INTELLIGENT DRIVESYSTEMS, WORLDWIDE SERVICES

BU 0960 – en

NORDAC ACCESS BT

Manual SK TIE5-BT-STICK / NORDCON APP

NORD® DRIVESYSTEMS

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*

Copyright notice

Publisher

Getriebebau NORD GmbH & Co. KG
Getriebebau-Nord-Straße 1 • 22941 Bargteheide, Germany • http://www.nord.com/
Fon +49 (0) 45 32 / 289-0 • Fax +49 (0) 45 32 / 289-2253

Member of the NORD DRIVESYSTEMS Group

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").

Table of Contents

List of illustrations

List of tables

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*

- 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 Getriebebau 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 RoHS 2011/65/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 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	C310901_0319	CE

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

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.

A Parameter LED

B Status LED

C Link LED

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 ① 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

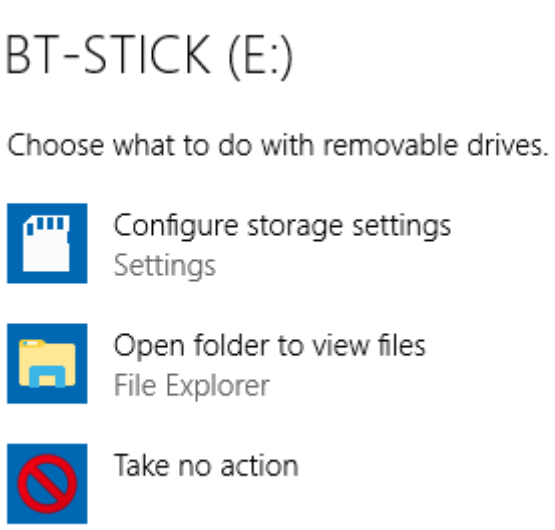


Figure 6: Automatic display

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 ⑥ in the “unlocked” 🔓 position).

If write protection is activated (sliding switch ⑥ in the “locked” 🔒 position) the status LED Ⓑ lights up yellow 🟡.

Information

The following restrictions must be taken into account if the ① 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 ②and ⬇ Download ④do 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 Ⓒ first flashes red slowly, and then faster
   - After the installation phase the Link LED Ⓒ 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.

Upload

Device → NORDAC *ACCESS BT*

Download

NORDAC *ACCESS BT* → Device

Figure 8: Data transfer, upload and download

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

4. Delete the NORDAC *ACCESS BT* pairing list (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 Ⓐ lights up orange
   b. Deletion process: after releasing the control keys the saved pairing list is deleted.
      • The parameter LED Ⓐ briefly lights up green
   c. End: The pairing list has been deleted.
   • The green parameter LED Ⓐ goes out

Figure 9: Delete Pairing List

Information

Deletion of the paring 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 ⑥ in the “locked” position) the status LED Ⓑ 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!

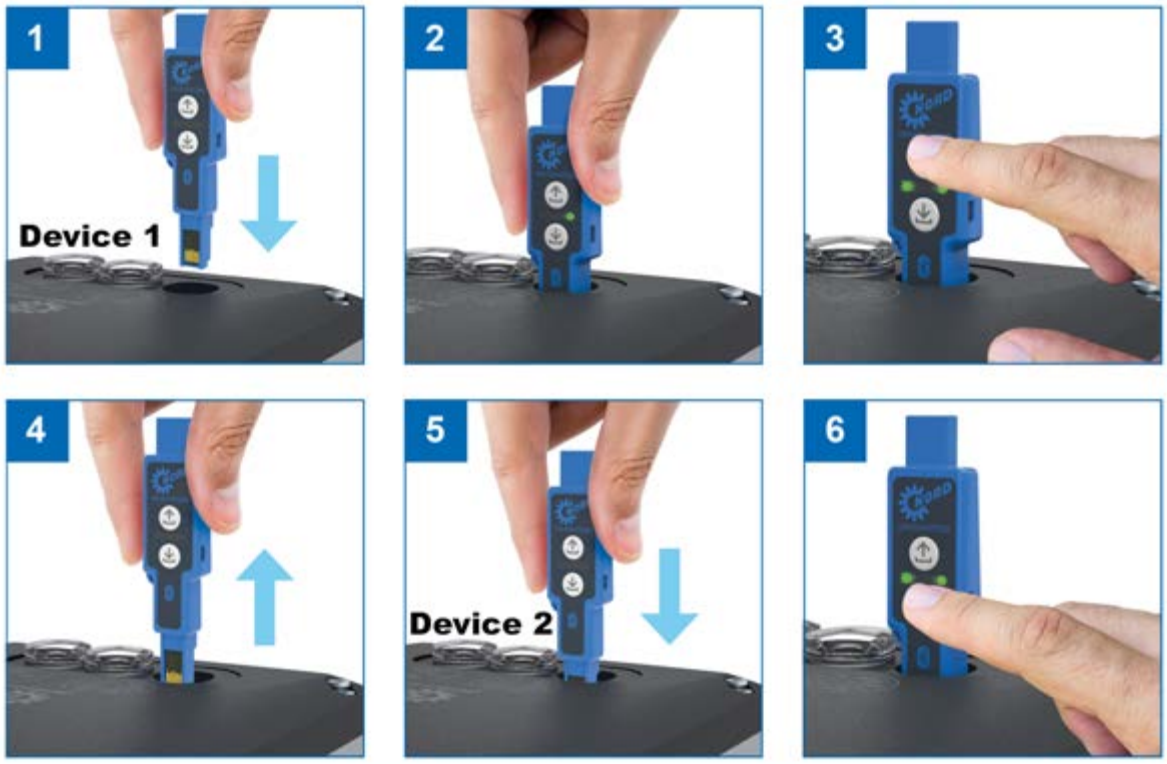


Figure 11: Data transfer procedure

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 Ⓒ 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. Activate the Bluetooth mode. Press the Upload ② or Download ④ control key for < 1 s to activate Bluetooth visibility.
   - The parameter LED Ⓐ briefly lights up orange
   - Visibility is indicated by the slowly flashing blue status LED Ⓑ

Figure 14: Activating Bluetooth visibility

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

- The blue flashing status LED Ⓑ 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 Ⓐ briefly lights up orange
   - The previously blue flashing status LED Ⓑ goes out
   - The Bluetooth mode or visibility is deactivated

Figure 15: Deactivation of visibility and Bluetooth

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 ② and Download ④ 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 paring list

Information

Deletion of the paring 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.

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.

Apple	Download on the App Store	Version iOS 8 and higher
Android	GET IT ON Google Play	Version 5.1 and higher

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 ⑦ 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 ⑦ 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

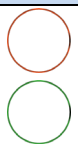
LED Position	Colours	Description	Signal status		Meaning
(A) Left LED	Dual orange/green	Parameter data Upload Download	Off		• Not active No parameter data present
			Orange On		• The Upload (2) and / or Download (4) key has just been pressed.
			Flashing orange	 5 Hz	• The Upload (2) or Download (4) key 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 Position	Colours	Description	Signal status		Meaning
Ⓑ 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 ② and Download ④ keys have no function. → Parameter data transfer is not possible. If an Upload ② or Download ④ 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 ⑥ in “unlocked” position.
			Yellow On	●	• The NORDAC *ACCESS BT* write protection LOCK is active. → Sliding switch ⑥ in “locked” position.

Table 9: Status LED display

4.2.3 Link LED

LED Position	Colours	Description	Signal status		Meaning
Ⓒ 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 ⑦

[1] Depending on device type and baud rate

Table 10: Link LED display

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 ③ 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 ⑦ USB plug connector ① • 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 ⑥ 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 ⑦ • 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 ② key • Restart ⬇ download data transfer Press the ⬇ Download ④ 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 ① • 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*:

1. Delete the pairing list, see 🕮 2.4.6 "Bluetooth connection to an electronic drive technology device".
2. 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 Ⓑ 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 (1) on the USB interface on the computer the two operating keys (2) Upload and (4) 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	*Radio*	🕮 1.4.1 "Standards and directives"
	EMC	🕮 1.4.2 "EMC Directive"
	RoHS	🕮 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 Android	 iOS 8 and higher 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	*FCC*	🕮 1.4.3 "Bluetooth module"
	IC	🕮 1.4.3 "Bluetooth module"
	MIC	🕮 1.4.3 "Bluetooth module"
	CE	🕮 1.4.1 "Standards and directives"
	KC	🕮 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:

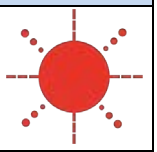
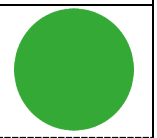
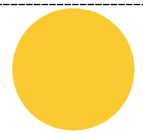
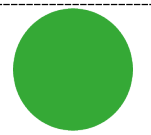
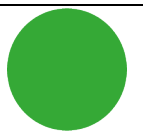
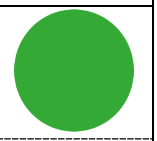
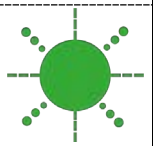
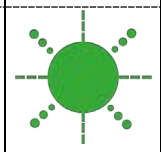
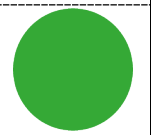
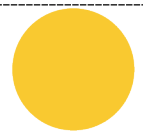
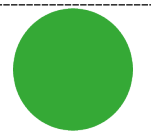
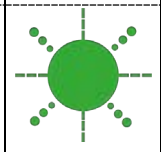
Device connection	Description / Function area			LED		
	Parameter data	Write protection	Data transfer	Parameters (A)	Status (B)	Link (C)
Device search active						
1 device found						
						
	Dataset.ndbx					
				 1 Hz		
				 1 Hz		
						
				 1 Hz		

Table 13: Status overview Part 1

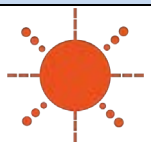
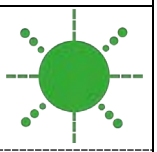
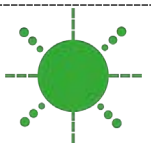
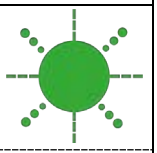
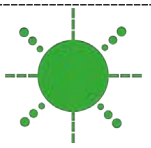
Device connection	Description / Function area			LED		
	Parameter data	Write protection	Data transfer	Parameters (A)	Status (B)	Link (C)
Several devices found	Dataset.ndbx		or	 5 Hz		
	Target and / or source not defined					
						
						
	Dataset.ndbx					
						

Table 14: Status overview Part 2

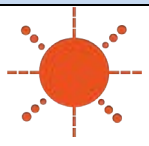
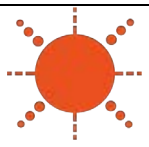
Description / Function area				LED		
	Parameter data	Write protection	Data transfer	Parameters (A)	Status (B)	Link (C)
System error active				 5 Hz		
Function not possible as e.g. Write protection is active				 10 Hz		

Table 15: Status overview Part 3

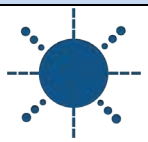
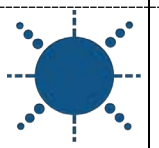
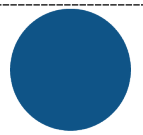
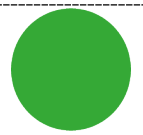
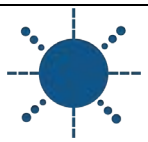
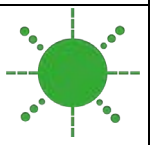
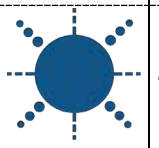
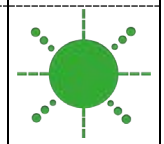
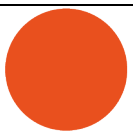
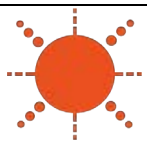
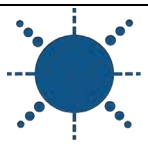
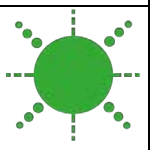
Device connection	Description / Function area Bluetooth mode / NORDCON *APP*	LED Parameters (A)	Status (B)	Link (C)
1 device found	Visibility		 1 Hz	
	Pairing active		 5 Hz	
	Connection with the NORDCON *APP*			
Several devices found	Visibility		 1 Hz	 1 Hz
	Pairing active		 5 Hz	 1 Hz
	Connection with 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

DRIVESYSTEMS

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 61000-4-3:2011
EN 61000-4-4:2013
EN 61000-4-5:2015
EN 61000-4-6:2014

EN 300 328 V2.1.1:2016
EN 301 489-1 V2.1.1:2017
EN 301 489-17 V3.1.1:2017

EN 50581:2012

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.

Key word index

NORD DRIVESYSTEMS Group

Headquarters and Technology Centre
in Bargteheide, close to Hamburg

Innovative drive solutions
for more than 100 branches of industry

Mechanical products
parallel shaft, helical gear, bevel gear and worm gear units

Electrical products
IE2/IE3/IE4 motors

Electronic products
centralised and decentralised frequency inverters,
motor starters and field distribution systems

7 state-of-the-art production plants
for all drive components

Subsidiaries and sales partners
in 98 countries on 5 continents
provide local stocks, assembly, production,
technical support and customer service

More than 4,000 employees throughout the world
create customer oriented solutions

www.nord.com/locator

Headquarters:

Getriebebau NORD GmbH & Co. KG
Getriebebau-Nord-Straße 1
22941 Bargteheide, Germany
T: +49 (0) 4532 / 289-0
F: +49 (0) 4532 / 289-22 53
info@nord.com, www.nord.com

Member of the NORD DRIVESYSTEMS Group

NORD® DRIVESYSTEMS

6079602 / 3319