SIEMENS

Manufacturer's Declaration

Nr. / No. SINAMICS_S_Book_Size_668.DCO.BG.0918.40.035

Manufacturer:	SIEMENS Aktiengesellschaft
Address:	SIEMENS Aktiengesellschaft, DF MC Frauenauracher Straße 80 D-91056 Erlangen Germany
Product description:	**SINAMICS S120 frame size:** **Booksize, Booksize Compact and Chassis** (for included hardware and software releases see annex)

The functional safety functions "Basic Functions" (STO, SBC, SS1) and "Extended Functions" (STO, SBC, SS1, SS2, SLS, SOS, SSM, safe I/Os, SDI, SLP, SP) of the above mentioned product fulfil the requirements of SIL2 according to [1] and [4], PLd according to [2] and category 3 according to [2]. The functions STO, SS1 and SS2 correspond to stop category 0, stop category 1 and stop category 2 according to [3], respectively.

The safe break test (SBT) is suitable for safety functions up to category 2 according to [2].

Reference number

[1]	IEC 61508, part 1 to 3 (2010)
[2]	ISO 13849 part 1 (2015)
[3]	IEC 60204 (2009)
[4]	IEC 61800-5-2 (2016)

Erlangen, 18-09-10

X 

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1 Basic Functions

1.1 Software

1.1.1 SINAMICS Control Units

CU310DP 6SL3040-0LA00-0AA0 6SL3040-0LA00-0AA1 CU310 PN 6SL3040-0LA01-0AA1	CU320 6SL3040-0MA00-0AA1	CU320-2 DP 6SL3040-1MA00-0AA0	CU320-2 PN 6SL3040-1MA01-0AA0 CU310-2 DP 6SL3040-1LA00-0AA0 CU310-2 PN 6SL3040-1LA01-0AA0	Safety-Firmware-Version
---	V 2.1	---	---	02.10.36.00
---	V 2.2	---	---	02.20.24.00
---	V 2.3	---	---	02.30.18.00 02.30.29.00 02.30.31.00
V 2.4	V 2.4	---	---	02.40.28.00 02.40.33.00 02.40.43.00
V 2.5	V 2.5	---	---	02.50.22.00 02.50.28.00 02.50.32.14 02.50.39.00 02.50.49.00
V 2.6	V 2.6	---	---	02.60.30.00 02.60.40.00
---	---	V 4.3	---	04.30.14.00
---	---	V 4.4	V 4.4	04.40.22.00
---	---	V 4.5	V 4.5	04.50.30.00 04.50.30.05 04.50.30.29 04.30.34.00 04.50.30.46
---	---	V 4.6	V 4.6	04.60.19.00 04.60.21.06
---	---	V 4.7	V 4.7	04.70.35.07 04.70.35.18 04.70.35.35 04.70.35.42 04.70.35.51 04.70.36.02 04.74.35.02
---	---	V 4.8	V 4.8	04.80.60.00
---	---	V 5.1	V 5.1	05.10.16.00 05.10.34.00

1.1.2 SINAMICS Motor Modules (booksize/chassis/cabinet)

Motor Module (booksize)	CIB Assembly (chassis/cabinet)	Safety-Firmware-Version
V 2.1	---	02.10.36.00 02.10.41.00 02.20.24.00
V 2.3	V 2.3	02.30.17.00 02.30.27.00
V 2.4	V 2.4	02.40.20.00 02.40.33.00 02.40.52.00
V 2.5	V 2.5	02.50.15.00 02.50.28.00 02.50.37.00 02.50.49.00
V 2.6	V 2.6	02.60.25.00

1.1.3 SINAMICS Motor Modules (booksize/chassis/cabinet) – 2. Generation[1]

Motor Module (booksize)	Motor Module (motor-integrated)	CIM Assembly (chassis/cabinet)	Safety-Firmware-Version
V 2.5	---	---	02.50.22.00 02.50.32.00 02.50.39.00 02.50.49.00
V 2.6	---	V 2.6	02.60.30.00 02.60.40.00
V 4.3	---	V 4.3	04.30.14.00
V 4.4	---	V 4.4	04.40.23.04 04.40.23.22
V 4.4 HF99	---	---	04.40.23.96
V 4.5	---	V 4.5	04.50.28.00 04.50.30.05
V 4.6	V 4.6	V 4.6	04.60.16.00 04.60.21.05
V 4.7	V 4.7	V 4.7	04.70.35.00 04.70.35.18 04.70.36.02
V 4.8	V 4.8	V 4.8	04.80.60.00
V 5.1	V 5.1	V 5.1	05.10.16.00 05.10.34.00

[1] The 2nd generation motor modules of book size type are designated by an MLFB with final digit 3 or higher. The 2nd generation motor modules also include all book size compact types.

1.1.4 Hydraulic Linear Axis

HLA	Safety-Firmware-Version
V 4.7	04.70.35.00 04.70.35.18 04.70.36.02
V 4.8	04.80.60.00
V 5.1	05.10.16.00 05.10.34.00

1.2 Hardware

1.2.1 SINAMICS Control Units

Description	Order Purchase No. (MLFB)
CU310 DP	6SL3040-0LA00-0AA0 6SL3040-0LA00-0AA1
CU310-2 DP	6SL3040-1LA00-0AA0
CU310 PN	6SL3040-0LA01-0AA1
CU310-2 PN	6SL3040-1LA01-0AA0
CU320	6SL3040-0MA00-0AA1
CU320-2 DP	6SL3040-1MA00-0AA0
CU320-2 PN	6SL3040-1MA01-0AA0

1.2.2 SINAMICS Motor Modules (chassis/cabinet)

Only applies to chassis and cabinet motor modules of the SINAMICS drive system including the subassembly listed below.

Description	Order Purchase No. (MLFB)
CIB (control interface board, only STO and SS1)	6SL335x-6xxxx-xAx3

The entire safety functionality of motor modules of type chassis and cabinet is completely concentrated within the CIB (control interface board). All parts outside the CIB are considered to be irrelevant for integrated safety functionality.
Information:
The CIB (6SL335x-6xxxx-xAx3) are integrated in the modules listed below:

SINAMICS Chassis

6SL3310-1TExx-xAA0 (110kW-250kW)
6SL3315-1Texx-xAA0 (110kW-250kW)
6SL3320-1Texx-xAA0 (110kW-250kW)
6SL3325-1Texx-xAA0 (110kW-250kW)
6SL3325-1TGxx-xAA0 (110kW-250kW)

1.2.3 SINAMICS Motor Modules (chassis/cabinet) – 2. Generation

Description	Order Purchase No. (MLFB)
CIM (control interface module)	6SL3350-6TK00-0EA0 6SL3350-6TK00-0BA0 6SL3350-6TK00-0CA0 6SL3350-6TK00-0DA0

The entire safety functionality of motor modules of type chassis and cabinet is completely concentrated within the CIM (control interface module). All parts outside the CIM are considered to be irrelevant for integrated safety functionality.
Information:
The above mentioned CIM are integrated in the modules listed below:

SINAMICS Chassis

6SL3310-1Texx-xAA3 (110kW-250kW)
6SL3315-1Texx-xAA3 (110kW-250kW)
6SL3320-1Texx-xAA3 (110kW-250kW)
6SL3325-1Texx-xAA3 (110kW-250kW)
6SL3325-1TGxx-xAA3 (110kW-250kW)

1.2.4 SINAMICS Motor Modules (booksize)

Warning:
The DC-link interconnection of a multiple drive assembly must be electrically isolated on the right and left hand side by assembling a DC-link protection cover (order purchase no.: 6SL3162-5AA00-0AA0).

Description		Order Purchase No. (MLFB)			
Motor Module 400V		Internal Cooling		Cold-Plate Cooling	External Cooling
			coated		
SMM[2]	3A	6SL3120-1TE13-0AA0 [3]	6SL3120-1TE13-0AB0	6SL3126-1TE13-0AA0	6SL3121-1TE13-0AA0
SMM	5A	6SL3120-1TE15-0AA0	6SL3120-1TE15-0AB0	6SL3126-1TE15-0AA0	6SL3121-1TE15-0AA0
SMM	9A	6SL3120-1TE21-0AA1	6SL3120-1TE21-0AB0	6SL3126-1TE21-0AA0	6SL3121-1TE21-0AA0
SMM	18A	6SL3120-1TE21-8AA1	6SL3120-1TE21-8AB0	6SL3126-1TE21-8AA0	6SL3121-1TE21-8AA0
SMM	30[a]	6SL3120-1TE23-0AA1	6SL3120-1TE23-0AB0	6SL3126-1TE23-0AA0	6SL3121-1TE23-0AA0
SMM	45A	6SL3120-1TE24-5AA1 [4]	6SL3120-1TE24-5AB0	6SL3126-1TE24-5AA0 [4]	6SL3121-1TE24-5AA0
SMM	60A	6SL3120-1TE26-0AA1 [4]	6SL3120-1TE26-0AB0	6SL3126-1TE26-0AA0 [4]	6SL3121-1TE26-0AA0
SMM	85A	6SL3120-1TE28-5AA1	6SL3120-1TE28-5AB0	6SL3126-1TE28-5AA0	6SL3121-1TE28-5AA0
SMM	132A	6SL3120-1TE31-3AA0	6SL3120-1TE31-3AB0	6SL3126-1TE31-3AA0	6SL3121-1TE31-3AA0
SMM	200A	6SL3120-1TE31-3AA0	6SL3120-1TE32-0AB0	6SL3126-1TE32-0AA0	6SL3121-1TE32-0AA0
DMM[5]	3A	6SL3120-2TE13-0AA0	6SL3120-2TE13-0AB0	6SL3126-2TE13-0AA0	6SL3121-2TE13-0AA0
DMM	5A	6SL3120-2TE15-0AA0	6SL3120-2TE15-0AB0	6SL3126-2TE15-0AA0	6SL3121-2TE15-0AA0
DMM	9A	6SL3120-2TE21-0AA0	6SL3120-2TE21-0AB0	6SL3126-2TE21-0AA0	6SL3121-2TE21-0AA0
DMM	18A	6SL3120-2TE21-8AA0	6SL3120-2TE21-8AB0	6SL3126-2TE21-8AA0	6SL3121-2TE21-8AA0

1.2.5 SINAMICS Motor Modules (booksize) – 2. Generation

Warning:
The DC-link interconnection of a multiple drive assembly must be electrically isolated on the right and left hand side by assembling a DC-link protection cover (order purchase no.: 6SL3162-5AA00-0AA0).

Description		Order Purchase No. (MLFB)			
Motor Module 400V		Internal Cooling	Cold-Plate Cooling	External Cooling	Compact
SMM	3A	6SL3120-1TE13-0AA3 6SL3120-1TE13-0AA4 6SL3120-1TE13-0AD0	6SL3126-1TE13-0AA3 6SL3126-1TE13-0AA4	6SL3121-1TE13-0AA3 6SL3121-1TE13-0AA4	---
SMM	5A	6SL3120-1TE15-0AA3 6SL3120-1TE15-0AA4 6SL3120-1TE15-0AD0	6SL3126-1TE15-0AA3 6SL3126-1TE15-0AA4	6SL3121-1TE15-0AA3 6SL3121-1TE15-0AA4	---
SMM	9A	6SL3120-1TE21-0AA3 6SL3120-1TE21-0AA4 6SL3120-1TE21-0AD0	6SL3126-1TE21-0AA3 6SL3126-1TE21-0AA4	6SL3121-1TE21-0AA3 6SL3121-1TE21-0AA4	---
SMM	18A	6SL3120-1TE21-8AA3 6SL3120-1TE21-8AA4 6SL3120-1TE21-8AC0 6SL3120-1TE21-8AD0	6SL3126-1TE21-8AA3 6SL3126-1TE21-8AA4	6SL3121-1TE21-8AA3 6SL3121-1TE21-8AA4	---

[2] Single Motor Module
[3] in version A (PRODIC) SBC is not available
[4] only valid in combination with a terminal board cover with order purchase no.: 6SL3162-3CF00-0AA1 and article code A5E00397355), which is moulded-in on the inside of the cover
[5] Double Motor Module

Description		Order Purchase No. (MLFB)			
Motor 400V	Module	Internal Cooling	Cold-Plate Cooling	External Cooling	Compact
SMM	24[a]	6SL3120-1TE22-4AC0 6SL3120-1TE22-4AD0	---	---	---
SMM	30[a]	6SL3120-1TE23-0AA3 6SL3120-1TE23-0AC0 6SL3120-1TE23-0AD0	6SL3126-1TE23-0AA3	6SL3121-1TE23-0AA3	---
SMM	45[a]	6SL3120-1TE24-5AA3 6SL3120-1TE24-5AC0	6SL3126-1TE24-5AA3	6SL3121-1TE24-5AA3	---
SMM	60A	6SL3120-1TE26-0AA3 6SL3120-1TE26-0AC0	6SL3126-1TE26-0AA3	6SL3121-1TE26-0AA3	---
SMM	85A	6SL3120-1TE28-5AA3	6SL3126-1TE28-5AA3	6SL3121-1TE28-5AA3	---
SMM	132A	6SL3120-1TE31-3AA3	6SL3126-1TE31-3AA3	6SL3121-1TE31-3AA3	---
SMM	150A	---	---	6SL3125-1UE31-5AA0[6]	---
SMM	200A	6SL3120-1TE32-0AA3 6SL3120-1TE32-0AA4[7]	6SL3126-1TE32-0AA3 6SL3126-1TE32-0AA4	6SL3121-1TE32-0AA3 6SL3121-1TE32-0AA4 6SL3125-1TE32-0AA3 6SL3125-1TE32-0AA4	---
SMM	225A	---	---	6SL3125-1UE32-2AA0	---
DMM	3A	6SL3120-2TE13-0AA3 6SL3120-2TE13-0AA4 6SL3120-2TE13-0AD0	6SL3126-2TE13-0AA3 6SL3126-2TE13-0AA4	6SL3121-2TE13-0AA3 6SL3121-2TE13-0AA4	---
DMM	5A	6SL3120-2TE15-0AA3 6SL3120-2TE15-0AA4 6SL3120-2TE15-0AD0	6SL3126-2TE15-0AA3 6SL3126-2TE15-0AA4	6SL3121-2TE15-0AA3 6SL3121-2TE15-0AA4	---
DMM	9A	6SL3120-2TE21-0AA3 6SL3120-2TE21-0AA4 6SL3120-2TE21-0AD0	6SL3126-2TE21-0AA3 6SL3126-2TE21-0AA4	6SL3121-2TE21-0AA3 6SL3121-2TE21-0AA4	---
DMM	18A	6SL3120-2TE21-8AA3 6SL3120-2TE21-8AC0 6SL3120-2TE21-8AD0	6SL3126-2TE21-8AA3	6SL3121-2TE21-8AA3	---
SMM	9A	6SL3120-1VE21-0AA0	---	---	---
SMM	18A	6SL3120-1VE21-8AA0	---	---	---
SMM	24A	6SL3120-1VE22-4AA0	---	---	---
DMM	5A	6SL3120-2VE15-0AA0	---	---	---
DMM	9A	6SL3120-2VE21-0AA0	---	---	---
SMM	3A	---	---	---	6SL3420-1TE13-0AA0 6SL3420-1TE13-0AA1
SMM	5A	---	---	---	6SL3420-1TE15-0AA0 6SL3420-1TE15-0AA1
SMM	8A	---	---	---	6SL3420-1TE21-0AA0 6SL3420-1TE21-0AA1
SMM	18A	---	---	---	6SL3420-1TE21-8AA0 6SL3420-1TE21-8AA1
DMM	1,7A	---	---	---	6SL3420-2TE11-7AA0 6SL3420-2TE11-7AA1
DMM	3A	---	---	---	6SL3420-2TE13-0AA0 6SL3420-2TE13-0AA1
DMM	5A	---	---	---	6SL3420-2TE15-0AA0 6SL3420-2TE15-0AA1

[6] Liquid Cooled
[7] 70% de-rating

1.2.6 COMBI Motor Modules

Description	Order Purchase No. (MLFB)
COMBI (400V, 3 axis, 16kW, 18A-5A-5A)	6SL3111-3VE21-6FA0 6SL3111-3VE21-6FA1
COMBI (400V, 3 axis, 16kW, 24A-9A-9A)	6SL3111-3VE21-6EA0 6SL3111-3VE21-6EA1
COMBI (400V, 3 axis, 20kW, 30A-9A-9A)	6SL3111-3VE22-0HA0 6SL3111-3VE22-0HA1
COMBI (400V, 4 axis, 10kW, 24A-12A-12A-12A)	6SL3111-4VE21-0EA0 6SL3111-4VE21-0EA1
COMBI (400V, 4 axis, 16kW, 18A-9A-5A-5A)	6SL3111-4VE21-6FA0 6SL3111-4VE21-6FA1
COMBI (400V, 4 axis, 16kW, 24A-9A-9A-5A)	6SL3111-4VE21-6EA0 6SL3111-4VE21-6EA1
COMBI (400V, 4 axis, 20kW, 30A-12A-9A-9A)	6SL3111-4VE22-0HA0 6SL3111-4VE22-0HA1

1.2.7 Motor-Integrated Motor Modules

Description	Order Purchase No. (MLFB)
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RA1
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RB1
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RG1
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RH1
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RA2
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RB2
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RG2
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RH2
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RA1
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RB1
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RG1
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RH1
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RA2
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RB2
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RG2
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RH2
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RA1
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RB1
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RG1
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RH1
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RA2
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RB2
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RG2
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RH2
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RA1
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RB1
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RG1
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RH1
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RA2
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RB2
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RG2

Description	Order Purchase No. (MLFB)
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RH2
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RA1
S120M (400V, AH63, motor-integrated)	6SL3563-6DC71-0RA1
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RB1
S120M (400V, AH63, motor-integrated)	6SL3563-6DC71-0RB1
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RG1
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RH1
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RA2
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RB2
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RG2
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RH2

2 Extended Functions

2.1 Software

2.1.1 SINAMICS Control Units

CU310DP 6SL3040-0LA00-0AA0 6SL3040-0LA00-0AA1 CU310 PN 6SL3040-0LA01-0AA1	CU320 6SL3040-0MA00-0AA1	CU320-2 DP 6SL3040-1MA00-0AA0	CU320-2 PN 6SL3040-1MA01-0AA0 CU310-2 DP 6SL3040-1LA00-0AA0 CU310-2 PN 6SL3040-1LA01-0AA0	Safety-Firmware-Version
V 2.5	V 2.5	---	---	02.50.30.00 02.50.32.29 02.50.49.00
V 2.6	V 2.6	---	---	02.60.31.00 02.60.40.00 02.60.45.03 02.60.45.13 02.60.45.31
---	---	V 4.3	---	04.30.17.00
---	---	V 4.4	V 4.4	04.40.23.04 04.40.23.35
---	---	V 4.5	V 4.5	04.50.24.00 04.50.30.05 04.50.30.14 04.50.30.23 04.50.30.24 04.50.30.30 04.50.30.34 04.50.30.41
---	---	V 4.6	V 4.6	04.60.20.00 04.60.21.13
---	---	V 4.7	V 4.7	04.70.29.00[8] 04.70.35.21 04.70.35.37 04.70.35.44 04.70.35.62 04.70.36.01 04.70.36.04 04.74.35.02 04.74.35.13 04.74.35.15
---	---	V 4.8	V 4.8	04.80.65.01 04.80.65.05
---	---	V 5.1	V 5.1	05.10.20.00 05.10.23.01 05.10.39.00

2.1.2 SINAMICS Motor Modules (booksize/chassis/cabinet)

Motor Module (booksize)	CIB Assembly (chassis/cabinet)	Safety-Firmware-Version
---	---	---

[8] The use of SOS in combination with SS2 may lead to behaviour not described in the manual. For details see 3.1.

2.1.3 SINAMICS Motor Modules (booksize/chassis/cabinet) – 2. Generation[9]

Motor Module (booksize)	Motor Module (motor-integrated)	CIM Assembly (chassis/cabinet)	Safety-Firmware-Version
V 2.5	---	---	02.50.31.00 02.50.49.00
V 2.6	---	V 2.6	02.60.30.00 02.60.39.00 02.60.45.03 02.60.45.31
V 4.3	---	V 4.3	04.30.15.00
V 4.4	---	V 4.4	04.40.23.04 04.40.23.25
V 4.5	---	V 4.5	04.50.24.00 04.50.30.05 04.50.30.14 04.50.30.23 04.50.30.24 04.50.30.30
V 4.6	V 4.6	V 4.6	04.60.20.00 04.60.21.13
V 4.7	V 4.7	V4.7	04.70.28.00[10] 04.70.35.18 04.70.35.35 04.70.35.62 04.70.36.01 04.70.36.04
V 4.8	V 4.8	V4.8	04.80.65.01
V 5.1	V 5.1	V 5.1	05.10.17.00 05.10.34.00

2.1.4 Sensor Modules

SMI20 6SL3055-0AA00-5MA0 SME20 6SL3055-0AA00-5EA0 SME25 6SL3055-0AA00-5HA0 SME120 6SL3055-0AA00-5JA0 SME125 6SL3055-0AA00-5KA0 SMC20 6SL3055-0AA00-5BA1 6SL3055-0AA00-5BA2	SMI20 (2. Generation) 6SL3055-0AA00-5MA3 SMI24[11] 6SL3055-0AA00-5SA3	SMC20 (2. Generation) 6SL3055-0AA00-5BA3 SME20 (2. Generation) 6SL3055-0AA00-5EA3 SME25 (2. Generation) 6SL3055-0AA00-5HA3 SME120 (2. Generation) 6SL3055-0AA00-5JA3 SME125 (2. Generation) 6SL3055-0AA00-5KA3	Safety-Firmware-Version
V 2.4 SP1 V 2.5 V 2.6 V 4.1 V 4.3 V 4.4 V 4.5 V 4.6	---	---	02.40.06.00

[9] The 2nd generation motor modules of book size type are designated by an MLFB with final digit 3 or higher. The 2nd generation motor modules also include all book size compact types.
[10] The use of SOS in combination with SS2 may lead to behaviour not described in the manual. For details see 3.1.
[11] SMI24 only released for V4.4 and higher

V 4.7 V 4.8 V 5.1			
---	V 2.5 V 2.6	---	02.60.29.00 02.60.34.00
---	V 2.4 HF12 V 4.3	V 2.4 HF12 V 4.3	04.30.13.00
---	V 4.4	V 4.4	04.40.18.00 04.50.13.00 04.50.19.00
---	V 4.5	V 4.5	04.50.19.00
---	V 4.6	V 4.6	04.60.09.00
---	V 4.7	V 4.7	04.70.02.00
---	---	V 4.8	04.80.40.00
---	V 5.1	V 5.1	05.10.05.00

2.1.5 Terminal Module

TM54F 6SL3055-0AA00-3BA0	Safety-Firmware-Version
V 2.5	02.50.30.00
V 2.6	02.60.30.00
V 4.3	04.30.14.00
V 4.4	04.40.21.00
V 4.5	04.50.22.00
V 4.6	04.60.15.00
V 4.7	04.70.32.00
V 4.8	04.80.43.00
V 5.1	05.10.16.00

2.1.6 Hydraulic Linear Axis

HLA	Safety-Firmware-Version
V 4.7	04.70.28.00[12] 04.70.35.18 04.70.35.35 04.70.35.62 04.70.36.01 04.70.36.04
V 4.8	04.80.65.01
V 5.1	05.10.17.00 05.10.34.00

[12] Not valid for SOS and SS2. For details see 3.1.

2.2 Hardware

2.2.1 SINAMICS Control Units

Description	Order Purchase No. (MLFB)
CU310 DP	6SL3040-0LA00-0AA0 6SL3040-0LA00-0AA1
CU310-2 DP	6SL3040-1LA00-0AA0
CU310 PN	6SL3040-0LA01-0AA1
CU310-2 PN	6SL3040-1LA01-0AA0
CU320	6SL3040-0MA00-0AA1
CU320-2 DP	6SL3040-1MA00-0AA0
CU320-2 PN	6SL3040-1MA01-0AA0

2.2.2 SINAMICS Motor Modules (chassis/cabinet)

Description	Order Purchase No. (MLFB)
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2.2.3 SINAMICS Motor Modules (chassis/cabinet) – 2. Generation

Only applies to chassis and cabinet motor modules of the SINAMICS drive system including the subassembly listed below.

Description	Order Purchase No. (MLFB)
CIM (control interface module)	6SL3350-6TK00-0EA0 6SL3350-6TK00-0BA0 6SL3350-6TK00-0CA0 6SL3350-6TK00-0DA0

The entire safety functionality of motor modules of type chassis and cabinet is completely concentrated within the CIM (control interface module). All parts outside the CIM are considered to be irrelevant for integrated safety functionality.

Information:
The above mentioned CIM are integrated in the modules listed below:

SINAMICS S120 Chassis

6SL3310-1TExx-xAA3 (110kW-250kW)
6SL3315-1TExx-xAA3 (110kW-250kW)
6SL3320-1TExx-xAA3 (110kW-250kW)
6SL3325-1TExx-xAA3 (110kW-250kW)
6SL3325-1TGxx-xAA0 (110kW-250kW)

2.2.4 SINAMICS Motor Modules (booksize)

Description	Order Purchase No. (MLFB)			
Motor Module 400V	Internal Cooling		Cold-Plate Cooling	External Cooling
		coated		
---	---	---	---	---

2.2.5 SINAMICS Motor Modules (booksize) – 2. Generation

Warning:

The DC-link interconnection of a multiple drive assembly must be electrically isolated on the right and left hand side by assembling a DC-link protection cover (order purchase no.: 6SL3162-5AA00-0AA0).

Description		Order Purchase No. (MLFB)			
Motor Module 400V		Internal Cooling	Cold-Plate Cooling	External Cooling	Compact
SMM[13]	3A	6SL3120-1TE13-0AA3 6SL3120-1TE13-0AA4 6SL3120-1TE13-0AD0	6SL3126-1TE13-0AA3 6SL3126-1TE13-0AA4	6SL3121-1TE13-0AA3 6SL3121-1TE13-0AA4	6SL3420-1TE13-0AA0 6SL3420-1TE13-0AA1
SMM	5A	6SL3120-1TE15-0AA3 6SL3120-1TE15-0AA4 6SL3120-1TE15-0AD0	6SL3126-1TE15-0AA3 6SL3126-1TE15-0AA4	6SL3121-1TE15-0AA3 6SL3121-1TE15-0AA4	6SL3420-1TE15-0AA0 6SL3420-1TE15-0AA1
SMM	9A	6SL3120-1TE21-0AA3 6SL3120-1TE21-0AA4 6SL3120-1TE21-0AD0	6SL3126-1TE21-0AA3 6SL3126-1TE21-0AA4	6SL3121-1TE21-0AA3 6SL3121-1TE21-0AA4	6SL3420-1TE21-0AA0 6SL3420-1TE21-0AA1
SMM	18A	6SL3120-1TE21-8AA3 6SL3120-1TE21-8AA4 6SL3120-1TE21-8AC0 6SL3120-1TE21-8AD0	6SL3126-1TE21-8AA3 6SL3126-1TE21-8AA4	6SL3121-1TE21-8AA3 6SL3121-1TE21-8AA4	6SL3420-1TE21-8AA0 6SL3420-1TE21-8AA1
SMM	24A	6SL3120-1TE22-4AC0 6SL3120-1TE22-4AD0	---	---	---
SMM	30A	6SL3120-1TE23-0AA3 6SL3120-1TE23-0AC0 6SL3120-1TE23-0AD0	6SL3126-1TE23-0AA3	6SL3121-1TE23-0AA3	---
SMM	45A	6SL3120-1TE24-5AA3[14] 6SL3120-1TE24-5AC0	6SL3126-1TE24-5AA3	6SL3121-1TE24-5AA3	---
SMM	60A	6SL3120-1TE26-0AA3 6SL3120-1TE26-0AC0	6SL3126-1TE26-0AA3	6SL3121-1TE26-0AA3	---
SMM	85A	6SL3120-1TE28-5AA3	6SL3126-1TE28-5AA3	6SL3121-1TE28-5AA3	---
SMM	132A	6SL3120-1TE31-3AA3	6SL3126-1TE31-3AA3	6SL3121-1TE31-3AA3	---
SMM	150A	---	---	6SL3125-1UE31-5AA0[15]	---
SMM	200A	6SL3120-1TE32-0AA3 6SL3120-1TE32-0AA4	6SL3126-1TE32-0AA3 6SL3126-1TE32-0AA4	6SL3121-1TE32-0AA3 6SL3121-1TE32-0AA4[16] 6SL3125-1TE32-0AA3 6SL3125-1TE32-0AA4,	---
SMM	225A	---	---	6SL3125-1UE32-2AA0	---
DMM[17]	1,7A	---	---	---	6SL3420-2TE11-7AA0 6SL3420-2TE11-7AA1
DMM	3A	6SL3120-2TE13-0AA3 6SL3120-2TE13-0AA4	6SL3126-2TE13-0AA3 6SL3126-2TE13-0AA4	6SL3121-2TE13-0AA3 6SL3121-2TE13-0AA4	6SL3420-2TE13-0AA0 6SL3420-2TE13-0AA1

[13] Single Motor Module
[14] only valid in combination with a terminal board cover with order purchase no.: 6SL3162-3CF00-0AA1 and article code A5E00397355), which is moulded-in on the inside of the cover
[15] Liquid Cooled
[16] 70% de-rating
[17] Double Motor Module

Description		Order Purchase No. (MLFB)			
Motor Module 400V		Internal Cooling	Cold-Plate Cooling	External Cooling	Compact
		6SL3120-2TE13-0AD0			
DMM	5A	6SL3120-2TE15-0AA3 6SL3120-2TE15-0AA4 6SL3120-2TE15-0AD0	6SL3126-2TE15-0AA3 6SL3126-2TE15-0AA4	6SL3121-2TE15-0AA3 6SL3121-2TE15-0AA4	6SL3420-2TE15-0AA0 6SL3420-2TE15-0AA1
DMM	9A	6SL3120-2TE21-0AA3 6SL3120-2TE21-0AA4 6SL3120-2TE21-0AD0	6SL3126-2TE21-0AA3 6SL3126-2TE21-0AA4	6SL3121-2TE21-0AA3 6SL3121-2TE21-0AA4	---
DMM	18A	6SL3120-2TE21-8AA3 6SL3120-2TE21-8AC0 6SL3120-2TE21-8AD0	6SL3126-2TE21-8AA3	6SL3121-2TE21-8AA3	---
SMM	9A	6SL3120-1VE21-0AA0	---	---	---
SMM	18A	6SL3120-1VE21-8AA0	---	---	---
SMM	24A	6SL3120-1VE22-4AA0	---	---	---
DMM	5A	6SL3120-2VE15-0AA0	---	---	---
DMM	9A	6SL3120-2VE21-0AA0	---	---	---

2.2.6 COMBI Motor Modules

Description	Order Purchase No. (MLFB)
COMBI (400V, 3 axis, 16kW, 18A-5A-5A)	6SL3111-3VE21-6FA0 6SL3111-3VE21-6FA1
COMBI (400V, 3 axis, 16kW, 24A-9A-9A)	6SL3111-3VE21-6EA0 6SL3111-3VE21-6EA1
COMBI (400V, 3 axis, 20kW, 30A-9A-9A)	6SL3111-3VE22-0HA0 6SL3111-3VE22-0HA1
COMBI (400V, 4 axis, 10kW, 24A-12A-12A-12A)	6SL3111-4VE21-0EA0 6SL3111-4VE21-0EA1
COMBI (400V, 4 axis, 16kW, 18A-9A-5A-5A)	6SL3111-4VE21-6FA0 6SL3111-4VE21-6FA1
COMBI (400V, 4 axis, 16kW, 24A-9A-9A-5A)	6SL3111-4VE21-6EA0 6SL3111-4VE21-6EA1
COMBI (400V, 4 axis, 20kW, 30A-12A-9A-9A)	6SL3111-4VE22-0HA0 6SL3111-4VE22-0HA1

2.2.7 Motor-Integrated Motor Modules

Description	Order Purchase No. (MLFB)
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RA1
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RB1
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RG1
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RH1
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RA2
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RB2
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RG2
S120M (400V, AH36, motor-integrated)	6SL3532-6DF71-0RH2
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RA1
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RB1
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RG1
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RH1
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RA2
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RB2

Description	Order Purchase No. (MLFB)
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RG2
S120M (400V, AH48, motor-integrated)	6SL3540-6DF71-0RH2
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RA1
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RB1
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RG1
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RH1
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RA2
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RB2
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RG2
S120M (400V, AH48, motor-integrated)	6SL3542-6DF71-0RH2
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RA1
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RB1
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RG1
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RH1
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RA2
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RB2
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RG2
S120M (400V, AH63, motor-integrated)	6SL3562-6DF71-0RH2
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RA1
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RB1
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RG1
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RH1
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RA2
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RB2
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RG2
S120M (400V, AH63, motor-integrated)	6SL3563-6DF71-0RH2

2.2.8 Sensor Modules

Description	Order Purchase No. (MLFB)
SMI20 (sensor module internal)	6SL3055-0AA00-5MA0 (A5E00207496) 6SL3055-0AA00-5MA3 (A5E01139087)
SMI24 (sensor module internal)	6SL3055-0AA00-5SA3
SME20 (sensor module external)	6SL3055-0AA00-5EA0 6SL3055-0AA00-5EA3 (2. Generation)
SME25 (sensor module external)	6SL3055-0AA00-5HA0 6SL3055-0AA00-5HA3 (2. Generation)
SME120 (sensor module external)	6SL3055-0AA00-5JA0 6SL3055-0AA00-5JA3 (2. Generation)
SME125 (sensor module external)	6SL3055-0AA00-5KA0 6SL3055-0AA00-5KA3 (2. Generation)
SMC20 (sensor module cabinet)	6SL3055-0AA00-5BA1 6SL3055-0AA00-5BA2 6SL3055-0AA00-5BA3 (2. Generation)
SMC40 (sensor module cabinet)	6SL3055-0AA00-5DA0

2.2.9 Motor-Integrated Sensor Modules

Description	Order Purchase No. (MLFB)
1FK2 Motor AH20 (DQ-singleturn, one cable connector) 1FK2 Motor AH30 (DQ-singleturn, one cable connector) 1FK2 Motor AH40 (DQ-singleturn, one cable connector) 1FK2 Motor AH48 (DQ-singleturn, one cable connector) 1FK2 Motor AH63 (DQ-singleturn, one cable connector) 1FK2 Motor AH80 (DQ-singleturn, one cable connector) 1FK2 Motor AH100 (DQ-singleturn, one cable connector)	1FK2x02-xAxxx-xSAx 1FK2x03-xAxxx-xSAx 1FK2x04-xAxxx-xSAx 1FK2x05-xAxxx-xSAx 1FK2x06-xAxxx-xSAx 1FK2x08-xAxxx-xSAx 1FK2x10-xAxxx-xSAx
1FK2 Motor AH20 (DQ-multiturn, one cable connector) 1FK2 Motor AH30 (DQ-multiturn, one cable connector) 1FK2 Motor AH40 (DQ-multiturn, one cable connector) 1FK2 Motor AH48 (DQ-multiturn, one cable connector) 1FK2 Motor AH63 (DQ-multiturn, one cable connector) 1FK2 Motor AH80 (DQ-multiturn, one cable connector) 1FK2 Motor AH100 (DQ-multiturn, one cable connector)	1FK2x02-xAxxx-xMAx 1FK2x03-xAxxx-xMAx 1FK2x04-xAxxx-xMAx 1FK2x05-xAxxx-xMAx 1FK2x06-xAxxx-xMAx 1FK2x08-xAxxx-xMAx 1FK2x10-xAxxx-xMAx
1FK2 Motor AH20 (DQ-singleturn, two cable connector) 1FK2 Motor AH30 (DQ-singleturn, two cable connector) 1FK2 Motor AH40 (DQ-singleturn, two cable connector) 1FK2 Motor AH48 (DQ-singleturn, two cable connector) 1FK2 Motor AH63 (DQ-singleturn, two cable connector) 1FK2 Motor AH80 (DQ-singleturn, two cable connector) 1FK2 Motor AH100 (DQ-singleturn, two cable connector)	1FK2x02-xAxxx-xSBx 1FK2x03-xAxxx-xSBx 1FK2x04-xAxxx-xSBx 1FK2x05-xAxxx-xSBx 1FK2x06-xAxxx-xSBx 1FK2x08-xAxxx-xSBx 1FK2x10-xAxxx-xSBx
1FK2 Motor AH20 (DQ-multiturn, two cable connector) 1FK2 Motor AH30 (DQ-multiturn, two cable connector) 1FK2 Motor AH40 (DQ-multiturn, two cable connector) 1FK2 Motor AH48 (DQ-multiturn, two cable connector) 1FK2 Motor AH63 (DQ-multiturn, two cable connector) 1FK2 Motor AH80 (DQ-multiturn, two cable connector) 1FK2 Motor AH100 (DQ-multiturn, two cable connector)	1FK2x02-xAxxx-xMBx 1FK2x03-xAxxx-xMBx 1FK2x04-xAxxx-xMBx 1FK2x05-xAxxx-xMBx 1FK2x06-xAxxx-xMBx 1FK2x08-xAxxx-xMBx 1FK2x10-xAxxx-xMBx

2.2.10 Terminal Module

Description	Order Purchase No. (MLFB)
TM54F	6SL3055-0AA00-3BA0

2.2.11 Hydraulic Linear Axis

Description	Order Purchase No. (MLFB)
HLA	6SL3420-2HX00-0AA0

3 Boundary Conditions

3.1 Exceptions

The marked software versions may lead to unexpected behaviour if SOS is used in combination with SS2. Please contact your local support for details.

3.2 System Related Software

According to IEC61508-4 (2010) the related engineering system “SINAMICS Startdrive” is classified as T3 off-line support tool. Therefore, all required measures considering T3 off-line support tools as defined in [1] were applied.

Off-Line Support Tool	Version TIA Portal
SINAMICS Startdrive	V14 V14 SP1 V15 V15 Update 1 V15 Update 2 V15 Update 3