

HarmonicDrive®

AC servo Actuator

SHA Series CG Type

Panasonic Corporation

**MINAS****A5 II / A5 II N Series**

Additional lineup of Collaborating Products

HarmonicDrive® AC servo actuator SHA series CG type

now connects directly with Panasonic Corporation's "MINAS A5 II N series" (RTEX: Realtime Express).

Further expanding the options for network connectivity.

HarmonicDrive®



Panasonic Corporation

MINAS A5 II N (Compatible with RTEX)

■ Features

- The SHA Servo Actuator combines HarmonicDrive® gearing with a flat AC servo motor.
- Hollow Shaft design allows cables, shafts or lasers to pass through the axis of rotation. (Piping and wiring processes, etc.)
- Compact, flat configuration enables compact machine design. (Can be installed in any direction)
- Precise one-way positional accuracy: Gear Ratio 50:1=40 arc-sec (0.011 degrees) Gear Ratio 80:1 or more = 30 arc-sec (0.008 degrees) (SHA32P/40P-CG type)
- Torque to Volume ratio of 5-times or more than direct drive motors
- SHA-P series is easy to use with the machine configured Realtime Express (RTEX).

CG Type Specification

Item	Model	SHA25P					SHA32P					SHA40P					
		50	80	100	120	160	50	80	100	120	160	50	80	100	120	160	
Combination Amplifier	AS II Series ^{*3}	MCDKT3520/MCDKT3520E					MDDKT3530/MDDKT3530E					MDDKT5540/MDDKT5540E					
	AS II N Series ^{*4}	MCDHT3520N21/MCDHT3520ND1					MDDHT3530N21/MDDHT3530ND1					MDDHT5540N21/MDDHT5540ND1					
Maximum Torque ^{*1}	Nm	127	178	204	217	229	271	395	433	459	484	523	675	738	802	841	
Continuous Torque ^{**2}	Nm	40	66	81	81	81	90	151	178	178	178	157	260	327	382	382	
Maximum Speed ^{*1}	r/min	112	70	56	46.7	35	96	60	48	40	30	80	50	40	33.3	25	
Maximum Current ^{*1}	A	8.7	7.6	7.0	6.3	5.2	17.1	15.4	13.7	12.2	10.0	27.0	22.0	19.6	18.0	14.7	
Continuous Current ^{**2}	A	3.0	3.0	3.0	2.6	2.1	6.0	6.0	5.7	5.0	4.1	9.0	9.0	9.0	8.8	7.2	
Moment of Inertia (without Brake)	GD 2/4	kg·m ²	0.50	1.3	2.0	2.9	5.1	1.7	4.3	6.7	9.7	17	4.8	12	19	27	49
Moment of Inertia (with Brake)	GD 2/4	kg·m ²	0.60	1.5	2.4	3.4	6.1	2.0	5.1	7.9	11	20	5.8	15	23	33	59
Reduction Ratio		1:50 AM	1:80	0:101	0:121	0:161	1:50 AM	1:80	0:101	0:121	0:161	1:50 AM	1:80	0:101	0:121	0:161	
Max. Moment Load	Nm	258					580					849					
Moment Stiffness	Nm/rad	39.2 X 10 ⁴					100 X 10 ⁴					179 X 10 ⁴					
One-way Positioning Accuracy	arc-sec	50	40	40	40	40	40	30	30	30	30	40	30	30	30	30	
Repeatability	arc-sec	±5					±4					±4					
Reverse Positioning Accuracy	arc-sec	60	25	25	25	25	60	25	25	25	25	50	20	20	20	20	
Encoder Type		Magnetic Type Absolute Encoder															
Output Resolution	Counts / Revolution	6,53,600	10,485,760	13,107,200	15,728,640	20,971,520	6,553,600	10,485,760	13,107,200	15,728,640	20,971,520	6,553,600	10,485,760	13,107,200	15,728,640	20,971,520	
Mass (without brake)	kg	3.95					7.7					13.0					
Mass (with brake)	kg	4.1					8.0					13.8					
Mounting Direction		Can be installed in any direction															

The values in the table above show typical values for the output shaft.

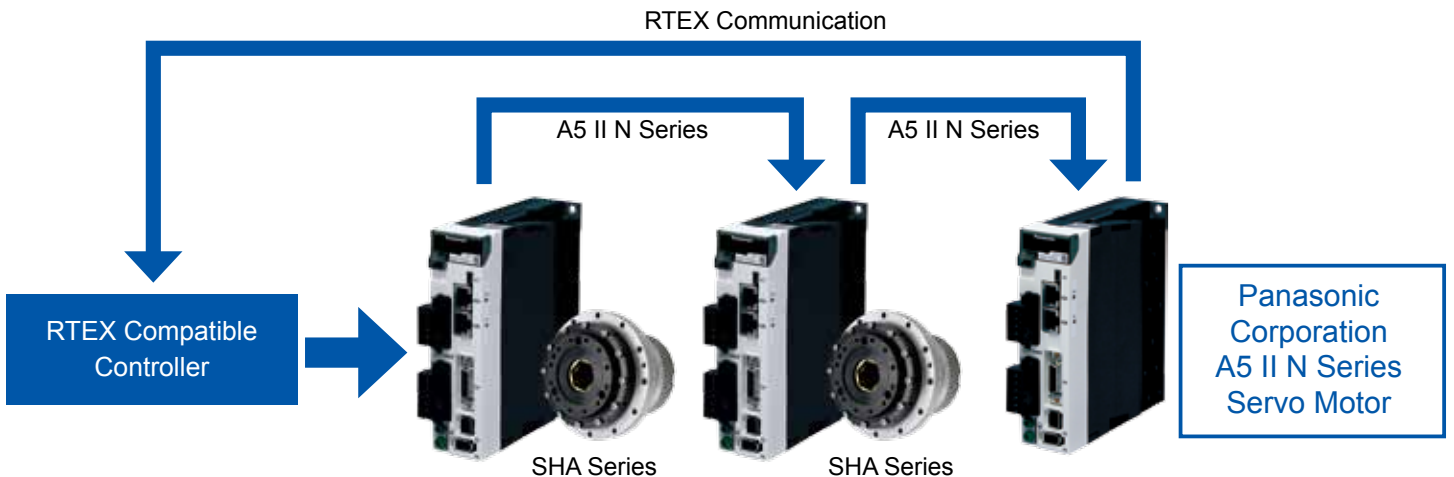
*1: They are typical characteristics in the case of combinations with amplifiers (driven with the ideal sine wave).

*2: Value for saturated temperature when installed on an aluminum heatsink of the following size: (Size 25: 350 x 350 x 18 mm, Size 32: 400 x 400 x 20 mm, Size 40: 500 x 500 x 25 mm)

*3: M*DKT****: Applicable to the speed, position, torque, full-closed controls and safety standard. M*DKT****E: The position-control-only type, non-applicable for the safety standard.

*4: M*DHT****N21: Applicable to the safety standard. M*DHT****ND1: Non-applicable to the safety standard.

Example of System Configuration



* Please contact our sales department with any questions.



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