



Product Service

CERTIFICATE

No. Z10 17 07 22021 728

Holder of Certificate: Yaskawa Electric Corp.
Tokyo Plant
480 Kamifujisawa, Iruma
Saitama 358-8555
JAPAN

Certification Mark:



Product: AC Servo Systems
AC Servo Pack

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.: YI86386T

Valid until: 2022-08-06

Date, 2017-08-07

Jiayi Dong
(Jiayi Dong)



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Model(s):

SGD7

For nomenclature see attachment

Parameters:

Protection class: I
Overvoltage category: III
Pollution degree: 2

For model SGD7S:

Rated voltage: 100-120Vac, 200-240Vac, 380-480Vac
Rated frequency: 50/60Hz
Rated input current: 100Vac, 200Vac, 200V3ac, 400V3ac
1.5A-10A, 0.8A-16A, 0.4A-73A, 1.4A-43.4A
Degree of protection: IP10/20

For models SGD7W, SGD7C:

Rated voltage: 200-240Vac, 380-480Vac
Rated frequency: 50/60Hz
Rated input current: 200Vac, 200V3ac, 400V3ac
5.5A-12A, 2.5A-11A, 4.4A-8.6A
Degree of protection: IP10/20
Safety function: STO (acc. to IEC 61800-5-2 / EN 61800-5-2)
Stop category 0
(acc. to IEC 60204-1 / EN 60204-1)
Serial number: S/N ** *****

A B

A: 2 digits factory code (indicate by TUV)

B: 13 digits alphanumeric characters

S/N D0 ***** indicates registered code, 48921

S/N 1A ***** indicates registered code, 77204

S/N F0 ***** indicates registered code, 23987

S/N 1R ***** indicates registered code, 42802

S/N 1W ***** indicates registered code, 38663

Tested

according to:

2006/42/EC
IEC 61508-1:2010 (SIL3)
IEC 61508-2:2010 (SIL3)
EN 61508-1:2010 (SIL 3)
EN 61508-2:2010 (SIL 3)
IEC 62061:2005 (SILCL 3)
IEC 62061:2005/AMD1:2012
IEC 62061:2005/AMD2:2015
EN 62061:2005/A2:2015 (SILCL 3)
IEC 61800-5-1:2007 (SIL 3)
IEC 61800-5-2:2007 (SIL 3)
EN 61800-5-1:2007 (SIL 3)
EN 61800-5-2:2007 (SIL 3)
ISO 13849-1:2015 (Cat.3, PL e)
EN ISO 13849-1:2015 (Cat.3, PL e)
IEC 60204-1:2006
IEC 60204-1:2006/AMD1:2009
EN 60204-1:2006/A1:2009
IEC 61326-3-1:2008
EN 61326-3-1:2008

Factory(ies):

48921, 77204, 23987, 38663, 42802

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1 Standard Spec., Hardware Option Spec., EX Spec. and FT Spec.

SGD7*- ******* ***** ****** ***** ******* ***** ****** *****
A **B** **C** **D** **E** **F** **G** **H** **I**

Example: Standard spec. SGD7*-*** ** *
 Hardware Option Spec. SGD7*-*** ** * ** *
 EX Spec. SGD7*-*** ** * ** * E ** *
 FT Spec. SGD7*-*** ** * ** * F ** *

A: Model

Group	Model	Note
SGD7S	Sigma-7 series SERVOPACK Sigma-7S model	Control of 1 axis
SGD7W	Sigma-7 series SERVOPACK Sigma-7W model	Control of 2 axes
SGD7C	Sigma-7 series SERVOPACK Sigma-7C model	Control of 2 axes

B+C: Continuous Output Current Type for SGD7S

Group	Rated input power			Rated output power		Note
	Input voltage	Number of phase	Input current	Output current	Output power	
R70 F	100Vac	Single	1.5[A]	0.66[A]	0.05kW	
R90 F		Single	2.5[A]	0.91[A]	0.1kW	
2R1 F		Single	5.0[A]	2.1[A]	0.2kW	
2R8 F		Single	10.0[A]	2.8[A]	0.4kW	
R70 A	200Vac	Three	0.4[A]	0.66[A]	0.05kW	
		Single	0.8[A]			
R90 A		Three	0.8[A]	0.91[A]	0.1kW	
		Single	1.6[A]			
1R6 A		Three	1.3[A]	1.6[A]	0.2kW	
		Single	2.4[A]			
2R8 A		Three	2.5[A]	2.8[A]	0.4kW	
		Single	5.0[A]			
3R8 A		Three	3.0[A]	3.8[A]	0.5kW	
5R5 A		Three	4.1[A]			5.5[A]
		Single	8.7[A]			
7R6 A		Three	5.7[A]	7.6[A]	1.0kW	
120 A		Three	7.3[A]			11.6[A]
		Single	16.0[A]			
180 A		Three	10.0[A]	18.5[A]	2.0kW	
200 A		Three	15.0[A]			19.6[A]
330 A		Three	25.0[A]	32.9[A]	5.0kW	
470 A		Three	29.0[A]			46.9[A]
550 A		Three	37.0[A]	54.7[A]	7.5kW	
590 A		Three	54.0[A]			58.6[A]
780 A	Three	73.0[A]	78.0[A]	15.0kW		
1R9 D	400Vac	Three			1.4[A]	1.9[A]
3R5 D		Three	2.9[A]	3.5[A]	1.0kW	
5R4 D		Three	4.3[A]	5.4[A]	1.5kW	
8R4 D		Three	5.8[A]	8.4[A]	2.0kW	
		Three	8.6[A]	11.9[A]	3.0kW	
120 D		Three	8.6[A]	11.9[A]	3.0kW	



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Group	Rated input power			Rated output power		Note
	Input voltage	Number of phase	Input current	Output current	Output power	
170 D		Three	14.5[A]	16.0[A]	5.0kW	
210 D		Three	17.4[A]	20.8[A]	6.0kW	
260 D		Three	21.7[A]	25.7[A]	7.5kW	
280 D		Three	31.8[A]	28.1[A]	11.0kW	
370 D		Three	43.4[A]	37.2[A]	15.0kW	

B+C: Continuous Output Current Type for SGD7W and SGD7C

Group	Rated input power			Rated output power at 1-axis		Note
	Input voltage	Output current	Output current	Output current	Output power	
1R6 A	200Vac	Three	2.5[A]	1.6[A]	0.2kW	
		Single	5.5[A]			
2R8 A		Three	4.7[A]	2.8[A]	0.4kW	
		Single	11.0[A]			
5R5 A	400Vac	Three	7.8[A]	5.5[A]	0.75kW	
		Single	12.0[A]			
7R6 A	400Vac	Three	11.0[A]	7.6[A]	1.0kW	
2R6 D		Three	4.4[A]	2.6[A]	0.75kW	
5R4 D		Three	8.6[A]	5.4[A]	1.5kW	

C: Rated Input / Output Voltage Type

Group	Rated voltage type	
	Input voltage	Output voltage
A	200V3ac	200V3ac
D	400V3ac	400Vac
F	100Vac	200Vac

D: Interface Type

Group	Interface type	Note
00	Analog & Pulse I/F	Sigma-7S model only.
10	MECHATROLINK-II I/F	Sigma-7S model only.
20	MECHATROLINK-III I/F	
30	MECHATROLINK-III(RJ45) I/F	
A0	EtherCAT I/F	Sigma-7S model and Sigma-7W model 400V input only.
E0	Command Option I/F	Sigma-7S model only.
MA	BUS I/F (Standard)	Sigma-7C model only.
M0	Sigma-7Siec I/F	SGD7S-xxxxA0x based with PLC function
Q0	SigmaLogic 7 Compact I/F	SGD7S-xxxxA0x based with Ethernet/IP protocol
R0	SigmaLogic 7 Modbus I/F	SGD7S-xxxxA0x based with Modbus protocol (General protocol)



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E: Design Order

Group	Design order	Note
A	Standard	
B	Standard	400V type only

F: Hardware Option Type

Group	Hardware option type	Note
Blank	Standard	Standard specification only.
000	Standard	In case of Software Option only.
001	Rack mount type	
002	Vanish coating	
004	Measures for vibration	
008	200Vac (Single phase) input type	SGD7S-120A**A only.
00A	Group# 002 and 008	
010	Open collector output of Encoder pulse	
020	External DB resistor type or Without DB	Voltage type A only.
021	DI power supply 12Vdc	
022	Zone output	
023	Analog Voltage FB input type	
024	Group# 002 and 020	
025	Group# 001 and 023	
026	Add the Holding Break(SBC) function	Voltage type D only.
027	Group# 020 and 021	
030	Group# 008 and 022	SGD7S-120A**A only.
031	Group# 002 and 023	
032	Group# 001 and 002 and 023	
033	Group# 002 and 008 and 023	SGD7S-120A**A only.
034	Group# 008 and 020	SGD7S-120A**A only.
035	Group# 020 and 022	
100	Pulse encoder interface and analog input for Thermistor on CN9. CN8(Safety Connector) eliminated.	SGD7S-***A30A only.
101	Group# 100 and 001	SGD7S-***A30A only.
102	Group# 100 and 002	SGD7S-***A30A only.
104	Group# 100 and 004	SGD7S-***A30A only.
108	Group# 100 and 008	SGD7S-120A30A only.
110	Group# 100 and 010	SGD7S-***A30A only.
120	Group# 100 and 020	SGD7S-***A30A only.
121	Group# 100 and 021	SGD7S-***A30A only.
122	Group# 100 and 022	SGD7S-***A30A only.
124	Group# 100 and 024	SGD7S-***A30A only.
700	Add the HWBB(STO) function	Sigma-7W and Sigma-7C models only.
701	Group# 001 and 700	
702	Group# 002 and 700	
704	Group# 004 and 700	
70A	Group# 00A and 700	
710	Group# 010 and 700	
720	Group# 020 and 700	
721	Group# 021 and 700	
722	Group# 022 and 700	



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Group	Hardware option type	Note
723	Group# 023 and 700	
724	Group# 024 and 700	
725	Group# 025 and 700	
727	Group# 027 and 700	
731	Group# 031 and 700	
732	Group# 032 and 700	

G: Specification Type

Group	Specification type	Note
Blank	Standard or Hardware Option Spec.	
0	BTO order	For Standard spec. and Hardware Option Spec.
E	EX specification	
F	FT specification	

G+H: Software Option Type

Group	Difference from standard		Note
	Hardware	Software	
Blank	Same	Same	Standard or Hardware Option Spec. only.
000	Same or Diff.	Same	BTO order for Standard spec. and Hardware Option Spec
E**	Same or Diff.	Diff.	Except E9* and F9*. (see Note.1) Customized for non-safety related Software. Hardware is defines of "Hardware Option Type".
F**	Same or Diff.	Diff.	

Note.1: E9* and F9* are customized the safety related Software.

I: Order Type

Group	Order type
Blank	Standard order
B	BTO order



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2 Y Spec.

SGD7*- *** * ** * Y *****
A B C D E F G

Example: Y spec. SGD7*-*** ** * Y *****

A: Model

Group	Model	Note
SGD7S	Sigma-7 series SERVOPACK Sigma-7S model	Control of 1 axis
SGD7W	Sigma-7 series SERVOPACK Sigma-7W model	Control of 2 axes
SGD7C	Sigma-7 series SERVOPACK Sigma-7C model	Control of 2 axes

B+C: Continuous Output Current Type for SGD7S

Group	Rated input power			Rated output power		Note
	Input voltage	Number of phase	Input current	Output current	Output power	
R70 F	100Vac	Single	1.5[A]	0.66[A]	0.05kW	
R90 F		Single	2.5[A]	0.91[A]	0.1kW	
2R1 F		Single	5.0[A]	2.1[A]	0.2kW	
2R8 F		Single	10.0[A]	2.8[A]	0.4kW	
R70 A	200Vac	Three	0.4[A]	0.66[A]	0.05kW	
		Single	0.8[A]			
R90 A		Three	0.8[A]	0.91[A]	0.1kW	
		Single	1.6[A]			
1R6 A		Three	1.3[A]	1.6[A]	0.2kW	
		Single	2.4[A]			
2R8 A		Three	2.5[A]	2.8[A]	0.4kW	
		Single	5.0[A]			
3R8 A		Three	3.0[A]	3.8[A]	0.5kW	
5R5 A		Three	4.1[A]	5.5[A]	0.75kW	
		Single	8.7[A]			
7R6 A		Three	5.7[A]	7.6[A]	1.0kW	
120 A		Three	7.3[A]	11.6[A]	1.5kW	
		Single	16.0[A]			
180 A		Three	10.0[A]	18.5[A]	2.0kW	
200 A		Three	15.0[A]	19.6[A]	3.0kW	
330 A	Three	25.0[A]	32.9[A]	5.0kW		
470 A	Three	29.0[A]	46.9[A]	6.0kW		
550 A	Three	37.0[A]	54.7[A]	7.5kW		
590 A	Three	54.0[A]	58.6[A]	11.0kW		
780 A	Three	73.0[A]	78.0[A]	15.0kW		
1R9 D	400Vac	Three	1.4[A]	1.9 [A]	0.5kW	
3R5 D		Three	2.9[A]	3.5 [A]	1.0kW	
5R4 D		Three	4.3[A]	5.4 [A]	1.5kW	
8R4 D		Three	5.8[A]	8.4 [A]	2.0kW	
120 D		Three	8.6[A]	11.9 [A]	3.0kW	
170 D		Three	14.5[A]	16.0[A]	5.0kW	
210 D		Three	17.4[A]	20.8[A]	6.0kW	
260 D		Three	21.7[A]	25.7[A]	7.5kW	



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Group	Rated input power			Rated output power		Note
	Input voltage	Number of phase	Input current	Output current	Output power	
280 D		Three	31.8[A]	28.1[A]	11.0kW	
370 D		Three	43.4[A]	37.2[A]	15.0kW	

B+C: Continuous Output Current Type for SGD7W and SGD7C

Group	Rated input power			Rated output power at 1-axis		Note
	Input voltage	Output current	Output current	Output current	Output power	
1R6 A	200Vac	Three	2.5[A]	1.6[A]	0.2kW	
		Single	5.5[A]			
2R8 A		Three	4.7[A]	2.8[A]	0.4kW	
		Single	11.0[A]			
5R5 A		Three	7.8[A]	5.5[A]	0.75kW	
		Single	12.0[A]			
7R6 A	400Vac	Three	11.0[A]	7.6[A]	1.0kW	
2R6 D		Three	4.4[A]			2.6[A]
5R4 D		Three	8.6[A]	5.4[A]	1.5kW	
		Three	8.6[A]			

C: Rated Input/Output Voltage Type

Group	Rated voltage type	
	Input voltage	Output voltage
A	200V3ac	200V3ac
D	400V3ac	400V3ac
F	100Vac	200V3ac

D: Interface Type

Group	Interface Type	Note
00	Analog & Pulse I/F	Sigma-7S model only.
10	MECHATROLINK-II I/F	
20	MECHATROLINK-III I/F	
30	MECHATROLINK-III(RJ45) I/F	
A0	EtherCAT I/F	Sigma-7S model and Sigma-7W model 400V input only.
E0	Command Option I/F	Sigma-7S model only.
MA	BUS I/F (Standard)	Sigma-7C model only.
M0	Sigma-7Siec I/F	SGD7S-xxxxA0x based with PLC function
Q0	SigmaLogic 7 Compact I/F	SGD7S-xxxxA0x based with Ethernet/IP protocol
R0	SigmaLogic 7 Modbus I/F	SGD7S-xxxxA0x based with Modbus protocol (General protocol)

E: Design Order

Group	Design order	Note
A	Standard	
B	Standard	400V type only



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F: Specification Type

Group	Specification type
Y	Y Specification

F+G: Y Specification Type

Group	Difference from standard		Note
	Hardware	Software	
Y0400*	Diff.	Diff.	Customized for the case.
Y*5***	Same	Diff.	Customized for non-safety related parameters and software. The combination of this model and Safety module is not possible.
Y*6***	Same	Diff.	Customized for non-safety related parameters and software. The combination of this model and Safety module is not possible.
Y*7***	Same	Diff.	Customized for non-safety related parameters and software. The combination of this model and Safety module is possible.
Y*8***	Same	Diff.	Customized for non-safety related parameters and software. The combination of this model and Safety module is not possible.
Y*9***	Same	Diff.	Customized for non-safety related parameters and software. The combination of this model and Safety module is not possible.