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NORDAC *FLEX* – SK 200E (22 kW, Size 4)

SK 200E-222-340-A-C-DC1 with connection unit

Publisher

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Technical Information / Datasheet	Additional Information SK 200E-222-340A-C-DC1			
Documentation	TI 70_1901	V 1.0	0221	en

Validity of document

The following information applies for the following types of NORDAC *FLEX* series frequency inverters.

- **Frequency inverter**

  SK 200E-222-340-A-C-DC1 (part number: 275137817)

- **Connection unit**

  SK TI4-4-2xx-4-C-DC1 (part number: 275279914)

NOTICE

Destruction of the frequency inverter through use of an incorrect connection unit

If the frequency inverter is not operated with the corresponding connection unit, this will result in overload of electrical components and thus to the destruction of the device.

- Only operate the frequency inverter with the corresponding connection unit.

The devices differ from standard devices basically in the permissible supply voltage and the connection terminals to be used for this purpose. The devices are based on the standard firmware of the NORDAC *PRO* SK 200E series.

- The frequency inverter is to be used exclusively with the corresponding connection unit.
- The connection unit is to be used exclusively with the corresponding frequency inverter.

The following documents are therefore the basis for the device:

1. **BU 0200, edition 4920** (Part no.: 6072001)

   Safety information, hardware description, installation notes and software description for the basic device

2. **BU 0210, edition 1620** (Part no.: 6072101)

   Description of the POSICON function

3. **BU 0550, edition 1919** (Part no.: 6075501)

   for the description of PLC functionality

4. and the following information identifying the differences of the device in comparison with **BU 0200** with regard to the hardware description and installation information.

1 General

The following deviations from the manual apply.

Chapter 1.6 Standards and approvals

There is **no approval** according to **UL, CSA, RCM** or **EAC** as well as **CE EX** or **EAC Ex**!

2 Assembly and installation

The following deviations from the manual apply.

Chapter 2.3 Braking resistor (BR)

Chapter removed.

No braking resistor can be connected.

Chapter 2.4.2 Electrical connection of the power unit

Paragraph

3. Mains cable connection: to terminals L1-L2/N-L3 and PE (depending on the device)

is replaced by

3. Mains cable connection: to terminals DC+ / DC- and PE

Chapter 2.4.2.1 Mains connection (L1, L2(/N), L3, PE)

This chapter is replaced by

Chapter 2.4.2.1 Mains connection (DC+, DC-, PE)

⚠ WARNING

Electric shock

Dangerous voltages can be present at the mains input and the motor connection terminals, even when the device is not in operation.

- Before starting work, check that all relevant components (voltage source, connection cables, connection terminals of the device) are free of voltage using suitable measuring equipment.
- Use insulated tools (e.g. screwdrivers).
- DEVICES MUST BE EARTHED.

NOTICE

Supply voltage connection

Incorrect DC supply connection results in destruction of the frequency inverter.

- Observe correct polarity

Fuse protection must be provided by a suitable DC fuse (see technical data). For connection to or isolation from the mains, components (main switch or contactor) with suitable DC rating must be used.

Isolation from or connection to the mains must always be carried out for all poles.

ⓘ Information

Input choke

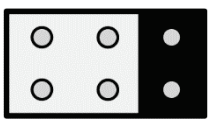
For improved EMC characteristics and in order to minimise the back-flowing current, an input choke can be incorporated into the mains supply cables.

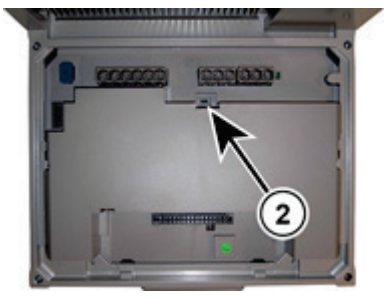
- Inductance: 0.3 to 0.5 mH
- Nominal current: ≥ 50 A

Jumper position

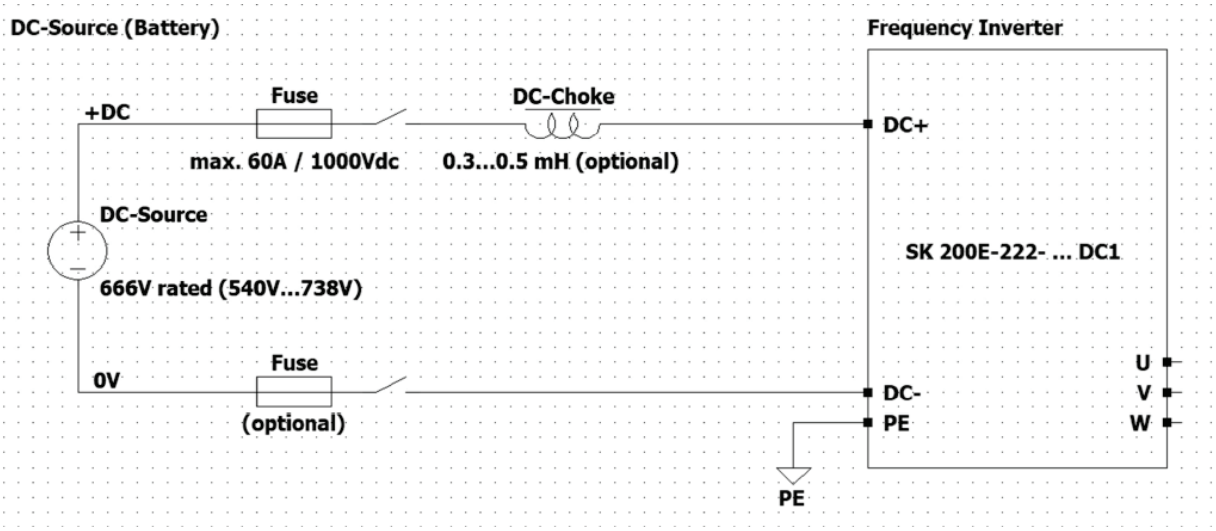
The jumpers for the line filters **(2)** must be set according to the figure (only jumpers on the right are set).

CY = ON





Connection scheme



Chapter 2.4.2.3 Brake resistor (+B, -B)

Chapter removed.

3 Display, operation and options

No deviations

4 Commissioning

No deviations

5 Parameters

No deviations

6 Operating status messages

No deviations

7 Technical Data

The following deviations from the manual apply.

Chapter 7.1 General data

Function	Specification
Pulse frequency	3.0 … 16.0 kHz, factory setting = 6 kHz Power reduction > 6 kHz
Ambient conditions	3K4 IP66
Hardware status	EAA
Firmware status	V2.2 R0

All other specifications remain unchanged.

Chapter 7.2.2 Electrical data 400 V

Device type	SK 200E…	-222-340-A-C-DC1			
	Size	4			
Nominal motor power (4-pole standard motor)	400 V	22 kW			
	480 V	30 hp			
Mains voltage		430 … 800 V DC, ± 0			
Input current	rms [1]	46 A			
	FLA [2]	38 A			
Output voltage		3 phases, 0 … 0.7 x mains voltage, 0 – 400 Hz			
Output current [3]	rms [1]	46 A			
	FLA motor mounting [2]	38 A			
	FLA wall mounting [2]	38 A			
Braking resistor		Not permissible			
Motor mounting (fan cooling, integrated into the device) [4]					
max. continuous power / max. continuous current					
S1-50°C		22.0kW / 46.0A			
max. permissible ambient temperature with nominal output current					
S1 S3 70% ED 10 min S6 70% ED 10 min (100% / 20% M_N)		40°C 41°C 41°C			
Wall mounting (fan cooling, integrated into the device) [4]					
max. continuous power / max. continuous current					
S1-40°C		22.0kW / 46.0A			
max. permissible ambient temperature with nominal output current					
S1 S3 70% ED 10 min S6 70% ED 10 min (100% / 20% M_N)		40°C 42°C 41°C			
		Fuses (1000 V DC)			
Slow-blowing		≤ 60 A			

1) Note the derating curve (🕮 Section).

2) FLA – **Full Load Current**, maximum current for the entire mains voltage range as stated above

3) FLA (S1-40°C)

4) Fan cooling, temperature controlled ON= 55°C, OFF= 50°C,
Run-on time if the 50°C limit is undershot and with the removal of the enable: 2 minutes

8 Additional information

The following deviations from the manual apply.

Chapter 8.3.3 EMC of the device

Figure 33, The wiring recommendation is to be applied analogously.

- Mains connection: Instead of L1, L2/N, L3, now use **DC+, DC-** according to the labelling on the terminal strip
- Braking resistor n/a

Chapter 8.4.4 Reduced output current due to low voltage

Chapter removed.

Chapter 8.5 Operation on the RCD

Chapter removed.

9 Maintenance and service information

No deviations