



RP Series Product Specification

Serial Number		1	2	3	4	5	6
Module Model		RP40C	RP50L	RP50H	RP70L	RP70H	RP90L
System	Reducer Mode	Planet	Planet	Planet	Planet	Planet	Planet
	Motor rated power (W)	31	92	184	191	314	633
	Reduction ratio	25	19.5278	19.5278	20	20	21.913
	Rated Torque (N.m)	2	5	10	12	17	35
	Peak Torque (N.m)	6	15	30	36	60	120
	Joint Rated Power (W)	25	79	157	163	223	421
	Backlash (Arcmin)	≤12	≤12	≤12	≤12	≤12	≤12
	Rated speed of output end (rpm)	120	150	150	130	125	115
	Output peak speed (rpm)	145	180	180	160	150	135
	Dimensions (Outer Diameter x Axial) (mm)	Φ45x52	Φ59x53.5	Φ59x59.5	Φ77x52.5	Φ77x58.3	Φ96.5x56
	Weight (g) (excluding wire)	225	410	465	670	760	1075
	Joint rated efficiency	70%	70%	78%	78%	78%	82%
	Hollow Diameter (mm)	4	5	5	6	6	8
	Shell Appearance (Process Color)	Regular Matte Black	Regular Matte Black	Regular Matte Black	Regular Matte Black	Regular Matte Black	Regular Matte Black
	Moment of inertia(kg*mm ²)	8.18	26.15	28.66	72.97	93.21	269.40
	Bearing Type	Deep Groove Ball Bearing	Crossed Roller Bearing	Crossed Roller Bearing	Crossed Roller Bearing	Crossed Roller Bearing	Crossed Roller Bearing
	Radial (dynamic/static) allowable load (N) at the output end	1170/980	2140/2740	2140/2740	2430/3490	2430/3490	2810/4680
	Axial (dynamic/static) allowable load (N) at the output end	/	5100/18700	5100/18700	5500/22700	5500/22700	6440/30480
	Output Shaft Bending Moment(Nm)	/	22.8	22.8	38.3	38.3	73.5
Hardware	Operating Voltage (VDC)	48±10%					
	Maximum withstand voltage (VDC)	90					
	Bus Current (Arms)	1.2	2.6	4.5	5.5	7.5	12.5
	Drive	Built-in FOC					
	Encoder/Bit (bit)	Dual Absolute / 17 (input), 19 (output)					
	Power cord length	≥35cm					
Software	Drive Interface	Power (DC in DC out) 、CAN FD (In,Out)					
	Communication Protocol	CANOpen / CANFD (custom development required)					
	Control Mode	Current, Speed, Position, MIT Mode					
Reliability and Life	Working environment temperature (°C)	-10~45					
	Enclosure operating temperature rise (°C)	≤60					
	Noise (dB) @ 1m	≤60					
	IP Rating	IP54					
Life (h)		>3000					