

INTELLIGENT DRIVESYSTEMS, WORLDWIDE SERVICES



BU 0960 – en

NORDAC ACCESS BT

Manual SK TIE5-BT-STICK / NORDCON APP



Documentation

Designation: **BU 0960**
Part number: 6079602
Series: **NORDAC ACCESS BT**

Version list

Title, Date	Order number	Software version	Hardware Version	Remarks
BU 0960 , August 2019	6079602 / 3319	V1.0R0	AAA	First edition Product launch August 2019 NORDAC ACCESS BT and NORDCON APP

Table 1: Version list NORDAC ACCESS BT

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About this manual

This manual describes the essential functions of NORDAC ACCESS *BT* and basic use of the NORDCON *APP* software.

It is intended for qualified electricians who are familiar with electronic drive technology devices, in particular with their operation and parameterisation (📖 1.3 "Safety information").

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1 General

NORDAC ACCESS BT is the mobile Bluetooth access for electronic drive technology devices from Getriebebau NORD GmbH & CO. KG (hereinafter referred to as NORD). It is used for wireless connection of devices to a mobile terminal (device). Monitoring, parameterisation and analysis of the connected device can be carried out with the aid of the free NORDCON APP software (available for iOS and Android).

In addition, NORDAC ACCESS BT can be used to exchange parameter data between 2 identical devices or a computer.

For further descriptions of the devices, including their parameters, please refer to the relevant manual  6.3 "Further documentation".

1.1 Characteristics

- Monitoring, parameterisation and analysis of NORD electronic drive technology devices via Bluetooth (mobile terminal device with NORDCON APP software required)
- Integrated, non-volatile data storage for exchange of parameter data between identical devices or a computer.
- Mechanical switch to activate write protection (LOCK) to prevent accidental overwriting of the internal data memory
- RJ12 plug connector for connection to the device (communication via RS485)
- USB Type A port for connection to a computer
- 3 multi-colour LEDs as status and operation indicators
- 2 operating keys (data transfer, upload and download)

1.2 Delivery

Unpack the NORDAC ACCESS BT **immediately** on receipt and check that the delivery is complete and undamaged.

NOTICE: Only send the product in the original packaging to prevent damage. Keep the packaging for further use. Dispose of packaging material which is no longer required according to the applicable regulations in your country.

If you notice any transport damage, please contact the carrier immediately and arrange for an inspection.

Important! This also applies if the packaging is undamaged.

1.2.1 Scope of delivery

- | | |
|------------------|---|
| NORDAC ACCESS BT | <ul style="list-style-type: none">• SK TIE5-BT STICK• QUICK-START as hard copy• Film (LINK) about the NORDCON APP |
|------------------|---|

1.3 Safety information

for Operating Instructions

Read all of this safety information before working with the NORDAC ACCESS BT (SK TIE5-BT-STICK, Part-No: 275900120) Follow the descriptions in QUICK START. Observe all other information in the frequency inverter manual.

Keep the documents in a safe place. Give the documents to any third parties to whom you pass on the NORDAC ACCESS BT.

For power supply and operation of the system

- The NORDAC ACCESS BT is operated with electric power, so that in principle there is a risk of electric shock. Therefore, never immerse the NORDAC ACCESS BT in water or other liquids. Keep it away from rain and moisture. Do not operate the NORDAC ACCESS BT outdoors or in areas with high humidity.
- During parameterisation take precautions to prevent accidental movement of the drive (e.g. dropping of lifting equipment).
- Never enter the danger area of the system.

For correct use

The NORDAC ACCESS BT is used to establish a wireless connection between a device from Getriebbau NORD GmbH & Co. KG and a mobile terminal device. The NORDAC ACCESS BT has the following functions:

1. Parameter data transmission
2. Bluetooth Gateway for mobile terminal devices
3. Mass data storage

All other use is considered to be not as intended and is prohibited.

For use of the radio interface

- Ensure that Bluetooth communication is permitted in the intended area of use.

For incorrect use

The NORDAC ACCESS BT is only safe if it is used as intended! Incorrect use may cause damage. Therefore, please note the following:

- Only use the NORDAC ACCESS BT for its intended purpose.
- Never connect the ACCESS BT to an RJ12 port and a USB port simultaneously.
- Only plug the RJ12 connector of the NORDAC ACCESS BT into the RJ12 socket of the device.
- Only use the USB port of the NORDAC ACCESS BT for archiving data on a PC.
- Only transfer data to the device when it is not enabled.
- Do not interrupt the data transfer.

If the NORDAC ACCESS BT is defective

Never use a defective NORDAC ACCESS BT, and never plug it in to a defective device.

Please contact Getriebebau NORD GmbH & Co. KG immediately if you notice any defect of your NORDAC ACCESS BT. Consequential damage may be caused if you continue to use a defective NORDAC ACCESS BT.

You can contact the central emergency service under ☎ +49 (0) 180 - 521 50 60.

Disposal

Incorrect disposal may cause damage to the environment! Electrical waste and batteries must not be disposed of with household waste. At the end of its life, the product must be properly disposed of according to the local regulations for industrial waste. Use the local collection points.

1.4 Standards and approvals

1.4.1 Standards and directives

NORDAC ACCESS BT fulfils the following standards and directives.

Approval	Directive	Applied standards	Certificates	Code
CE (EU)	Radio Installation Directive 2014/35/ EU	EN 61000-4-2:2009-12 EN 61000-4-3:2011-04 EN 61000-4-4:2013-04 EN 61000-4-5:2015-03 EN 61000-4-6:2014-08	C310901_0319	
	RoHS 2011/65/EU	EN 300 328 V2.1.1:2016-11 EN 301 489-1 V2.1.1:2017-02 EN 301 489-17 V3.1.1:2017-02 EN 50581:2012		

Table 2: Standards and directives

1.4.2 EMC Directive

NORDAC ACCESS BT fulfils all requirements of the EMC Directive according to the European specifications.

Standard / Directive	Comments
IEC 61000-4-2	Electromagnetic compatibility (EMC) Parts 4-2: Testing and measuring methods - Testing of resistance to interference due to the discharge of static electricity
IEC 61000-4-3	Electromagnetic compatibility (EMC) Parts 4-3: Testing and measuring methods - Testing of resistance to interference due to high frequency electromagnetic fields (IEC 61000-4-3:2006 + A1:2007 + A2:2010); German version EN 61000-4-3:2006 + A1:2008 + A2:2010
IEC 61000-4-4	Electromagnetic compatibility (EMC) Parts 4-4: Testing and measuring methods - Testing of resistance to interference due to rapid transient electric interference/bursts (German version EN 61000-4-4:2012)
DIN EN 61000-4-5	Electromagnetic compatibility (EMC) Parts 4-5: Testing and measuring methods - Testing of resistance to interference due to voltage surges (IEC 61000-4-5:2014); German version EN 61000-4-5:2014
IEC 61000-4-6	Electromagnetic compatibility (EMC) Parts 4-6: Testing and measuring methods - Testing of resistance to interference induced by high frequency fields (IEC 61000-4-6:2013); German version EN 61000-4-6:2014

Table 3: EMC Directive

1.4.3 Bluetooth module

The Bluetooth module in the NORDAC ACCESS BT meets the following specifications:

Standard / Directive	Comments
ETSI EN 300 328 V2.1.1 (2016-11)	Wideband transmission systems; Data transmission equipment operating in the 2,4 GHz ISM band and using wide band modulation techniques; Harmonised Standard covering the essential requirements of article 3.2 of Directive 2014/53/EU
ETSI EN 301 489-1 V2.1.1 (2017-02)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU
ETSI EN 301 489-17 V3.1.1 (2017-02)	ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 17: Specific conditions for Broadband Data Transmission Systems; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU

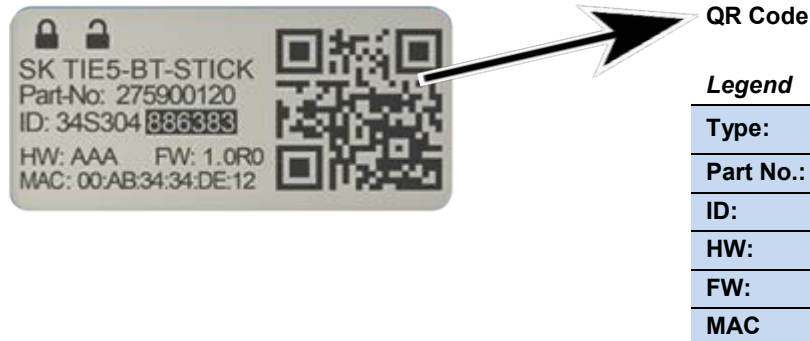
Table 4: Bluetooth module standard / directive

Standard / Directive	Comments	Code
FCC (America)	WAP4008	
IC (Canada)	7922A-4008	
KC (Korea)	MSIP-CRM-Cyp-4008	
MIC (Japan)	203-JN0509	

Table 5: National Bluetooth module standard / directive

1.5 Type code / Type plate

All relevant information for the NORDAC ACCESS BT including information for identifying the device can be obtained from the type plate.



Legend

Type:	Type / designation
Part No.:	Material No.
ID:	Device identification number
HW:	Hardware status (xxx)
FW:	Firmware status (x.x Rx)
MAC	Hardware network address

Figure 1: Type plate

The approx. 34 mm x 17 mm type plate can be found on the rear of the NORDAC ACCESS BT. The part number is 275900120.

1.6 Symbols

Symbol	Meaning / Explanation
	LOCK active, write protection
	LOCK not active, not write-protected
	Upload, button and function
	Download, button and function
	Bluetooth, connection and function
	Parameter data set, dataset file.temp or dataset.ndbx

Table 6: Symbols used

1.7 Terminology definitions

- **NORD** – Getriebebau NORD GmbH &Co. KG, Member of the NORD DRIVESYSTEMS Group
- **Electronic drive technology / Drive electronics**
Devices, e.g. Control cabinet and decentralised frequency inverters, i.e. field distributors, motor starters, options and IO extensions are NORD products and accessories.
- **NORDAC ACCESS BT**
Connection extension for connection via  Bluetooth to an electronic drive technology device (frequency inverter / motor starter) and its options (modules) from NORD.
- **NORDCON APP**
Software for mobile terminal devices for monitoring, parameterisation and analysis of devices coupled via NORDAC ACCESS BT or .
- **Computer / Device**
A computer (e.g. A PC, notebook or laptop) is a computer which is operated with an operating system (Windows, Mac OS, Linux, etc.). The various operating systems are available both for desktop PCs as well as for mobile terminal devices (e.g. smartphones, tablets) which are also termed as devices.
- **Download**
The function  Download describes the transfer of a stored parameter set from the NORDAC ACCESS BT to a connected device / participant. The action is started by actuating the  key and performs the transfer of the saved parameter data set.
- **Upload**
The function  Upload describes the transfer of parameter data from the connected device / participant to the NORDAC ACCESS BT. The action is started by actuating the  key and performs the transfer of the internal parameter data set of the device.
-  **Bluetooth**
Bluetooth is the standard for short range wireless communication and is a Short Range Wireless (SRW) technology.
- **Pairing**
Coupling of two devices via  Bluetooth, i.e. connection of a mobile terminal device with a device.

1.8 Abbreviations

APP	Application	I/O	In / Out (input / output) extension
BLE	Bluetooth Low Energy	KC	Korea Certification
CAN	Controller Area Network	LED	Light-Emitting Diode
CE	Communauté Européenne	MAC	Media Access Control
EC	European Community	MIC	Ministry of Internal Affairs and Communications
EMC	Electromagnetic compatibility	NDBX	NORDCON file format
EN	European standard	PC	Personal Computer
EU	European Union	PDA	Personal Digital Assistant
FCC	Federal Communications Commission	RJ	Registered Jack, standardised plug connection
FI	Frequency inverter	RS232	Interface for serial data communication
FW	Firmware status	RS485	Interface for serial data communication
HW	Hardware status	SRW	Short Range Wireless
IC	Industry Canada Certification	USB	Universal Serial Bus
ID	Device identification number	WPAN	Wireless Personal Area Network
IEC	International Electrotechnical Commission		

Table 7: Overview of abbreviations

2 NORDAC ACCESS BT

2.1 Design



No.	Designation	Function
1	USB port	Connection to computer USB interface, type A
2	Control button ⬆ Upload	Read parameter data
3	LEDs	Status and operating indicators
4	Control button ⬇ Download	Write parameter data
5	Eye	Attachment point
6	Slider switch	Write protection LOCK
7	RJ12 port	Connection on the device RS485 interface

Figure 2: NORDAC ACCESS BT structure

2.2 Write protection LOCK



Figure 3: Write protection LOCK

2.3 LED meanings

The NORDAC ACCESS BT is equipped with three dual colour LEDs. These multi-colour LEDs indicate the actual status as well as error messages.



Figure 4: LEDs

2.4 Application

2.4.1 Use for data storage

The NORDAC ACCESS BT can be used to exchange data and transfer parameter data from one device to another.

1. When connected to a computer via the USB port exchange of data from the mass storage is via the USB port ①.
2. When connected to the diagnostic interface of the device / participant via the RS485 interface the parameter data are transferred from or to the NORDAC ACCESS BT via the RJ12 port ⑦.

2.4.2 Connection to a computer

1. Connecting the NORDAC ACCESS BT to a computer.

Plug the USB plug connector ① from the NORDAC ACCESS BT into a USB socket of the Computer



Figure 5: USB- Connection to computer

2. Wait until ready for operation.

- The Link LED  first flashes red  and then lights up green .
- The NORDAC ACCESS BT is supplied with power from the Computer via the USB connection  or the USB port

3. Reading process: Read out the data memory

- The mass storage is searched for the saved parameter set and other files
- The parameter LED  flashes orange 

4. Displaying the content of the data memory

a. With a saved parameter data set

- The parameter LED  lights up green 

b. If there is no saved parameter data set

- The parameter LED  does not light



Information

The parameter LED  also lights up green , if a defective data set is saved on the NORDAC ACCESS BT

For detailed information about the further course of action please refer to Section  4.3 "FAQ Malfunctions".

5. Start Windows Explorer

- The window may also open automatically on the screen

BT-STICK (E:)

Choose what to do with removable drives.



Configure storage settings
Settings



Open folder to view files
File Explorer



Take no action

Figure 6: Automatic display

6. Open the folder to select the files which are displayed.

- Under Computer the BT-STICK drive is displayed
- Files which are saved on the BT-STICK are displayed

** Information**

File processing, e.g. deletion of a dataset is only possible if the write protection is deactivated (sliding switch  in the “unlocked”  position).

If write protection is activated (sliding switch  in the “locked”  position) the status LED  lights up yellow .

** Information**

The following restrictions must be taken into account if the  NORDAC ACCESS BT is connected to a computer via the USB port:

- TIE5-BT-STICK is not visible on mobile terminal devices for the coupling process via Bluetooth
 - NORDCON APP cannot be used
 - The operating keys  Upload  and  Download  do not function
-

2.4.3 Connection to an electronic drive technology device

1. Connect the NORDAC ACCESS BT to the diagnostic connection of the device / participant. Plug the RJ12 plug connector ⑦ from the NORDAC ACCESS BT into the RJ12 port of the device.



Figure 7: RJ12 connection to the device

2. Wait until ready for operation.
 - The Link LED ③ first flashes red slowly , and then faster 
 - After the installation phase the Link LED ③ then lights up green 
 - NORDAC ACCESS BT is supplied with power from the device via the RJ12 port ⑦ or the RS485 interface
3. Start the data transfer.



Figure 8: Data transfer, upload and download

- a. Starting: Press the  Upload ② or  Download ④ control key for > 2 s.
 - The parameter LED ① lights up orange 
- b. Transfer phase: The parameter data are transferred.
 - During transfer the parameter LED ① flashes green 
- c. End: The parameter data have been transferred and saved.
 - The parameter LED ① lights up green 

4. Delete the NORDAC ACCESS BT pairing list (3 coupling list).
 - a. Starting: Press the  Upload (2) and  Download (4) control keys simultaneously and hold them pressed for > 4 s.
 - While the two control keys are actuated the parameter LED (A) lights up orange 
 - b. Deletion process: after releasing the control keys the saved pairing list is deleted.
 - The parameter LED (A) briefly lights up green 
 - c. End: The pairing list has been deleted.
 - The green parameter LED (A) goes out 



Figure 9: Delete Pairing List

Information

Deletion of the pairing list is only possible if the  Bluetooth mode is switched off, i.e. the status LED (B) does not light up blue .

Note: If write protection is activated (sliding switch (6) in the "locked"  position) the status LED (B) may light up yellow . The pairing list is deleted in spite of this.

5. Remove the NORDAC ACCESS BT from the diagnostic port of the device. Unplug the RJ12 plug connector (7) from the NORDAC ACCESS BT from the RJ12 socket of the device.



Figure 10: Disconnecting the RJ12 port

2.4.4 Procedure for transferring data between devices

The parameter data which is saved by a device / participant (Dataset.ndbx) can be transferred to an identical device with the NORDAC ACCESS BT.

Information

The data transfer for the parameter data depends on the device and can take several seconds. During the data transfer the NORDAC ACCESS BT must not be disconnected from the device and the device must not be disconnected from the power supply!



Figure 11: Data transfer procedure

A detailed description of the procedure for transferring data between two devices can be obtained from Section  2.4.3 "Connection to an electronic drive technology device".

2.4.5 Use with Bluetooth

The NORDAC ACCESS BT can establish a wireless connection via Bluetooth between a NORD device / participant and the NORDCON APP.

The NORDAC ACCESS BT connection is made via the RJ12 port ⑦ on the diagnostic interface of the device.



The conditions for communication via Bluetooth are:

- Use of a mobile terminal device with integrated BLE
- The requirements of Bluetooth 4.1 LE must be met
- Use of the NORDCON APP

Figure 12: Bluetooth connection

Information

The NORDCON APP contains the protocol and is intended for installation on a mobile terminal device. The NORDCON APP can be obtained free of charge via the usual stores. For detailed information please refer to section 3 "NORDCON APP".

2.4.6 Bluetooth connection to an electronic drive technology device

1. Connect the NORDAC ACCESS BT to the diagnostic port of the device / participant. Plug the RJ12 plug connector ⑦ from the NORDAC ACCESS BT into the RJ12 socket of the device.



Figure 13: RJ12 connection to the device

2. Wait until ready for operation.
 - The Link LED ③ first flashes red 🔴 and then lights up green 🟢
 - NORDAC ACCESS BT is supplied with power from the device via the RJ12 port ⑦ or the RS485 interface
3. Bluetooth Activate the Bluetooth mode. Press the ⬆️ Upload ② or ⬇️ Download ④ control key for < 1 s to activate Bluetooth visibility.
 - The parameter LED ① briefly lights up orange 🟠
 - Visibility is indicated by the slowly flashing blue 🌊 status LED ⑤



Figure 14: Bluetooth Activating Bluetooth visibility

If no Bluetooth connection to a mobile terminal device is established within 1 hour Bluetooth visibility of the NORDAC ACCESS BT is extinguished automatically.

- The blue 🌊 flashing status LED ⑤ goes out ○
4. Deactivating the Bluetooth mode again. Press the ⬆️ Upload ② or ⬇️ Download ④ control key for < 1 s to deactivate Bluetooth visibility again.
 - The parameter LED ① briefly lights up orange 🟠
 - The previously blue 🌊 flashing status LED ⑤ goes out ○
 - The Bluetooth mode or visibility is deactivated



Figure 15: Deactivation of visibility and Bluetooth

i Information

Connection of the NORDAC ACCESS BT via Bluetooth can differ for mobile terminal devices from different manufacturers. By removing the NORDAC ACCESS BT from the diagnostic interface of the connected device the Bluetooth mode or visibility is also deactivated.

5. Deleting the NORDAC ACCESS BT pairing list. Press the  Upload  and  Download  keys simultaneously for > 4 s.
 - While the keys are pressed, the parameter LED  lights up orange , goes out  and then flashes green  for the rest of the time the keys are pressed
 - The parameter LED  goes out  if the two control keys are no longer being pressed



Figure 16: Delete Bluetooth pairing list



Information

Deletion of the pairing list is only possible if the Bluetooth mode is switched off, i.e. the status LED  does not light up blue .

Note: If write protection is activated (sliding switch  in the "locked"  position) the status LED  may light up yellow . The pairing list is deleted in spite of this.



Information

On the mobile terminal device, the device connection must also be deleted via the menu setting under Bluetooth. The procedure for deletion may differ depending on the manufacturer of the mobile terminal device.



Information

During the initial installation of NORDAC ACCESS BT on a mobile terminal device a password query is made during connection and pairing of the devices.

For more detailed information about pairing, please refer to the Quick Start guide  3.1 "QUICK-START" and Section  3 "NORDCON APP".

3 NORDCON APP

NORDCON APP is a software which enables the operation, parameterisation and monitoring of NORD electronic drive technology. The NORDCON APP is based on the NORDCON software and is specially tailored for use on mobile terminal devices. The NORDCON APP is available for Android and iOS operating systems and can be downloaded free of charge via Google Play and Apple Store.

Essentially, the following functions are supported:

- Drive monitoring
- Drive parameterisation
- Backup and recovery
- Oscilloscope function
- Support request

Via the NORDCON APP there is direct access to the data of the connected device / participant which is connected to the diagnostic connection of the NORDAC ACCESS BT. If other devices / participants are connected to this via USS or the system bus, their data can also be accessed.

3.1 QUICK-START

More detailed information about the use of NORDAC ACCESS BT is described in a Quick-Start instruction (📖 S9090). The QUICK-START is available for download on the homepage under the link [QUICK-START](#).

3.2 Installation of the NORDCON APP

3.2.1 Scan the QR code

Scan the QR Code of the NORDAC ACCESS BT (📖 1.5 "Type code / Type plate") with the mobile terminal device and follow the brief instructions (📖 3.1 "QUICK-START").



Figure 17: NORDCON APP QR Code

3.2.2 Installation via Stores

The NORDCON APP is available for Apple and Android operating systems.



Figure 18: Installation of the NORDCON APP operating system

3.3 Establishing Bluetooth communication

3.3.1 Establishing NORDAC ACCESS BT connection

The NORDCON APP is coupled to the device via NORDAC ACCESS BT by use of a  Bluetooth connection. Connection is made with the RJ12 port  on the diagnostic interface or via the RS485 interface on the device.



Figure 19: Establishing communication via  Bluetooth



Information

The following procedure must be observed for RJ12 connection  of the NORDAC ACCESS BT to the device and use of the NORDCON APP:

- Delete any pairing information on the NORDAC ACCESS BT, i.e. delete the pairing list. For detailed information please refer to section  2.4.6 " Bluetooth connection to an electronic drive technology device".
- Delete any existing pairing information on the mobile terminal device, i.e. existing entries in the  Bluetooth settings must be deleted.

4 Diagnosis and fault analysis

4.1 Status displays

The NORDAC ACCESS BT generates operating and statuses as well as error messages for the various functions and application areas and displays these via the LEDs ³. The meaning of the colours and the various flashing frequencies are assigned to the three LEDs as follows.



Description	Meaning / Function
A Parameter LED	Parameter data, data transfer (⬆ Upload and ⬇ Download), control keys
B Status LED	Bluetooth mode connection to NORDCON APP, LOCK write protection, display of sliding switch position
C Link LED	Readiness for operation, connection, power supply, connection error

Figure 20: LED meanings

4.2 Display statuses

The three coloured LEDs ³ can display the following colours and statuses:

Status	Parameter LED	Status LED	Link LED
	A	B	C
	Orange Green	Blue Yellow	Red Green
Off	 	 	 
On	 	 	 
Flashing	 		 

Figure 21: LED display statuses

4.2.1 Parameter LED

LED		Description	Signal status		Meaning
Position	Colours				
A Left LED	Dual orange/green	Parameter data ⬆ Upload ⬇ Download	Off		- Not active - No parameter data present
			Orange On		The ⬆ Upload 2 and / or ⬇ Download 4 key has just been pressed.
			Flashing orange	5 Hz	- The ⬆ Upload 2 or ⬇ Download 4 key has been pressed and data transfer is being executed - System error active
			Flashing orange	10 Hz	- The ⬆ Upload 2 or ⬇ Download 4 key has been pressed and more than one device / participant has been detected. - The ⬇ Download 4 key has been pressed but there are no parameter data present ( Dataset.ndbx) in the NORDAC ACCESS BT. - Access by the computer 1 to the mass storage of NORDAC ACCESS BT via the USB port.
			Green On		- The parameter data ( Dataset.ndbx) are saved in the NORDAC ACCESS BT. The ⬆ upload was successful - The parameter data are saved in the device / participant. The ⬇ download was successful.
			Flashing green	1 Hz	A parameter data transfer between NORDAC ACCESS BT and the connected device / participant in in progress.

Table 8: Parameter LED display

Error acknowledgement

If an error occurs while saving parameter data on the NORDAC ACCESS BT, the parameter-

LED **A** lights up continuously orange. This state must be acknowledged by briefly pressing either the  Upload **2** or  Download keys **4**

4.2.2 Status LED

LED		Description	Signal status		Meaning
Position	Colours				
 Middle LED	Dual blue/yellow	 Bluetooth mode	Off		Not active NORDAC ACCESS BT is not sending any  Bluetooth signals → It is not possible to establish a connection.
			Blue On		NORDCON APP is connected to a device / participant.
			Flashing blue	 1 Hz	NORDCON ACCESS BT is transmitting  Bluetooth signals and is visible for other mobile terminal devices. → NORDCON APP can be connected to the NORDAC ACCESS BT.
			Flashing blue	 5 Hz	- NORDAC ACCESS BT is connected to a NORDCON APP. → Therefore the NORDAC ACCESS BT is no longer visible to other mobile terminal devices. - The  Upload  and  Download  keys have no function. → Parameter data transfer is not possible. If an  Upload  or  Download  key is actuated; the orange  parameter-LED  flashes quickly (10 Hz).
		Write protection	Off		The NORDAC ACCESS BT write protection LOCK is not active. → Sliding switch  in "unlocked"  position.
			Yellow On		The NORDAC ACCESS BT write protection LOCK is active. → Sliding switch  in "locked"  position.

Table 9: Status LED display

4.2.3 Link LED

LED		Description	Signal status		Meaning
Position	Colours				
C Right LED	Dual red/green	Link	Off		- Not active - Not ready for operation
			Green On		- NORDAC ACCESS BT is ready for operation → Power supply OK - Connected device / participant found
			Flashing green	 1 Hz	Several devices / participants found → Parameter data transfer not possible → Change to  Bluetooth mode possible
			Red On		Connection error → Parameter data transfer not possible → No establishment of connection via Bluetooth
			Flashing red	 1 to 4 Hz ¹⁾	NORDAC ACCESS BT scans for connected devices / participants → Only for RJ12 port 

Table 10: Link LED display

¹⁾ Depending on device type and baud rate

Error acknowledgement

If an error occurs while saving parameter data on the NORDAC ACCESS BT, the Link LED  flashes red. This state must be acknowledged by briefly pressing either the  Upload ^② or  Download key ^④

4.3 FAQ Malfunctions

Fault	Possible cause	Remedy
NORDAC ACCESS BT has no LED display (all 3 LEDs  are off)	- Connection or contact problems - Device or computer is switched off - No power supply to device or computer - Link LED  does not light up green 	- Check connections - RJ12 plug connector  - USB plug connector  - Switch on the device or computer
NORDAC ACCESS BT data transfer upload is not executed	- NORDAC ACCESS BT is write protected The LOCK sliding switch is in the "locked"  position; write protection is active - Status LED  lights up yellow 	Set the  LOCK sliding switch to the "unlocked"  position
NORDAC ACCESS BT  upload or  download transfer of parameter data ( Dataset.ndbx) incomplete	- NORDAC ACCESS BT was disconnected from the power supply or was not plugged in correctly - The LOCK sliding switch is in the "locked"  position; write protection is active - Status LED  lights up yellow 	- Check the RJ12 connection  - Check the power supply of the connected device - Set the LOCK sliding switch to the "unlocked"  position
Incomplete NORDAC ACCESS BT data set;  download not executed	- No dataset ( Dataset.ndbx) present on the NORDAC ACCESS BT - Previous  upload was interrupted or defective - Defective dataset ( Dataset.temp) on the NORDAC ACCESS BT	- Repeat the  upload data transfer - Press the  Upload  key - Restart  download data transfer - Press the  Download  key
The parameter data set saved on the NORDAC ACCESS BT ( Dataset.ndbx) cannot be deleted	- NORDAC ACCESS BT is connected via the USB port  - NORDAC ACCESS BT is write protected - The LOCK sliding switch is in the "locked"  position; write protection is active - Status LED  lights up yellow 	- Set the LOCK sliding switch to the "unlocked"  position - Delete the parameter data set ( Dataset.ndbx)  Select with Windows-Explorer and delete

Table 11: FAQ Malfunctions Part 1



Information

Use via  Bluetooth with the NORDCON APP

The following must be noted before using the NORDAC ACCESS BT with the NORDCON APP:

- Delete the pairing list, see  2.4.6 " Bluetooth connection to an electronic drive technology device".
- Any entries for previous  Bluetooth connections e.g. "TIE5-BT 10:10" must be deleted on mobile terminal devices.

Fault	Possible cause	Remedy
NORDAC ACCESS BT does not connect to the NORDCON APP	- NORDAC ACCESS BT is connected to the computer via the USB port ① - NORDCON APP is not installed or started - Bluetooth-Modus not active - Status LED ⑧ does not light up green ● - The connected device / participant is switched off - No power supply	- Connect the NORDAC ACCESS BT to the device via the RJ12 plug connector ⑦ - Check the power supply of the device - Activate Bluetooth mode / visibility - Switch on Bluetooth on the mobile terminal device - Check the NORDCON APP installation - Starting - Connect and carry out pairing as necessary
NORDAC ACCESS BT "TIE5-BT XX:XX" is not visible in the overview of Bluetooth devices on the mobile terminal device XX:XX stands for the last 5 characters of the MAC address.	- NORDAC ACCESS BT is not correctly plugged in to the connected device / participant - NORDAC ACCESS BT is connected via the USB port ① - Bluetooth is not enabled on the mobile terminal device - Range (distance) too large - Bluetooth visibility period (1 h) expired - Activate Bluetooth mode	- Switch on Bluetooth on the mobile terminal device - Check the RJ12 connection ⑦ - Check that the NORDAC ACCESS BT is ready for operation - Activate visibility via Bluetooth - Keep within range (max. 10 m) - Search for available Bluetooth devices again
NORDAC ACCESS BT "TIE5-BT XX:XX" is not displayed in the NORDCON APP connection list XX:XX stands for the last 5 characters of the MAC address.	- NORDAC ACCESS BT is not correctly plugged in to the connected device / participant - NORDAC ACCESS BT is connected via the USB port ① - Bluetooth is not enabled on the mobile terminal device - Range (distance) too large - Bluetooth visibility period (1 h) expired - Activate Bluetooth mode	- Switch on Bluetooth on the mobile terminal device - Check the RJ12 connection ⑦ - Check that the NORDAC ACCESS BT is ready for operation - Activate visibility via Bluetooth - Keep within range (max. 10 m) - Search for available Bluetooth devices again

Table 12: FAQ Malfunctions Part 2



Information

RJ12- Connection / RS485 interface

The NORDAC *ACCESS BT* is equipped with automatic baud rate detection for the RS485 interface.

The USS baud rate is specific to the device and is set in parameter 511 USS baud rate

The baud rate 187750 Baud is not supported for NORDAC *PRO SK 540E* and *SK 545E* devices.



Information

USB- port / USB interface

With the USB port  on the USB interface on the computer the two operating keys  Upload  and  Download  have no function. Visibility via  Bluetooth and use of the NORDCON *APP* is not possible with mobile terminal devices.

5 Technical data

The following technical data apply for NORDAC ACCESS BT or the connection extension SK TIE5-BT-STICK with part number 275900120:

5.1 General Data

Function	Specification
Operating / ambient temperature	-10°C ... +50°C
Storage and transport temperature	-20°C ... +60°C
Long-term storage	-20°C ... +50 C
Protection class	IP00
Environmental protection	<i>Radio</i>  1.4.1 "Standards and directives" <i>EMC</i>  1.4.2 "EMC Directive" <i>RoHS</i>  1.4.1 "Standards and directives"
Dimensions(W x H x D)	91 x 22 x 14 [mm]
Weight.	12 g
Interfaces (integrated)	RS485 (RJ12plug connector) USB (Typ A, plug)
Memory capacity	~ 3 MByte

5.2 NORDCON APP Data

Function	Specification
Software version	V1.0 R028 (series production approval)
Operating systems	
Apple	iOS 8 and higher
Android	Version 5.1 and higher

5.3 Bluetooth data

Function	Specification
Version	BLE 4.1
Profile	Custom profile
Frequency band	2.40 GHz ... 2.48 GHz
Max. output power	+3 dBm
Receiver sensitivity	-91 dBm
Communication interface	
Max. range	~10 m
Certification	<i>FCC</i>  1.4.3 "Bluetooth module" <i>IC</i>  1.4.3 "Bluetooth module" <i>MIC</i>  1.4.3 "Bluetooth module" <i>CE</i>  1.4.1 "Standards and directives" <i>KC</i>  1.4.3 "Bluetooth module"

5.4 Electrical data

Function	Specification
Nominal voltage supply (DC)	+5 V ... +24 V
Current consumption	35 mA ... 80 mA (depending on input voltage)
Communication interface	
max. baud rate	460800 Baud

6 Additional information

6.1 Status overview

The following status and operating states can be displayed on the NORDAC ACCESS BT with the 3 multi-colour LEDs:

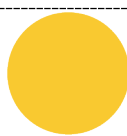
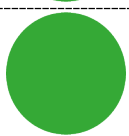
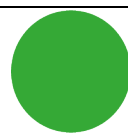
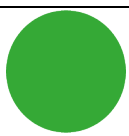
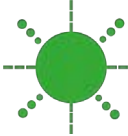
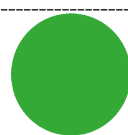
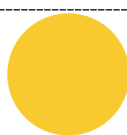
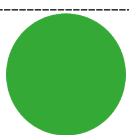
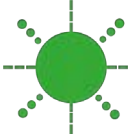
Device connection	Description / Function area			LED		
	Parameter data 	Write protection 	Data transfer 	Parameters A	Status B	Link C
Device search active						
1 device found						
						
	 Dataset.ndbx					
				 1 Hz		
				 1 Hz		
						
				 1 Hz		

Table 13: Status overview Part 1

Device connection	Description / Function area			LED		
	Parameter data 	Write protection 	Data transfer 	Parameters (A) 	Status (B) 	Link (C) 
Several devices found	 Dataset.ndbx		 or 	 5 Hz		
	Target and / or source not defined					
						
						
	 Dataset.ndbx					
						

Table 14: Status overview Part 2

Description / Function area				LED		
	Parameter data 	Write protection 	Data transfer 	Parameters (A) 	Status (B) 	Link (C) 
System error active				 5 Hz		
Function not possible as e.g. Write protection  is active				 10 Hz		

Table 15: Status overview Part 3

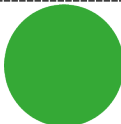
Device connection	Description / Function area  Bluetooth mode / NORDCON APP	Parameters	LED	
			Status 	Link 
1 device found	 Visibility		 1 Hz	
	 Pairing active		 5 Hz	
	 Connection with the NORDCON APP			
Several devices found	 Visibility		 1 Hz	 1 Hz
	 Pairing active		 5 Hz	 1 Hz
	 Connection with the NORDCON APP			 1 Hz
Control key  or  is actuated				
The pairing list is being deleted				

Table 16: Status overview Part 4

6.2 EU Declaration of Conformity

GETRIEBEBAU NORD Member of the NORD DRIVESYSTEMS Group		
Getriebebau NORD GmbH & Co. KG Getriebebau Nord Str. 1, 22941 Bargteheide, Germany, Fon +49(0)4532 289 - 0, Fax +49(0)4532 289 - 2253, info@nord.com		
C310901_0319		
EU Declaration of Conformity In the meaning of the directive 2014/53/EU Annex II and 2011/65/EU Annex VI		
Getriebebau NORD GmbH & Co. KG as manufacturer in sole responsibility hereby declares, that the product „NORDAC ACCESS BT“ (Bluetooth Stick for starters and variable speed drives) with the marking		Page 1 of 1
• SK TIE5-BT-STICK		
comply with the following regulations:		
Radio Equipment Directive	2014/53/EU	OJ. L 153 of 22.5.2014, P. 62-106
RoHS Directive	2011/65/EU	OJ. L 174 of 1.7.2011, P. 88-110
Delegated Directive (EU)	2015/863	OJ. L 137 of 4.6.2015, P. 10-12
Applied standards:		
EN 61000-4-2:2009	EN 300 328 V2.1.1:2016	EN 50581:2012
EN 61000-4-3:2011	EN 301 489-1 V2.1.1:2017	
EN 61000-4-4:2013	EN 301 489-17 V3.1.1:2017	
EN 61000-4-5:2015		
EN 61000-4-6:2014		
For the intended use, the information in the operating instructions must be observed.		
First marking was carried out in 2019.		
Bargteheide, 15.01.2019		
		
U. Küchenmeister Managing Director		pp F. Wiedemann Head of Inverter Division

Figure 22: EU Declaration of Conformity

6.3 Further documentation

Further documentation and software (www.nord.com)

Software	Description
NORDCON APP	Parametrisation and diagnostic software for mobile terminal devices

Film	Description
Video	Video on the use of the NORDCON APP

Document	Description
S9090	NORDAC ACCESS BT and NORDCON APP QUICK START
BU 0135	Motor starter manual NORDAC START SK 135E / SK 175E
BU 0155	Manual for motor starters and field distributors NORDAC LINK SK 155E-FDS / SK 175E-FDS
BU 0180	Manual for decentralised frequency inverter NORDAC BASE SK 180E + SK 190E
BU 0200	Manual for decentralised frequency inverters NORDAC FLEX SK 200E ... SK 235E

Document	Description
BU 0250	Manual for decentralised frequency inverters / field distributors NORDAC LINK SK 250E-FDS... SK 280E-FDS
BU 0500	Control cabinet frequency inverter manual for NORDAC PRO SK 500E ... SK 535E
BU 0505	Control cabinet frequency inverter manual for NORDAC PRO SK 540E ... SK 545E
BU 0600	Control cabinet frequency inverter manual for NORDAC PRO SK 500P / SK 530P / SK 550P
BU 0000	Description of NORDCON software

Flyer	Description
E3000	NORDAC Electronic drive technology

7 Maintenance and servicing information

7.1 Maintenance information

The NORDAC ACCESS BT is *maintenance free*  5 "Technical data" in normal operation.

Dusty environments

If the NORDAC ACCESS BT is operated in dusty air the connections of the NORDAC ACCESS BT must be properly cleaned after use.

7.2 Service notes

Our Technical Support is available in case of technical queries.

In case of enquiries to our technical support, please keep the exact device type ( 1.5 "Type code / Type plate") and the ID / serial number at hand.

The NORDAC ACCESS BT must be sent to the following address if it needs repairing:

NORD Electronic DRIVESYSTEMS GmbH

Tjüchkampstraße 37

D-26605 Aurich, Germany

Please back up the data which is saved in the data memory before sending the NORDAC ACCESS BT.



INFORMATION

Reason for return / sending

Please note the reason for sending in NORDAC ACCESS BT and specify a contact for any queries that we might have.

You can obtain a return note from our web site ([Link](#)) or from our technical support.

Unless otherwise agreed, after examination / repair the NORDAC ACCESS BT will be reset to the state as delivered.

Contacts (Phone)

Technical support	During normal business hours	+49 (0) 4532-289-2125
	Outside normal business hours	+49 (0) 180-521-5060
Repair enquiries	During normal business hours	+49 (0) 4532-289-2115

The manual and additional information can be found on the Internet under  www.nord.com.

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