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

<table>
<thead>
<tr>
<th>Title, Date</th>
<th>Order number</th>
<th>Software version</th>
<th>Hardware Version</th>
<th>Remarks</th>
</tr>
</thead>
</table>
| 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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Publisher

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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").
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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
• SK TIE5-BT STICK
• QUICK-START as hard copy
• Film (LINK) about the NORDCON APP
1 General

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 Getriebbau 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.

<table>
<thead>
<tr>
<th>Approval</th>
<th>Directive</th>
<th>Applied standards</th>
<th>Certificates</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>RoHS 2011/65/EU</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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.

<table>
<thead>
<tr>
<th>Standard / Directive</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>IEC 61000-4-2</td>
<td>Electromagnetic compatibility (EMC) Parts 4-2: Testing and measuring methods - Testing of resistance to interference due to the discharge of static electricity</td>
</tr>
<tr>
<td>IEC 61000-4-4</td>
<td>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)</td>
</tr>
<tr>
<td>DIN EN 61000-4-5</td>
<td>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</td>
</tr>
<tr>
<td>IEC 61000-4-6</td>
<td>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</td>
</tr>
</tbody>
</table>

Table 3: EMC Directive
1.4.3 Bluetooth module

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

<table>
<thead>
<tr>
<th>Standard / Directive</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETSI EN 300 328 V2.1.1 (2016-11)</td>
<td>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</td>
</tr>
<tr>
<td>ETSI EN 301 489-1 V2.1.1 (2017-02)</td>
<td>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</td>
</tr>
<tr>
<td>ETSI EN 301 489-17 V3.1.1 (2017-02)</td>
<td>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</td>
</tr>
</tbody>
</table>

Table 4: Bluetooth module standard / directive

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>FCC (America)</td>
<td>WAP4008</td>
<td><img src="image" alt="FCC" /></td>
</tr>
<tr>
<td>IC (Canada)</td>
<td>7922A-4008</td>
<td><img src="image" alt="Industry Canada" /></td>
</tr>
<tr>
<td>KC (Korea)</td>
<td>MSIP-CRM-Cyp-4008</td>
<td><img src="image" alt="KC" /></td>
</tr>
<tr>
<td>MIC (Japan)</td>
<td>203-JN0509</td>
<td><img src="image" alt="MIC" /></td>
</tr>
</tbody>
</table>

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.

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

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Meaning / Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>🔒🔒</td>
<td>LOCK active, write protection</td>
</tr>
<tr>
<td>🔓🔓</td>
<td>LOCK not active, not write-protected</td>
</tr>
<tr>
<td>🔄🔄</td>
<td>Upload, button and function</td>
</tr>
<tr>
<td>🔄🔄</td>
<td>Download, button and function</td>
</tr>
<tr>
<td>📥💰</td>
<td>Bluetooth, connection and function</td>
</tr>
<tr>
<td>📥💰</td>
<td>Parameter data set, dataset file.temp or dataset.ndbx</td>
</tr>
</tbody>
</table>

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 Download 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 Upload 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

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

Table 7: Overview of abbreviations
2 NORDAC ACCESS BT

2.1 Design

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

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](image)

- **A** Parameter LED
- **B** Status LED
- **C** Link LED

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 🌐.
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 🎥.

2.4.2 Connection to a computer

1. Connecting the NORDAC ACCESS BT to a computer.
   
   Plug the USB plug connector 🌐 from the NORDAC ACCESS BT into a USB socket of the Computer

![Figure 5: USB- Connection to computer](image)
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
- Open folder to view files
- 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 \( \text{\textbullet} \) from the NORDAC ACCESS BT into the RJ12 port of the device.

![Figure 7: RJ12 connection to the device](image)

2. Wait until ready for operation.
   - The Link LED \( \text{\textbullet} \) first flashes red slowly \( \text{\textbullet} \), and then faster \( \text{\textbullet} \)
   - After the installation phase the Link LED \( \text{\textbullet} \) then lights up green \( \text{\textbullet} \)
   - NORDAC ACCESS BT is supplied with power from the device via the RJ12 port \( \text{\textbullet} \) or the RS485 interface

3. Start the data transfer.

   ![Upload](image) 
   ![Download](image)

   Figure 8: Data transfer, upload and download

   a. Starting: Press the \( \text{\textbullet} \) Upload \( \text{\textbullet} \) or \( \text{\textbullet} \) Download \( \text{\textbullet} \) control key for > 2 s.
      - The parameter LED \( \text{\textbullet} \) lights up orange \( \text{\textbullet} \)
   b. Transfer phase: The parameter data are transferred.
      - During transfer the parameter LED \( \text{\textbullet} \) flashes green \( \text{\textbullet} \)
   c. End: The parameter data have been transferred and saved.
      - The parameter LED \( \text{\textbullet} \) lights up green \( \text{\textbullet} \)
4. **Delete the NORDAC ACCESS BT pairing list (coupling list).**
   
a. **Starting:** Press the **Upload** and **Download** 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.

![Starting Deletion process End](image)

**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 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.

---

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

![Figure 10: Disconnecting the RJ12 port](image)
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 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](image-url)

**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 from the NORDAC ACCESS BT into the RJ12 socket of the device.

![Image](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 or the RS485 interface.

3. Activate the Bluetooth mode. Press the Upload or Download 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.

![Image](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 or Download 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.
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 \( \text{lights up orange} \), goes out \( \text{and then flashes green} \) for the rest of the time the keys are pressed
   • The parameter LED \( \text{goes out} \) if the two control keys are no longer being pressed
**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.

Apple

![App Store](image)

Version iOS 8 and higher

Android

![Google Play](image)

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 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. The meaning of the colours and the various flashing frequencies are assigned to the three LEDs as follows.

![LED meanings](image)

<table>
<thead>
<tr>
<th>Description</th>
<th>Meaning / Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parameter LED</td>
<td>Parameter data, data transfer (Upload and Download), control keys</td>
</tr>
<tr>
<td>Status LED</td>
<td>Bluetooth mode connection to NORDCON APP, LOCK write protection, display of sliding switch position</td>
</tr>
<tr>
<td>Link LED</td>
<td>Readiness for operation, connection, power supply, connection error</td>
</tr>
</tbody>
</table>

Figure 20: LED meanings

4.2 Display statuses

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

<table>
<thead>
<tr>
<th>Status</th>
<th>Parameter LED</th>
<th>Status LED</th>
<th>Link LED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
</tr>
<tr>
<td>Off</td>
<td>Orange Green</td>
<td>Blue Yellow</td>
<td>Red Green</td>
</tr>
<tr>
<td>On</td>
<td>Orange Green</td>
<td>Blue Yellow</td>
<td>Red Green</td>
</tr>
<tr>
<td>Flashing</td>
<td>Orange Green</td>
<td>Blue Yellow</td>
<td>Red Green</td>
</tr>
</tbody>
</table>

Figure 21: LED display statuses
### 4.2.1 Parameter LED

<table>
<thead>
<tr>
<th>LED Position</th>
<th>Colours</th>
<th>Description</th>
<th>Signal status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>Left LED</td>
<td>Dual orange/green</td>
<td>Parameter data</td>
<td>Off</td>
<td>• Not active</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▼ Upload ▲ Download</td>
<td></td>
<td>No parameter data present</td>
</tr>
<tr>
<td>Orange On</td>
<td>Orange</td>
<td>On</td>
<td></td>
<td>• The ▼ Upload ▲ Download key has just been pressed.</td>
</tr>
<tr>
<td>Flashing</td>
<td>Flashing orange</td>
<td>5 Hz</td>
<td></td>
<td>• The ▼ Upload ▲ Download key has been pressed and data transfer is</td>
</tr>
<tr>
<td>orange</td>
<td></td>
<td></td>
<td></td>
<td>being executed</td>
</tr>
<tr>
<td>Flashing</td>
<td>Flashing green</td>
<td>10 Hz</td>
<td></td>
<td>• The ▼ Upload ▲ Download key has been pressed and more than one</td>
</tr>
<tr>
<td>green</td>
<td></td>
<td></td>
<td></td>
<td>device / participant has been detected.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>• The ▼ Download ▲ Upload key has been pressed but there are no parameter</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>data present (Dataset.ndbx) in the NORDAC ACCESS BT.</td>
</tr>
<tr>
<td>Green On</td>
<td>Green</td>
<td>On</td>
<td></td>
<td>• The parameter data (Dataset.ndbx) are saved in the NORDAC ACCESS BT.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The ▼ upload was successful</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The parameter data are saved in the device / participant.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>The ▼ download was successful.</td>
</tr>
<tr>
<td>Flashing</td>
<td>Flashing green</td>
<td>1 Hz</td>
<td></td>
<td>• A parameter data transfer between NORDAC ACCESS BT and the connected</td>
</tr>
<tr>
<td>green</td>
<td></td>
<td></td>
<td></td>
<td>device / participant in in progress.</td>
</tr>
</tbody>
</table>

| 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

<table>
<thead>
<tr>
<th>LED Position</th>
<th>Colours</th>
<th>Description</th>
<th>Signal status</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Middle LED</strong></td>
<td>Dual blue/yellow</td>
<td>Bluetooth mode</td>
<td>Off</td>
<td>• Not active. NORDAC ACCESS BT is not sending any Bluetooth signals. → It is not possible to establish a connection.</td>
</tr>
<tr>
<td>Blue On</td>
<td>Blue On</td>
<td>• NORDCON APP is connected to a device / participant.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flashing blue</td>
<td>Flashing blue 1 Hz</td>
<td>• NORDAC ACCESS BT is transmitting Bluetooth signals and is visible for other mobile terminal devices. → NORDCON APP can be connected to the NORDAC ACCESS BT.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flashing blue</td>
<td>Flashing blue 5 Hz</td>
<td>• 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).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Write protection</td>
<td>Off</td>
<td>• The NORDAC ACCESS BT write protection LOCK is not active. → Sliding switch in “unlocked” position.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yellow On</td>
<td>Yellow On</td>
<td>• The NORDAC ACCESS BT write protection LOCK is active. → Sliding switch in “locked” position.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 9: Status LED display
### 4.2.3 Link LED

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

**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 (red) flashes red ( ). This state must be acknowledged by briefly pressing either the Upload or Download key.
4 Diagnosis and fault analysis

4.3 FAQ Malfunctions

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

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.
<table>
<thead>
<tr>
<th>Fault</th>
<th>Possible cause</th>
<th>Remedy</th>
</tr>
</thead>
</table>
| 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 6) 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 6) Bluetooth mode / visibility  
• Switch on 6) 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 | • 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 6) Bluetooth mode                                                                                                                   | • Switch on 6) Bluetooth on the mobile terminal device  
• Check the RJ12 connection 7)  
• Check that the NORDAC ACCESS BT is ready for operation  
• Activate visibility via 6) Bluetooth  
• Keep within range (max. 10 m)  
• Search for available 6) Bluetooth devices again                                                                                               |
| NORDAC ACCESS BT "TIE5-BT XX:XX" is not displayed in the NORDCON APP connection list | • 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 6) Bluetooth mode                                                                                                                   | • Switch on 6) Bluetooth on the mobile terminal device  
• Check the RJ12 connection 7)  
• Check that the NORDAC ACCESS BT is ready for operation  
• Activate visibility via 6) Bluetooth  
• Keep within range (max. 10 m)  
• Search for available 6) Bluetooth devices again                                                                                               |

XX:XX stands for the last 5 characters of the MAC address.

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

<table>
<thead>
<tr>
<th>Function</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating / ambient temperature</td>
<td>-10°C ... +50°C</td>
</tr>
<tr>
<td>Storage and transport temperature</td>
<td>-20°C ... +60°C</td>
</tr>
<tr>
<td>Long-term storage</td>
<td>-20°C ... +50°C</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP00</td>
</tr>
<tr>
<td>Environmental protection</td>
<td>Radio</td>
</tr>
<tr>
<td></td>
<td>1.4.1 &quot;Standards and directives&quot;</td>
</tr>
<tr>
<td></td>
<td>EMC</td>
</tr>
<tr>
<td></td>
<td>1.4.2 &quot;EMC Directive&quot;</td>
</tr>
<tr>
<td></td>
<td>RoHS</td>
</tr>
<tr>
<td></td>
<td>1.4.1 &quot;Standards and directives&quot;</td>
</tr>
<tr>
<td>Dimensions (W x H x D)</td>
<td>91 x 22 x 14 [mm]</td>
</tr>
<tr>
<td>Weight</td>
<td>12 g</td>
</tr>
<tr>
<td>Interfaces (integrated)</td>
<td>RS485 (RJ12 plug connector)</td>
</tr>
<tr>
<td></td>
<td>USB (Typ A, plug)</td>
</tr>
<tr>
<td>Memory capacity</td>
<td>~ 3 MByte</td>
</tr>
</tbody>
</table>

5.2 NORDCON APP Data

<table>
<thead>
<tr>
<th>Function</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Software version</td>
<td>V1.0 R028 (series production approval)</td>
</tr>
<tr>
<td>Operating systems</td>
<td></td>
</tr>
<tr>
<td>Apple</td>
<td>iOS 8 and higher</td>
</tr>
<tr>
<td>Android</td>
<td>Version 5.1 and higher</td>
</tr>
</tbody>
</table>

5.3 Bluetooth data

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

5.4 Electrical data

<table>
<thead>
<tr>
<th>Function</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage supply (DC)</td>
<td>+5 V ... +24 V</td>
</tr>
<tr>
<td>Current consumption</td>
<td>35 mA ... 80 mA (depending on input voltage)</td>
</tr>
<tr>
<td>Communication interface</td>
<td></td>
</tr>
<tr>
<td>max. baud rate</td>
<td>460800 Baud</td>
</tr>
</tbody>
</table>
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:

<table>
<thead>
<tr>
<th>Device connection</th>
<th>Description / Function area</th>
<th>LED</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Parameter data</td>
<td>Write protection</td>
</tr>
<tr>
<td>Device search active</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| 1 device found          |                            |               |              |            |        |      |
|                         | Dataset.ndbx               |               |              |            |        |      |

Table 13: Status overview Part 1
### Table 14: Status overview Part 2

<table>
<thead>
<tr>
<th>Device connection</th>
<th>Description / Function area</th>
<th>LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Several devices found</td>
<td>Dataset.ndbx</td>
<td><strong>Parameters</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td>A</td>
</tr>
<tr>
<td></td>
<td>Target and / or source not defined</td>
<td>![LED icon]</td>
</tr>
<tr>
<td></td>
<td>5 Hz</td>
<td>![LED icon]</td>
</tr>
</tbody>
</table>

### Table 15: Status overview Part 3

<table>
<thead>
<tr>
<th>Description / Function area</th>
<th>LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>System error active</td>
<td>![LED icon]</td>
</tr>
<tr>
<td>Function not possible as e.g. Write protection is active</td>
<td>![LED icon]</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LED</th>
</tr>
</thead>
<tbody>
<tr>
<td>![LED icon]</td>
</tr>
<tr>
<td>![LED icon]</td>
</tr>
<tr>
<td>![LED icon]</td>
</tr>
</tbody>
</table>
### Table 16: Status overview Part 4

<table>
<thead>
<tr>
<th>Device connection</th>
<th>Description / Function area</th>
<th>Parameters</th>
<th>LED</th>
<th>Status</th>
<th>Link</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bluetooth mode / NORDCON APP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 device found</td>
<td>Visibility</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Hz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 Hz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Connection with the NORDCON APP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Several devices found</td>
<td>Visibility</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 Hz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 Hz</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Connection with the NORDCON APP</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control key</td>
<td></td>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>or is actuated</td>
<td>B</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>The pairing list is being deleted</td>
<td>C</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Bluetooth mode / NORDCON APP

- **Visibility**
  - 1 Hz
  - 5 Hz
- **Pairing active**
  - 5 Hz
- **Connection with the NORDCON APP**
  - 1 Hz
6.2 EU Declaration of Conformity

Figure 22: EU Declaration of Conformity
6.3 Further documentation

Further documentation and software (www.nord.com)

<table>
<thead>
<tr>
<th>Software</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>NORDCON APP</td>
<td>Parametrisation and diagnostic software for mobile terminal devices</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Film</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video</td>
<td>Video on the use of the NORDCON APP</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BU 0250</td>
<td>Manual for decentralised frequency inverters / field distributors NORDAC LINK SK 250E-FDS / SK 280E-FDS</td>
</tr>
<tr>
<td>BU 0500</td>
<td>Control cabinet frequency inverter manual for NORDAC PRO SK 500E ... SK 535E</td>
</tr>
<tr>
<td>BU 0505</td>
<td>Control cabinet frequency inverter manual for NORDAC PRO SK 540E ... SK 545E</td>
</tr>
<tr>
<td>BU 0600</td>
<td>Control cabinet frequency inverter manual for NORDAC PRO SK 500P / SK 530P / SK 550P</td>
</tr>
<tr>
<td>BU 0900</td>
<td>Description of NORDCON software</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Document</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>BU 0200</td>
<td>Manual for decentralised frequency inverters NORDAC FLEX SK 200E ... SK 235E</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Flyer</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E3000</td>
<td>NORDAC Electronic drive technology</td>
</tr>
</tbody>
</table>
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
Tüückampstraße 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)

<table>
<thead>
<tr>
<th></th>
<th>During normal business hours</th>
<th>+49 (0) 4532-289-2125</th>
</tr>
</thead>
<tbody>
<tr>
<td>Technical support</td>
<td>Outside normal business hours</td>
<td>+49 (0) 180-521-5060</td>
</tr>
<tr>
<td>Repair enquiries</td>
<td>During normal business hours</td>
<td>+49 (0) 4532-289-2115</td>
</tr>
</tbody>
</table>

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

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Innovative drive solutions
for more than 100 branches of industry

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Electronic products
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for all drive components

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F: +49 (0) 4532 / 289-22 53
info@nord.com, www.nord.com

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