

SK LF2-480/5-F 500E Size 2

Part number: 278 273 005

Footprint line filter



Similar to illustration

Only qualified electricians are allowed to install and commission the module. An electrician is a person who, because of their technical training and experience, has sufficient knowledge with regard to

- switching on, switching off, isolating, earthing and marking power circuits and devices,
- proper maintenance and use of protective devices in accordance with defined safety standards.

⚠ DANGER!

Danger of electric shock

The frequency inverter continues to carry hazardous voltages for up to 5 minutes after it was switched off.

- Work must not be carried out unless the device has been disconnected from the voltage and at least 5 minutes have elapsed since the mains was switched off!

⚠ CAUTION

Danger of burns

The module and all other metal components can heat up to temperatures above 70 °C.

Sufficient cooling time must be allowed for when working on the components in order to avoid injuries (local burns) to parts of the body coming into contact with the components.

In order to avoid damage to neighbouring objects, sufficient clearance must be maintained during installation.

NOTICE

Validity of this document

This document is only valid in combination with the operating instructions for the relevant frequency inverter. Safe commissioning of this module and the frequency inverter depends on the availability of this information.

| | | | | |
|--|-----------------------|-------|------|----|
| Technical Information / Datasheet | SK LF2-480/5-F | | | |
| Line filter | TI 278273005 | V 1.0 | 4016 | EN |

Scope of delivery

| | | |
|-----|------------------|----------------------------|
| 1 x | Module | SK LF2-480/5-F 500E Size 2 |
| 1 x | Plug part | 4-pole |



Similar to illustration

Field of use

Footprint line filter (input filter) to reduce the emission of electromagnetic interference. In combination with this footprint line filter, the radio interference suppression level of the frequency inverter improves, and a longer motor cable is possible. The module can be mounted underneath or in the immediate vicinity of the frequency inverter.

Frequency inverter assignment

| Permissible frequency inverters | Size | Limit value classes ¹⁾ Cable-related emission 150 kHz – 30 MHz | |
|---|------|---|----------|
| | | Class C2 | Class C1 |
| SK 5xxE-111-340-A ... SK 5xxE-221-340-A | 2 | 100 m | 50 m |
| SK 5xxE-111-340-O ... SK 5xxE-221-340-O | 2 | 100 m | 25 m |

¹⁾ Class C1 / C2 as per EN 61800-3

Technical Data

Electrical data

| | | | | | |
|-------------------------|-----|------------------------------|---------------------------|-----|-------------|
| Number of phases | | 3 | Leakage current 1) | mA | 74.3 / 7.7 |
| Rated voltage | V ~ | 480 | Test voltage 2) | V - | 2150 / 2700 |
| Rated frequency | Hz | 50 ... 60 | Resistance on line | mΩ | 43.5 |
| Rated current | A | 5.5 (U _T ≈ 50 °C) | Power dissipation | W | 3.2 |

¹⁾ 1st value: Calculated with max. input voltage and failure of 2 phases (typically at 50 Hz)

2nd value: Rated for the maximum permissible input voltage fluctuation as per IEC 38 ± 10 %

²⁾ 1st value: between 2 phases

2nd value: between phase and housing

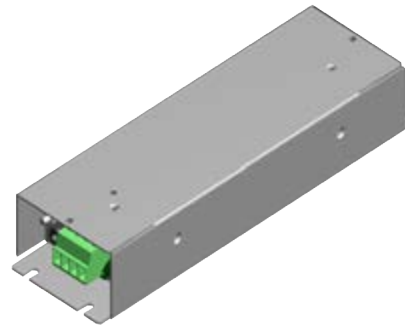
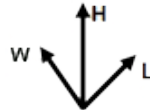
General

| | | | | |
|--------------------------|----|---|--------------------------|-------------------------------|
| Temperature range | °C | 0 ... 40 (100 % duty cycle / S1) 0 ... 50 (70 % duty cycle / S3) | European standard | EN 60939-2 |
| Climate class | | 25/085/21 (EN 60068-1) | Mounting 1) | |
| Certifications | | RoHS, EAC | Standard position | 4 x M5 x 8 (mounting surface) |
| Tightening torque | Nm | 0.7 – 0.8 terminal 3.0 PE connection | FI on line filter | 2 x M5 x 8 (FI) |
| Weight | kg | 1.7 | Protection class | IP00 |

¹⁾ not part of the delivery, use washers if applicable

Dimensions

| | | |
|---------------------------------|-------------------|---------------|
| Envelope dimensions [mm] | L x W x H | 290 x 88 x 48 |
| Mounting [mm] | Standard position | L x W |
| | FI | L |
| Supply cable [mm] | Flexible strand | L |
| | Wire end sleeve | L |



Connections

| Name | PC connection | Input (PE, L1, L2, L3) | | Output (PE2, L12, L22, L32) ²⁾ | |
|----------------------|--------------------|--|------------|--|--------|
| Type | Bolt ¹⁾ | Socket part with provided plug part, screw terminals, 4-pole | | Leads with wire end sleeves, 4-lead | |
| Cross section / type | M5 | 0.2 - 10 mm ² | AWG 24 - 8 | 1 mm ² | AWG 18 |

¹⁾ incl. 2 washers, 1 spring washer, 1 M5 nut

²⁾ Name can differ for older versions.

Installation

| | |
|---------------------------------|--|
| Installation location | In a control cabinet: <ul style="list-style-type: none"> • underneath the frequency inverter, or • in its immediate vicinity |
| Installation orientation | Standard (vertical) or Booksize: <ul style="list-style-type: none"> • Keep a minimum distance of 100 mm above and below other devices or control cabinet components |
| Fastening | With screws (fastening material has to be provided) |

Installation steps

| | | |
|----|--|--|
| 1. | <p>Installation of footprint accessories / unit</p> <p><i>Standard position:</i> Install a footprint unit with its underside flat on a level surface (control cabinet rear wall) and screw in with 4 screws to be provided (see  Technical Data – Fastening) into the respective fastening bores.</p> <p><i>Booksize:</i> Install a Booksize unit with a side on a level surface (control cabinet rear wall) in the vicinity of the frequency inverter and screw in with 2 or 4 screws to be provided (see  Technical Data – Fastening) into the respective fastening bores.</p> |  |
| 2. | <p>Installation of frequency inverter on footprint accessories</p> <p><i>Standard position:</i> Use 2 or 4 screws (depending on the size) to fasten the frequency inverter to the footprint unit.</p> <p><i>Booksize:</i> Not required</p> |  <p style="text-align: center;">Standard position</p> |
| 3. | <p>Connect the power cable and the PE connection to terminals PE, L1, L2, L3 of the input terminal block or the provided plug (depending on the size) while heeding the specified tightening torques (see  Technical Data – Connections).</p> <p>Note: Establish the PE connection first!</p> | |
| 4. | <p>Connect the pre-assembled output cable (separate leads) (PE2, L12, L22, L32) to terminal strip X1 ¹⁾ of the frequency inverter (PE, L1, L2, L3) for mains connection. Please refer to the manuals for the tightening torques (see  "Further documentation and software: www.nord.com").</p> |  <p style="text-align: center;">Booksize</p> |

¹⁾ X1 for sizes 1 - 7 X1.1 and X1.2 for size 8 and above


 **Information**

Combination with brake resistor

When using a footprint brake resistor, it should be mounted preferably underneath the frequency inverter and on the footprint line filter.

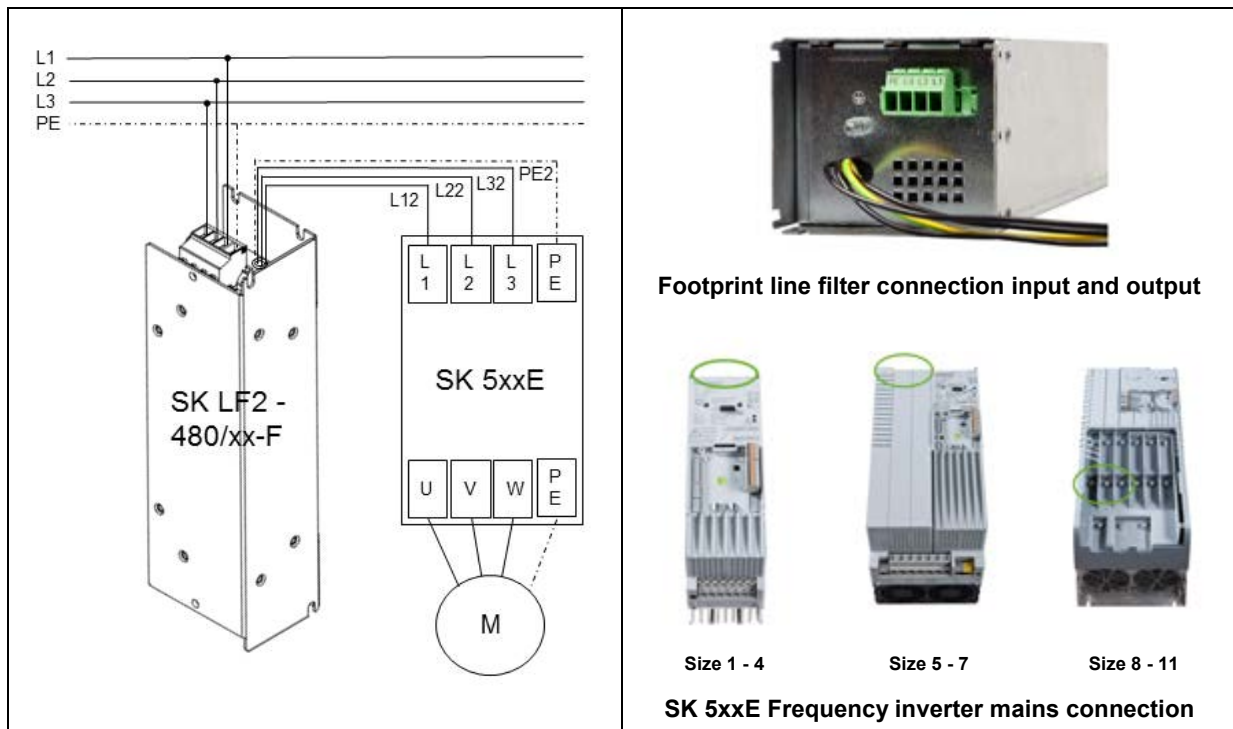
NOTICE

Connection and EMC configuration

For information on how to connect the line filter, on the jumper settings required for compliance with the limit value classes, please refer to the respective manual  "Further documentation and software: www.nord.com". For frequency inverters of sizes 1 – 7, jumpers A and B have to be used. For frequency inverters of sizes 8 – 11, DIP switch EMC Filter has to be used.

Non-compliance or incorrect jumper settings can destroy the frequency inverter.

Wiring diagram



Further documentation and software: www.nord.com

| Document | Name |
|-------------------------|---|
| BU_0500 | SK 500E – SK 535E frequency inverter manual |

| Document | Name |
|-------------------------|-----------------------------------|
| BU_0505 | SK 54xE frequency inverter manual |