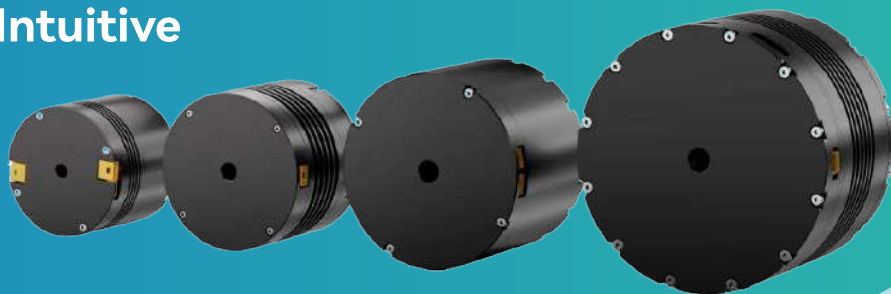


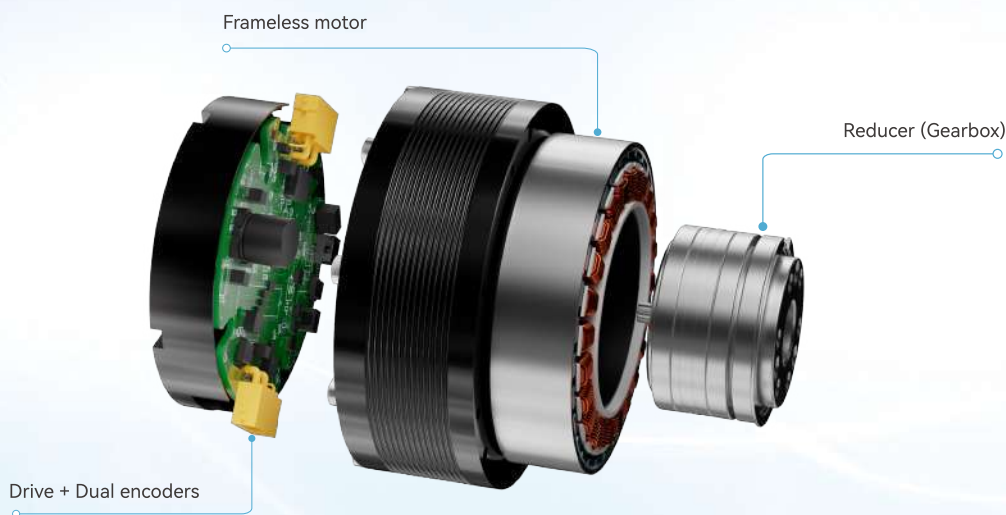
RB200 Series Planetary Joint Modules

Compact | Powerful | Intuitive

Low Backdrive
Comprehensive
Cost-Optimized
Customizable
Low Heat Rise



Built on an integrated architecture, the planetary joint module combines the reducer, motor, encoder and other key components into a compact, high-performance unit. End-to-end in-house R&D and manufacturing drive precision transmission breakthroughs, lower material costs, shorter delivery cycles, and faster robotics development.



Low-Temp. Operation

Over 40% lower drive losses
Optimized magnetic circuit
10% lower temperature rise



Low Backdriving Torque

Optimized for
force-control applications
Precise force control



Wide Range of Specifications

Rated torque: 0.6Nm~120Nm
Peak torque: 1.8Nm~360Nm
Comprehensive product coverage



Cost-Optimized

Standardized, scaled
production for superior
cost performance



Rapid Customization

Prototype delivery in
4~6 weeks
Fast market response

Applications:



• Humanoid Robots



• Collaborative Robots



• Quadruped Robots



• Medical Collaborative Robots

Naming Rules:

RB200-G1236-C1

① ② ③ ④ ⑤ ⑥

① Product Series

RB200 series

② Voltage Class

G: DC48V
I: DC24V

③ Rated Torque

12: 12Nm

④ Gear Ratio

36: 36

⑤ Communication

C: CANopen
E: Ethercat

⑥ Brake

1: No brake
2: With brake

Standard Planetary Joint Module

Parameters	Unit	RB200-G1236-C1	RB200-G2025-C1	RB200-G3018-C1	RB200-G5012-C1	RB200-G10024-C1	RB200-G0608-C1	RB200-G0108-C1
Performance								
Gear ratio	/	36	25	18	12	24	7.75	7.9
Rated voltage	V	48	48	48	48	48	48	24
Rated current	A	6	9	12	24	37	7	2
Rated speed	RPM	78	131	142	130	102	360	50
Rated torque	N.m	12	20	30	50	100	6	0.6
Peak speed	RPM	85	135	150	150	150	410	100
Peak torque	N.m	36	60	94	150	360	17	1.8
Encoder	/	Dual encoders (17bit/17bit)						
Dimensions								
Weight	Kg	0.38	0.6	0.83	1.4	2.2	0.4	0.19
Dimensions (Outer diameter × length)	mm3	φ56*60	φ88*59.5	φ105*47.5	φ124*61.5	φ124*85	φ78.5*45.5	φ43*32.5
Communication		Ethercat/can						can

Hollow Planetary Joint Module

Parameters	Unit	RB200-G1221-C1-6	RB200-G2115-C1-8	RB200-G4019-C1-10	RB200-G10021-C1-10
Performance					
Gear ratio	/	21.67	15.45	19.68	21.13
Rated voltage	V	48	48	48	48
Rated current	A	/	/	/	/
Rated speed	RPM	115.36	129.42	127	94.65
Rated torque	N.m	12.89	21	45.17	105.96
Peak speed	RPM	124.59	142.37	137.16	104.11
Peak torque	N.m	36	63	120	310
Encoder	/	Dual encoders (17-bit/17-bit)			
Dimensions					
Weight	Kg	0.41	0.81	1.35	2.3
Dimensions (Outer diameter × length)	mm3	φ68*58	φ80*66.8	φ96*79	φ124*92
Hollow bore diameter	mm	6	8	10	10
Communication		Can/Ethercat			

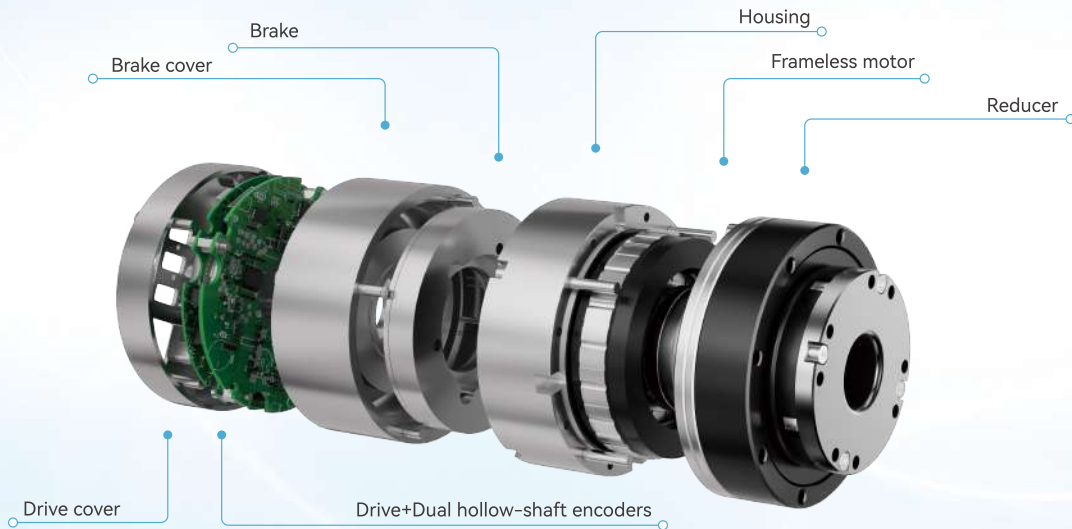
RB200 Series Rotary Joint Module

Compact | Powerful | Intuitive

Lightweight Precise Modular Efficient Compact Economical Powerful Low Heat Rise



The RB200 Series Rotary Joint Module integrates the drive, dual hollow-shaft encoders, frameless motor, harmonic reducer, sensors and other key technologies into a compact, high-performance unit. With in-house-developed core components, it delivers high power and torque density, high-precision sensing, precise torque control, and reliable load inertia identification. Built on a modular, lightweight, cost-efficient and high-performance platform, it simplifies robot development and enables easier deployment of automation equipment.



Naming Rules

RB200 - G70 I 4- R1030 - 100 D JM 2 E-L											
1	2	3	4	5	6	7	8	9	10	11	12
1 Product Series: RB200 series	2 Voltage Class: G:DC48V I: DC24V		3 Module OD: 70:70mm			4 Harmonic Specs: 14:14					
5 Rated Power: R10:0.1*1000=100W	6 Motor Rated Speed: 30:30*100=3000rpm		7 Gear Ratio: 100:1			8 Motor Encoder: D: Single-turn encoder DM: Multi-turn encoder					
9 Gearbox Encoder: J: Single-turn encoder JM: Multi-turn encoder	10 Brake: 1: No brake 2: With brake		11 Communication: C: CANopen E: Ethercat			12 Module Configuration: L: Short version Blank: Standard					

Standard Harmonic Joint

Parameters	RB200-E4008	RB200-G5211	RB200-G5211	RB200-G7014	RB200-G8017	RB200-G9020	RB200-G11025	RB200-G14232	RB200-G17040
Performance									
Rated voltage (V)	24	48	48	48	48	48	48	48	48
Rated current (A)	0.64	3.5	3.5	2.55	6.3	13.5	13.5	22	25
Rated power (W)	15	63	63	100	189	650	650	1000	1200
Rated speed (rpm)	40	30	30	30	30	30	30	25	20
Peak speed (rpm)	55	60	60	40	40	40	40	30	30
Rated torque (N·m)	2.4	5	5	13.5	30	50	84	169	363
Max. avg. load torque (N·m)	3.3	8.9	8.9	9.6	49	61	133	267	557
Peak torque (N·m)	9	25	25	13.5	134	182	351	848	1458
Gear Reducer Parameters									
Gear ratio	101	101	101	101	101	101	101	121	121
Rotational inertia (10 ⁻⁴ kg·m ²)	0.27	0.09	0.1	0.19	0.28	2.07	2.07	3.82	9.07
Dimensions									
Overall dimensions (mm ³)	φ40*54	φ52*66.5	φ52*78.5	φ70*88	φ80*97	φ90*101	φ110*121.6	φ142*118.5	φ*170*143.9
Hollow bore diameter (mm)	5	5	5	18	18	18	18	18	18
Weight (g)	165	465	580	990	1290	2090	3200	6100	9300
Brake	W/O	W/O	With	With	With	With	With	With	With
Communication	Ethercat/can								

Compact Harmonic Joint

Parameters	RB200-G4008	RB200-G5211	RB200-G5211	RB200-G7014	RB200-G7014	RB200-G8017	RB200-G8017	RB200-G9020	RB200-G9020	RB200-G11025	RB200-G11025	RB200-G14232	RB200-G17040
Performance													
Rated voltage (V)	48	48	48	48	48	48	48	48	48	48	48	48	48
Rated current (A)	1.2	3.5	3.5	2.3	2.3	4	4	7.6	7.6	16	16	22	29
Rated power (W)	37	63	63	100	100	180	180	300	300	600	600	1000	1200
Rated speed (rpm)	40	30	30	30	30	30	30	30	30	30	30	25	20
Peak speed (rpm)	55	60	60	40	40	40	40	40	40	40	40	30	30
Rated torque (N·m)	2.4	5	5	9.6	9.6	30	30	50	50	84	84	169	363
Max. avg. load torque (N·m)	3.3	8.9	8.9	13.5	13.5	49	49	61	61	133	133	267	557
Peak torque (N·m)	9	25	25	66	66	134	134	182	182	351	351	848	1458
Gear Reducer Parameters													
Gear ratio	101	101	101	101	101	101	101	101	101	101	101	121	121
Rotational inertia (10 ⁻⁴ kg·m ²)	0.27	0.09	0.1	0.19	0.19	0.28	0.28	0.83	0.83	2.07	2.07	3.82	9.07
Dimensions													
Overall dimensions (mm ³)	φ40*55.6	φ52*59.9	φ52*71.4	φ70*61	φ70*71.6	φ80*68.5	φ80*77.2	φ90*72	φ90*83	φ110*79	φ110*89.9	φ142*118.5	φ*170*142
Hollow bore diameter (mm)	7	7	7	10	10	12	12	18	18	18	18	18	18
Weight (g)	165	400	430	850	920	1020	1180	1500	1750	3200	3200	6100	8500
Brake	W/O	W/O	With	W/O	With	W/O	With	W/O	With	W/O	With	With	With
Communication	Ethercat/can												