GETRIEBEBAU NORD
Member of the NORD DRIVESYSTEMS Group

SK LF2-480/2-F 500E Size 1

Footprint line filter

Part number: 278 273 002

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.

Scope of delivery

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

Similar to illustration

Field of use

Footprint input filter (line 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-550-340-A	…	SK 5xxE-750-340-A	1	100 m	50 m
SK 5xxE-550-340-O	…	SK 5xxE-750-340-O	1	100 m	25 m

[1] Class C1 / C2 as per EN 61800-3

Technical Data

Electrical data

Number of phases		3
Rated voltage	V ~	480
Rated frequency	Hz	50 … 60
Rated current	A	2.3 ($U_T \approx 50$ °C)

Leakage current 1)	mA	61.5 / 6.4
Test voltage 2)	V -	2150 / 2700
Resistance on line	mΩ	200
Power dissipation	W	1.1

[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 %

General

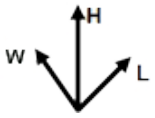
Temperature range	°C	0 … 40 (100 % duty cycle / S1) 0 … 50 (70 % duty cycle / S3)
Climate class		25/085/21 (EN 60068-1)
Certifications		RoHS, EAC
Tightening torque	Nm	0.7 – 0.8 terminal 3.0 PE connection
Weight	kg	1.1

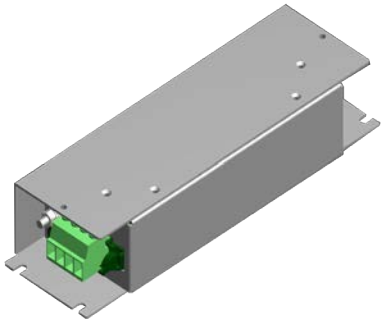
European standard	EN 60939-2
Mounting 1)	
Standard position	4 x M5 x 8 (mounting surface)
FI on line filter	2 x M5 x 8 (FI)
Protection class	IP00

[1] not part of the delivery, use washers if applicable

Dimensions

Envelope dimensions [mm]	L x W x H	250 x 75 x 48
Mounting [mm]		
Standard position	L x W	240 x 50
FI	L	220
Supply cable [mm]		
Flexible strand	L	500
Wire end sleeve	L	10





Connections

Name	**PC connection**	**Input** (PE, L1, L2, L3)		**Output** **(PE2, L12, L22, L32)**	
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 mm²	AWG 24 - 8	1.5 mm²	AWG 16

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

Installation

Installation location	In a control cabinet: • underneath the frequency inverter, or • in its immediate vicinity
Installation orientation	Standard (vertical) or Booksize: • 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.	Installation of footprint accessories / unit *Standard position:* 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. *Booksize:* 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.	  Standard position  Booksize
2.	Installation of frequency inverter on footprint accessories *Standard position:* Use 2 or 4 screws (depending on the size) to fasten the frequency inverter to the footprint unit. *Booksize:* Not required	
3.	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). Note: Establish the PE connection first!	
4.	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").	

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.

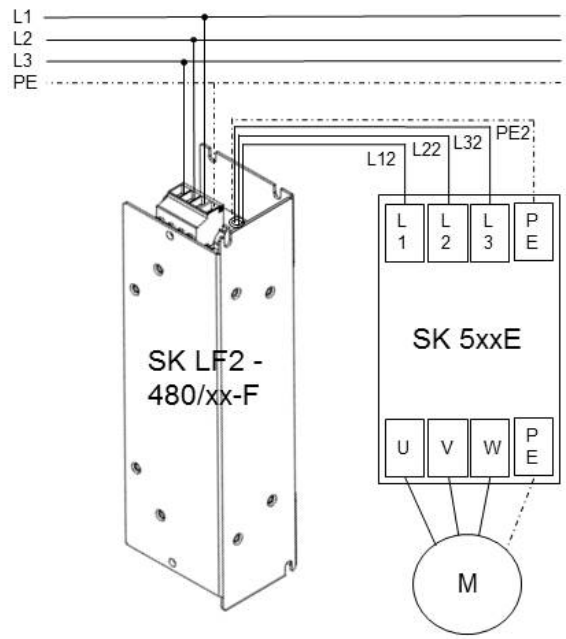
NOTICE

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



Footprint line filter connection input and output

Size 1 - 4 **Size 5 - 7** **Size 8 - 11**

SK 5xxE Frequency inverter mains connection

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

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

Footprint line filter

Part number: 278 273 005

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.

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
Rated voltage	V ~	480
Rated frequency	Hz	50 … 60
Rated current	A	5.5 ($U_T \approx 50$ °C)

Leakage current 1)	mA	74.3 / 7.7
Test voltage 2)	V -	2150 / 2700
Resistance on line	mΩ	43.5
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

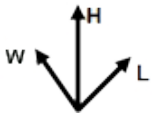
Temperature range	°C	0 … 40 (100 % duty cycle / S1) 0 … 50 (70 % duty cycle / S3)
Climate class		25/085/21 (EN 60068-1)
Certifications		RoHS, EAC
Tightening torque	Nm	0.7 – 0.8 terminal 3.0 PE connection
Weight	kg	1.7

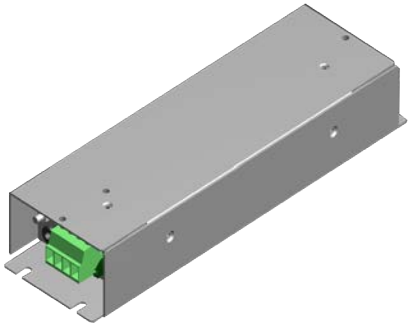
European standard	EN 60939-2
Mounting 1)	
Standard position	4 x M5 x 8 (mounting surface)
FI on line filter	2 x M5 x 8 (FI)
Protection class	IP00

[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	274 x 50
FI	L	260
Supply cable [mm]		
Flexible strand	L	500
Wire end sleeve	L	10





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 mm²	AWG 24 - 8	1 mm²	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: • underneath the frequency inverter, or • in its immediate vicinity
Installation orientation	Standard (vertical) or Booksize: • 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.	Installation of footprint accessories / unit *Standard position:* 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. *Booksize:* 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.	  Standard position  Booksize
2.	Installation of frequency inverter on footprint accessories *Standard position:* Use 2 or 4 screws (depending on the size) to fasten the frequency inverter to the footprint unit. *Booksize:* Not required	
3.	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). Note: Establish the PE connection first!	
4.	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").	

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.

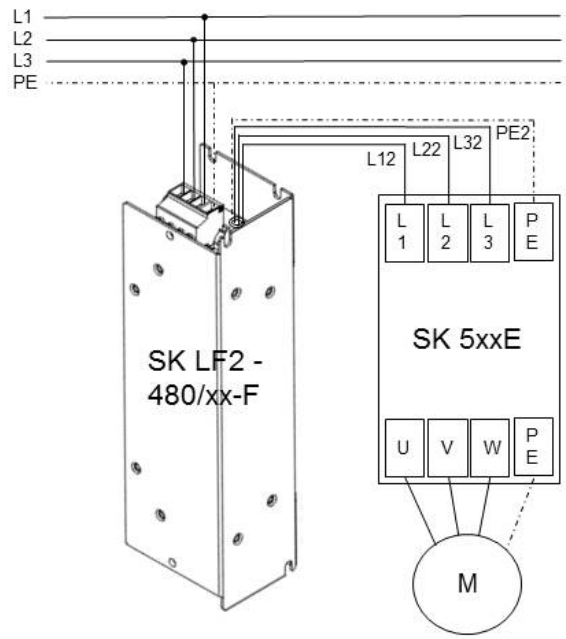
NOTICE

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



Footprint line filter connection input and output

Size 1 - 4 **Size 5 - 7** **Size 8 - 11**

SK 5xxE Frequency inverter mains connection

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

GETRIEBEBAU NORD
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SK LF2-480/9-F 500E Size 3

Part number: 278 273 009

Footprint line filter

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.

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Scope of delivery

1 x	**Module**	SK LF2-480/9-F 500E Size 3
1 x	**Plug part**	4-pole

Field of use

Footprint input filter (line 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-301-340-A	…	SK 5xxE-401-340-A	3	100 m	50 m
SK 5xxE-301-340-O	…	SK 5xxE-401-340-O	3	100 m	25 m

[1] Class C1 / C2 as per EN 61800-3

Technical Data

Electrical data

Number of phases		3
Rated voltage	V ~	480
Rated frequency	Hz	50 … 60
Rated current	A	9.5 ($U_T \approx 50$ °C)

Leakage current 1)	mA	187 / 19.5
Test voltage 2)	V -	2150 / 2700
Resistance on line	mΩ	25.3
Power dissipation	W	5.6

[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

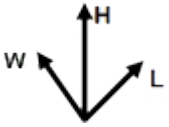
Temperature range	°C	0 … 40 (100 % duty cycle / S1) 0 … 50 (70 % duty cycle / S3)
Climate class		25/085/21 (EN 60068-1)
Certifications		RoHS, EAC
Tightening torque	Nm	0.7 – 0.8 terminal 3.0 PE connection
Weight	kg	2.5

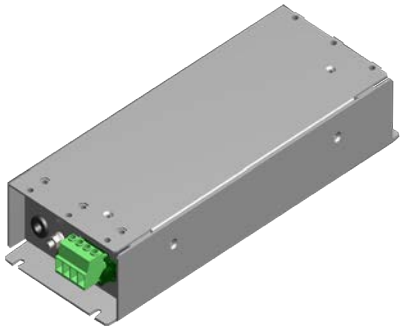
European standard	EN 60939-2
Mounting 1)	
Standard position	4 x M5 x 8 (mounting surface)
FI on line filter	6 x M5 x 8 (FI)
Protection class	IP00

[1] not part of the delivery, use washers if applicable

Dimensions

Envelope dimensions [mm]	L x W x H	305 x 115 x 54
Mounting [mm]		
Standard position	L x W	293 x 80
FI	L x W	275 x 80
Supply cable [mm]		
Flexible strand	L	500
Wire end sleeve	L	10





Connections

Name	**PC connection**	**Input** (PE, L1, L2, L3)		**Output** **(PE2, L12, L22, L32)**		
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 mm²	AWG 24 - 8	1.5 mm²	AWG 16	

[1] incl. 2 washers, 1 spring washer, 1 M5 nut

Installation

Installation location	In a control cabinet: • underneath the frequency inverter, or • in its immediate vicinity
Installation orientation	Standard (vertical) or Booksize: • 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.	Installation of footprint accessories / unit *Standard position:* 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. *Booksize:* 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.	  Standard position  Booksize
2.	Installation of frequency inverter on footprint accessories *Standard position:* Use 2 or 4 screws (depending on the size) to fasten the frequency inverter to the footprint unit. *Booksize:* Not required	
3.	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). Note: Establish the PE connection first!	
4.	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").	

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.

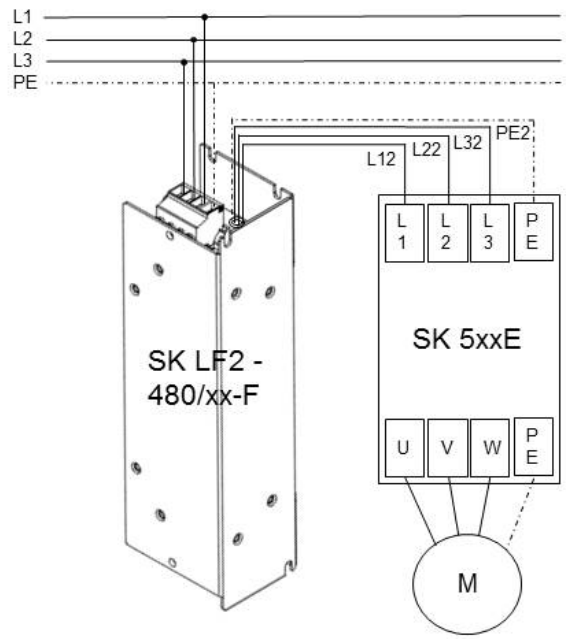
NOTICE

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



Footprint line filter connection input and output

Size 1 - 4 **Size 5 - 7** **Size 8 - 11**

SK 5xxE Frequency inverter mains connection

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

GETRIEBEBAU NORD
Member of the NORD DRIVESYSTEMS Group

SK LF2-480/15-F 500E Size 4

Footprint line filter

Part number: 278 273 015

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**

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Scope of delivery

1 x	**Module**	SK LF2-480/15-F 500E Size 4
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-551-340-A	…	SK 5xxE-751-340-A	4	100 m	50 m
SK 5xxE-551-340-O	…	SK 5xxE-751-340-O	4	100 m	25 m

1) Class C1 / C2 as per EN 61800-3

Technical Data

Electrical data

Number of phases		3
Rated voltage	V ~	480
Rated frequency	Hz	50 … 60
Rated current	A	16.0 ($U_T \approx 50$ °C)

Leakage current 1)	mA	193.4 / 20.2
Test voltage 2)	V -	2150 / 2700
Resistance on line	mΩ	14.5
Power dissipation	W	9.7

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

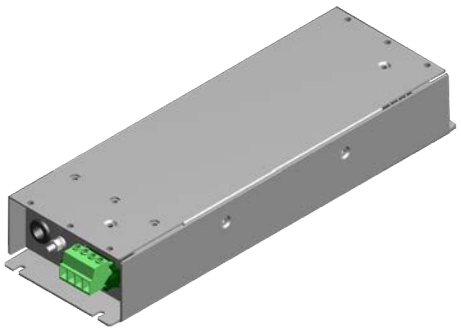
Temperature range	°C	0 … 40 (100 % duty cycle / S1) 0 … 50 (70 % duty cycle / S3)
Climate class		25/085/21 (EN 60068-1)
Certifications		RoHS, EAC
Tightening torque	Nm	0.7 – 0.8 terminal 3.0 PE connection
Weight	kg	2.8

European standard	EN 60939-2
Mounting 1)	
Standard position	4 x M5 x 8 (mounting surface)
FI on line filter	6 x M5 x 8 (FI)
Protection class	IP00

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

Dimensions

Envelope dimensions [mm]	L x W x H	350 x 115 x 54
Mounting [mm]		
Standard position	L x W	340 x 80
FI	L	320
Supply cable [mm]		
Flexible strand	L	500
Wire end sleeve	L	10



Connections

Name	**PC connection**	**Input** (PE, L1, L2, L3)		**Output** **(PE2, L12, L22, L32)**	
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 mm²	AWG 24 - 8	1.5 mm²	AWG 16

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

Installation

Installation location	In a control cabinet: • underneath the frequency inverter, or • in its immediate vicinity
Installation orientation	Standard (vertical) or Booksize: • 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.	Installation of footprint accessories / unit *Standard position:* 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. *Booksize:* 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.	  Standard position  Booksize
2.	Installation of frequency inverter on footprint accessories *Standard position:* Use 2 or 4 screws (depending on the size) to fasten the frequency inverter to the footprint unit. *Booksize:* Not required	
3.	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). Note: Establish the PE connection first!	
4.	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").	

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.

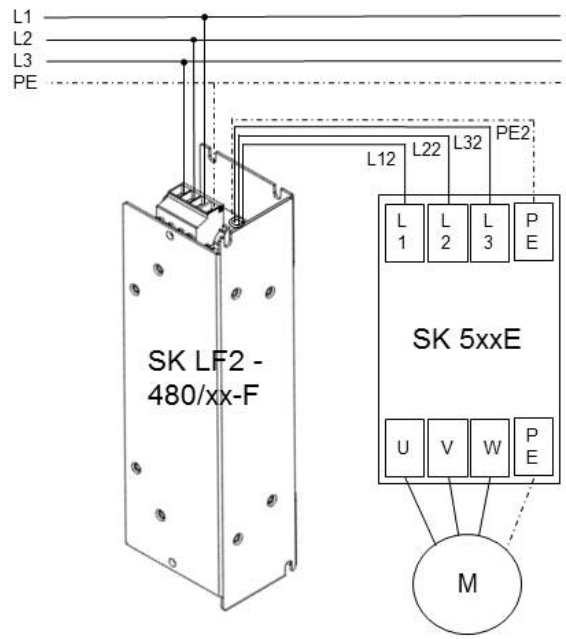
NOTICE

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



Footprint line filter connection input and output

Size 1 - 4 **Size 5 - 7** **Size 8 - 11**

SK 5xxE Frequency inverter mains connection

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

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SK LF2-480/45-F 500E Size 5

Part number: 278 273 045

Footprint line filter

It only is allowed for qualified electricians to install and commission the module. An electrician is a person who, because of their technical training and experience, has sufficient knowledge relating 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.

Scope of delivery

1 x	**Module**	SK LF2-480/45-F 500E Size 5
1 x	**Plug part**	4-pole

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 [1]			**Size**	**Limit value classes** [2] **Cable-related emission 150 kHz – 30 MHz**	
				Class C2	**Class C1**
SK 5xxE-551-323-A	…	SK 5xxE-751-323-A	5	100 m	100 m
SK 5xxE-112-340-A	…	SK 5xxE-152-340-A	5	100 m	50 m
SK 5xxE-112-340-O	…	SK 5xxE-152-340-O	5	100 m	25 m

[1] SK 5xxE -…-**O** frequency inverters must **not** be used with footprint line filters of type number **B 1008062**! Only UB line filters with the type …number **B1405049** are to be used for these devices (see type plate of the line filter).

[2] Class C1 / C2 as per EN 61800-3

Technical Data

Electrical data

Number of phases		3
Rated voltage	V ~	500
Rated frequency	Hz	50 … 60
Rated current	A	45.0 ($U_T \approx 50$ °C)

Leakage current 1)	mA	193.8 / 20.2
Test voltage 2)	V -	2150 / 2700
Resistance on line	mΩ	3.7
Power dissipation	W	26

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

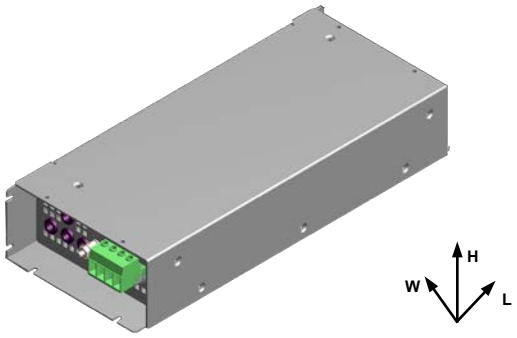
Temperature range	°C	0 … 40 (100 % duty cycle / S1) 0 … 50 (70 % duty cycle / S3)
Climate class		25/085/21 (EN 60068-1)
Certifications		RoHS, EAC
Tightening torque	Nm	1.7 – 1.8 terminal 3.0 PE connection
Weight	kg	5.2

European standard	EN 60939-2
Mounting 1)	
Standard position	4 x M5 x 8 (mounting surface)
FI on line filter	4 x M5 x 8 (FI)
Booksize	4 x M5 x 8 (mounting surface)
Protection class	IP00

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

Dimensions

Envelope dimensions [mm]	L x W x H	388 x 164 x 75
Mounting [mm]		
Standard position	L x W	378 x 103
FI	L x W	358 x 93
Booksize	L x H	378 x 51
Supply cable [mm]		
Flexible strand	L	500
Wire end sleeve	L	10



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	M6	0.75 - 16 mm²	AWG 18 - 6	10 mm²	AWG 8

1) incl. 2 washers, 1 spring washer, 1 M6 nut

2) Name can differ for older versions.

Installation

Installation location	In a control cabinet: • underneath the frequency inverter, or • in its immediate vicinity
Installation orientation	Standard (vertical) or Booksize: • 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.	Installation of footprint accessories / unit *Standard position:* 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. *Booksize:* 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.	  Standard position
2.	Installation of frequency inverter on footprint accessories *Standard position:* Use 2 or 4 screws (depending on the size) to fasten the frequency inverter to the footprint unit. *Booksize:* Not required	
3.	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). Note: Establish the PE connection first!	 Booksize
4.	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").	

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.

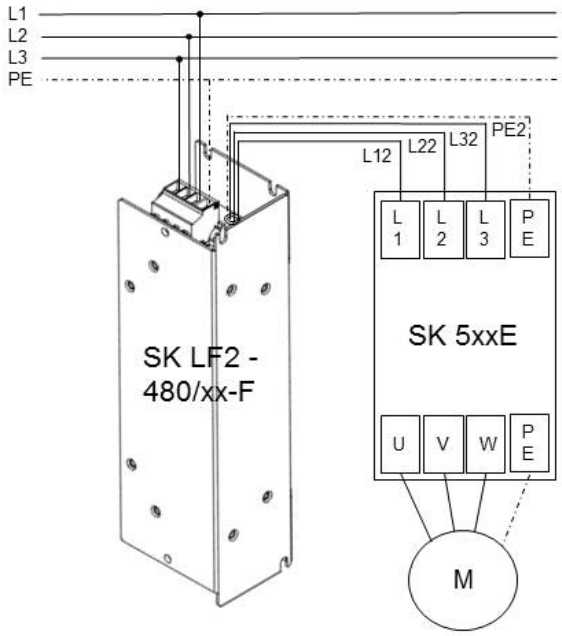
NOTICE

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



Footprint line filter connection input and output

Size 1 - 4 **Size 5 - 7** **Size 8 - 11**

SK 5xxE Frequency inverter mains connection

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

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SK LF2-480/66-F 500E Size 6

Part number: 278 273 066

Footprint line filter

It only is allowed for qualified electricians to install and commission the module. An electrician is a person who, because of their technical training and experience, has sufficient knowledge relating 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.

Scope of delivery

1 x	**Module**	SK LF2-480/66-F 500E Size 6
1 x	**Plug part**	4-pole

Field of use

Footprint input filter (line 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 [1]			**Size**	**Limit value classes** [2] **Cable-related emission 150 kHz – 30 MHz**	
				Class C2	**Class C1**
SK 5xxE-112-323-A	…		6	100 m	50 m
SK 5xxE-182-340-A	…	SK 5xxE-222-340-A	6	100 m	50 m
SK 5xxE-182-340-O	…	SK 5xxE-222-340-O	6	100 m	25 m

[1] SK 5xxE -…-**O** frequency inverters must **not** be used with footprint line filters of type number **B 1008063**! Only UB line filters with the type number **B1405050** are to be used for these devices (see type plate of the line filter).

[2] Class C1 / C2 as per EN 61800-3

Technical Data

Electrical data

Number of phases		3
Rated voltage	V ~	500
Rated frequency	Hz	50 … 60
Rated current	A	63.0 ($U_T \approx 50$ °C)

Leakage current 1)	mA	193.8 / 20.2
Test voltage 2)	V -	2150 / 2700
Resistance on line	mΩ	3.4
Power dissipation	W	45

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

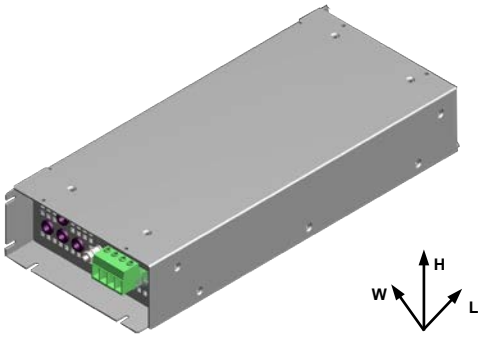
Temperature range	°C	0 … 40 (100 % duty cycle / S1) 0 … 50 (70 % duty cycle / S3)
Climate class		25/085/21 (EN 60068-1)
Certifications		RoHS, EAC
Tightening torque	Nm	1.7 – 1.8 terminal 3.0 PE connection
Weight	kg	6.5

European standard	EN 60939-2
Mounting 1)	
Standard position	4 x M5 x 8 (mounting surface)
FI on line filter	4 x M5 x 8 (FI)
Booksize	4 x M5 x 8 (mounting surface)
Protection class	IP00

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

Dimensions

Envelope dimensions [mm]	L x W x H	428 x 182 x 75
Mounting [mm]		
Standard position	L x W	408 x 120
FI	L x W	398 x 110
Booksize	L x H	408 x 51
Supply cable [mm]		
Flexible strand	L	500
Wire end sleeve	L	10



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	M6	0.75 - 16 mm²	AWG 18 - 6	10 mm²	AWG 8

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

2) Name can differ for older versions.

Installation

Installation location	In a control cabinet: • underneath the frequency inverter, or • in its immediate vicinity
Installation orientation	Standard (vertical) or Booksize: • 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.	Installation of footprint accessories / unit *Standard position:* 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. *Booksize:* 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.	  Standard position
2.	Installation of frequency inverter on footprint accessories *Standard position:* Use 2 or 4 screws (depending on the size) to fasten the frequency inverter to the footprint unit. *Booksize:* Not required	
3.	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). Note: Establish the PE connection first!	 Booksize
4.	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").	

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.

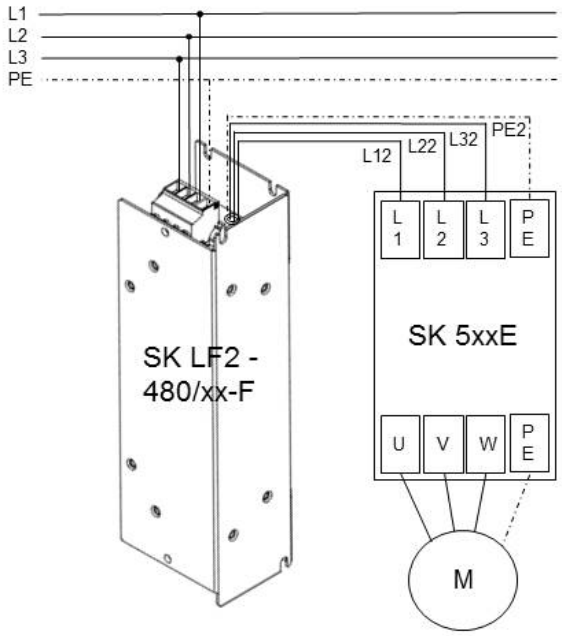
NOTICE

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



Footprint line filter connection input and output

Size 1 - 4 **Size 5 - 7** **Size 8 - 11**

SK 5xxE Frequency inverter mains connection

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

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SK LF2-480/105-F 500E Size 7

Part number: 278 273 105

Footprint line filter

It only is allowed for qualified electricians to install and commission the module. An electrician is a person who, because of their technical training and experience, has sufficient knowledge relating 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.

Scope of delivery

1 x	**Module**	SK LF2-480/105-F 500E Size 7

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 [1]			**Size**	**Limit value classes** [2] **Cable-related emission 150 kHz – 30 MHz**	
				Class C2	**Class C1**
SK 5xxE-152-323-A	…	SK 5xxE-182-323-A	7	100 m	50 m
SK 5xxE-302-340-A	…	SK 5xxE-372-340-A	7	100 m	50 m
SK 5xxE-302-340-O	…	SK 5xxE-372-340-O	7	100 m	25 m

[1] SK 5xxE -…-**O** frequency inverters must **not** be used with footprint line filters of type number **B 1109119**! Only UB line filters with the type number **B1405051** are to be used for these devices (see type plate of the line filter).

[2] Class C1 / C2 as per EN 61800-3

Technical Data

Electrical data

Number of phases		3
Rated voltage	V ~	500
Rated frequency	Hz	50 … 60
Rated current	A	105.0 ($U_T \approx 50$ °C)

Leakage current 1)	mA	341 / 35
Test voltage 2)	V -	2150 / 2700
Resistance on line	mΩ	0.9
Power dissipation	W	56

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)
Climate class		25/085/21 (EN 60068-1)
Certifications		RoHS, EAC
Tightening torque	Nm	3.0 – 6.0 terminal 3.0 PE connection
Weight	kg	12.4

European standard	EN 60939-2
Mounting 1)	
Standard position	4 x M5 x 8 (mounting surface)
FI on line filter	4 x M5 x 8 (FI)
Booksize	4 x M5 x 8 (mounting surface)
Protection class	IP00

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

Dimensions

Envelope dimensions [mm]	L x W x H	527 x 210 x 95
Mounting [mm]		
Standard position	L x W	505 x 140
FI	L x W	451 x 130
Booksize	L x H	525 x 71
Supply cable [mm]		
Flexible strand	L	500
Wire end sleeve	L	10

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 terminals3), 4-pole, yellow/green and black		Leads with wire end sleeves, 4-lead	
Cross section / type	M10	16 - 50 mm²	AWG 6 - 1	35 mm²	AWG 2

1) incl. 2 washers, 1 spring washer, 1 M10 nut

2) Name can differ for older versions.

3) Tools: Use a size 5 Allen key for connection to the input terminals.

Installation

Installation location	In a control cabinet: • underneath the frequency inverter, or • in its immediate vicinity
Installation orientation	Standard (vertical) or Booksize: • 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.	Installation of footprint accessories / unit *Standard position:* 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. *Booksize:* 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.	  Standard position
2.	Installation of frequency inverter on footprint accessories *Standard position:* Use 2 or 4 screws (depending on the size) to fasten the frequency inverter to the footprint unit. *Booksize:* Not required	
3.	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). Note: Establish the PE connection first!	 Booksize
4.	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").	

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.

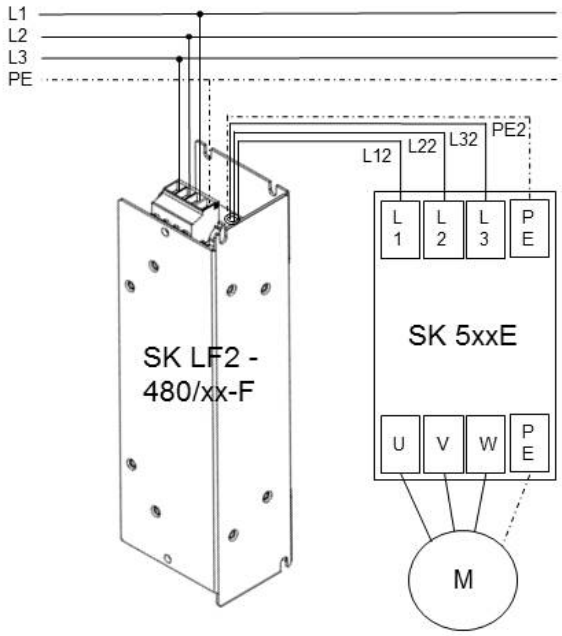
NOTICE

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



Footprint line filter connection input and output

Size 1 - 4 **Size 5 - 7** **Size 8 - 11**

SK 5xxE Frequency inverter mains connection

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