ZERTIFIKAT ◆ CERTIFICATE ◆ 認証書 ◆ СЕРТИФИКАТ ◆ CERTIFICADO ◆ CERTIFICAT

Product Service

CERTIFICATE

No. Z10 16 11 22021 695

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

Certification Mark:

Product: **Static power converter**
AC Servo Amplifier

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.: YI89883T

Valid until: 2021-11-24

Date, 2016-12-07

(Christian Dirmeier)

719707

TÜV SÜD Product Service GmbH · Zertifizierstelle · Ridlerstraße 65 · 80339 München · Germany

TÜV®

Product Service

CERTIFICATE
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Model(s): **SIGMA-V Series (AC SERVOPACK)**
SGDV Series
For nomenclature see attachment

Parameters:

Protective Class:	I	
Overvoltage Category:	III	
Rated voltage:	100 - 115 Vac 50/60Hz	
	200 - 230 Vac 50/60Hz	
	380 - 480 Vac 50/60Hz	
Rated current:	100 Vac:	0,56 - 10A
	200 Vac:	0,6 - 16A
	200 V3ac:	0,3 - 179A
	400 V3ac:	1,2 - 133A

Safety Function:
STO (acc. to IEC 61800-5-2:2007 / EN 61800-5-2:2007)
Stop Category 0 (acc. to IEC 60204-1:2005 / EN 60204-1:2006)

Tested according to:

2006/42/EC
IEC 61508-1(ed.2) (SIL 2)
IEC 61508-2(ed.2) (SIL 2)
IEC 61508-4(ed.2) (SIL 2)
EN 61508-1:2010 (SIL 2)
EN 61508-2:2010 (SIL 2)
EN 61508-4:2010 (SIL 2)
IEC 62061(ed.1);am1;am2 (SILCL 2)
EN 62061:2005/A2:2015 (SILCL 2)
ISO 13849-1:2015 (Cat.3, PL d)
EN ISO 13849-1:2015 (Cat.3, PL d)
IEC 61800-5-1(ed.2)
EN 61800-5-1:2007
IEC 61800-5-2(ed.1)
EN 61800-5-2:2007
IEC 61326-3-1(ed.1)
EN 61326-3-1:2008

Factory(ies): 23987, 38663, 42802, 48921, 75416, 77204

ATTACHMENT TO CERTIFICATE
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Product Service

1 Nomenclature for standard models (Design order = A type)

SGDV-	***	*	**	*	***	**	*
A	B	C	D	E	F	G	H

A SGDV Σ-V Series SGDV Servopack

B Output Current

Group	Continuous Output current (A)	Input Voltage	Output Voltage
R70	0,66	200V3ac, ac	200V3ac
R90	0,91		
1R6	1,6		
2R8	2,8		
3R8	3,8		
5R5	5,5		
7R6	7,6	200V3ac	
120	11,6	200V3ac, ac	
180	18,5	200V3ac	
200	19,6		
330	32,9		
470	46,9		
550	54,7		
590	58,6		
780	78,0		
1R9	1,9	400V3ac	400V3ac
3R5	3,5		
5R4	5,4		
8R4	8,4		
120	11,9		
170	16,5		
210	20,8		
260	25,7		
280	28,1	400V3ac	400V3ac
370	37,2		
450	45,0		
R70	0,66	100Vac	200V3ac
R90	0,91		
2R1	2,1		

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Group	Continuous Output current (A)	Input Voltage	Output Voltage
2R8	2,8		
R70	0,7	100Vac	100V3ac
1R0	0,98		
121	116	270Vdc	200V3ac
161	160		
201	200		
750	75	540Vdc	400V3ac
101	98		
131	126		

C Rated Input Voltage / Output Voltage

A: 200V3ac, ac/200V3ac
B: 100Vac/100V3ac
D: 400V3ac/400V3ac
F: 100Vac/200V3ac
H: 270Vdc/200V3ac
J: 540Vdc/400V3ac

D Interface Type

Group	Model	Difference
01	Analogue/Pulse I/F, for Rotary motor	Control board is Analogue/Pulse I/F, Software is for Analogue/Pulse I/F, Rotary motor
05	Analogue/Pulse I/F, for Linear motor	Hardware is exactly same as 01 type. Software is changed from 01 type for Linear motor
11	MECHATROLINK-II I/F, for Rotary motor	Control board is MECHATROLINK-II I/F, Software is for MECHATROLINK-II I/F, Rotary motor
15	MECHATROLINK-II I/F, for Linear motor	Hardware is exactly same as 11 type. Software is changed from 11 type for Linear motor.
E1	Command Option I/F, for Rotary motor	Control board is Command Option I/F, Software is for Command Option I/F, Rotary motor
E5	Command Option I/F, for Linear motor	Hardware is exactly same as E1 type. Software is changed from E1 type for Linear motor.
21	MECHATROLINK-III I/F, for Rotary motor	Control board is MECHATROLINK-III I/F, Software is for MECHATROLINK-III I/F, Rotary motor
25	MECHATROLINK-III I/F, for Linear motor	Hardware is exactly same as 21 type. Software is changed from 21 type for Linear motor.
F1	Multi Windings Drive type, for Rotary motor	Hardware is exactly same as 11 type. Software for Multi Windings Drive type, Rotary motor.
31	MECHATROLINK-III (RJ-45)I/F, for Rotary motor	Control board is MECHATROLINK-III (RJ-45)I/F, Software is for MECHATROLINK-III I/F, Rotary motor
35	MECHATROLINK-III (RJ-45)I/F, for Linear motor	Hardware is exactly same as 31 type. Software is changed from 31 type for Linear motor.

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Product Service

E Design Order

A: Standard

F Option of Hardware

Group	Option Specification of Hardware		
--	Structure (Hardware)	Board coating (Varnish)	Measures for vibration
Blank	Standard	Not handle	Not handle
000	Standard	Not handle	Not handle
001	Rack mount type (capacity of 5kW and below) Ventilation type (capacity between 6kW and 55kW)	Not handle	Not handle
002	Standard	Handle	Not handle
003	=001+002	Handle	Not handle
004	Standard	Not handle	Handle
005	=001+004	Not handle	Handle
006	=002+004	Handle	Handle
007	=001+002+004	Handle	Handle
008	AC 200V single phase input voltage	Not handle	Not handle
009	=001+008	Not handle	Not handle
00A	=002+008	Handle	Not handle
00B	=001+002+008	Handle	Not handle
00C	=004+008	Not handle	Handle
00D	=001+004+008	Not handle	Handle
00E	=002+004+008	Handle	Handle
00F	=001+002+004+008	Handle	Handle
010	Open collector pulse output signal type	Not handle	Not handle
011	=001+010	Not handle	Not handle
012	=002+010	Handle	Not handle
013	=001+002+010	Handle	Not handle
014	=004+010	Not handle	Handle
015	=001+004+010	Not handle	Handle
016	=002+004+010	Handle	Handle
017	=001+002+004+010	Handle	Handle
018	=008+010	Not handle	Not handle
019	=001+008+010	Not handle	Not handle
01A	=002+008+010	Handle	Not handle

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Product Service

Group	Option Specification of Hardware		
--	Structure (Hardware)	Board coating (Varnish)	Measures for vibration
01B	=001+002+008+010	Handle	Not handle
01C	=004+008+010	Not handle	Handle
01D	=001+004+008+010	Not handle	Handle
01E	=002+004+008+010	Handle	Handle
01F	=001+002+004+008+010	Handle	Handle
020	External DB resistor type or without DB type	Not handle	Not handle
021	=001+020	Not handle	Not handle
022	=002+020	Handle	Not handle
023	=001+002+020	Handle	Not handle
024	=004+020	Not handle	Handle
025	=001+004+020	Not handle	Handle
026	=002+004+020	Handle	Handle
027	=001+002+004+020	Handle	Handle
028	=008+020	Not handle	Not handle
029	=001+008+020	Not handle	Not handle
02A	=002+008+020	Handle	Not handle
02B	=001+002+008+020	Handle	Not handle
02C	=004+008+020	Not handle	Handle
02D	=001+004+008+020	Not handle	Handle
02E	=002+004+008+020	Handle	Handle
02F	=001+002+004+008+020	Handle	Handle
030	=010+020	Not handle	Not handle
031	=001+010+020	Not handle	Not handle
032	=002+010+020	Handle	Not handle
033	=001+002+010+020	Handle	Not handle
034	=004+010+020	Not handle	Handle
035	=001+004+010+020	Not handle	Handle
036	=002+004+010+020	Handle	Handle
037	=001+002+004+010+020	Handle	Handle
038	=008+010+020	Not handle	Not handle
039	=001+008+010+020	Not handle	Not handle
03A	=002+008+010+020	Handle	Not handle
03B	=001+002+008+010+020	Handle	Not handle

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Group	Option Specification of Hardware		
--	Structure (Hardware)	Board coating (Varnish)	Measures for vibration
03C	=004+008+010+020	Not handle	Handle
03D	=001+004+008+010+020	Not handle	Handle
03E	=002+004+008+010+020	Handle	Handle
03F	=001+002+004+008+010+020	Handle	Handle

G Option of Software

Group	Option Specification of Software	Difference from Standard Model
Blank	Standard	--
00	Standard	Hardware and/or parameters are changed.
01	Internal setting speed a change of 15 steps	Specification into the number of the speed tables of the internal parameter which can be set as a servopack was changed from three steps in 15 steps..
02	The functional addition of absolute value encoder initialization by the contact input signal from the outside	Specification, which could be made to perform initialization operation of the absolute value encoder with an I/O signal without connecting an external operation.
03	Speed limit detection functional addition	Speed limit detection function addition.
04	Instruction input disconnection functional addition	Specification, which added the function, which detects disconnections and is used as alarm when wiring of the instruction input from a controller is disconnected.
05	The Mitsubishi PLC correspondence and the Mitsubishi specification absolute value data-processing correspondence	Specification, which changed I/F according to Mitsubishi PLC.
06	C phase pulse zero return functional addition	Specification, which added the zero return function which uses C-Phase pulse.
07	F47 standard correspondence	Specification, to which soft processing required for the measures against the power failure specified by F47 standard was added.

H Option of Parameter

Group	Option Specification of Parameter Setting	Difference from Standard Model
Blank	Standard	--
0	Standard	--

Product Service

2 Nomenclature for standard models (Design order = B type)

SGDV- ***/A ***/B *C **D *E ***F **G *H

A SGDV Σ-V Series SGDV Servopack

B Output Current

Group	Continuous Output current (A)	Input Voltage	Output Voltage
R70	0,66	200V3ac, ac	200V3ac
R90	0,91		
1R6	1,6		
2R8	2,8		

C Rated Input Voltage / Output Voltage

A: 200V3ac, ac/200V3ac

D Interface Type

Group	Interface Type	Difference
01	Analogue/Pulse I/F, for Rotary motor	Control board is Analogue/Pulse I/F, Software is for Analogue/Pulse I/F, Rotary motor
05	Analogue/Pulse I/F, for Linear motor	Hardware is exactly same as 01 type. Software is changed from 01 type for Linear motor
11	MECHATROLINK I/F, for Rotary motor	Control board is MECHATROLINK I/F, Software is for MECHATROLINK I/F, Rotary motor
15	MECHATROLINK I/F, for Linear motor	Hardware is exactly same as 11 type. Software is changed from 11 type for Linear motor
21	MECHATROLINK-III I/F, for Rotary motor	Control board is MECHATROLINK-III I/F, Software is for MECHATROLINK-III I/F, Rotary motor
25	MECHATROLINK-III I/F, for Linear motor	Hardware is exactly same as 21 type. Software is changed from 21 type for Linear motor

E Design Order

B: Fan-less

F Option of Hardware

Group	Option Specification of Hardware		
--	Structure (Hardware)	Board coating (Varnish)	Measures for vibration
Blank	Standard	Not handle	Not handle
000	Standard	Not handle	Not handle

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Group	Option Specification of Hardware		
--	Structure (Hardware)	Board coating (Varnish)	Measures for vibration
001	Rack mount type (capacity of 5kW and below) Ventilation type (capacity between 6kW and 15kW)	Not handle	Not handle
002	Standard	Handle	Not handle
003	=001+002	Handle	Not handle
004	Standard	Not handle	Handle
005	=001+004	Not handle	Handle
006	=002+004	Handle	Handle
007	=001+002+004	Handle	Handle
008	AC 200V single phase input voltage	Not handle	Not handle
009	=001+008	Not handle	Not handle
00A	=002+008	Handle	Not handle
00B	=001+002+008	Handle	Not handle
00C	=004+008	Not handle	Handle
00D	=001+004+008	Not handle	Handle
00E	=002+004+008	Handle	Handle
00F	=001+002+004+008	Handle	Handle
010	Open collector pulse output signal type	Not handle	Not handle
011	=001+010	Not handle	Not handle
012	=002+010	Handle	Not handle
013	=001+002+010	Handle	Not handle
014	=004+010	Not handle	Handle
015	=001+004+010	Not handle	Handle
016	=002+004+010	Handle	Handle
017	=001+002+004+010	Handle	Handle
018	=008+010	Not handle	Not handle
019	=001+008+010	Not handle	Not handle
01A	=002+008+010	Handle	Not handle
01B	=001+002+008+010	Handle	Not handle
01C	=004+008+010	Not handle	Handle
01D	=001+004+008+010	Not handle	Handle
01E	=002+004+008+010	Handle	Handle
01F	=001+002+004+008+010	Handle	Handle

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Group	Option Specification of Hardware		
--	Structure (Hardware)	Board coating (Varnish)	Measures for vibration
020	External DB resistor type or without DB type	Not handle	Not handle
021	=001+020	Not handle	Not handle
022	=002+020	Handle	Not handle
023	=001+002+020	Handle	Not handle
024	=004+020	Not handle	Handle
025	=001+004+020	Not handle	Handle
026	=002+004+020	Handle	Handle
027	=001+002+004+020	Handle	Handle
028	=008+020	Not handle	Not handle
029	=001+008+020	Not handle	Not handle
02A	=002+008+020	Handle	Not handle
02B	=001+002+008+020	Handle	Not handle
02C	=004+008+020	Not handle	Handle
02D	=001+004+008+020	Not handle	Handle
02E	=002+004+008+020	Handle	Handle
02F	=001+002+004+008+020	Handle	Handle
030	=010+020	Not handle	Not handle
031	=001+010+020	Not handle	Not handle
032	=002+010+020	Handle	Not handle
033	=001+002+010+020	Handle	Not handle
034	=004+010+020	Not handle	Handle
035	=001+004+010+020	Not handle	Handle
036	=002+004+010+020	Handle	Handle
037	=001+002+004+010+020	Handle	Handle
038	=008+010+020	Not handle	Not handle
039	=001+008+010+020	Not handle	Not handle
03A	=002+008+010+020	Handle	Not handle
03B	=001+002+008+010+020	Handle	Not handle
03C	=004+008+010+020	Not handle	Handle
03D	=001+004+008+010+020	Not handle	Handle
03E	=002+004+008+010+020	Handle	Handle
03F	=001+002+004+008+010+020	Handle	Handle

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G Option of Software

Group	Option Specification of Software	Difference from Standard Model
Blank	Standard	--
00	Standard	Hardware and/or parameters are changed.
01	Internal setting speed a change of 15 steps	Specification into the number of the speed tables of the internal parameter which can be set as a servopack was changed from three steps in 15 steps..
02	The functional addition of absolute value encoder initialization by the contact input signal from the outside	Specification, which could be made to perform initialization operation of the absolute value encoder with an I/O signal without connecting an external operation.
03	Speed limit detection functional addition	Speed limit detection function addition.
04	Instruction input disconnection functional addition	Specification, which added the function, which detects disconnections and is used as alarm when wiring of the instruction input from a controller is disconnected.
05	The Mitsubishi PLC correspondence and the Mitsubishi specification absolute value data-processing correspondence	Specification, which changed I/F according to Mitsubishi PLC.
06	C phase pulse zero return functional addition	Specification, which added the zero return function which uses C-Phase pulse.
07	F47 standard correspondence	Specification, to which soft processing required for the measures against the power failure specified by F47 standard was added.

H Option of Parameter

Group	Option Specification of Parameter Setting	Difference from Standard Model
Blank	Standard	--
0	Standard	--

Product Service

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3 Nomenclature for OY type

SGDV-	**	*	**	*	-OY	******
A	B	C	D	E	F	G

A SGDV Σ-V Series SGDV Servopack

B Rated Output of Applicable Servomotor

Group	Relationship with Standard group	Rated Output of Applicable Servomotor	Input Voltage	Output voltage
A5	R70	50 [W]	200Vac	200V3ac
01	R90	100 [W]		
02	1R6	200 [W]		
04	2R8	400 [W]		
05	3R8	500 [W]		
08	5R5	750 [W]		
15	120	1.5 [kW]		
05	1R9	500 [W]	400V3ac	400V3ac
10	3R5	1.0 [kW]		
15	5R4	1.5 [kW]		
20	8R4	2.0 [kW]		
30	120	3.0 [kW]		
50	170	5.0 [kW]		
60	210	6.0 [kW]		
75	260	7.5 [kW]		
1A	280	11 [kW]		
1E	370	15 [kW]		

Notes:

For OY models, at the column B have 2 digits, but standard models have 3 digits to indicate output current

C Rated Input Voltage/Output voltage

A: 200Vac/200V3ac

D: 400V3ac/400V3ac

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D Interface Type

Group	Interface Type	Difference
01	Analogue/Pulse I/F, for Rotary motor	Control board is Analogue/Pulse I/F, Software is for Analogue/Pulse I/F, Rotary motor
05	Analogue/Pulse I/F, for Linear motor	Hardware is exactly same as 01 type. Software is changed from 01 type for Linear motor
11	MECHATROLINK I/F, for Rotary motor	Control board is MECHATROLINK I/F, Software is for MECHATROLINK I/F, Rotary motor
15	MECHATROLINK I/F, for Linear motor	Hardware is exactly same as 11 type. Software is changed from 11 type for Linear motor.

E Design Order

A: Standard

F: -OY: OMRON YASKAWA Bland

G: Option Specification

Blank: Standard model

008000: AC 200V single phase input type

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4 Nomenclature for Y-Specification (Design order = A type)

SGDV-*** *** * ** * Y*****
A B C D E F

A SGDV Σ-V Series SGDV Servopack

B Output Current:

Group	Continuous Output Current (A)	Input Voltage	Output Voltage
R70	0,66	200V3ac, ac	200V3ac
R90	0,91		
1R6	1,6		
2R8	2,8		
3R8	3,8		
5R5	5,5		
7R6	7,6	200V3ac	
120	11,6	200V3ac, ac	
180	18,5	200V3ac	
200	19,6		
330	32,9		
470	46,9		
550	54,7		
590	58,6		
780	78,0		
1R9	1,9	400V3ac	400V3ac
3R5	3,5		
5R4	5,4		
8R4	8,4		
120	11,9		
170	16,5		
210	20,8		
260	25,7		
280	28,1		
370	37,2		
450	45,0		
R70	0,66	100Vac	200V3ac

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Group	Continuous Output Current (A)	Input Voltage	Output Voltage
R90	0,91		
2R1	2,1		
2R8	2,8		

Group	Continuous Output Current (A)	Input Voltage	Output Voltage
R70	0,7	100Vac	100V3ac
1R0	0,98		
121	116	270Vdc	200V3ac
161	160		
201	200		
750	75	540Vdc	400V3ac
101	98		
131	126		
	106 (Y132 only)		

C Rated Input Voltage / Output Voltage

A: 200V3ac, ac/200V3ac
B: 100Vac/100V3ac
D: 400V3ac/400V3ac
F: 100Vac/200V3ac
H: 270Vdc/200V3ac
J: 540Vdc/400V3ac

D Interface Type

Group	Model	Difference
01	Analogue/Pulse I/F, for Rotary motor	Control board is Analogue/Pulse I/F, Software is for Analogue/Pulse I/F, Rotary motor
05	Analogue/Pulse I/F, for Linear motor	Hardware is exactly same as 01 type. Software is changed from 01 type for Linear motor
11	MECHATROLINK-II I/F, for Rotary motor	Control board is MECHATROLINK-II I/F, Software is for MECHATROLINK-II I/F, Rotary motor
15	MECHATROLINK-II I/F, for Linear motor	Hardware is exactly same as 11 type. Software is changed from 11 type for Linear motor.
E1	Command Option I/F, for Rotary motor	Control board is Command Option I/F, Software is for Command Option I/F, Rotary motor

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E5	Command Option I/F, for Linear motor	Hardware is exactly same as E1 type. Software is changed from E1 type for Linear motor.
21	MECHATROLINK-III I/F, for Rotary motor	Control board is MECHATROLINK-III I/F, Software is for MECHATROLINK-III I/F, Rotary motor
25	MECHATROLINK-III I/F, for Linear motor	Hardware is exactly same as 21 type. Software is changed from 21 type for Linear motor.
F1	Multi Windings Drive type, for Rotary motor	Hardware is exactly same as 11 type. Software for Multi Windings Drive type, Rotary motor.
31	MECHATROLINK-III (RJ-45)I/F, for Rotary motor	Control board is MECHATROLINK-III (RJ-45)I/F, Software is for MECHATROLINK-III I/F, Rotary motor
35	MECHATROLINK-III (RJ-45)I/F, for Linear motor	Hardware is exactly same as 31 type. Software is changed from 31 type for Linear motor.

E Design Order

A: Standard

F Option Specification of Hardware and/or Software and/or Parameter Setting:

Group	Option Specification of Software	Difference from Standard model
Blank	Standard	--
Y5****	Software and parameters are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.
Y6****	Software and parameters are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.
Y7****	Software and parameters are changed. The combination of this model and Safety module is possible. Refer to "Note".	Hardware is exactly same as standard model. Customized for non-safety related parameters and software.
Y8****	Software and parameters are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.
Y9****	Software and parameters are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.
Y400**	Hardware and/or software and/or parameter are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as SGDV-*******02**** and SGDV-*******03**** of Dynamic Brake Function Option specification of standard model. ** of Y400 means 2alphanumeric characters for changed software and/or parameter are changed.
Y401**	Hardware and/or software and/or parameter are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as SGDV-*******02**** and SGDV-*******03**** of Dynamic Brake Function Option specification of standard model. ** of Y401 means 2alphanumeric characters for changed software and/or parameter are

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		changed.
Y409**	Software and/or parameter are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model. ** of Y409 means 2alphanumeric characters for changed software and/or parameter are changed. Y specifications number is added to the board name combinated by an additional model for the parts change management of the board.
Y132**	Parameter are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.** of Y132 means 2alphanumeric characters for changed software and/or parameter are changed.
Y133AA	Software and/or parameter are changed. The combination of this model and Safety module is not possible.	Hardware is changed from standard model.
Y133AB	Software and/or parameter are changed. The combination of this model and Safety module is not possible.	Hardware is changed from standard model.

Notes: All applicable models of Safety module are described in the technical report: 717503093.

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5 Nomenclature for Y-Specification (Design order = B type)

SGDV- *** * ** * Y*****
A B C D E F

A SGDV Σ-V Series SGDV Servopack

B Output Current:

Group	Continuous Output Current (A)	Input Voltage	Output Voltage
R70	0,66	200V3ac, ac	200V3ac
R90	0,91		
1R6	1,6		
2R8	2,8		

C Rated Input Voltage / Output Voltage

A: 200V3ac, ac/200V3ac

D Interface Type

Group	Interface Type	Difference
01	Analogue/Pulse I/F, for Rotary motor	Control board is Analogue/Pulse I/F, Software is for Analogue/Pulse I/F, Rotary motor
05	Analogue/Pulse I/F, for Linear motor	Hardware is exactly same as 01 type. Software is changed from 01 type for Linear motor
11	MECHATROLINK I/F, for Rotary motor	Control board is MECHATROLINK I/F, Software is for MECHATROLINK I/F, Rotary motor
15	MECHATROLINK I/F, for Linear motor	Hardware is exactly same as 11 type. Software is changed from 11 type for Linear motor.
21	MECHATROLINK-III I/F, for Rotary motor	Control board is MECHATROLINK-III I/F, Software is for MECHATROLINK-III I/F, Rotary motor
25	MECHATROLINK-III I/F, for Linear motor	Hardware is exactly same as 21 type. Software is changed from 21 type for Linear motor.

E Design order

B: Fan-less

F Option Specification of Hardware and/or Software and/or Parameter Setting:

Group	Option Specification	Difference from Standard Model
Blank	Standard.	--
Y5****	Software and parameters are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.

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Group	Option Specification	Difference from Standard Model
Y6****	Software and parameters are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.
Y7****	Software and parameters are changed. The combination of this model and Safety module is possible. Refer to "Note".	Hardware is exactly same as standard model. Customized for non-safety related parameters and software.
Y8****	Software and parameters are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.
Y9****	Software and parameters are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.
Y400**	Hardware and/or software and/or parameter are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as SGDV-******B02**** and SGDV-******B03**** of Dynamic Brake Function Option specification of standard model. ** of Y400 means 2alphanumeric characters for changed software and/or parameter are changed.
Y401**	Hardware and/or software and/or parameter are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as SGDV-******B02**** and SGDV-******B03**** of Dynamic Brake Function Option specification of standard model. ** of Y401 means 2alphanumeric characters for changed software and/or parameter are changed.

Notes: All applicable models of Safety module are described in the technical report: 717503093.

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6 Nomenclature for Σ-V-EX/FT series (Design order = A type)

SGDV-	***	*	**	*	***	**	***
A	B	C	D	E	F	G	H

A SGDV Σ-V Series SGDV Servopack

B Output Current

Group	Continuous Output current (A)	Input Voltage	Output Voltage
R70	0,66	200V3ac, ac	200V3ac
R90	0,91		
1R6	1,6		
2R8	2,8		
3R8	3,8		
5R5	5,5		
7R6	7,6	200V3ac	
120	11,6	200V3ac, ac	
180	18,5	200V3ac	
200	19,6		
330	32,9		
470	46,9		
550	54,7		
590	58,6		
780	78,0		
1R9	1,9	400V3ac	400V3ac
3R5	3,5		
5R4	5,4		
8R4	8,4		
120	11,9		
170	16,5		
210	20,8		
260	25,7		
280	28,1		
370	37,2		
450	45,0		

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Group	Continuous Output current (A)	Input Voltage	Output Voltage
R70	0,66	100Vac	200V3ac
R90	0,91		
2R1	2,1		
2R8	2,8		
R70	0,7	100Vac	100V3ac
1R0	0,98		
121	116	270Vdc	200V3ac
161	160		
201	200		
750	75	540Vdc	400V3ac
101	98		
131	126		

C Rated Input Voltage / Output Voltage

A: 200V3ac, ac/200V3ac
B: 100Vac/100V3ac
D: 400V3ac/400V3ac
F: 100Vac/200V3ac
H: 270Vdc/200V3ac
J: 540Vdc/400V3ac

D Interface Type

Group	Model	Difference
01	Analogue/Pulse I/F, for Rotary motor	Control board is Analogue/Pulse I/F, Software is for Analogue/Pulse I/F, Rotary motor
05	Analogue/Pulse I/F, for Linear motor	Hardware is exactly same as 01 type. Software is changed from 01 type for Linear motor
11	MECHATROLINK-II I/F, for Rotary motor	Control board is MECHATROLINK-II I/F, Software is for MECHATROLINK-II I/F, Rotary motor
15	MECHATROLINK-II I/F, for Linear motor	Hardware is exactly same as 11 type. Software is changed from 11 type for Linear motor.
E1	Command Option I/F, for Rotary motor	Control board is Command Option I/F, Software is for Command Option I/F, Rotary motor
E5	Command Option I/F, for Linear motor	Hardware is exactly same as E1 type. Software is changed from E1 type for Linear motor.
21	MECHATROLINK-III I/F, for Rotary motor	Control board is MECHATROLINK-III I/F, Software is for MECHATROLINK-III I/F, Rotary motor
25	MECHATROLINK-III I/F, for Linear motor	Hardware is exactly same as 21 type. Software is changed from 21 type for Linear motor.

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F1	Multi Windings Drive type, for Rotary motor	Hardware is exactly same as 11 type. Software for Multi Windings Drive type, Rotary motor.
31	MECHATROLINK-III (RJ-45)I/F, for Rotary motor	Control board is MECHATROLINK-III (RJ-45)I/F, Software is for MECHATROLINK-III I/F, Rotary motor
35	MECHATROLINK-III (RJ-45)I/F, for Linear motor	Hardware is exactly same as 31 type. Software is changed from 31 type for Linear motor.

E Design Order

A: Standard

F Option of Hardware

Group	Option Specification of Hardware		
--	**Structure (Hardware)**	**Board coating (Varnish)**	**Measures for vibration**
Blank	Standard	Not handle	Not handle
000	Standard	Not handle	Not handle
001	Rack mount type (capacity of 5kW and below) Ventilation type (capacity between 6kW and 55kW)	Not handle	Not handle
002	Standard	Handle	Not handle
003	=001+002	Handle	Not handle
004	Standard	Not handle	Handle
005	=001+004	Not handle	Handle
006	=002+004	Handle	Handle
007	=001+002+004	Handle	Handle
008	AC 200V single phase input voltage	Not handle	Not handle
009	=001+008	Not handle	Not handle
00A	=002+008	Handle	Not handle
00B	=001+002+008	Handle	Not handle
00C	=004+008	Not handle	Handle
00D	=001+004+008	Not handle	Handle
00E	=002+004+008	Handle	Handle
00F	=001+002+004+008	Handle	Handle
010	Open collector pulse output signal type	Not handle	Not handle
011	=001+010	Not handle	Not handle
012	=002+010	Handle	Not handle
013	=001+002+010	Handle	Not handle
014	=004+010	Not handle	Handle
015	=001+004+010	Not handle	Handle
016	=002+004+010	Handle	Handle
017	=001+002+004+010	Handle	Handle
018	=008+010	Not handle	Not handle
019	=001+008+010	Not handle	Not handle
01A	=002+008+010	Handle	Not handle
01B	=001+002+008+010	Handle	Not handle
01C	=004+008+010	Not handle	Handle
01D	=001+004+008+010	Not handle	Handle
01E	=002+004+008+010	Handle	Handle

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Group	Option Specification of Hardware		
--	Structure (Hardware)	Board coating (Varnish)	Measures for vibration
01F	=001+002+004+008+010	Handle	Handle
020	External DB resistor type or without DB type	Not handle	Not handle
021	=001+020	Not handle	Not handle
022	=002+020	Handle	Not handle
023	=001+002+020	Handle	Not handle
024	=004+020	Not handle	Handle
025	=001+004+020	Not handle	Handle
026	=002+004+020	Handle	Handle
027	=001+002+004+020	Handle	Handle
028	=008+020	Not handle	Not handle
029	=001+008+020	Not handle	Not handle
02A	=002+008+020	Handle	Not handle
02B	=001+002+008+020	Handle	Not handle
02C	=004+008+020	Not handle	Handle
02D	=001+004+008+020	Not handle	Handle
02E	=002+004+008+020	Handle	Handle
02F	=001+002+004+008+020	Handle	Handle
030	=010+020	Not handle	Not handle
031	=001+010+020	Not handle	Not handle
032	=002+010+020	Handle	Not handle
033	=001+002+010+020	Handle	Not handle
034	=004+010+020	Not handle	Handle
035	=001+004+010+020	Not handle	Handle
036	=002+004+010+020	Handle	Handle
037	=001+002+004+010+020	Handle	Handle
038	=008+010+020	Not handle	Not handle
039	=001+008+010+020	Not handle	Not handle
03A	=002+008+010+020	Handle	Not handle
03B	=001+002+008+010+020	Handle	Not handle
03C	=004+008+010+020	Not handle	Handle
03D	=001+004+008+010+020	Not handle	Handle
03E	=002+004+008+010+020	Handle	Handle
03F	=001+002+004+008+010+020	Handle	Handle

G Software option series

Group	Type
EX	Σ-V-EX series
FT	Σ-V-FT series

Product Service

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H Option of Software and parameter

Group	Option Specification of Software and parameter	Difference from Standard model
0**	Software and parameters are changed. The combination of this model and Safety module is possible.	Hardware is exactly same as standard model.
1**		
2**		
3**		
4**		
5**		
6**		
7**		
8**		
9**	Software and parameters are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.

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7 Nomenclature for Σ-V-EX/FT series (Design order = B type)

SGDV-	***	*	**	*	***	**	***
A	B	C	D	E	F	G	H

A SGDV Σ-V Series SGDV Servopack

B Output Current

Group	Continuous Output current (A)	Input Voltage	Output Voltage
R70	0,66	200V3ac, ac	200V3ac
R90	0,91		
1R6	1,6		
2R8	2,8		

C Rated Input Voltage / Output Voltage

A: 200V3ac, ac/200V3ac

D Interface Type

Group	Interface Type	Difference
01	Analogue/Pulse I/F, for Rotary motor	Control board is Analogue/Pulse I/F, Software is for Analogue/Pulse I/F, Rotary motor
05	Analogue/Pulse I/F, for Linear motor	Hardware is exactly same as 01 type. Software is changed from 01 type for Linear motor
11	MECHATROLINK I/F, for Rotary motor	Control board is MECHATROLINK I/F, Software is for MECHATROLINK I/F, Rotary motor
15	MECHATROLINK I/F, for Linear motor	Hardware is exactly same as 11 type. Software is changed from 11 type for Linear motor
21	MECHATROLINK-III I/F, for Rotary motor	Control board is MECHATROLINK-III I/F, Software is for MECHATROLINK-III I/F, Rotary motor
25	MECHATROLINK-III I/F, for Linear motor	Hardware is exactly same as 21 type. Software is changed from 21 type for Linear motor

E Design Order

B: Fan-less

Product Service

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F Option of Hardware

Group	Option Specification of Hardware		
--	**Structure (Hardware)**	**Board coating (Varnish)**	**Measures for vibration**
Blank	Standard	Not handle	Not handle
000	Standard	Not handle	Not handle
001	Rack mount type (capacity of 5kW and below) Ventilation type (capacity between 6kW and 15kW)	Not handle	Not handle
002	Standard	Handle	Not handle
003	=001+002	Handle	Not handle
004	Standard	Not handle	Handle
005	=001+004	Not handle	Handle
006	=002+004	Handle	Handle
007	=001+002+004	Handle	Handle
008	AC 200V single phase input voltage	Not handle	Not handle
009	=001+008	Not handle	Not handle
00A	=002+008	Handle	Not handle
00B	=001+002+008	Handle	Not handle
00C	=004+008	Not handle	Handle
00D	=001+004+008	Not handle	Handle
00E	=002+004+008	Handle	Handle
00F	=001+002+004+008	Handle	Handle
010	Open collector pulse output signal type	Not handle	Not handle
011	=001+010	Not handle	Not handle
012	=002+010	Handle	Not handle
013	=001+002+010	Handle	Not handle
014	=004+010	Not handle	Handle
015	=001+004+010	Not handle	Handle
016	=002+004+010	Handle	Handle
017	=001+002+004+010	Handle	Handle
018	=008+010	Not handle	Not handle
019	=001+008+010	Not handle	Not handle
01A	=002+008+010	Handle	Not handle

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Group	Option Specification of Hardware		
--	Structure (Hardware)	Board coating (Varnish)	Measures for vibration
01B	=001+002+008+010	Handle	Not handle
01C	=004+008+010	Not handle	Handle
01D	=001+004+008+010	Not handle	Handle
01E	=002+004+008+010	Handle	Handle
01F	=001+002+004+008+010	Handle	Handle
020	External DB resistor type or without DB type	Not handle	Not handle
021	=001+020	Not handle	Not handle
022	=002+020	Handle	Not handle
023	=001+002+020	Handle	Not handle
024	=004+020	Not handle	Handle
025	=001+004+020	Not handle	Handle
026	=002+004+020	Handle	Handle
027	=001+002+004+020	Handle	Handle
028	=008+020	Not handle	Not handle
029	=001+008+020	Not handle	Not handle
02A	=002+008+020	Handle	Not handle
02B	=001+002+008+020	Handle	Not handle
02C	=004+008+020	Not handle	Handle
02D	=001+004+008+020	Not handle	Handle
02E	=002+004+008+020	Handle	Handle
02F	=001+002+004+008+020	Handle	Handle
030	=010+020	Not handle	Not handle
031	=001+010+020	Not handle	Not handle
032	=002+010+020	Handle	Not handle
033	=001+002+010+020	Handle	Not handle
034	=004+010+020	Not handle	Handle
035	=001+004+010+020	Not handle	Handle
036	=002+004+010+020	Handle	Handle
037	=001+002+004+010+020	Handle	Handle
038	=008+010+020	Not handle	Not handle

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Group	Option Specification of Hardware		
--	Structure (Hardware)	Board coating (Varnish)	Measures for vibration
039	=001+008+010+020	Not handle	Not handle
03A	=002+008+010+020	Handle	Not handle
03B	=001+002+008+010+020	Handle	Not handle
03C	=004+008+010+020	Not handle	Handle
03D	=001+004+008+010+020	Not handle	Handle
03E	=002+004+008+010+020	Handle	Handle
03F	=001+002+004+008+010+020	Handle	Handle

G Software option series

Group	Type
EX	Σ-V-EX series
FT	Σ-V-FT series

H Option of Software and parameter

Group	Option Specification of Software and parameter	Difference from Standard model
0**	Software and parameters are changed. The combination of this model and Safety module is possible.	Hardware is exactly same as standard model.
1**		
2**		
3**		
4**		
5**		
6**		
7**		
8**		
9**	Software and parameters are changed. The combination of this model and Safety module is not possible.	Hardware is exactly same as standard model.

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8 Nomenclature for SGDV Series (Option Card for SGDV Series)

SGDV-	**	*	**	*	***	**	*
A	B	C	D	E	F	G	H

A SGDV: Option Card for AC Servo Amplifier SGDV Series

B Function of Board

C Product Control Section

D I/F Specification

B, C, D

Group B	Group C	Group D	Spcification
OF: feedback option	A: JAPAN	01	Fully closed I/F card
OC: command option		01	EtherCAT I/F card
		03	INDEXER I/F card
		04	DeviceNet I/F card (Power supply from SERVOPACK)
		05	DeviceNet I/F card (Power supply from DeviceNet port)
		06	SynqNet I/F card
	B: EUROPE	01	CANopen I/F card
		02	Ethernet POWERLINK I/F card
		03	PROFINET IO Device option card
	C: USA	02	MP2600iec 1axis machine controller option card
		04	SigmaLogic controller option card

E Design Order

A: Standard

F Option of Hardware

Group	Option Specification of Hardware			Difference from Standard Model
	Structure (Hardware)	Board Coating (Varnish)	Measures for Vibration	
Blank	Standard	Not handle	Not handle	-
000	Standard	Not handle	Not handle	Software and/or parameters are changed.

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002	Standard	Handle	Not handle	What prevents the short circuit by a foreign substance etc. by coating of a printed circuit board.
004	Standard	Not handle	Handle	What fixed weak parts to vibration by resin material.
006	=002+004	Handle	Handle	Specification which combined "002" and "004"

G Option of Software

Group	Option Specification of Software
Blank	Standard
00	Standard

H Option of Parameter

Group	Option Specification of Parameter Setting
Blank	Standard
0	Standard

9 Nomenclature for Y-specification (Option Card for SGDV Series)

SGDV- (A) ** (B) * (C) ** (D) * (E) Y***** (F)

A SGDV: Option Card for AC Servo Amplifier SGDV Series

B Function of Board

C Product Control Section

D I/F Specification

Product Service

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B, C, D

Group B	Group C	Group D	Spcification
OF: feedback option	A: JAPAN	01	Fully closed I/F card
OC: command option		01	EtherCAT I/F card
		03	INDEXER I/F card
		04	DeviceNet I/F card (Power supply from SERVOPACK)
		05	DeviceNet I/F card (Power supply from DeviceNet port)
		06	SynqNet I/F card
	B: EUROPE	01	CANopen I/F card
		02	Ethernet POWERLINK I/F card
		03	PROFINET IO Device option card
	C: USA	02	MP2600iec 1axis machine controller option card
		04	SigmaLogic controller option card

E Design Order

A: Standard

F Specification of Y-Number

Group	Option Specification	Difference from standard model
Blank	Standard	-
Y5****	Software and/or parameters are changed	Hardware is exactly same as standard model
Y6****	Software and/or parameters are changed	Hardware is exactly same as standard model
Y7****	Software and/or parameters are changed	Hardware is exactly same as standard model
Y8****	Software and/or parameters are changed	Hardware is exactly same as standard model
Y9****	Software and/or parameters are changed	Hardware is exactly same as standard model