

Supplements to Manual BU0500

NORDAC SK 5xxE- ... -ERS

SK 5xxE-750-323-A ... SK 5xxE-221-323-A
(0.75kW, 1.1kW, 2.2kW, 1/3~ 230V)

SK 5xxE-111-340-A ... SK 5xxE-301-340-A
(1.1kW, 3.0kW, 3~ 400V)

BU0560_ERS_GB_0512

Getriebebau NORD GmbH & Co. KG



Documentation

Designation: BU0560_ERS_GB

Part No.: 607 56 02

Device series: SK 5xxE- ... -ERS / Special device series

Version list

Designation of previous issues	Software Version	Comments
Supplement BU0500-ERSA, May '06	See SK 500E	Supplement BU0500-ERSA, first edition
Further revisions: February 2008, December 2008, April 2010, June 2010 (For an overview of the amendments to the above editions: please refer to the June 2010 edition (Part No.: 6075602/2410))		
BU0560_ERS_EN, February 2012	See SK 5xxE	X9 CAN/CANopen interface: plug-in type changed to brand <i>Phoenix</i> , cable cross-section changed to 0.2 ... 1.5mm ²

Publisher

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Intended use of the frequency inverter

Compliance with the operating instructions is necessary for fault-free operation and the acceptance of possible warranty claims. These operating instructions must be read before working with the device!

The BU0560 contains important information on servicing and must be kept near to the device.

The CANopen modules and the corresponding frequency inverters are devices for stationary installation in control cabinets or decentralised structures. All data regarding technical data and permissible conditions at the installation site must be complied with.

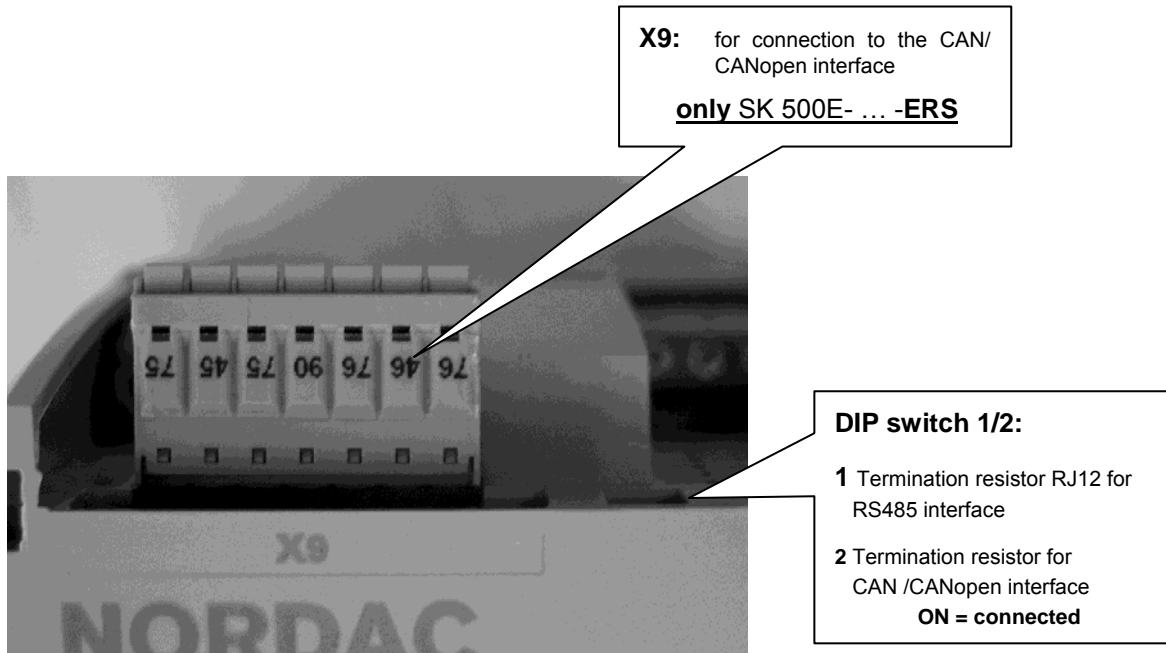
Commissioning (commencement of the intended use) is not permitted until it has been ensured that the machine complies with the EMC Directive 2004/108/EEC and that the conformity of the end product meets the Machinery Directive 2006/42/EEC (observe EN 60204).

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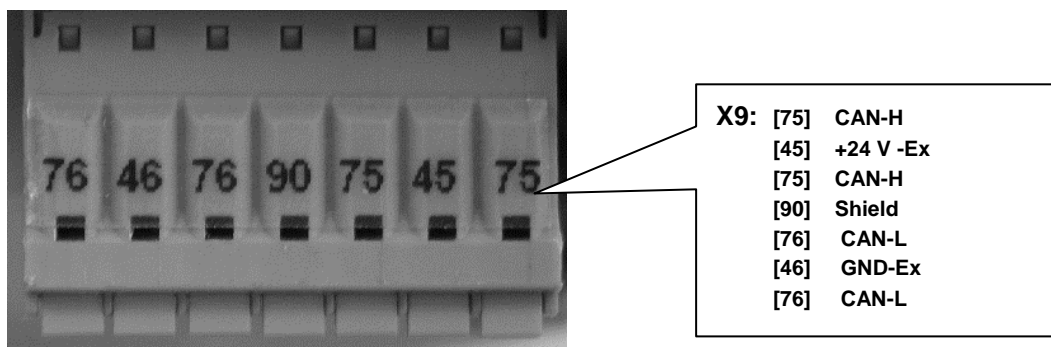
This supplement contains excerpts from the manual BU 0500 EN with supplementary entries for the plug-in CAN/CANopen connection. This is additional information for the SK 500E-xxx-xxx-A-ERS special device series with a plug-in 7-pin CAN spring terminal bar.

All other information should be obtained from the frequency inverter manual **BU0500**. For detailed CAN information, please refer to the operating instructions **BU0060** or contact the supplier of the frequency inverter.

Contact assignment of the X9 CAN terminal strip:



The 7-pin Phoenix spring terminal bar X9 (CAN plug) is used instead of the two RJ45 plug connectors (from SK 520E).



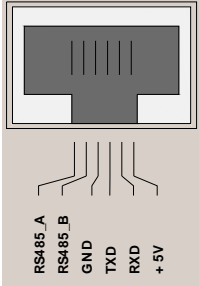
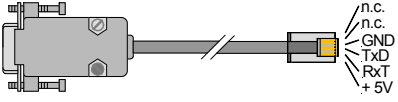
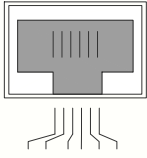

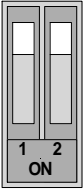
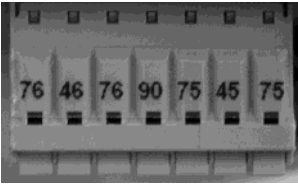
Terminals 75 and 76 on the spring terminal bar X9 are for connection of the signal leads from CAN High and CAN Low and are doubled for looping.

NOTE



Until date of bringing the *Phoenix spring terminal bar* onto the market (approx. the end of the 2nd quarter 2012), the *WAGO spring terminal bar* will be used. Detailed information in this context are illustrated at the former edition of the BU0560.

Wires with a cross-section of 0.2mm² to 1.5mm² (without wire end sleeve) can be connected to the spring terminals. The type code **-ERS** is the abbreviation for this special version.

Terminal	Function [factory setting]	Data	Description / wiring suggestion	Parameter
Terminal block X11 (1x RJ12), RS485/RS232				
1 RS485 A	Data cable RS485	Baud rate 9600...38400Baud	 <p>RJ12: Pin No. 1 ... 6</p>	P502...P513
2 RS485 B		Terminal resistance R=120Ω DIP 1 (see below)		
3 GND	Reference potential for Bus signals	0V digital		
4,232 TXD	Data cable RS232	Baud rate 9600...38400Baud		
5,232 RXD				
6 +5V	internal 5V supply voltage	5V ± 20%		
optional	Adapter cable RJ12 to SUB-D9 for direct connection to a PC with NORD CON	Length 3m Assignment RS 232 (Rx/D, Tx/D, GND)	 <p>Part. No. 278910240</p>	
DIP switches 1/2 (top view of SK 5xxE)				
	Plug designation		X11	X9
DIP switch 1	Terminal resistor for RS485 interface (RJ12); ON = switched in			
DIP switch 2	Terminal resistor for CAN/CANopen interface (RJ12); ON = switched in		 <p>RS232/485 DIP</p>	<p>CAN/CANopen</p>
Terminal block X9, CAN/CANopen (only SK 500E-...-ERS)				
75 CAN_H	CAN/CANopen signal	Baud rate ...500kBaud	 <p>1x spring terminal bar</p>	P502...P515
76 CAN_L		RJ45 sockets are connected in parallel internally.		
90 CAN_SHD	Cable shield	Termination resistor R=120Ω DIP 2 (see below)		
46 CAN_GND	CAN GND			
45 CAN_24V	External 24 VDC power supply			
75 CAN_H	CAN/CANopen signal	NOTE: To operate CANbus/CANopen the interface must be externally supplied with 24V (capacity at least 30mA).		
76 CAN_L				

The "ERS" special versions are only available for the following devices/powers:

SK 500E-750-323-A-ERS	275410076	SK 511E-750-323-A-ERS	275770076
SK 500E-111-323-A-ERS	275410111		
SK 500E-221-323-A-ERS	275410221	SK 511E-221-323-A-ERS	275770221
SK 500E-111-340-A-ERS	275420111		
SK 500E-301-340-A-ERS	275420301		

Electrical data 230V

Size 1 / 2					
Device type:	SK 5xxE...	-750-323-A-ERS	-111-323-A-ERS	-221-323-A-ERS	
Nominal motor power (4-pole standard motor)	230V	0.75 kW	1.1 kW	2.2 kW	
	240V	1 hp	1½ hp	3 hp	
Mains phases	Number	1/3 AC			
Mains voltage		200 - 240 V, ±10 %, 47 ... 63 Hz			
Output voltage		3 AC 0 - mains voltage			
Nominal output current	rms [A]	4.0	5.5	9.0	
Min. brake resistor	Accessories	100 Ω	75 Ω	43 Ω	
Typical input current	1 / 3 AC rms [A]	8.7 / 5.6	12.0 / 7.7	19.6 / 13.3	
Rec. mains fuse	1 / 3 AC slow-blowing	16 A / 10 A	16 A / 16 A	25 A / 20 A	
Type of ventilation		Free convection	Fan cooling, temperature controlled Switching thresholds: ON ≈ 57°C OFF ≈ 47°C		
Weight	Approx. [kg]	1.8	2.7		

Electrical data 400V

Size 2 / 3					
Device type:	SK 5xxE...	-111-340-A-ERS	-301-340-A-ERS		
Nominal motor power (4-pole standard motor)	400V	1.1 kW	3.0 kW		
	480V	1½ hp	4 hp		
Mains phases	Number	3 AC			
Mains voltage		380 ... 480 V, -20% / +10 %, 47 ... 63 Hz			
Output voltage		3 AC 0 - mains voltage			
Nominal output current	rms [A]	3.1	7.5		
Min. brake resistor	Accessories	220 Ω	91 Ω		
Typical input current	1 / 3 AC rms [A]	4.3	12.5		
Rec. mains fuse	1 / 3 AC slow-blowing	10 A	16 A		
Type of ventilation		Fan cooling, temperature controlled Switching thresholds: ON ≈ 57°C OFF ≈ 47°C			
Weight	Approx. [kg]	1.8	2.7		

Note: Up to week of manufacture 48/08, SK 500E-111-340-A-ERS frequency inverters were produced with free convection (without fan). Since week 49/08 a fan has also been incorporated in units of this size to provide better dissipation of heat.