



Product Service

CERTIFICATE

No. B 15 08 22021 608

Holder of Certificate: Yaskawa Electric Corp.
Tokyo Plant

480 Kamifujisawa, Iruma
Saitama 358-8555
JAPAN

Production Facility(ies): 48921, 92439

Certification Mark:



Product: Electric Motors
AC Servo Motor

Model(s): SGMAS, SGMPS Series
(See Attachment for Nomenclature)

Parameters:

Rated voltage:	AC 200 V
Rated input power:	50 - 1150 W (SGMAS) 80 - 1500 W (SGMPS)
Protection class:	I
Degree of protection:	IP55 / IP67
Remark:	When installing / inserting the equipment all requirements of the mentioned test standards must be fulfilled.

Tested according to: EN 60034-1:2010
EN 60034-5:2001/A1:2007

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. It is not permitted to alter the certification mark in any way. In addition the certification holder must not transfer the certificate to third parties. See also notes overleaf.

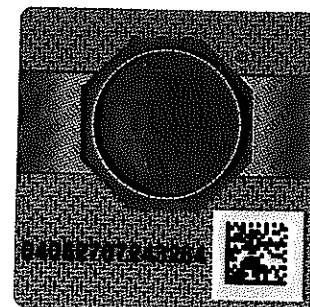
Test report no.: 73555232

Valid until: 2020-08-23

Date, 2015-08-31

(Yoshio Sato)

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Σ- III Series SGMAS Type

PRODUCT COVERED:

STANDARD

Component - AC Servo Motors, Series SGMAS, followed by any number from A5 to 12, followed by A, followed by 2, C and so on, followed by A or F, followed by 2, 4 and so on, may be followed by additional letters and or numbers.

WITH GEAR

Component- AC Servo Motors, Series SGMAS, followed by any number from A5 to 12, followed by A, followed by 2, C and so on, followed by AH or AJ may be followed by additional letters and or numbers.

ELECTRICAL RATINGS:

Model	Voltage(V)	Phase	Amp.(A)	Output(KW)
SGMAS-A5Axxxxx	200	3	0,66	0,05
SGMAS-A8Axxxxx	200	3	0,74	0,08
SGMAS-01Axxxxx	200	3	0,91	0,10
SGMAS-C2Axxxxx	200	3	1,8	0,15
SGMAS-D2Axxxxx	200	3	1,9	0,20
SGMAS-02Axxxxx	200	3	1,9	0,20
SGMAS-04Axxxxx	200	3	2,6	0,40
SGMAS-06Axxxxx	200	3	4,3	0,60
SGMAS-08Axxxxx	200	3	5,4	0,75
SGMAS-10Axxxxx	200	3	5,7	1,00
SGMAS-12Axxxxx	200	3	8,5	1,15

"X" represents variations in model number as described in product covered and series nomenclature which do not affect electrical construction or rating. Reference "Product Covered" or "Series Nomenclature".

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SERIES NOMENCLATURE:

1) Standard

<u>SGMAS-</u>	<u>01</u>	<u>A</u>	<u>C</u>	<u>A</u>	<u>2</u>	<u>B</u>	<u>-E</u>
a	b	c	d	e	f	g	h

- a. Motor type: Σ-III Series SGMAS Type

- b. Motor Output:
 - A5 - 0,05W
 - A8 - 0,08KW
 - 01 - 0,10KW
 - C2 - 0,15KW
 - D2 - 0,20KW
 - 02 - 0,20KW
 - 04 - 0,40KW
 - 06 - 0,60KW
 - 08 - 0,75KW
 - 10 - 1,00KW
 - 12 - 1,15KW

- c. Power Supply: A - 200V

- d. Encoder Spec:
 - A - Incremental (13 bit serial)
 - B - Incremental (16 bit serial)
 - C - Incremental (17 bit serial)
 - D - Incremental (20 bit serial)
 - 1 - Absolute Value (16 bit serial)
 - 2 - Absolute Value (17 bit serial)
 - 3 - Absolute Value (20 bit serial)
 - 4 - Absolute Value (16 bit serial with built-in capacitor)
 - 5 - Absolute Value (17 bit serial with built-in capacitor)
 - 6 - Absolute Value (20 bit serial with built-in capacitor)

- e. Design Revision Order:
 - A - Standard
 - F - Different from standard flange type

- f. Shaft Type:
 - 2 - Straight (without keyway)
 - 3 - Tapered 1/10 (with parallel keyway)
 - 4 - Straight (with keyway)
 - 5 - Tapered 1/10 (with woodruff keyway)
 - 6 - Straight (without keyway and tapped hole)
 - 8 - Straight (with tapped hole)
 - A - Straight (with flat key seat)
 - B - Straight (with double flat key seat)
 - C - Straight (with keyway and flat key seat)

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- g. Optional specifications:
- 1 - Without Option
 - B - With brake (90V)
 - C - With brake (24V)
 - S - With shaft seal
 - D - With brake (90V) and shaft seal
 - E - With brake (24V) and shaft seal

- h. Additional type:
- | | |
|-------|------------------------------|
| Blank | Standard |
| -E | Standard(for ROHS directive) |

2) With gear

<u>SGMAS-</u>	<u>01</u>	<u>A</u>	<u>C</u>	<u>AH</u>	<u>1</u>	<u>1</u>	<u>B</u>	<u>-E</u>
a	b	c	d	e	f	g	h	i

- a. Motor Type: Σ- III Series SGMAS Type
- b. Motor Output:
- A5 - 0,05KW
 - A8 - 0,08KW
 - 01 - 0,10KW
 - C2 - 0,15KW
 - D2 - 0,20KW
 - 02 - 0,20KW
 - 04 - 0,40KW
 - 06 - 0,60KW
 - 08 - 0,75KW
 - 10 - 1,00KW
 - 12 - 1,15KW
- c. Power Supply: A - 200V
- d. Encoder Spec.:
- A - Incremental (13 bit serial)
 - B - Incremental (16 bit serial)
 - C - Incremental (17 bit serial)
 - D - Incremental (20 bit serial)
 - 1 - Absolute Value (16 bit serial)
 - 2 - Absolute Value (17 bit serial)
 - 3 - Absolute Value (20 bit serial)
 - 4 - Absolute Value (16 bit serial with built-in capacitor)
 - 5 - Absolute Value (17 bit serial with built-in capacitor)
 - 6 - Absolute Value (20 bit serial with built-in capacitor)
- e. Design Revision Order:
- AH - With non-backlash gear
 - AJ - With standard Backlash gear

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- f. Reduction ratio:
 - 1 - 5
 - 2 - 9
 - 3 - 10 or 10.3
 - 7 - 29 or 33
 - B - 11
 - C - 21

- g. Shaft Type:
 - 0 - Flange Type (without keyway)
 - 1 - Taper (without keyway)
 - 2 - Straight (without keyway)
 - 3 - Taper (with keyway)
 - 4 - Straight (with keyway)
 - 5 - Taper (with keyway and tapped hole)
 - 6 - Straight (with keyway and tapped hole)
 - 8 - Straight (with tapped hole)

- h. Optional specifications:
 - 1 - Without Option
 - B - With brake (90V)
 - C - With brake (24V)

- i. Additional type:

Blank	Standard
-E	Standard (for ROHS directive)

3) Exclusive Design for Customer

3-1) Exclusive Design for Customer

<u>SGMAS-</u>	<u>01</u>	<u>A</u>	<u>C</u>	<u>AH</u>	<u>x</u>	<u>x</u>	<u>x</u>	<u>x</u>
a	b	c	d	e	f	g	h	i

- a. Motor Type: Σ -III Series SGMAS Type

- b. Motor Output:
 - A5 - 0,05KW
 - A8 - 0,08KW
 - 01 - 0,10KW
 - C2 - 0,15KW
 - D2 - 0,20KW
 - 02 - 0,20KW
 - 04 - 0,40KW
 - 06 - 0,60KW
 - 08 - 0,75KW
 - 10 - 1,00KW
 - 12 - 1,15KW



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- c. Power Supply: A - 200V
- d. Encoder Spec.:
 A - Incremental (13 bit serial)
 B - Incremental (16 bit serial)
 C - Incremental (17 bit serial)
 D - Incremental (20 bit serial)
 1 - Absolute Value (16 bit serial)
 2 - Absolute Value (17 bit serial)
 3 - Absolute Value (20 bit serial)
 4 - Absolute Value (16 bit serial with built-in capacitor)
 5 - Absolute Value (17 bit serial with built-in capacitor)
 6 - Absolute Value (20 bit serial with built-in capacitor)
- e. Design Revision Order:
 A - Standard (without gear)
 AH - With non-backlash gear
 AJ - With standard backlash gear
 K - Rating specifications, IP specifications, encoder and/or connector are changed for standard.
 KH - Rating specifications, IP specifications, encoder and/or connector are changed for standard.
 And with non backlash gear.
 KJ - Rating specifications, IP specifications, encoder and/or connector are changed for standard.
 And with standard backlash gear.
- f. g. Customer Code: put any alphabets
- h. i. Design Revision Order For Customer: put any numbers, any alphabets.

3-2) Exclusive Design for specified a customer

$$\frac{\text{SGMAS-01ACA21}}{a} \quad \frac{-Y2}{b}$$

- a. Standard model type:
- b. Customer Code: Y1 - Ball bearing fixing adhesion
 Y2 - Ball bearing fixing adhesion and Rotor magnet type change

3-3) Exclusive Design for another customer

$$\frac{\text{SGMAS-02ACA-YA11}}{a} \quad - \quad \frac{1}{b}$$

- a. Customer model type:
- b. Additional number: 1, 2 or 3 (It is a number for machine identification.
 The motor is same as SGMAS-02ACA-YA11.)



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CONSTRUCTION OF EXCLUSIVE DESIGN FOR CUSTOMER

TYPE	Different from Standard type	Drawing and Part List
SGMAS-A5ABA-TE11	Shaft only	DP0311622
SGMAS-12ABA-TE11	Model No. only	DP0311623
SGMAS-06AAA-TE12	With lead and connector	DP0311112
SGMAS-02AAA-TE12	With lead and connector	DP0310824
SGMAS-02AAA-TE22	With lead and connector	DP0310824
SGMAS-10ACA-SY11	Model No. only	DP0311355
SGMAS-02A2A-EB11	Shaft only	DP0311164
SGMAS-C2A2A-FJ11	Shaft only	DP0311379
SGMAS-08A2A-FJ11	Shaft only	DP0311354
SGMAS-01A2A-FJ11	Model No. only	DP0311974
SGMAS-04A2A-FJ11	Model No. only	DP0311975
SGMAS-08A2A-FJ12	Shaft only	DP0311354
SGMAS-01A2A-FJ12	Shaft only	DP0311974
SGMAS-04A2A-FJ12	Shaft only	DP0311975
SGMAS-08A2A-FJ13	Shaft only	DP0311354
SGMAS-01A2A-FJ31	Model No. only	DP0350234
SGMAS-01A2A-FJ41	Shaft only	DP0350235
SGMAS-C2A2A-FJ12	Shaft only	DP0350245
SGMAS-C2A2A-FJ21	Model No. only	DP0350244
SGMAS-04A2A-FJ21	Model No. only	DP0350246
SGMAS-08A2A-FJ21	Shaft and oilseal	DP0350159
SGMAS-08A2A-FJ31	Shaft and oilseal	DP0350160
SGMAS-A5ACA-SN11	Shaft only	DP0350142
SGMAS-01A2A-FJ13	Shaft only	900-014-957
SGMAS-C2A2A-FJ42	Shaft only	900-014-958
SGMAS-04A2A-FJ14	Shaft only	900-014-961
SGMAS-04A2A-FJ32	Model No. only	900-014-962
SGMAS-02ACA-YA11-1	Shaft only The motor is same as SGMAS-02ACA-Y11.	900-119-292
SGMAS-02ACA-YA11-2	Shaft only The motor is same as SGMAS-02ACA-Y11.	900-119-292
SGMAS-02ACA-YA11-3	Shaft only The motor is same as SGMAS-02ACA-Y11.	900-119-292

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Σ- III Series SGMPS Type

PRODUCT COVERED:

STANDARD

Component - AC Servo Motors ,Series SGMPS ,followed by any number from A8 to 15,followed by A ,followed by 2 , C and so on ,followed by A or E ,followed by 2 ,4 and so on ,may be followed by additional letters and or numbers.

WITH GEAR

Component - AC Servo Motors ,Series SGMPS ,followed by any number from A8 to 15 ,followed by A ,followed by 2 ,C and so on ,followed by AH ,AJ ,EH or EJ may be followed by additional letters and or numbers.

ELECTRICAL RATINGS:

Model	Voltage (V)	Phase	Amp.(A)	Output(KW)
SGMPS-A8Axxxxx	200	3	0,7	0,08
SGMPS-01Axxxxx	200	3	0,86	0,10
SGMPS-02Axxxxx	200	3	2,0	0,20
SGMPS-04Axxxxx	200	3	2,6	0,40
SGMPS-08Axxxxx	200	3	5,4	0,75
SGMPS-15Axxxxx	200	3	9,2	1,50

"X" represents variations in model number as described in product covered and series nomenclature which do not affect electrical construction or rating. Reference "Product Covered" or "Series Nomenclature".



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SERIES NOMENCLATURE:

1) Standard

<u>SGMPS-</u>	<u>08</u>	<u>A</u>	<u>C</u>	<u>A</u>	<u>2</u>	<u>BH</u>	<u>-E</u>
a	b	c	d	e	f	g	h

- | | |
|---------------------------|--|
| a. Motor type: | Σ- III Series SGMPS Type |
| b. Motor Output: | A8 - 0,08KW
01 - 0,10KW
02 - 0,20KW
04 - 0,40KW
08 - 0,75KW
15 - 1,50KW |
| c. Power Supply: | A - 200V |
| d. Encoder Spec.: | A - Incremental (13 bit serial)
B - Incremental (16 bit serial)
C - Incremental (17 bit serial)
D - Incremental (20 bit serial)
1 - Absolute Value (16 bit serial)
2 - Absolute Value (17 bit serial)
3 - Absolute Value (20 bit serial)
4 - Absolute Value (16 bit serial with built-in capacitor)
5 - Absolute Value (17 bit serial with built-in capacitor)
6 - Absolute Value (20 bit serial with built-in capacitor) |
| e. Design Revision Order: | A - Standard
E - Drip proof provision
F - Different from standard flange type |
| f. Shaft Type: | 2 - Straight (without keyway)
3 - Tapered 1/10 (with parallel keyway)
4 - Straight (with keyway)
5 - Tapered 1/10 (with woodruff keyway)
6 - Straight (without keyway and tapped hole)
8 - Straight (tapped hole)
A - Straight (with flat key seat)
B - Straight (with double flat key seat)
C - Straight (with keyway and flat key seat) |



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g. Optional specifications (Motor Output: A8 ~ 04):

- 1 - without Option
- B - with brake (90V)
- C - with brake (24V)
- S - with shaft seal
- D - with brake (90V) and Shaft seal
- E - with brake (24V) and Shaft seal

Optional and lead specifications (Motor output: 08, 15):

		Lead wire length			
		300 mm	500 mm	1,000 mm	1,500 mm
Standard connector	Without Option	1	1H	1J	1 K
	With brake(90V)	B	BH	BJ	BK
	With brake(24V)	C	CH	CJ	CK
	With shaft seal	S	SH	SJ	SK
	With brake(90V) and shaft seal	D	DH	DJ	DK
	With brake(24V) and shaft seal	E	EH	EJ	EK
Dripproofed connector	Without Option	1D	1E	1F	1G
	With brake(90V)	BD	BE	BF	BG
	With brake(24V)	CD	CE	CF	CG
	With shaft seal	SD	SE	SF	SG
	With brake(90V)and shaft seal	DD	DE	DF	DG
	With brake(24V)and shaft seal	ED	EE	EF	EG

h. Additional type: Blank Standard
 -E Standard (for ROHS directive)



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2) With gear

<u>SGMPS-</u>	<u>08</u>	<u>A</u>	<u>C</u>	<u>AH</u>	<u>1</u>	<u>1</u>	<u>BH</u>	<u>-E</u>
a	b	c	d	e	f	g	h	i

- a. Motor Type: Σ- III Series SGMPS Type

- b. Motor Output:
 A8 - 0,08KW
 01 - 0,10KW
 02 - 0,20KW
 04 - 0,40KW
 08 - 0,75KW
 15 - 1,50KW

- c. Power Supply: A - 200V

- d. Encoder SPEC.:
 A - Incremental (13 bit serial)
 B - Incremental (16 bit serial)
 C - Incremental (17 bit serial)
 D - Incremental (20 bit serial)
 1 - Absolute Value (16 bit serial)
 2 - Absolute Value (17 bit serial)
 3 - Absolute Value (20 bit serial)
 4 - Absolute Value (16 bit serial with built-in capacitor)
 5 - Absolute Value (17 bit serial with built-in capacitor)
 6 - Absolute Value (20 bit serial with built-in capacitor)

- e. Design Revision Order:
 AH - With non-backlash gear
 AJ - With standard backlash gear
 EH - With non-backlash gear and Drip proof provision
 EJ - With standard backlash gear and Drip proof provision

- f. Reduction ratio:
 1 - 5
 2 - 9
 3 - 10 o r 10.3
 7 - 29 or 33
 B - 11
 C - 21

- g. Shaft Type:
 0 - Flange Type (without keyway)
 1 - Taper (without keyway)
 2 - Straight (without keyway)
 3 - Taper (with keyway)
 4 - Straight (with keyway)
 5 - Taper (with keyway and tapped hole)
 6 - Straight (with keyway and tapped hole)
 8 - Straight (with tapped hole)

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- h. Optional specifications (Motor Output : A8 ~ 04):
- 1 - without Option
 - B - with brake (90V)
 - C - with brake (24V)

Optional and Lead specifications (Motor output: 08, 15):

		Lead wire length			
		300 mm	500 mm	1,000 mm	1,500 mm
Standard connector	Without Option	1	1H	1J	1K
	With brake (90V)	B	BH	BJ	BK
	With brake (24V)	C	CH	CJ	CK
Dripproofed connector	Without Option	1D	1E	1F	1G
	With brake (90V)	BD	BE	BF	BG
	With brake (24V)	CD	CE	CF	CG

- i. Additional type: Blank Standard
 -E Standard (for ROHS directive)

3) Exclusive Design for Customer

SGMPS- 01 A C AH- x x x x
 a b c d e f g h i

- a. Motor Type: Σ-III Series SGMPS Type
- b. Motor Output: A8 - 0,08KW
 01 - 0,10KW
 02 - 0,20KW
 04 - 0,40KW
 08 - 0,75KW
 15 - 1,50KW
- c. Power Supply: A-200V
- d. Encoder Spec.: A - Incremental (13 bit serial)
 B - Incremental (16 bit serial)
 C - Incremental (17 bit serial)
 D - Incremental (20 bit serial)
 1 - Absolute Value (16 bit serial)
 2 - Absolute Value (17 bit serial)
 3 - Absolute Value (20 bit serial)
 4 - Absolute Value (16 bit serial with built-in capacitor)
 5 - Absolute Value (17 bit serial with built-in capacitor)
 6 - Absolute Value (20 bit serial with built-in capacitor)

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- e. Design Revision Order:
- A - Standard (without gear)
 - E - Drip proof provision (without gear)
 - AH - With non-backlash gear
 - AJ - With standard backlash gear
 - EH - With non-backlash gear and Drip proof provision
 - EJ - With standard backlash gear and Drip proof provision
 - K - Rating specifications, IP specifications, encoder and/or connector are changed for standard.
 - M - Drip proof provision
Rating specifications, IP specifications, encoder and/or connector are changed for standard.
 - KH - With non-backlash gear
Rating specifications, IP specifications, encoder and/or connector are changed for standard.
 - KJ - With standard backlash gear rating specifications, IP specifications, encoder and/or connector are changed for standard.
 - MH - Drip proof provision and with non-backlash gear
Rating specifications, IP specifications, encoder, and/or connector are changed for standard.
 - MJ - Drip proof provision and with standard backlash gear
Rating specifications, IP specifications, encoder and/or connector are changed for standard.

f, g. Customer Code: put any alphabets.

h, i. Design Revision Order For Customer: put any numbers, any alphabets.

CONSTRUCTION OF EXCLUSIVE DESIGN FOR CUSTOMER

TYPE	Different from standard type	Drawing and Part List
SGMPS-15A3A-NE11	Model Number Only (Base Type SGMPS-15A3A21)	900-088-639
SGMPS-15A3A-NE21	Model Number Only (Base Type SGMPS-15A3A2C-E)	900-098-049