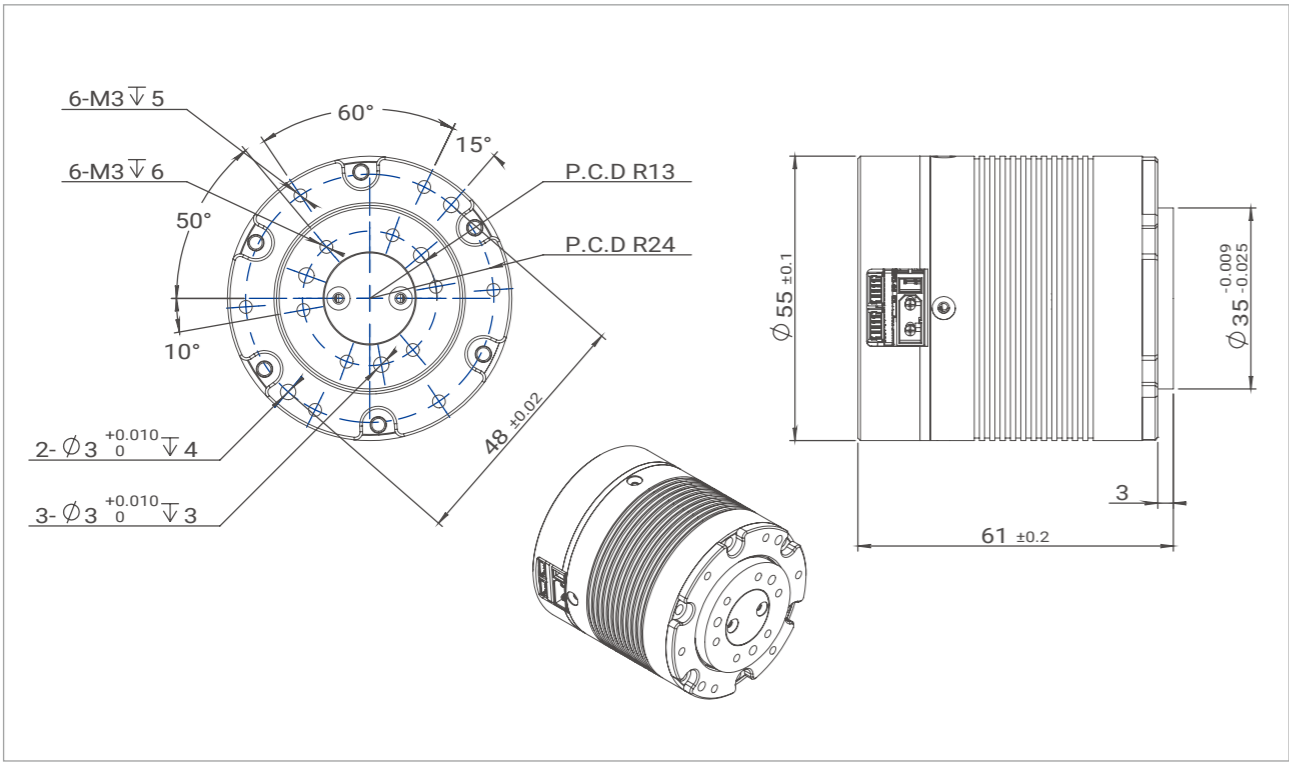
X4-36



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



Product Parameters

Parameters		单位 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	11.5
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	0.35
Motor Phase Inductance		mH	0.17
Pole Pair		—	13
Cogging Torque		mN.m	50
3 Phase Connection		—	Y
Back Drive Torque		N.m	1.14
Backlash		Arcmin	10
Axial Load	Suffer	KN	1.3
	Stress	KN	1.3
Radial Load		KN	1.5
Inertia		Kg.cm²	0.3
Encoder Type & Interface		—	Dual Encoder ABS-17BIT (Input) /18BIT (Output)
Repeat Position Accuracy		Degree	<0.01
Communication		—	CAN BUS /EtherCAT
Weight		Kg	0.36
Insulation Grade		—	F

Stall torque data

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

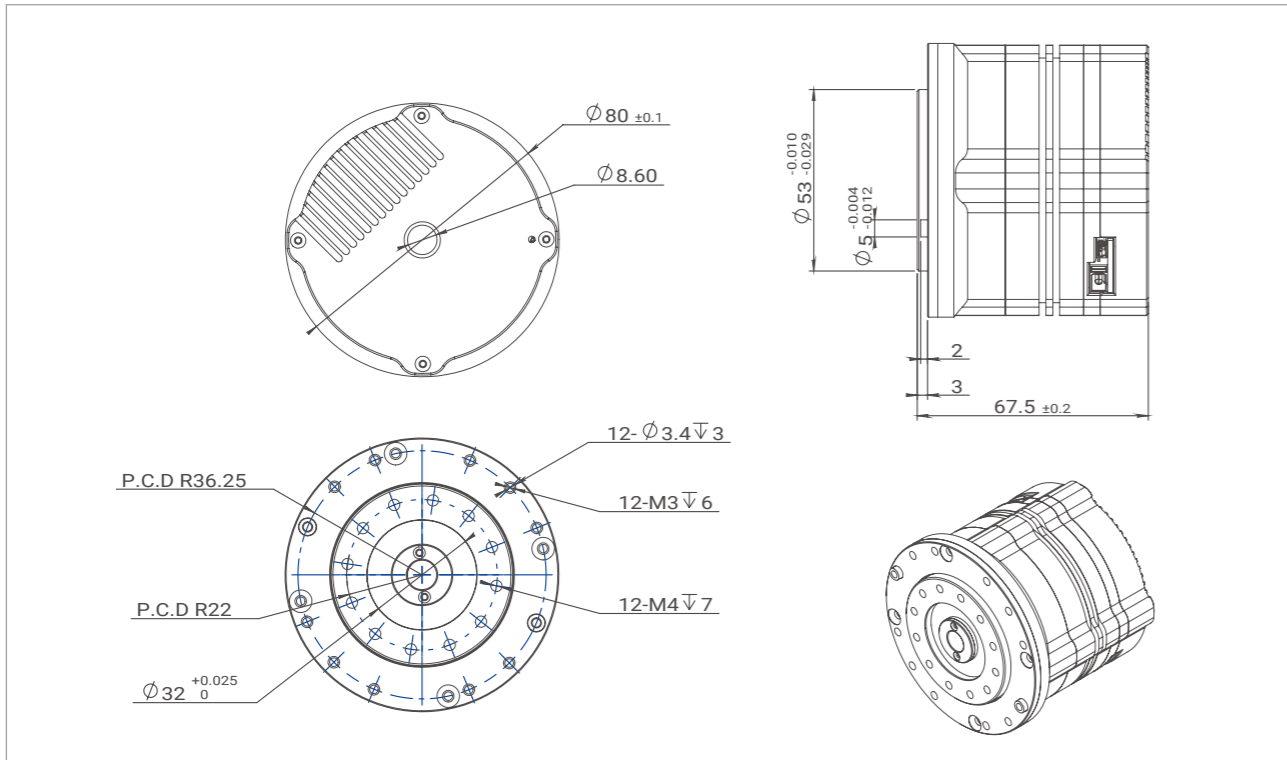
Series Name
RMD-X
Motor Simplified Name
X6-60



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



Product Parameters

Parameters		单位 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
Cogging Torque		mN.m	30
3 Phase Connection		—	Y
Back Drive Torque		N.m	1.6
Backlash		Arcmin	10
Axial Load	Suffer	KN	1.8
	Stress	KN	0.8
Radial Load		KN	2
Inertia		Kg.cm²	0.66
Encoder Type & Interface		—	Dual Encoder ABS-17BIT (Input) /17BIT (Output)
Repeat Position Accuracy		Degree	<0.01
Communication		—	CAN BUS /EtherCAT
Weight		Kg	0.82
Insulation Grade		—	F

Stall torque data

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

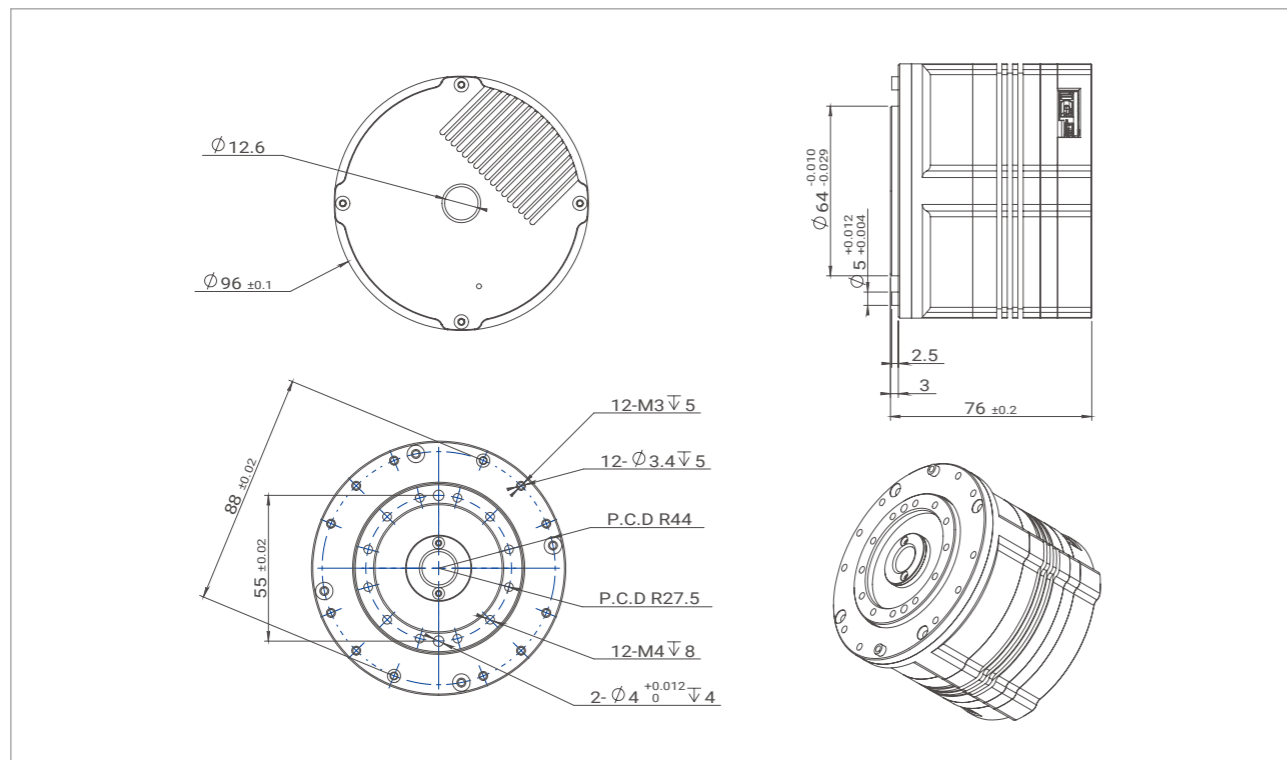
Series Name
RMD-X
Motor Simplified Name
X8-120



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



Product Parameters

Parameters		单位 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	110
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
Cogging Torque		mN.m	50
3 Phase Connection		—	Y
Back Drive Torque		N.m	3.21
Backlash		Arcmin	10
Axial Load	Suffer	KN	4
	Stress	KN	1
Radial Load		KN	4.5
Inertia		Kg.cm²	1.5
Encoder Type & Interface		—	Dual Encoder ABS-17BIT (Input) /17BIT (Output)
Repeat Position Accuracy		Degree	<0.01
Communication		—	CAN BUS /EtherCAT
Weight		Kg	1.4
Insulation Grade		—	F

Stall torque data

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

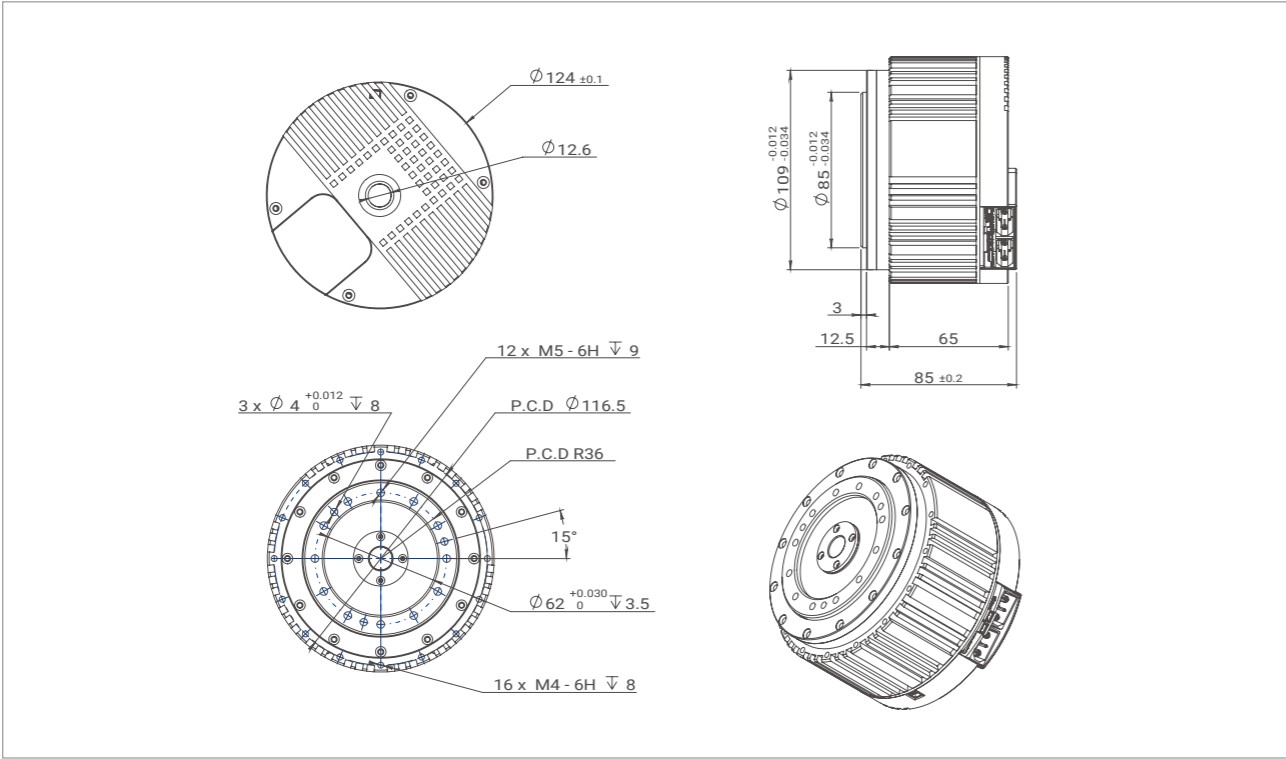
Series Name
RMD-X
Motor Simplified Name
X12-320



Dual encoder

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

Installation Drawing



Product Parameters

Parameters		单位 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	100
Rated Output Power		W	1000
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
Cogging Torque		mN.m	1420
3 Phase Connection		—	Y
Back Drive Torque		N.m	3.8
Backlash		Arcmin	10
Axial Load	Suffer	KN	4.5
	Stress	KN	4.5
Radial Load		KN	5
Inertia		Kg.cm²	12.9
Encoder Type & Interface		—	Dual Encoder ABS-17BIT (Input) /17BIT (Output)
Repeat Position Accuracy		Degree	<0.01
Communication		—	CAN BUS /EtherCAT
Weight		Kg	2.6
Insulation Grade		—	F

Series Name

RMD-X

Motor Simplified Name

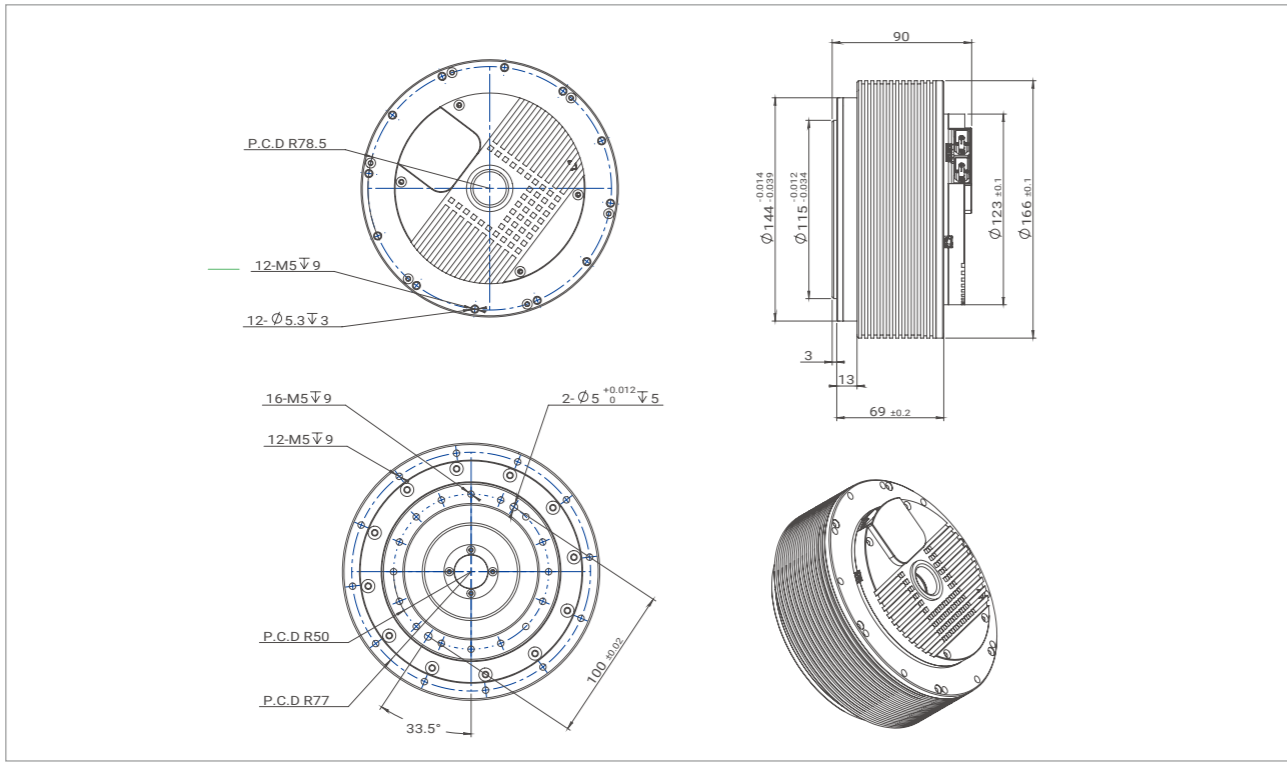
X15-450



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



Product Parameters

Parameters			单位 Unit	X15-450
Gear Ratio			—	20.25
Input Voltage			V	72
No Load Speed			RPM	93
No-Load Input Current			A	3.5
Rated Speed			RPM	74
Rated Torque			N.m	145
Rated Output Power			W	1124
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
Cogging Torque			mN.m	1480
3 Phase Connection			—	Y
Back Drive Torque			N.m	4
Backlash			Arcmin	10
Axial Load	Suffer		KN	5.4
	Stress		KN	5.4
Radial Load			KN	6
Inertia			Kg.cm²	31.6
Encoder Type & Interface			—	Dual Encoder ABS-17BIT (Input) /17BIT (Output)
Repeat Position Accuracy			Degree	<0.01
Communication			—	CAN BUS/EtherCAT
Weight			Kg	3.6
Insulation Grade			—	F

Stall torque data

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