



# Variable frequency drives for control cabinet applications

NORDAC *PRO* SK 500P series



# Top class VFD technology

## NORDAC *PRO*, SK 500P series



[NORDAC \*PRO\* - SK 500P](#)

NORDAC *PRO* SK 500P variable frequency drives are available for motors with rated powers of 0.33 – 30 HP. With their very compact design, the so-called book size format, they are perfect for space-saving installation in control cabinets.

Notable features across the entire product line include:

- ▶ Sensorless current vector control ensures constant speeds even with fluctuating loads and extremely high torques during startup
- ▶ 200% overload reserve, which provides greater operational safety in cranes and lifting gear applications
- ▶ Operation of asynchronous and synchronous motors
- ▶ Integrated brake chopper for 4-quadrant operation
- ▶ Integrated line filter as the basis for optimal EMC performance
- ▶ Integrated PLC, which enables convenient free programming of drive-related functions according to IEC 61131-3.

These features are as much a part of the basic configuration as the separately configurable PID or the process controller.

Functional safety is increasingly becoming the focus of attention in drive technology. To meet the various safety requirements, the NORDAC *PRO* also offers functional extensions to implement single or dual channel solutions for Safe Torque Switch-off and Safe Stop.

An optional removable operating display provides an extensive selection of operational and status information. It also allows direct access to parameterization.

As a standard, the SK 500P VFDs are equipped with an integrated mains unit that supplies power to the control board. The [USB port](#), which is standard for configured version SK 530P and higher, also provides access to the VFD control board without connection to the mains voltage.

Devices with configuration level SK 530P and higher are equipped with a separate 24 V DC connection. These devices can also be parameterized when the power is switched off. Restricted diagnosis and communication with the bus is also retained.

Optional SK CU5 extensions, which can be combined with all SK 530P devices and above round off the range of functions. These include the encoder extension or the universal encoder interface for connection of a wide range of encoders (e.g. SSI, EnDat), which in combination with the installed POSICON are the ideal solution for all types of positioning (relative and absolute).

A multi-protocol Ethernet interface is integrated in the SK 550P variant. During commissioning, the protocol can simply be set by switching a parameter to the required dialect (Ethernet/IP®, EtherCAT®, PROFINET IO® or POWERLINK). Flexibility for system planning is enhanced due to the comparatively small variance in hardware.



## Basic configuration

- Sensorless current vector control (ISD control) for high precision control and fast response times
- Brake management, electromechanical holding brake
- Brake chopper to divert generated energy to a brake resistor
- CANopen® including drive profile DS402
- POSICON variants with positioning function (relative and absolute)
- RS-485/RS-232 diagnostic interface
- 4 switchable parameter sets for flexible use of parameter settings (e.g. switching between drive units with different motor data)
- All common drive functions such as acceleration/braking on a ramp, S curves
- Parameters pre-set with standard values, immediately ready for use
- Scalable display values
- Stator resistance measurement to ensure optimal control characteristics
- Integrated PLC functionality
- Plug-in connection terminals

Available for all devices up to 3 HP



## Optional

- Interfaces for many Industrial Ethernet-based bus systems
  - Removable operating display with extensive operating and status indicators, and access to parameters
  - Variants for implementation of safe drive functions (e.g. STO, SS1)
  - Interface extensions for connection of encoders and IOs
- Available for SK 530P and higher
- USB-C interface for parameterization via PC using the NORDCON software, without additional connection of a mains or control voltage



EtherNet/IP™

EtherCAT®

ETHERNET POWERLINK



# Top class VFD technology

## NORDAC *PRO*, SK 500P series

NORD provides the new SK 500P with features for streamlined use:

### Electrical connection Power terminals

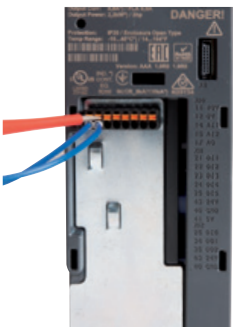
In addition to the control terminals on the front, which are always pluggable, for the two small sizes of frequency drives with rated powers up to 3 HP, all other power terminals (e.g. line and motor connections, connections to multi-function relays, etc.) can be removed for maintenance. In this way, wiring of the compact devices can be carried out easily and safely even in confined control cabinet spaces.

The architecture of Size 3 (VFDs with rated powers of 4 HP and above) allows enough space that a plug-in design of the power terminals is not necessary.



### Control terminals

The NORDAC *PRO* is equipped with an integrated "3rd hand", which holds the spring terminals in place for easy wiring.



## Parameter setup

To view operating values, error messages, or access and modify variable frequency drive parameter settings use one of these methods:

- ▶ Direct access with the snap-on SK TU5-CTR technology unit (optional)
- ▶ Separate SK PAR-3E or SK CSX-3E (optional) control and parameterization units which can be mounted in the control cabinet doors
- ▶ NORDCON software (free) – by connecting a Windows computer via USB-C<sup>1</sup> or RJ12
- ▶ NORDCON APP (free) for connection to a mobile terminal device via NORDCON ACCESS BT (optional)
- ▶ Removable data carrier (microSD) for backup and transfer of parameter data sets (optional)

Available for SK 530P and higher






<sup>1</sup> No additional connection of a mains or control voltage required



# Standards and approvals

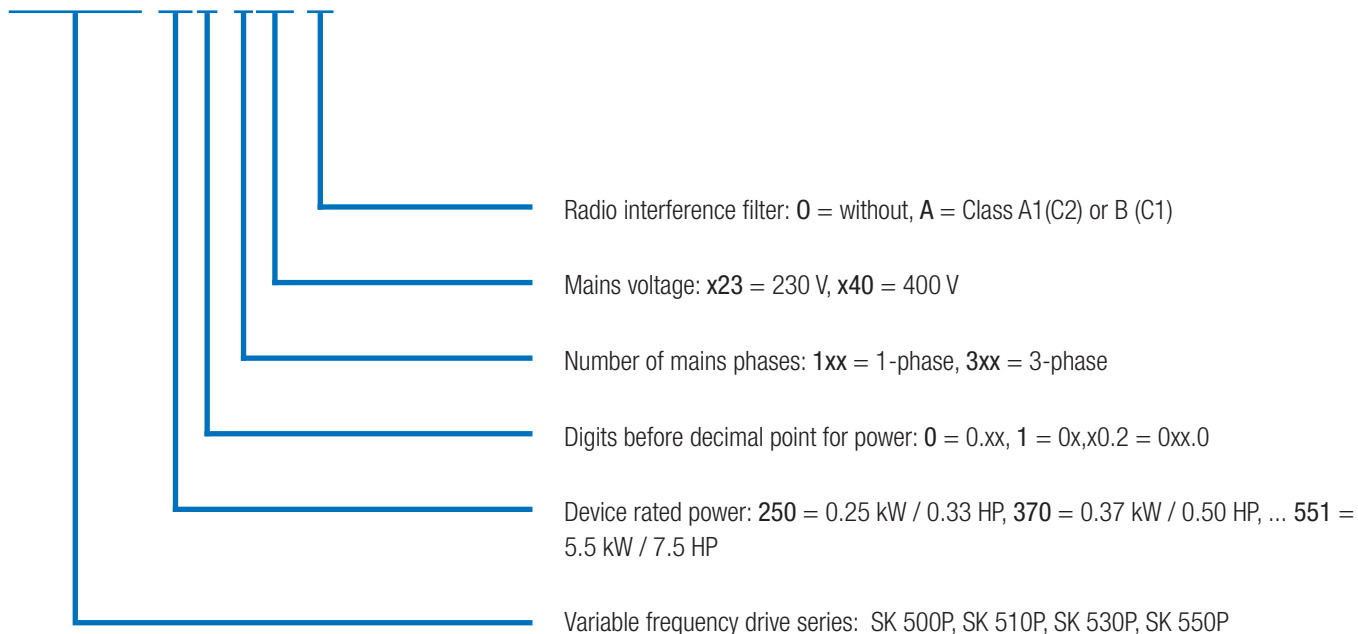
All devices of the entire series comply with the standards and directives listed below.

Approval	Directive	Applied standards	Certificates	Code
CE (European Union)	Low Voltage Directive 2014/35/EU	EN 61800-5-1 EN 60529	C310601	
	EMC 2014/30/EU	EN 61800-3 EN 63000		
	RoHS 2011/65/EU	EN 61800-9-1 EN 61800-9-2		
	Delegated directive (EU) 2015/863			
	Ecodesign 2009/125/EG			
	Regulation (EU) Ecodesign 2019/1781			
UL (USA)		UL 61800-5-1	E171342	
CSA (Canada)		C22.2 No.274-13	E171342	
EAC (Eurasia)	TR CU 004/2011, TR CU 020/2011	IEC 61800-5-1 IEC 61800-3	EA3C N RU Д- DE.HB27.B02718/20	

# Type code

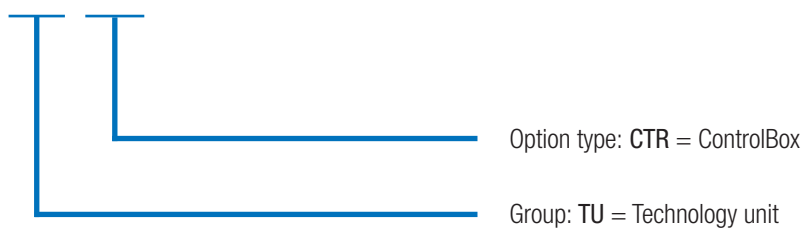
## Variable frequency drives

### SK 530P-370-340-A



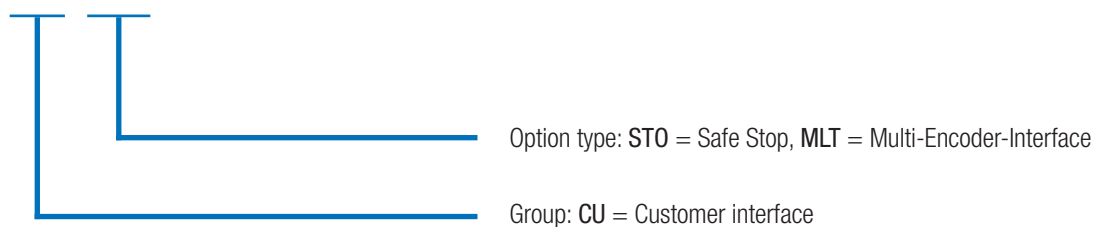
## Technology units

### SK TU5-CTR



## Customer units

### SK CU5-STO



# NORDAC PRO

## All versions at a glance

	Basic Drive SK 500P	Advanced Drive SK 530P
Sensorless current vector control (ISD control)	●	●
Brake management for mechanical holding brake	●	●
Brake chopper (brake resistor optional)	●	●
RS-232 diagnostic interface	●	●
4 switchable parameter sets	●	●
All normal drive functions	●	●
Parameters pre-set with standard values	●	●
Stator resistance measurement	●	●
Energy-saving function, optimized efficiency in partial load operation	●	●
Integrated EMC line filter according to EN 61800-3, Category C2 up to 20 m motor cable, Category C1 up to 5 m motor cable (devices above 1.0 HP)	●	●
Shielding plate for connection of shielded control cables for EMC-compliant wiring	●	●
Extensive monitoring functions	●	●
Load monitor	●	●
Link circuit coupling	●	●
Lifting gear functionality	●	●
PID controller	●	●
Process controller / compensator control	●	●
Synchronous motor operation (PMSM)	●	●
Incremental encoder input (HTL / TTL) for speed feedback - servo mode	● <sup>1</sup>	●
POSICON	●	●
PLC functionality	●	●
USS, Modbus RTU (RJ12)	●	●
CANopen® (connection terminals)	●	●
EtherCAT®, Ethernet IP®, PROFINET IO®, POWERLINK	○	● <sup>2</sup>
"Safe Torque Switch-off" and "Safe Stop" (STO, SS1) functions	● <sup>3</sup>	●
USB port (Parameterization of the FI by means of NORDCON without mains or control voltage connection)	○	●
Internal 24 V power supply unit to supply the control board	●	●
External 24 V DC supply for the control board voltage supply with automatic switch-over between the internal and external 24 V DC control voltage	○	●
Universal encoder interface	○	●
MicroSD slot, port for removable data carrier	○	●
Removable data carrier (microSD) for backup and transfer of parameter data sets	○	●
Operating display, removable for display of status and operating information and for control	●	●
Communication interface, removable, for wireless communication between the variable frequency drive and mobile terminal devices (tablet, smartphone)	●	●

<sup>1</sup> HTL only

<sup>2</sup> SK 550P only

<sup>3</sup> SK 510P only, Single channel

● Available as standard

● Optional

○ Not available



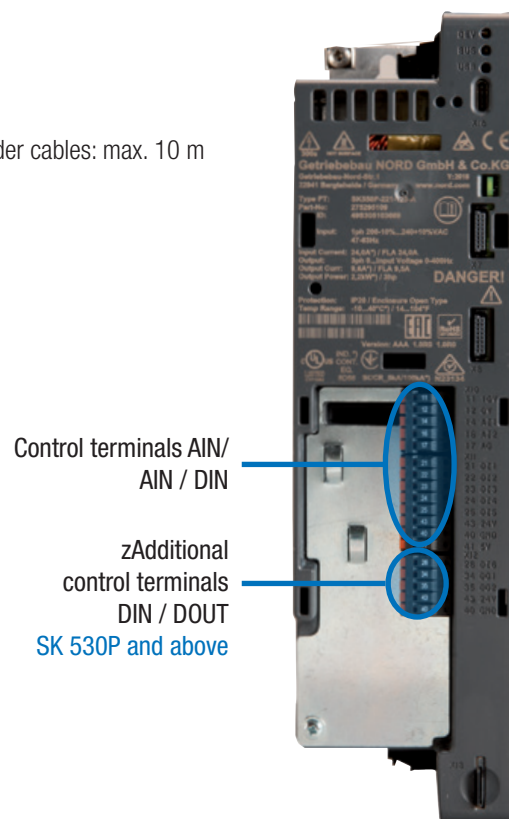
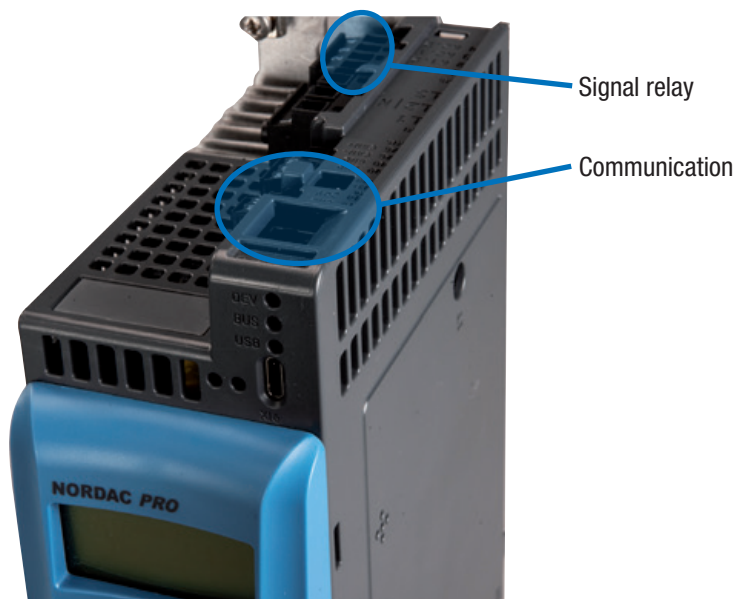
	Basic Drive SK 500P	Advanced Drive SK 530P	
Control terminals	DIN	6 <sup>1</sup>	
	DOUT	0	
	Signal relay <sup>2</sup> (... 230 V AC, 2 A)	2	
	AIN <sup>3</sup>	2	
	AOUT <sup>3</sup>	1	
Encoder interfaces	Temperature sensor (PTC)	1 <sup>4</sup>	
	TTL RS422	○	●
	HTL <sup>4</sup>	●	●
	CANopen®	●	●
	SIN / COS	○	● <sup>5</sup>
	SSI	○	● <sup>5</sup>
	BISS	○	● <sup>5</sup>
	Hiperface	○	● <sup>5</sup>
	Endat 2.1	○	● <sup>5</sup>
	Communication	CAN / CANopen®	● <sup>6</sup>
RS-485 / RS-232		●	●
Modbus RTU		●	●



Temperature sensor (PTC)  
SK 530P and above

TTL encoder interface  
SK 530P and above

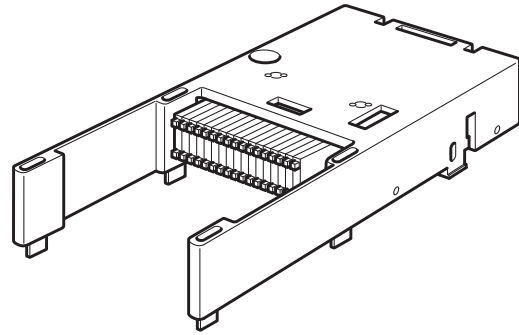
- 1 Extendable with the optional SK CU5-... customer interface
- 2 Parameterizable with DOUT functions
- 3 AIN/AOUT can also be used for digital signals.  
AIN: 0(2) – 10 V, 0(4) – 20 mA,  
AOUT: 0 – 10 V, 0 – 20 mA
- 4 Function can only be implemented through a digital input, permissible length of encoder cables: max. 10 m
- 5 Available via optional customer interface
- 6 System bus functions can only be used with restrictions.



# Optional modules for function extension

Variable frequency drives with configuration versions SK 530P and higher can be extended with a plug-in option module. This increases the installation depth by 23 mm.

One of the following variants can be selected.



Type	Material No.	Functions	I/Os	Remarks
SK CU5-MLT	275 298 200	Encoder interface: TTL, SIN/COS, HIPERFACE, EnDat 2.1, BiSS, SSI Functional safety: STO - PLe / SIL 3 SS1-t - PLd / SIL 2	4 I/O (usable as DIN or DO/DT)	Functional safety: 2-channel connection
SK CU5-STO	275 298 000	Functional safety: STO - PLe / SIL 3 SS1-t - PLd / SIL 2	1 Safe DIN	Functional safety: 2-channel connection

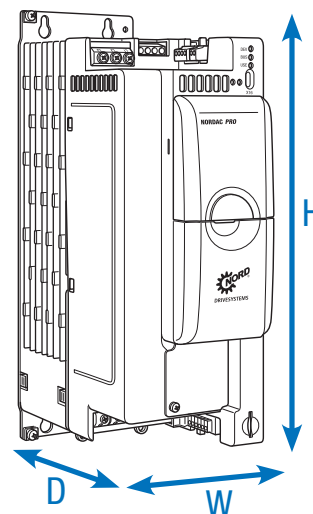
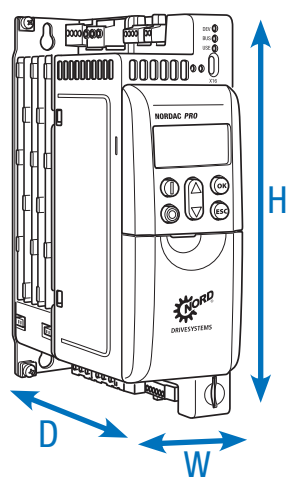


# NORDAC *PRO* SK 500P variable frequency drive

## 1~ 200 ... 240 V,

<b>Output frequency</b>	0.0 ... 400.0 Hz	<b>Regulation and control</b>	Sensorless current vector control (ISD), linear V/f characteristic curve
<b>Pulse frequency</b>	3.0 ... 16.0 kHz	<b>Motor temperature monitoring</b>	I <sup>2</sup> t Motor PTC / bi-metal switch
<b>Typical overload capacity</b>	150 % for 60 s, 200 % for 3.5 s	<b>Leakage current</b>	<30 mA, may be considerably less depending on the size and configuration of the VFD (refer to the manual for details)
<b>Energy efficiency class</b>	IE2		
<b>Efficiency</b>	Size 1-3 approx. 95 % Size 4+5 approx. 97%		
<b>Ambient temperature</b>	-10 °C ... +40 °C (S1) -10 °C ... +50 °C (S3, 70 % ED)		
<b>Protection class</b>	IP20		

VFDs SK 5xxP ...	Nominal motor power		Nominal output current rms [A]	Mains voltage	Output voltage
	230 V [kW]	240 V [HP]			
-250-123-A	0.25	1/3	1.7	1~ 200 ... 240 V, +/- 10 %, 47 ... 63 Hz	3~ 0 up to mains voltage
-370-123-A	0.37	1/2	2.4		
-550-123-A	0.55	3/4	3.2		
-750-123-A	0.75	1	4.2		
-111-123-A	1.1	1 1/2	5.7		
-151-123-A	1.5	2	7.3		
-221-123-A	2.2	3	9.6		



(Overall) dimensions  
H x W x D

VFDs SK 5xxP ...	Weight		(Overall) dimensions H x W x D		
	[kg]	[lbs]	[mm]	[in]	Size
-250-123-A	1.2	2.6	200 x 66 x 141	7.87 x 2.59 x 5.55	1
-370-123-A	1.2	2.6	200 x 66 x 141	7.87 x 2.59 x 5.55	1
-550-123-A	1.2	2.6	200 x 66 x 141	7.87 x 2.59 x 5.55	1
-750-123-A	1.2	2.6	200 x 66 x 141	7.87 x 2.59 x 5.55	1
-111-123-A	1.6	3.5	240 <sup>1</sup> x 66 x 141	9.44 x 2.59 x 5.55	2
-151-123-A	1.6	3.5	240 <sup>1</sup> x 66 x 141	9.44 x 2.59 x 5.55	2
-221-123-A	1.6	3.5	240 <sup>1</sup> x 66 x 141	9.44 x 2.59 x 5.55	2

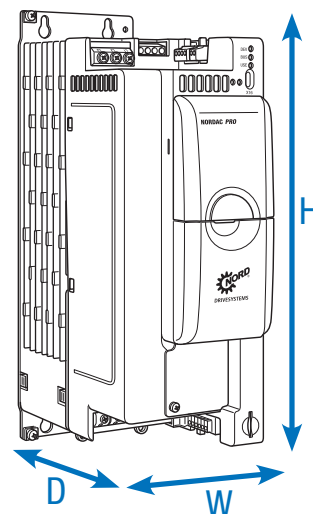
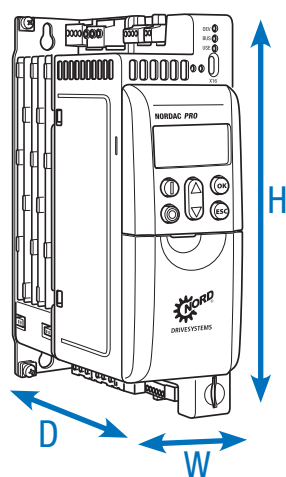
<sup>1</sup> SK 5xxP-221-123: Connection terminal protrudes beyond the stated overall dimension H about 15 mm.

# NORDAC *PRO* SK 500P variable frequency drive

## 3~ 380 ... 480 V

<b>Output frequency</b>	0.0 ... 400.0 Hz	<b>Protection class</b>	IP20
<b>Pulse frequency</b>	3.0 ... 16.0 kHz	<b>Regulation and control</b>	Sensorless current vector control (ISD), linear V/f characteristic curve
<b>Typical overload capacity</b>	150 % for 60 s, 200 % for 3.5 s	<b>Motor temperature monitoring</b>	I <sup>2</sup> t Motor PTC / bi-metal switch
<b>Energy efficiency class</b>	IE2	<b>Leakage current</b>	<30 mA, may be considerably less depending on the size and configuration of the VFD (refer to the manual for details)
<b>Efficiency</b>	Size 1-3 approx. 95 % Size 4+5 approx. 97%		
<b>Ambient temperature</b>	-10 °C ... +40 °C (S1) -10 °C ... +50 °C (S3, 70 % ED)		

VFDs SK 5xxP ...	Nominal motor power		Nominal output current rms [A]	Mains voltage	Output voltage
	400 V [kW]	480 V [hp]			
-250-340-A	0.25	0.33	1.0	3~ 380 ... 480 V, -20 % / +10 %, 47 ... 63 Hz	3~ 0 up to mains voltage
-370-340-A	0.37	0.5	1.3		
-550-340-A	0.55	3/4	1.8		
-750-340-A	0.75	1	2.4		
-111-340-A	1.1	1.5	3.1		
-151-340-A	1.5	2	4.0		
-221-340-A	2.2	3	5.6		
-301-340-A	3.0	4	7.5		
-401-340-A	4.0	5	9.5		
-551-340-A	5.5	7.5	12.5		
-751-340-A	7.5	10	16.0		
-112-340-A	11	15	24.0		
-152-340-A	15	20	31.0		
-182-340-A	18.5	25	38.0		
-222-340-A	22	30	46.0		






### Overall dimensions

VFDs SK 5xxP ...	Weight		H x W x D		Size
	[kg]	[lbs]	[mm]	[in]	
-250-340-A	1.2	2.6	200 x 66 x 141	7.87 x 2.59 x 5.55	1
-370-340-A	1.2	2.6	200 x 66 x 141	7.87 x 2.59 x 5.55	1
-550-340-A	1.2	2.6	200 x 66 x 141	7.87 x 2.59 x 5.55	1
-750-340-A	1.2	2.6	200 x 66 x 141	7.87 x 2.59 x 5.55	1
-111-340-A	1.6	3.5	240 x 66 x 141	9.44 x 2.59 x 5.55	2
-151-340-A	1.6	3.5	240 x 66 x 141	9.44 x 2.59 x 5.55	2
-221-340-A	1.6	3.5	240 x 66 x 141	9.44 x 2.59 x 5.55	2
-301-340-A	2.6	5.7	286 x 91 x 175	11.25 x 3.58 x 6.88	3
-401-340-A	2.6	5.7	286 x 91 x 175	11.25 x 3.58 x 6.88	3
-551-340-A	2.6	5.7	286 x 91 x 175	11.25 x 3.58 x 6.88	3
-751-340-A	3.8	8.3	331 x 91 x 175	13.03 x 3.58 x 6.88	4
-112-340-A	3.8	8.3	331 x 91 x 175	13.03 x 3.58 x 6.88	4
-152-340-A	7.1	15.6	371 x 126 x 232	14.60 x 4.96 x 9.13	5
-182-340-A	7.1	15.6	371 x 126 x 232	14.60 x 4.96 x 9.13	5
-222-340-A	7.1	15.6	371 x 126 x 232	14.60 x 4.96 x 9.13	5



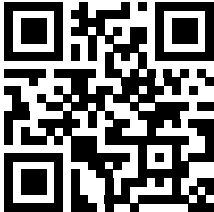
# Interfaces for operation, parameterization, and communication

## Operation and parameterization

Optional modules are available with up to 14 languages for displaying status, operational indicators, parameterization, and operation of the variable frequency drive. There are variants for direct mounting on the device, installation in a control cabinet door, and hand held versions. See also Accessories starting on page 157.

	Type designation Material No.	Description	Remarks
	ControlBox SK TU5-CTR 275 297 000	Suitable for operation and parameterization, LCD screen (illuminated), 5-digit, 7-segment display, display of measurement unit, various status and operating displays, display of utilization level, convenient keypad.	Installation in the SK TU5 slot on the device
	ParameterBox SK PAR-3E 275 281 414	Suitable for control and parameterization, LCD screen (illuminated), plain text display in 14 languages, direct control of up to 5 devices, memory for 5 device data sets, convenient control keypad, for installation in a control cabinet door.	Electrical data: 4.5 ... 30 V DC / 1.3 W, supply e.g. directly via the VFD, control cabinet installation
	SimpleControlBox SK CSX-3E 275 281 413	Suitable for control and parameterization, 4-digit, 7-segment display, direct control of a device, convenient control keypad, for installation in control cabinet doors.	Electrical data: 4.5 ... 30 V DC / 1.3 W, Supply e. g. directly via the VFD, control cabinet installation



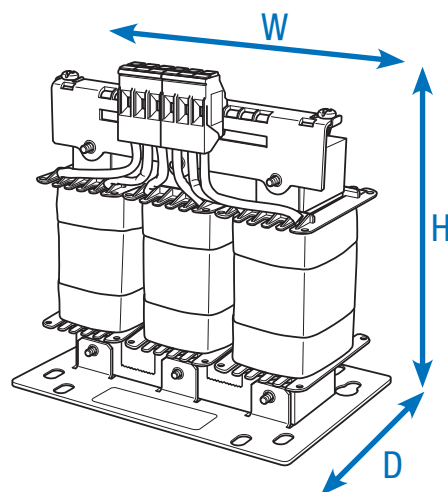
Type designation Material No.	Description	Remarks
	Control and parameterization software NORDCON	Software for control and parameterization as well as support for commissioning and fault analysis of NORD electronic drive technology.  Available in 14 languages.
	Bluetooth stick NORDAC <i>ACCESS BT</i> SK TIE5-BT-STICK 275 900 120	Interface for wireless connection to a mobile terminal device (e.g. tablet or smartphone) via Bluetooth.  The NORDCON <i>APP</i> , the NORDCON software for mobile terminal devices, enables smart operation and parameterization as well as commissioning assistance and fault analysis of NORD electronic drive technology.
		Available free of charge for Android and iOS:  

# Mains chokes

## Reduction of mains feedback

### General

It may be necessary for some drive systems to use mains chokes to reduce dangerous mains current peaks. They considerably reduce external mains feedback effects, keep the proportion of current harmonics to a minimum, and reduce the input current to approximately the value of the output current. This provides additional positive effects on device protection and EMC characteristics. All chokes have protection class IP00 and are UL certified.



	VFDs SK 5xxP ...	Choke type Material No.	Continuous current [A]	Inductance [mH]	(Overall) dimensions H x W x D
1~ 230 V	0.25 ... 0.37 kW 0.33 ... 0.5 HP	SK CI5-230/006-C 276 993 005	6	4.88	68 x 66 x 60 mm 2.67 x 2.6 x 2.36 in
	0.55 ... 0.75 kW 0.75 ... 1 HP	SK CI5-230/010-C 276 993 009	10	2.93	96 x 78 x 84 mm 3.78 x 3.07 x 3.31 in
	1.1 ... 2.2 kW 1.5 ... 3 HP	SK CI5-230/025-C 276 993 024	25	1.17	96 x 87 x 84 mm 3.78 x 3.43 x 3.31 in
3~ 400 V	0.25 ... 0.75 kW 0.33 ... 1 HP	SK CI5-500/004-C 276 993 004	4	3 x 7.35	116 x 80 x 60 mm 4.57 x 3.15 x 2.36 in
	1.1 ... 2.2 kW 1.5 ... 3 HP	SK CI5-500/008-C 276 993 008	8	3 x 3.68	135 x 120 x 86 mm 5.31 x 4.72 x 3.39 in
	3.0 ... 5.5 kW 4 ... 7.5 HP	SK CI5-500/016-C 276 993 016	16	3 x 1.84	135 x 120 x 95 mm 5.31 x 4.72 x 3.74 in
	7.5 ... 11 kW 10 ... 15 HP	SK CI5-500/035-C 276 993 035	35	3 x 0.84	167 x 155 x 110 mm 6.57 x 6.10 x 4.33 in
	15 ... 22 kW 20 ... 30 HP	SK CI5-500/063-C 276 993 063	63	3 x 0.47	241 x 210 x 117 mm 9.48 x 8.26 x 4.60 in

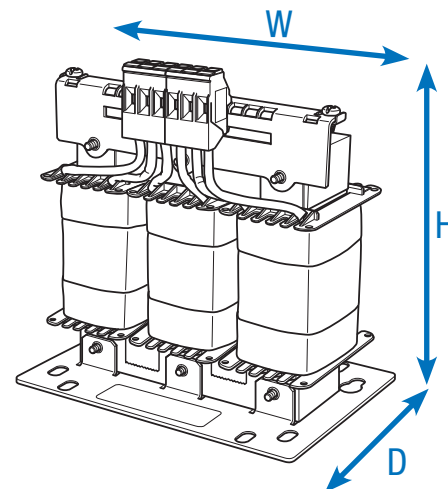
# Motor chokes

## Compensation of cable capacitances

### General

Long motor cable lengths (cable capacity) often require the use of additional motor chokes on the VFD output. The use of motor chokes has a positive effect on device protection and EMC characteristics.

The specified motor chokes are rated for a pulse frequency of 3 to 6 kHz and an output frequency of 0 to 120 Hz. All chokes have protection class IP00 and are UL certified.

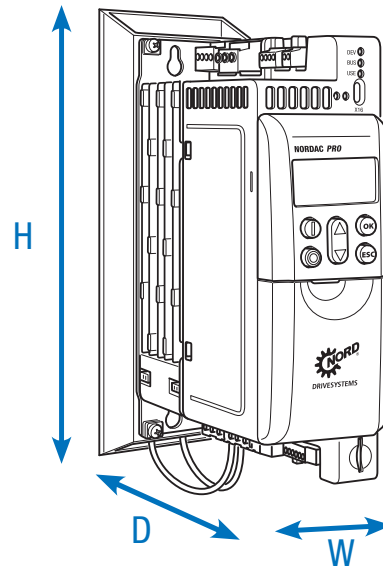


VFDs SK 5xxP ...	Choke type Material No.	Continuous current [A]	Inductance [mH]	(Overall) dimensions H x W x D
1~ 230 V	0.25 ... 0.37 kW 0.33 ... 0.5 HP	SK C05-500/002-C 276 992 002	2.5	3 x 3.68 140 x 120 x 85 mm 5.51 x 4.72 x 3.34 in
	0.55 ... 0.75 kW 0.75 ... 1 HP	SK C05-500/006-C 276 992 006	6	3 x 1.54 140 x 120 x 95 mm 5.51 x 4.72 x 3.74 in
	1.1 ... 2.2 kW 1.5 ... 3 HP	SK C05-500/012-C 276 992 012	12.5	3 x 0.74 165 x 155 x 95 mm 6.49 x 6.10 x 3.74 in
3~ 400 V	0.25 ... 0.75 kW 0.33 ... 1 HP	SK C05-500/002-C 276 992 002	2.5	3 x 3.68 140 x 120 x 85 mm 5.51 x 4.72 x 3.34 in
	1.1 ... 2.2 kW 1.5 ... 3 HP	SK C05-500/006-C 276 992 006	6	3 x 1.54 140 x 120 x 95 mm 5.51 x 4.72 x 3.74 in
	3.0 ... 5.5 kW 4 ... 7.5 HP	SK C05-500/012-C 276 992 012	12.5	3 x 0.74 165 x 155 x 95 mm 6.49 x 6.10 x 3.74 in
	7.5 ... 11 kW 10 ... 15 HP	SK C05-500/024-C 276 992 024	24	3 x 0.383 197 x 185 x 112 mm 7.75 x 7.28 x 4.40 in
	15.0 ... 22.0 kW 20 ... 30 HP	SK C05-500/046-C 276 992 046	46	3 x 0.200 240 x 210 x 125 mm 9.44 x 8.26 x 4.92 in

# Braking resistors for dynamic drive characteristics

## Bottom-mounted braking resistors SK BRU5

Available in four sizes, brake resistors can be mounted flat underneath the variable frequency drive. Although this increases the installation length and depth by a few centimeters, the basic installation surface in the control cabinet is considerably reduced. The specified resistance values are electrically matched to standard applications. Brake resistors have protection class IP40 and are UL certified.



VFDs SK 5xxP ...	Resistor type Material No.	Resistance [Ω]	Continuous output [W]	Short-term power [kW] <sup>1</sup>	(Overall) dimensions L x W x D	
230 V	0.25 ... 0.75 kW 0.33 ... 1 HP	SK BRU5-1-240-050 275 299 004	240	50	0.75	240 x 66 x 181 mm 9.49 x 2.59 x 7.13 in
	1.1 ... 2.2 kW 1.5 ... 3 HP	SK BRU5-2-075-200 275 299 210	75	200	3.0	280 x 66 x 181 mm 11.02 x 2.59 x 7.13 in
400 V	0.25 ... 0.75 kW 0.33 ... 1 HP	SK BRU5-1-400-100 275 299 101	400	100	1.5	240 x 66 x 181 mm 9.49 x 2.59 x 7.13 in
	1.1 ... 2.2 kW 1.5 ... 3 HP	SK BRU5-2-220-200 275 299 205	220	200	3.0	280 x 66 x 181 mm 11.02 x 2.59 x 7.13 in
	3.0 ... 5.5 kW 4 ... 7.5 HP	SK BRU5-3-100-300 275 299 309	100	300	4.5	340 x 91 x 225 mm 13.38 x 3.58 x 8.85 in
	7.5 ... 11.0 kW 10 ... 15 HP	SK BRU5-4-44-400 275 299 512	44	400	7.5	385 x 91 x 210 mm 15.15 x 3.58 x 8.26 in

Temperature monitoring for SK BR5 resistors  
with installation close to the VFD  
275 991 100

Bimetallic switch  
as opener  
Nominal switching temperature: 180°C

Broad brake resistor +  
10 mm (on one side)  
dimensions apply to  
the VFD, including the  
braking resistor

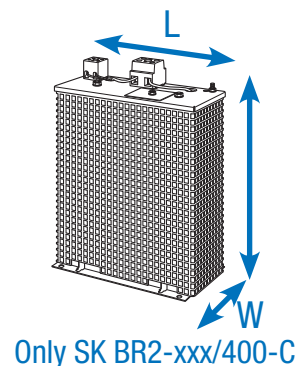
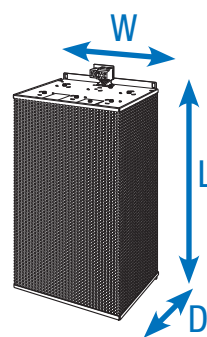
Temperature monitoring for SK BR5 resistors  
with direct installation under the VFD  
275 991 200

Bimetallic switch  
as opener  
Nominal switching temperature: 100°C

<sup>1</sup> Once within 120 s,  
for a maximum duration of 1.2 s

## Chassis braking resistors SK BR2

Chassis braking resistor elements are integrated into a housing cage and connected to the VFD via a separate connecting cable. These brake resistors need to be mounted horizontally (apart from SK BR2-xxx/400-C) and should use a shielded cable that is as short as possible. The chassis brake resistors have protection class IP20.



VFDs SK 5xxP ...	Resistor type Material No.	Resistance [Ω]	Continuous output [W]	Short-term power [kW] <sup>1</sup>	(Overall) dimensions L x W x D
400 V	3.0 ... 4.0 kW 4 ... 5.5 HP SK BR2-100/400-C <sup>1</sup> 278 282 040	100	400	12	178 x 100 x 252 mm 7 x 3.93 x 9.92 in
	5.5 ... 7.5 kW 7.5 ... 10 HP SK BR2-60/600-C 278 282 060	60	600	18	385 x 110 x 120 mm 15.15 x 4.33 x 4.72 in
	11.0 ... 15.0 kW 15 ... 20 hp SK BR2-30/1500-C 278 282 150	30	1500	45	585 x 185 x 120 mm 23.03 x 7.28 x 4.72 in
	18.5 ... 22.0 kW 25 ... 30 HP SK BR2-22/2200-C 278 282 220	22	2200	66	485 x 275 x 120 mm 19.09 x 10.82 x 4.72 in

<sup>1</sup> Type of assembly: vertical

<sup>2</sup> Once within 120 s,  
for a maximum duration of 1.2 s

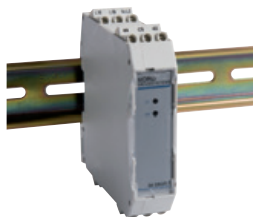
# NORDAC *PRO* variable frequency drive Accessories



## Signal converter +/- 10 V

For connection of a bipolar analog signal to the unipolar analog input of a VFD, top-hat rail mounting.

Material No.: 278910320



## Electronic brake rectifier SK EBGR-1

For direct control and supply of an electromagnetic holding brake.

Material No.: 19140990



## IO expansion SK EBIOE-2

The standard number of inputs and outputs on the device can be supplemented using an extension provided that is top-hat rail mounted.

Material No.: 275900210

Available for SK 530P and higher



## NORDAC *ACCESS BT*

Bluetooth adapter SK TIE5-BT-STICK that establishes a wireless connection between the VFD and mobile terminal devices (e.g. smartphone, tablet). Together with the free NORDCON APP for Android or iOS, NORD provides a smart aid for control, parameterization, and troubleshooting of variable frequency drives.

Material No.: 275900120



## MicroSD card, 128 MB

Removable data carrier for archiving and transfer of parameter data sets for the variable frequency drive.

Material No.: 275292200

Available for SK 530P and higher



## EMV-Kit

Available for EMC-compliant connection of shielded cables and to produce strain relief. Depending on size and configuration level, various EMC kits are available.

Size of VFD	Shield Motor connection ①	Shield IO ports ②	Shield control terminals (SK CU5-...) <sup>1</sup> ③
1	SK HE5-EMC-MS-HS12 275 292 300	SK HE5-EMC-IS-HS1 275 292 304	SK HE5-EMC-CS-HS1 275 292 310
2	SK HE5-EMC-MS-HS12 275 292 300	SK HE5-EMC-IS-HS2 275 292 305	SK HE5-EMC-CS-HS23 275 292 311
3	SK HE5-EMC-MS-HS34 <sup>2</sup> 275 292 301	SK HE5-EMC-IS-HS3 275 292 306	SK HE5-EMC-CS-HS23 275 292 311
4	SK HE5-EMC-MS-HS34 <sup>2</sup> 275 292 301	SK HE5-EMC-IS-HS4 275 292 307	SK HE5-EMC-CS-HS4 275 292 312
5	SK HE5-EMC-MS-HS5 <sup>2</sup> 275 292 302	SK HE5-EMC-IS-HS5 275 292 308	SK HE5-EMC-CS-HS5 275 292 313

<sup>1</sup> Available for SK 530P and higher only in combination with (1) "motor connection shield"

<sup>2</sup> Two-part



## CANopen® connection

The CANopen® interface is equipped with a 4-pole screw terminal as standard.

The following alternatives are optionally available.



Designation	Material No.	Description
SK TIE5-CAO-WIRE-2X4P	275 292 201	CANopen® double terminal (screw terminal, 2x4-pole)
SK TIE5-CAO-2X-RJ45	275 292 202	CANopen® RJ45 adapter

Optional:  
RJ45 adapter for  
CANopen

## US

NORD Gear Corporation  
Waunakee, WI  
800 NORD Drive  
Waunakee, WI 53597  
Tel. 888.314.6673  
info.us@nord.com  
www.nord.com

Corona, CA  
1180 Railroad St.  
Corona, CA 92882  
Tel. 888.314.6673  
info.us@nord.com

Charlotte, NC  
300E Forsyth Hall Dr.  
Charlotte, NC 28273  
Tel. 888.314.6673  
info.us@nord.com

## CA

NORD Gear Limited  
Brampton, ON  
41 West Drive  
Brampton, ON L6T4A1  
Tel. 800.668.4378  
info.ca@nord.com

## MX

NORD DRIVE SYSTEMS SA DE CV  
Queretaro, Mexico  
Av. Industria Textil B.6  
Parque Industrial PYME, Huimilpan  
QRO - Mexico 76950  
Tel. 52 442 688 7110  
info.mx@nord.com