

IndraDrive C and Accessories

Type 2180A...

Servo Amplifier

The maXYmos NC controls, monitors, evaluates and documents XY characteristics for joining and press-fitting processes in characteristics with NC joining modules and the associated servo amplifier IndraDrive.

- Coordinated complete package with all components
- Control unit CSB02 NC joining module specifically parameterized
- SERCOS III connection to maXYmos NC
- Safe Motion on-board (SMES, SMST2¹⁾, SMM1¹⁾)
- Applications up to Performance Level e (PL e) possible
- Diagnostics via Ethernet

Description

A suitable servo amplifier package is available for every NC joining module. It comprises the following components: a power section with the necessary firmware as well as a parameter set, safety zone box and the required cables. This ensures optimum system performance and at the same time reduces the project planning time required by the application planner for the drive technology to a minimum.

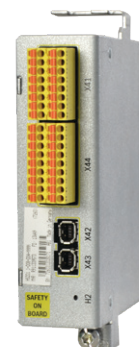
Application

The motor of the NC joining module is controlled by the servo amplifier IndraDrive. This has a direct impact on the travel distance, travel speed and the maximum force of the NC joining module. The specifications of this control are transferred directly per SERCOS III bus in accordance with the sequence parameterized in the maXYmos NC. This enables flexible implementation of a very wide variety of applications in the areas of joining and press-fitting.

¹⁾ not available at Type 5847B1



IndraDrive C and
power section HCS,
Control unit CSB02



Safety zone box
HSZ01

Technical Data

Servo amplifier IndraDrive

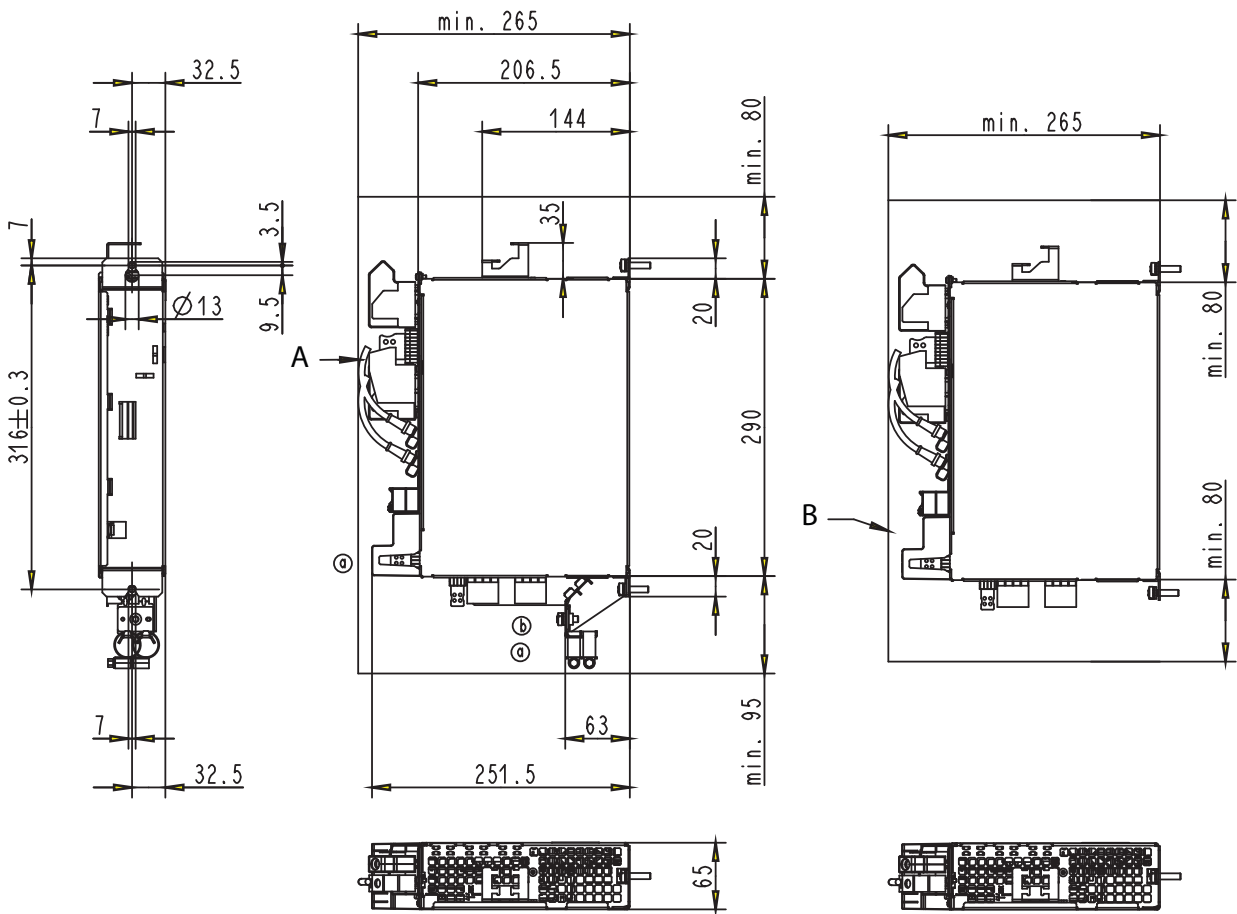
Interface		SERCOS III
Control voltage	VDC/W	(19,2 ... 28,8) /24
Power connection	V Hz Phases	400 (400 ... 500) ± 10% 50 ... 60 ± 2% 3
Weight Control Unit	kg	0,4
Weight Power Element		
HCS02.1E-W0012	kg	2,9
HCS02.1E-W0028	kg	3,8
HCS02.1E-W0054	kg	6,7
HCS02.1E-W0070	kg	6,8
HCS03.1E-W0100 ²⁾	kg	20

Weight auxiliary component for HCS03.1-W0100

HNK01 Line filter and power choke	kg	20
HLR01 Brake resistor	kg	4,5

²⁾ Specifications without line filter and brake resistor

Dimensions of power section/converter HCS02.1E-W0012



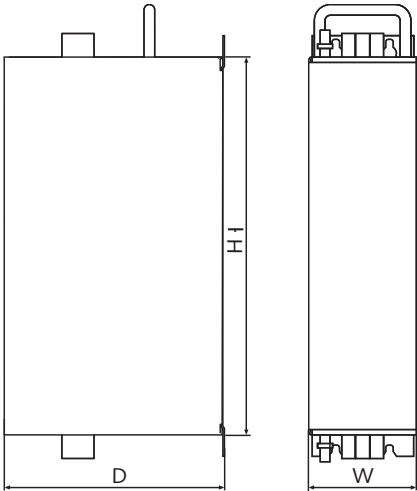
A: minimal installation space (when using the accessory HAS02.1); additional space for cable
B: minimal installation space; additional space for cable

Dimensions of line filter NFD03.1-480-007

Power section	Line filter
HCS02.1E-W0012	NFD03.1-480-007

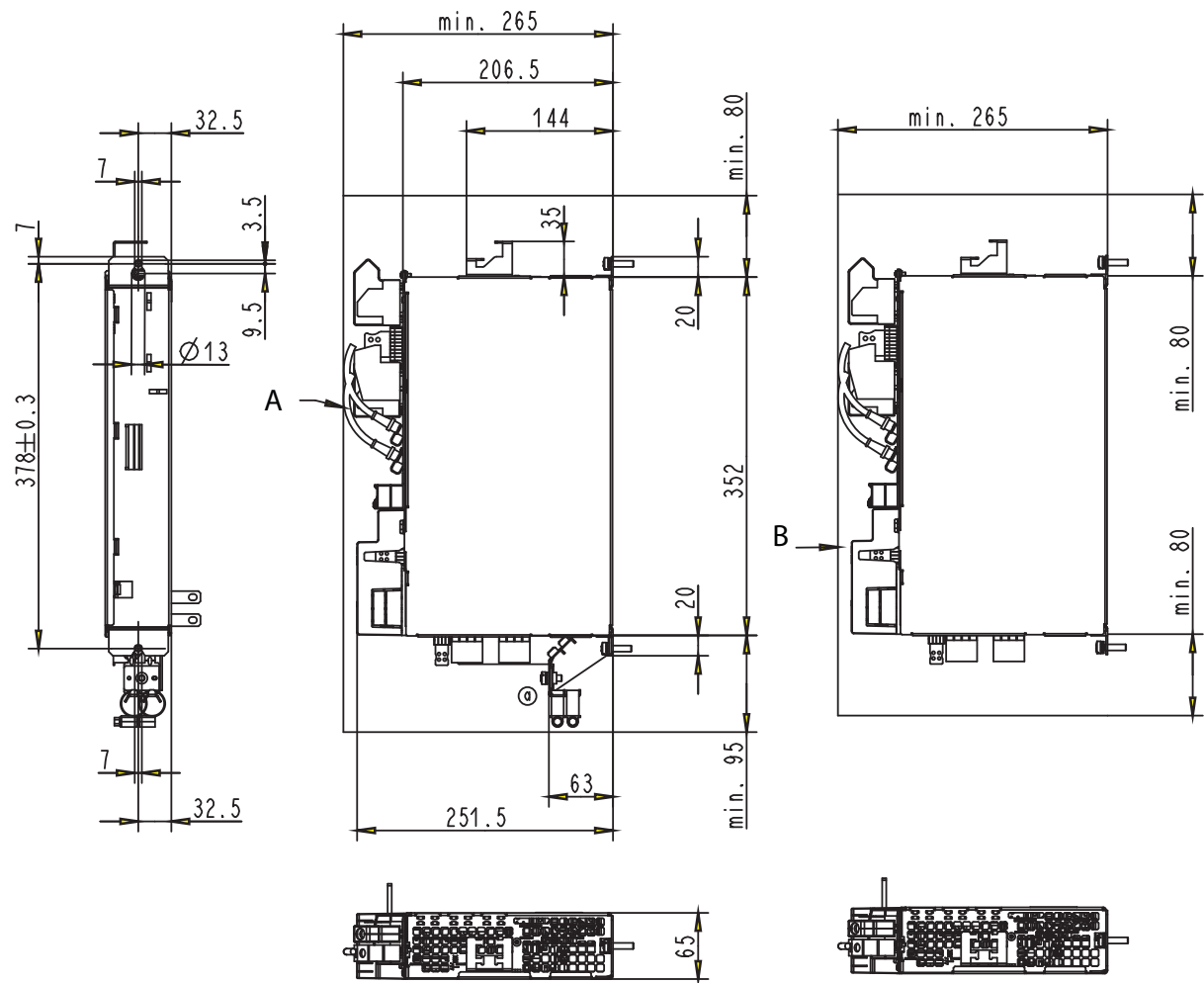
Dimensions of line filter NFD03.1-480-007		
H	D	W
160	90	50

Max. power dissipation inclusive braking resistance		
HCS02.1E-W0012	Watt (max.)	150



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Dimensions of power section/converter HCS02.1E-W0028



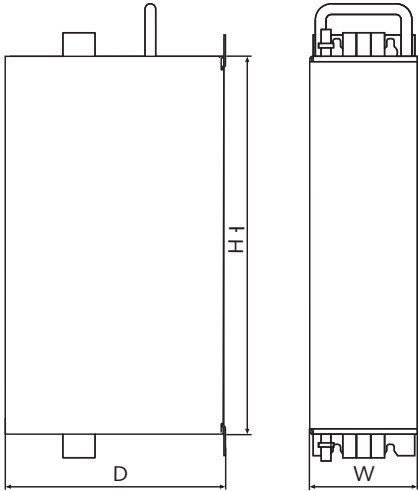
A: minimal installation space (when using the accessory HAS02.1); additional space for cable
B: minimal installation space; additional space for cable

Dimensions of line filter NFD03.1-480-007

Power section	Line filter
HCS02.1E-W0028	NFD03.1-480-007

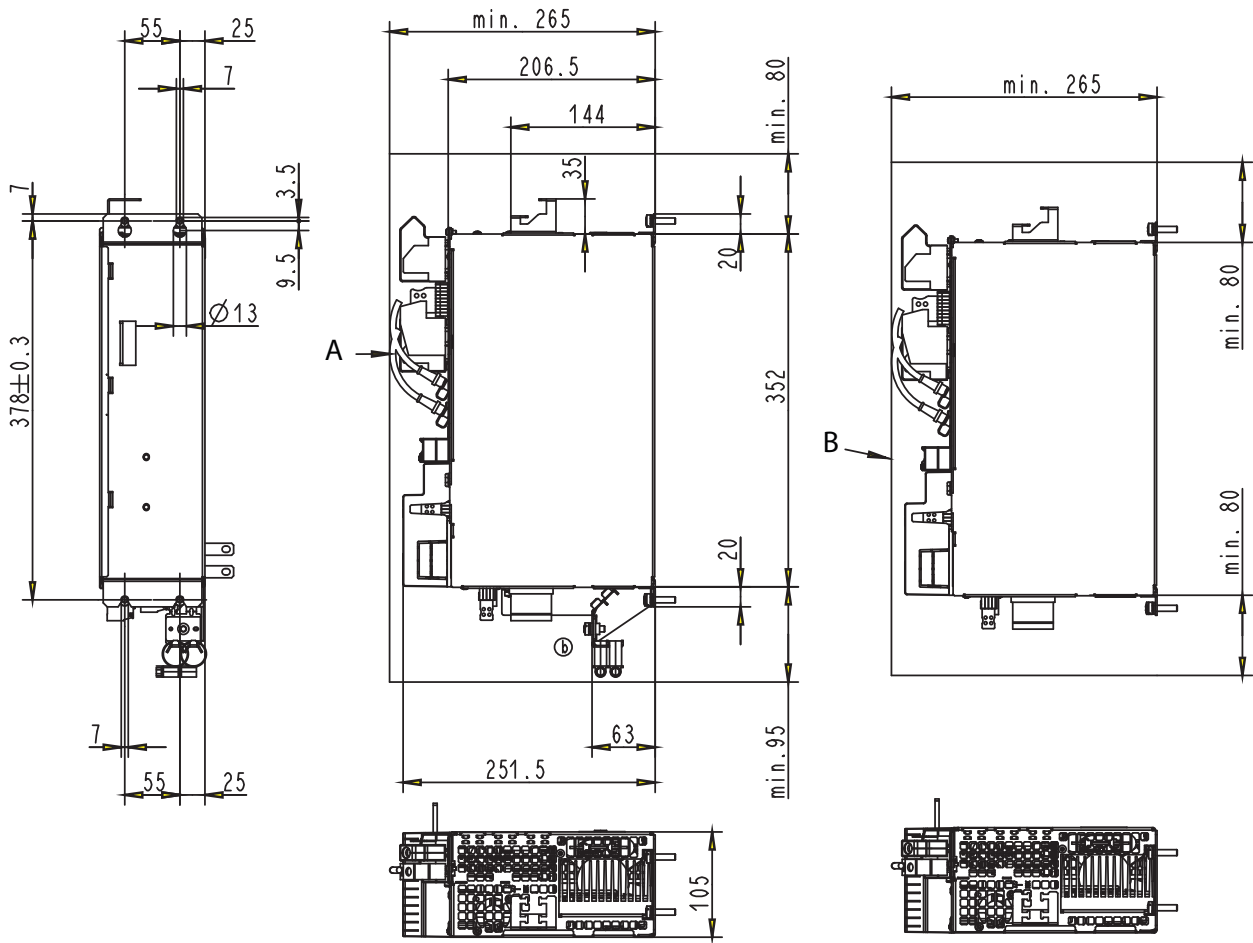
Dimensions of line filter NFD03.1-480-007		
H	D	W
160	90	50

Max. power dissipation inclusive braking resistance		
HCS02.1E-W0028	Watt (max.)	300



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Dimensions of power section/converter HCS02.1E-W0054 and HCS02.1E-W0070



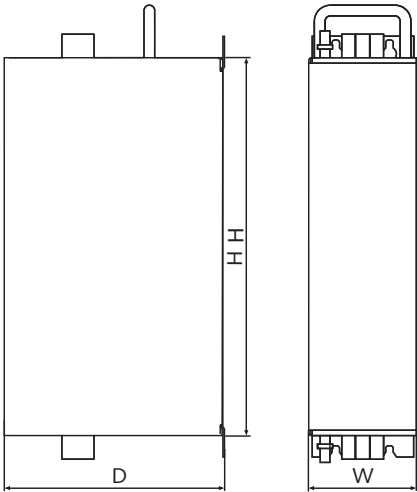
A: minimal installation space (when using the accessory HAS02.1); additional space for cable
B: minimal installation space; additional space for cable

Dimensions of line filter NFD03.1-480-016

Power section	Line filter
HCS02.1E-W0054	NFD03.1-480-016
HCS02.1E-W0070	NFD03.1-480-016

Dimensions of line filter NFD03.1-480-016		
H	D	W
220	90	55

Max. power dissipation inclusive braking resistance		
HCS02.1E-W0054	Watt (max.)	640
HCS02.1E-W0070	Watt (max.)	820

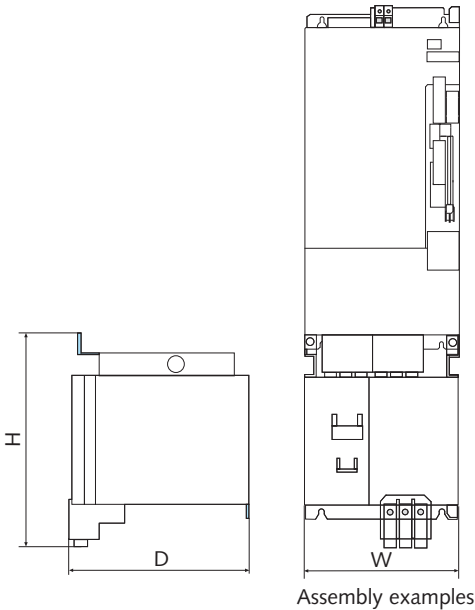


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Dimensions line filter with integrated power choke HNK01

Power element	Line filter and power choke
HCS03.1E-W0100	HNK01.1A-A075-E0080-A-500-NNNN

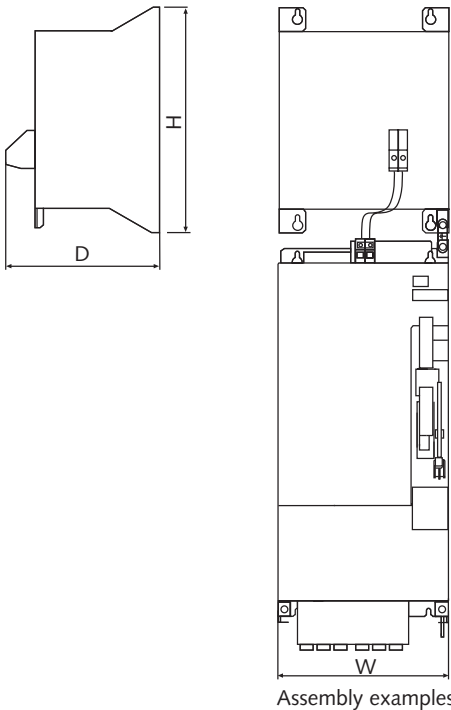
Dimensions of line filter HNK01.1A-A075...		
H	D	W
310	270	225



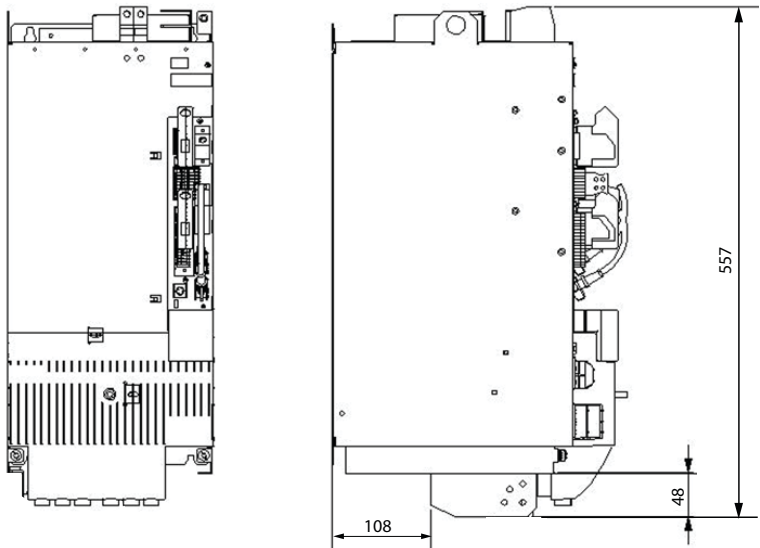
Dimensions brake resistor HLR01

Power element	Brake resistor
HCS03.1E-W0100	HLR01.1N-0470-N11R7-A-007-NNNN

Dimensions brake resistor HLR01.1N-0470...		
H	D	W
300	210	223



Dimensions power section/converter HCS03.1E-W0100¹⁾



Power element	Line filter and power choke
HCS03.1E-W0100	HNK01.1A-A075-E0080-A-500-NNNN

Max. power dissipation inclusive braking resistance		
HCS03.1E-W0100	Watt (max.)	1530

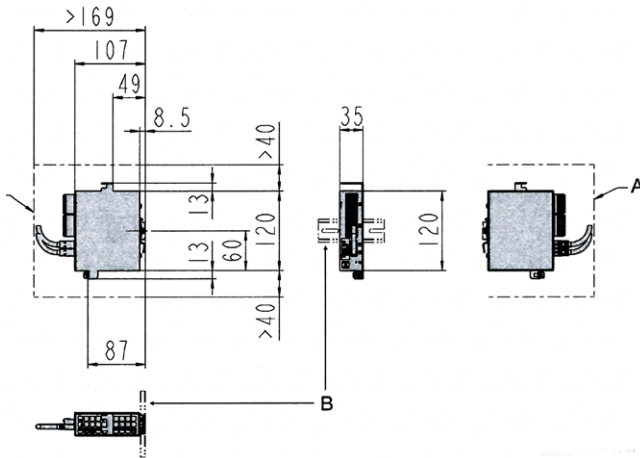
¹⁾ Specifications without line filter and brake resistor

Device depths, heights and widths

Device	Device width [mm]	min. installation width [mm]	Device height [mm]	Device depth [mm]
HCS02.1E-W0012	65	70	290	265
HCS02.1E-W0028	65	70	352	
HCS02.1E-W0054	105	110	352	
HCS02.1E-W0070	105	110	352	
HCS03.1E-W0100	225	225	440	322

Dimensions of safety zone box²⁾ (SB)

HSZ01.1-D08-D04-NNNN



Overview application chain:

NC joining module Type	NCFx	Controller	Motor cable	Feedback cable
2152B...	NCFS	HCS02.1 28A	KSM341600-5	KSM303500-5
2157B...	NCFT	HCS02.1 12A	KSM315330-5	KSM303500-5
2160A15...	NCFB	HCS02.1 12A	KSM341600-5	KSM303500-5
2160A50...	NCFB	HCS02.1 28A	KSM347990-5	KSM303500-5
2151B10/15...	NCFH	HCS02.1 28A	KSM333040-5	KSM18028885-5
2151B30...	NCFH	HCS02.1 54A	KSM333010-5	KSM18028885-5
2151B60...	NCFH	HCS02.1 70A	KSM333010-5	KSM18028885-5
2153A005...	NCFN	HCS02.1 12A	KSM341600-5	KSM303500-5
2153A010/015...	NCFN	HCS02.1 28A	KSM341600-5	KSM303500-5
2153A030...	NCFN	HCS02.1 54A	KSM303490-5	KSM303500-5
2153A060...	NCFN	HCS02.1 70A	KSM305640-5	KSM303500-5
2153A100...	NCFN	HCS02.1 70A	KSM307530-5	KSM303500-5
2153A200/300...	NCFN	HCS03.1 100A	KSM316330-5	KSM303500-5
2161A1505400...	NCFR	HCS02.1 28A	KSM333040-5	KSM18028885-5

Accessories:

- SERCOS III connection cable, length 5 m
- Safety zone box cable (2 cables required), length 1 m

Type

KSM18029160-5

KSM18029161-1

Ordering Key

Type 2180A

Power section for NC joining module

NCFH	2151B to ≤ 015...	NCFH0215
NCFH	2151B 30...	NCFH0030
NCFH	2151B 60...	NCFH0060
NCFN	2153A 005...	NCFN0005
NCFN	2153A 010/015...	NCFN1015
NCFN	2153A 030...	NCFN0030
NCFN	2153A 060...	NCFN0060
NCFN	2153A 100...	NCFN0100
NCFN	2153A 200...	NCFN0200
NCFN	2153A 300...	NCFN0300
NCFB	2160A 15...	NCFB0015
NCFB	2160A 50...	NCFB0050
NCFS	2152B 25...	NCFS0025
NCFT	2157B...	NCFT01,5
NCFR	2161A-Linear	NCFR1LB ¹⁾
NCFR	2161A-Rotation	NCFR1R00 ^{1),2)}

Safety technology

with safety zone box	SB
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Ordering example:

Type 2180ANCNF0030SB

Power section servo amplifier: **Type 2180A...**, for joining module: NCFN 30 kN: **NCFN0030**, with safety zone box: **SB**.

Type 2180ANCFR1R00^{1),2)}

Power section servo amplifier: **Type 2180A...**, for joining module: NCFR rotation: **NCFR1R00**, without safety zone box: (NCFR1R00).

¹⁾ Safe motion SMES

²⁾ NCFR1R00 (Rotation) without safety zone box