

CG type

Actuator Model		SHA20A					
		50	80	100	120	160	
Item							
Servo Drive		REL-230-18 HA-800□-3D/E-200					
Max. torque ^{*1}	Nm	73	96	107	113	120	
	kgf·m	7.4	9.8	10.9	11.5	12.2	
Allowable continuous torque ^{*1*2}	Nm	21	35	43	48	48	
	kgf·m	2.1	3.6	4.4	4.9	4.9	
Max. rotational speed ^{*1}	r/min	120	75	60	50	37.5	
Torque constant ^{*1}	Nm/A	16	26	33	39	53	
	kgf·m/A	1.7	2.7	3.4	4.0	5.4	
Max. current ^{*1}	A	6.1	5.0	4.6	4.1	3.4	
Allowable continuous current ^{*1*2}	A	2.1	2.1	2.1	2.0	1.7	
EMF constant ^{*3}	V/(rpm)	1.8	2.9	3.7	4.4	5.9	
Phase resistance (20°C)	Ω	1.4					
Phase inductance	mH	2.5					
Inertia moment (without brake)	GD ² /4	kg·m ²	0.21	0.53	0.82	1.2	2.1
	J	kgf·cm·s ²	2.1	5.4	8.0	12	22
Inertia moment (with brake)	GD ² /4	kg·m ²	0.23	0.60	0.94	1.3	2.4
	J	kgf·cm·s ²	2.4	6.1	9.6	14	24
Reduction ratio		1:50	1:80	1:100	1:120	1:160	
Permissible moment load	Nm	187					
	kgf·m	19.1					
Moment stiffness	Nm/rad	25.2 × 10 ⁴					
	kgf·m/arc min	7.5					
One-way positional accuracy	Sec	60	50	50	50	50	
Repeatability	Sec	±5					
Bi-directional repeatability	Sec	75	30	30	30	30	
Encoder type		Magnetic absolute encoder					
Single motor revolution Encoder resolution		2 ¹⁷ (131,072)					
Motor multi revolution counter		2 ¹⁶ (65,536)					
Output resolution	Pulse/rev	6,553,600	10,485,760	13,107,200	15,728,640	20,971,520	
Mass (without brake)	kg	2.6					
Mass (with brake)	kg	2.7					
Environmental conditions		Operating temperature: 0 to 40°C/Storage temperature: -20 to 60°C Operating humidity/storage humidity: 20 to 80%RH (no condensation) Resistance to vibration: 25 m/s ² (frequency: 10 to 400Hz)/Shock resistance: 300 m/s ² ^{*4} No dust, no metal powder, no corrosive gas, no inflammable gas, no oil mist To be used indoors, no direct sunlight Altitude: less than 1,000 m above sea level					
Motor insulation		Insulation resistance: 100MΩ or more (by DC500V insulation tester) Dielectric strength: AC1,500V/1 min Insulation class: A					
Mounting direction		Can be installed in any direction					
Protection structure		Totally enclosed self-cooled type (IP54)					

The table shows typical output values of actuators.

*1: Typical characteristics when combined with our HA-800 driver.

*2: Value after temperature rise and saturation when the 350 x 350 x 18 [mm] aluminum radiation plate is installed.

*3: Value of phase induced voltage constant multiplied by 3.

*4: For testing conditions, refer to [1-12 Shock resistance] (P49) and [1-13 Vibration resistance] (P50).