



Product Service

# CERTIFICATE

No. B 08 04 21347 057

**Holder of Certificate:** Yaskawa Electric Corporation  
Yahata Plant

2-3 Kitakukioka Maeda Yahatahigashi-Ku  
Kitakyusyu-City  
Fukuoka-ken  
805-0058 JAPAN

**Production Facility(ies):** 48675

**Certification Mark:**



**Product:** Servo Motor  
AC Servo Motor

**Model(s):** SGMGV series  
(See Attachment for Nomenclature)

**Parameters:**

|                       |  |
|-----------------------|--|
| Rated voltage:        | 200 V, 400 V   |
| Rated output power:   | 0.3 - 15 kW  |
| Rated input current:  | 1.4 - 78 A   |
| Rated torque:         | 1.96 - 95.4 N·m  |
| Rated speed:          | 1500 1/min, 1000 1/min.  |
| Protection class:     | I  |
| Degree of protection: | IP67 or IP55   |
| Remark:               | When installing / inserting the equipment, all requirements of the mentioned test standards must be fulfilled. |

**Tested according to:** EN 60034-1:2004  
EN 60034-5:2001

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. The certification mark must not be altered in any way. See also notes overleaf.

**Test report no.:** 73515142

**Date,** 2008-04-30

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Electrical ratings

| Motor type     | Rated output (kW) | Rated torque (N·m) | Rated speed (min <sup>-1</sup> ) | Max. speed (min <sup>-1</sup> ) | Rated current (A) | Supply Voltage | Rated | Thermal class |
|----------------|-------------------|--------------------|----------------------------------|---------------------------------|-------------------|----------------|-------|---------------|
| SGMGV-03AxAxxx | 0,3               | 1.96               | 1500                             | 3000                            | 2.8               | 200            | CONT. | F             |
| SGMGV-05AxAxxx | 0,45              | 2.86               | 1500                             | 3000                            | 3.8               | 200            | CONT. | F             |
| SGMGV-09AxAxxx | 0,85              | 5.39               | 1500                             | 3000                            | 6.9               | 200            | CONT. | F             |
| SGMGV-13AxAxxx | 1,3               | 8.34               | 1500                             | 3000                            | 10.7              | 200            | CONT. | F             |
| SGMGV-20AxAxxx | 1,8               | 11.5               | 1500                             | 3000                            | 16.7              | 200            | CONT. | F             |
| SGMGV-30AxAxxx | 2,9               | 18.6               | 1500                             | 3000                            | 23.8              | 200            | CONT. | F             |
| SGMGV-44AxAxxx | 4,4               | 28.4               | 1500                             | 3000                            | 32.8              | 200            | CONT. | F             |
| SGMGV-55AxAxxx | 5,5               | 35.0               | 1500                             | 3000                            | 42.1              | 200            | CONT. | F             |
| SGMGV-75AxAxxx | 7,5               | 48.0               | 1500                             | 3000                            | 54.7              | 200            | CONT. | F             |
| SGMGV-1AAxAxxx | 11,0              | 70                 | 1500                             | 2000                            | 58.6              | 200            | CONT. | F             |
| SGMGV-1EAxAxxx | 15,0              | 95.4               | 1500                             | 2000                            | 78                | 200            | CONT. | F             |
| SGMGV-03DxAxxx | 0,3               | 1.96               | 1500                             | 3000                            | 1.4               | 400            | CONT. | F             |
| SGMGV-05DxAxxx | 0,45              | 2.86               | 1500                             | 3000                            | 1.9               | 400            | CONT. | F             |
| SGMGV-09DxAxxx | 0,85              | 5.39               | 1500                             | 3000                            | 3.5               | 400            | CONT. | F             |
| SGMGV-13DxAxxx | 1,3               | 8.34               | 1500                             | 3000                            | 5.4               | 400            | CONT. | F             |
| SGMGV-20DxAxxx | 1,8               | 11.5               | 1500                             | 3000                            | 8.4               | 400            | CONT. | F             |
| SGMGV-30DxAxxx | 2,9               | 18.6               | 1500                             | 3000                            | 11.9              | 400            | CONT. | F             |
| SGMGV-44DxAxxx | 4,4               | 28.4               | 1500                             | 3000                            | 16.5              | 400            | CONT. | F             |
| SGMGV-55DxAxxx | 5,5               | 35.0               | 1500                             | 3000                            | 20.8              | 400            | CONT. | F             |
| SGMGV-75DxAxxx | 7,5               | 48.0               | 1500                             | 3000                            | 25.7              | 400            | CONT. | F             |
| SGMGV-1ADxAxxx | 11,0              | 70                 | 1500                             | 2000                            | 29.3              | 400            | CONT. | F             |
| SGMGV-1EDxAxxx | 15,0              | 95.4               | 1500                             | 2000                            | 39                | 400            | CONT. | F             |
| SGMGV-03AxBxxx | 0,3               | 2.84               | 1000                             | 2000                            | 3.0               | 200            | CONT. | F             |
| SGMGV-06AxBxxx | 0,6               | 5.68               | 1000                             | 2000                            | 5.7               | 200            | CONT. | F             |
| SGMGV-09AxBxxx | 0,9               | 8.62               | 1000                             | 2000                            | 7.6               | 200            | CONT. | F             |
| SGMGV-12AxBxxx | 1,2               | 11.5               | 1000                             | 2000                            | 11.6              | 200            | CONT. | F             |
| SGMGV-20AxBxxx | 2,0               | 19.1               | 1000                             | 2000                            | 18.5              | 200            | CONT. | F             |
| SGMGV-30AxBxxx | 3,0               | 28.4               | 1000                             | 2000                            | 24.8              | 200            | CONT. | F             |
| SGMGV-40AxBxxx | 4,0               | 38.2               | 1000                             | 2000                            | 30.0              | 200            | CONT. | F             |
| SGMGV-55AxBxxx | 5,5               | 52.6               | 1000                             | 2000                            | 43.2              | 200            | CONT. | F             |

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SGMGV Series - Nomenclature:

Standard

SGMGV -                    03    x    x    A    x    x    x  
     a            b            c            d            e            f            g            h

a. Motor Series: SGMGV

b. Motor Output (kW):

|    | SGMGV    |          |
|----|----------|----------|
|    | (r/min.) | (r/min.) |
|    | 1500     | 1000     |
| 03 | 0.3      | 0.3      |
| 05 | 0.45     | -        |
| 06 | -        | 0.6      |
| 09 | 0.85     | 0.9      |
| 12 | -        | 1.2      |
| 13 | 1.3      | -        |
| 20 | 1.8      | 2.0      |
| 30 | 2.9      | 3.0      |
| 40 |          | 4.0      |
| 44 | 4.4      | -        |
| 55 | 5.5      | 5.5      |
| 75 | 7.5      | -        |
| 1A | 11       | -        |
| 1E | 15       | -        |

c. Supply Voltage:

A: 200 V  
D: 400 V

d. Detector:

D: Incremental (20bit)  
3: Absolute value (20bit)  
8: Absolute value (20bit) with a large-capacity condenser

e. Design Revision Order

A: The Standard (Rated Speed 1500min<sup>-1</sup>)  
B: The Associate Standard (Rated Speed 1000min<sup>-1</sup>)  
L: Output is the same as a standard. The frame size is larger than a standard.

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f. Shaft Type:

- 2: Straight
- 4: Straight, without key
- 6: Straight, with key and Tap
- 3: 1/10 Conical shaft ends, With Sunk Key
- 5: 1/10 Conical shaft ends, With Woodruff Key
- 8: Straight, with tap

g. Optional parts:

- F: With oil seal (V type)
- G: With oil seal (V type) and with holding brake (DC90V)
- H: With oil seal (V type) and with holding brake (DC24V)
- D: With oil seal (S type) and with holding brake (DC90V)
- E: With oil seal (S type) and with holding brake (DC24V)
- S: With oil seal (S type)
- 1: Without option
- B: With holding brake (DC90V)
- C: With holding brake (DC24V)

h. Connector direction

- non: Standard (straight)
- B: With right angle support
- C: With left angle support

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Exclusive Design for Customer (case 1)

|                |           |          |          |          |          |   |          |          |          |
|----------------|-----------|----------|----------|----------|----------|---|----------|----------|----------|
| <u>SGMGV -</u> | <u>03</u> | <u>x</u> | <u>x</u> | <u>x</u> | <u>x</u> | = | <u>x</u> | <u>x</u> | <u>x</u> |
| a              | b         | c        | d        | e        | f        |   | g        | h        | i        |

a - d: Same as Standard

e: Design Revision Order

- A: The Standard (Rated Speed 1500min<sup>-1</sup>)
- B: The Associate Standard (Rated Speed 1000min<sup>-1</sup>)
- V: Winding is the same as a standard. The characteristic is different.
- W: Winding and the characteristic differ from a standard.
- L: Output is the same as a standard. The frame size is larger than a standard.

f, g: Customer Cord:

Alpha-numerical(s) or none

h, i: Design Revision Order for Customer:

Alpha-numerical(s) or none

Exclusive Design for Customer (case 2)

|                |           |          |          |          |          |          |          |   |          |          |
|----------------|-----------|----------|----------|----------|----------|----------|----------|---|----------|----------|
| <u>SGMGV -</u> | <u>03</u> | <u>x</u> | <u>x</u> | <u>x</u> | <u>x</u> | <u>x</u> | <u>x</u> | = | <u>x</u> | <u>x</u> |
| a              | b         | c        | d        | e        | f        | g        | h        |   | i        | j        |

a - h: Same as Standard

i: Customer Cord:

Alpha-numerical(s) or none

j: Design Revision Order for Customer:

Alpha-numerical(s) or none

Exclusive Design for Customer (case 3)

|                |           |          |          |          |          |          |          |   |           |
|----------------|-----------|----------|----------|----------|----------|----------|----------|---|-----------|
| <u>SGMGV -</u> | <u>03</u> | <u>x</u> | <u>x</u> | <u>x</u> | <u>x</u> | <u>x</u> | <u>x</u> | = | <u>OY</u> |
| a              | b         | c        | d        | e        | f        | g        | h        |   | i         |

a - h: Same as Standard

i(-OY): For OMRON YASKAWA Motion Control B.V.

With special name plate.

### 1.3 INTERNATIONAL PROTECTION CLASS (IP class)

| No. | Contents  | Except for drive end side(*1) | Oil seal of drive end side |        |
|-----|---|-------------------------------|----------------------------|--------|
|     |   |                               | V type                     | S type |
| 1   | Connection: Receptacle                                    | IP67                          | IP55                       | IP67   |
| 2   | Connection: Receptacle<br>(With right-angled support)     | IP67                          | IP55                       | IP67   |
| 3   | Connection: Cable<br>(Cable isn't attached to the motor.) | IP67                          | IP55                       | IP67   |

\*1: When drive end side needs IP55 or IP67, mount an oil seal.