

SGDH-□, SGM□H-□

# Sigma-II Series

**The Ideal servo family for motion control. Fast Response, High Speed, and High Accuracy.**

- Online autotuning with 10 levels of rigidity
- Peak torque 300% of nominal
- Automatic motor recognition
- Analogue control for speed and torque
- Pulse train control for positioning
- Optional Units for system flexibility and network connectivity
- Smooth operation
- Oscilloscope available via SigmaWin tool
- Windows based Configuration and commissioning software

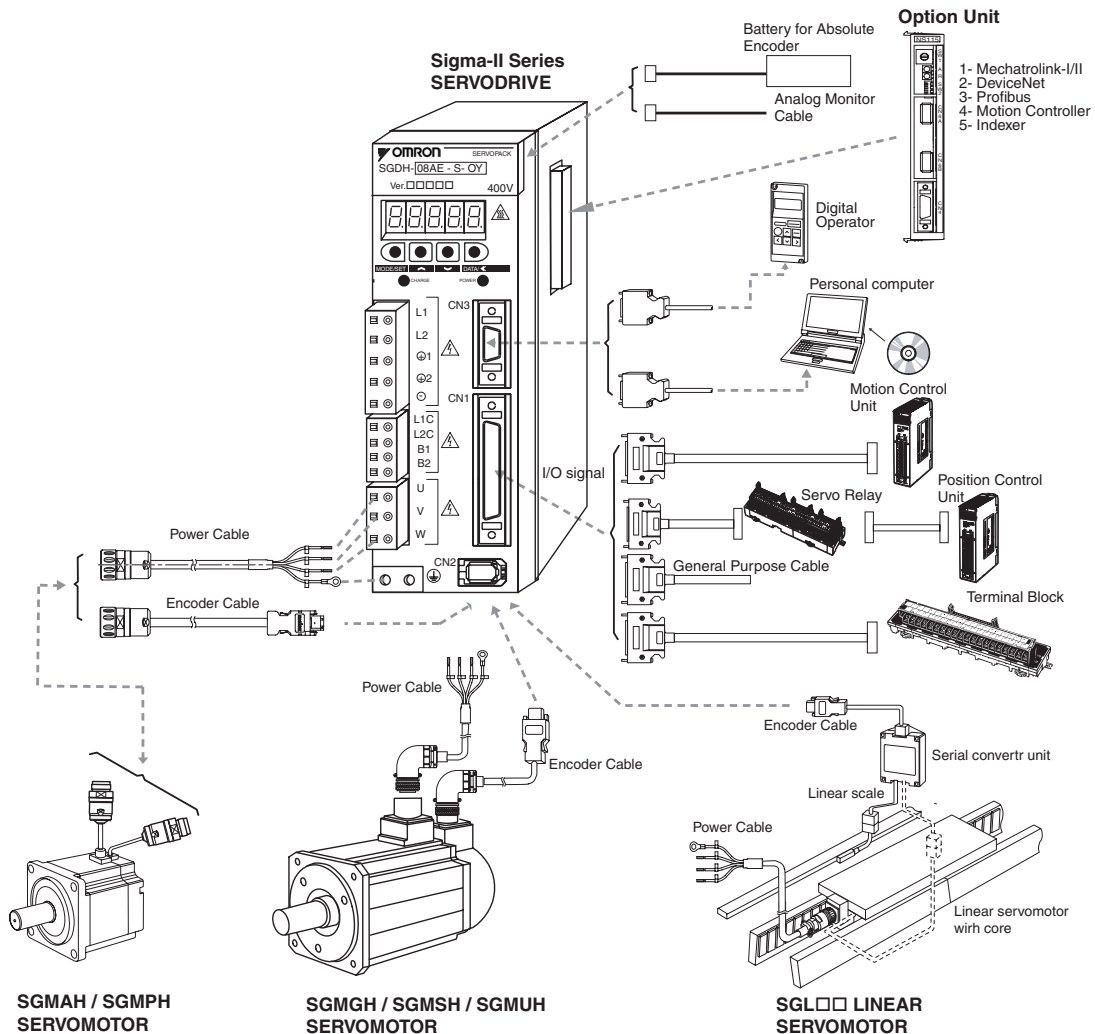
**Ratings**

- 230VAC Single-phase 30 W to 1.5kW (4.77 Nm)
- 400VAC Three-phase 450 W to 15 kW (95.4 Nm)



AC Servo Systems









**System Configuration**



Servomotor / Servo Drive Combination

# Σ - II



Servomotor				Servo Drive	
	Voltage	Rated Torque	Capacity	230 V (1-phase)	400 V (3-phase)
SGMAH (3000 min <sup>-1</sup> ) 	230 V	0.0955 N.m	30 W	SGDH-A3AE-OY	-
		0.159 N.m	50 W	SGDH-A5AE-OY	-
		0.318 N.m	100 W	SGDH-01AE-OY	-
		0.637 N.m	200 W	SGDH-02AE-OY	-
		1.27 N.m	400 W	SGDH-04AE-OY	-
		2.39 N.m	750 W	SGDH-08AE-S-OY	-
	400 V	0.955 N.m	300 W	-	SGDH-05DE-OY
		2.07 N.m	650 W	-	SGDH-10DE-OY
SGMPH (3000 min <sup>-1</sup> ) 	230 V	0.318 N.m	100 W	SGDH-01AE-OY	-
		0.637 N.m	200 W	SGDH-02AE-OY	-
		1.27 N.m	400 W	SGDH-04AE-OY	-
		2.39 N.m	750 W	SGDH-08AE-S-OY	-
		4.77 N.m	1500 W	SGDH-15AE-S-OY	-
	400 V	0.637 N.m	200 W	-	SGDH-05DE-OY
		1.27 N.m	400 W	-	SGDH-05DE-OY
		2.39 N.m	750 W	-	SGDH-10DE-OY
		4.77 N.m	1500 W	-	SGDH-15DE-OY
SGMGH (1500 min <sup>-1</sup> ) 	400 V	2.84 N.m	0.45 kW	-	SGDH-05DE-OY
		5.39 N.m	0.85 kW	-	SGDH-10DE-OY
		8.34 N.m	1.3 kW	-	SGDH-15DE-OY
		11.5 N.m	1.8 kW	-	SGDH-20DE-OY
		18.6 N.m	2.9 kW	-	SGDH-30DE-OY
		28.4 N.m	4.4 kW	-	SGDH-50DE-OY
		35.0 N.m	5.5 kW	-	SGDH-60DE-OY
		48.0 N.m	7.5 kW	-	SGDH-75DE-OY
		70.0 N.m	11 kW	-	SGDH-1AE-OY
		95.4 N.m	15 kW	-	SGDH-1EDE-OY
SGMSH (3000 min <sup>-1</sup> ) 	400 V	3.18 N.m	1.0 kW	-	SGDH-10DE-OY
		4.90 N.m	1.5 kW	-	SGDH-15DE-OY
		6.36 N.m	2.0 kW	-	SGDH-20DE-OY
		9.80 N.m	3.0 kW	-	SGDH-30DE-OY
		12.6 N.m	4.0 kW	-	SGDH-50DE-OY
		15.8 N.m	5.0 kW	-	SGDH-50DE-OY
SGMUH (6000 min <sup>-1</sup> ) 	400 V	1.59 N.m	1.0 kW	-	SGDH-10DE-OY
		2.45 N.m	1.5 kW	-	SGDH-15DE-OY
		4.9 N.m	3.0 kW	-	SGDH-30DE-OY
		6.3 N.m	4.0 kW	-	SGDH-50DE-OY
SGLGW Linear Motors 	230 V	Refer to the Linear Motors chapter for details			
SGLFW Linear Motors 	230 V, 400 V	Refer to the Linear Motors chapter for details			
SGLTW Linear Motors 	400 V	Refer to the Linear Motors chapter for details			

Type Designation

Servomotor

**SGMAH - 01 A 1 A 6 S D - OY**

Sigma-II Servomotor Type

- SGMAH: Super High Power Rate Type
- SGMPH: Cube Type
- SGMGH: High-speed Feed Type
- SGMSH: Super High Power Rate Type
- SGMUH: High Speed Type

Capacity (kW)

Code	SGMAH	SGMPH	SGMGH	SGMSH	SGMUH
	3000 min <sup>-1</sup>	3000 min <sup>-1</sup>	1500 min <sup>-1</sup>	3000 min <sup>-1</sup>	6000 min <sup>-1</sup>
A3	0.03				
A5	0.05				
01	0.1	0.1			
02	0.2	0.2			
03	0.3				
04	0.4	0.4			
05			0.45		
06					
07	0.65				
08	0.75	0.75			
09			0.85		
10				1.0	1.0
12					
13			1.3		
15		1.5		1.5	1.5
20			1.8	2.0	
22					
30			2.9	3.0	3.0
32					
40				4.0	4.0
44			4.4		
50				5.0	
55			5.5		
60					
75			7.5		
1A			11		
1E			15		

Voltage

- A: 230 V
- D: 400 V

Connector Specifications

Blank	No option
D	Hypertac Connector (SGMAH,SGMPH)

Brake, Oil Seal Specifications

1	No Brake, No Oil/Dust Seal
S	Oil Seal
B	90V Brake
C	24V Brake
D	Oil Seal + 90VDC Brake
E	Oil Seal + 24VDC Brake
F	Dust Seal
G	Dust Seal + 90VDC Brake
H	Dust Seal + 24VDC Brake

Shaft End Specifications

Code	Shaft End	Type				
		SGMAH	SGMPH	SGMGH	SGMSH	SGMUH
2	Straight, No key	○	○	○	○	
4	Straight, Key	○	○			
6	Straight, Key, Tapped	●	●	●	●	●
8	Straight, Tapped	○	○			

●: Standard ○: Option

Design Procedure:

- A: Standard
- E: SGMPH (IP67)
- F: SGMAH (prepared for oil seal mounting)

Serial Encoder Specifications

Code	Encoder	Type				
		SGMAH	SGMPH	SGMGH	SGMSH	SGMUH
1	16-bit Absolute	○	○			
2	17-bit Absolute			○	○	
A	13-bit Incremental	●	●			
B	16-bit Incremental	○	○			
C	17-bit Incremental			●	●	●

●: Standard ○: Option

Servo Drive

**SGDH - 04 A E - S - OY**

Sigma-II Servo Drive

Capacity

A3	30 W	15	1.5 kW
A5	50 W	20	2.0 kW
01	100 W	30	3.0 kW
02	200 W	50	5.0 kW
04	400 W	60	6.0 kW
05	500 W	75	7.5 kW
08	750 W	1A	11 kW
10	1.0 kW	1E	15 kW

Phase

Blank	Three-phase (0.5 to 15kW) Single-phase (30 to 400W)
S	Single-phase (750W/1.5kW)

Model

- E: Speed, Torque, Position

Source Voltage

- A: 230V
- D: 400V