optimize!
softing

Hardware Guide

mobiLink

Version: EN-062018-1.01

Disclaimer of liability

The information contained in these instructions corresponds to the technical status at the time of printing of it and is passed on with the best of our knowledge. Softing does not warrant that this document is error free. The information in these instructions is in no event a basis for warranty claims or contractual agreements concerning the described products, and may especially not be deemed as warranty concerning the quality and durability pursuant to Sec. 443 German Civil Code. We reserve the right to make any alterations or improvements to these instructions without prior notice. The actual design of products may deviate from the information contained in the instructions if technical alterations and product improvements so require.

Softing Industrial Automation GmbH

Richard-Reitzner-Allee 6
85540 Haar / Germany
http://industrial.softing.com

+ 49 89 4 56 56-340
+ 49 89 4 56 56-488
info.idn@softing.com
support.automation@softing.com

The latest version of this manual is available in the Softing download area at: http://industrial.softing.com/en/downloads.html

Table of Contents

1 About this guide

The information contained in this document is subject to change without notice. If you find any problems understanding the information and instructions in the documentation, please report them to us in writing.

1.1 Read me first

Please read this guide carefully before using the device to ensure safe and proper use. Softing does not assume any liability for damages due to improper installation or operation of this product.

This document is not warranted to be error-free. The information contained in this document is subject to change without prior notice. To obtain the most current version of the hardware guide, visit the download center on our website at: http://industrial.softing.com/en/downloads

1.2 Objective

This document explains how to connect and start mobiLink to configure and maintain field devices via USB or Bluetooth communication using the application software comConf and mobiLink DTM with FDT frame applications on PCs, tablets or smartphones.

1.3 Target audience

This hardware guide has been written for experienced operation personnel and network specialists responsible for configuring and maintaining field devices in process automation networks. Any person using a mobiLink must have read and fully understood the safety requirements and working instructions in this guide.

1.4 Typographic conventions

The following conventions are used throughout our product documentation:

Keys, buttons, menu items, commands and other elements involving user interaction are set in bold font and menu sequences are separated by an arrow	Open **Start → Control Panel → Programs**
Buttons from the user interface are enclosed in brackets and set to bold typeface	Press **[Start]** to start the application
Coding samples, file extracts and screen output is set in Courier font type	`MaxDlsapAddressSupported=23`
Filenames and directories are written in italic	Device description files are located in *C:\<Application name>\delivery\software\Device Description files*

CAUTION

This symbol is used to indicate a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

Note

This symbol is used to call attention to notable information that should be followed during installation, use, or servicing of this device.

Hint

This symbol is used when providing you with helpful user hints.

1.5 Document feedback

We would like to encourage you to provide feedback to help us improve the documentation. You can write your comments and suggestions to the PDF file using the editing tool in Adobe Reader and email your feedback to support.automation@softing.com.

If you prefer to write your feedback directly as an email, please include the following information with your comments:

- document name
- document version (as shown on cover page)
- page number

1.6 Related documentation

The following documentation of the specific application software is part of the product:

- *Communication Configuration Tool* - User Guide V2.23
- *MOBILINK dtm* - User Guide V1.10

2 About mobiLink

mobiLink is a mobile communication device designed to configure and manage field devices (HART, FOUNDATION fieldbus or PROFIBUS PA) in hazardous and non-hazardous areas from PCs, tablet computers or smartphones by wired or wireless communication. Operation of this communication device requires the use of suitable management tools like FDT frame applications or configuration tools on Windows PCs or tablets or smartphones.

2.1 Intended use

mobiLink is used to interface with network segments to configure, commission and maintain connected field devices (HART, FOUNDATION Fieldbus or PROFIBUS PA fieldbus). mobiLink may be used both in field installations and in bench applications. As mobiLink does not supply power to the connected devices, a powered HART loop or powered fieldbus segment is required when using mobiLink in bench applications.

mobiLink is certified for hazardous areas and can be connected to intrinsically safe field devices. See the section Functional Description 10 for details.

Note

Avoid interference with the operation system. Exercise utmost care when using mobiLink in operational plants.

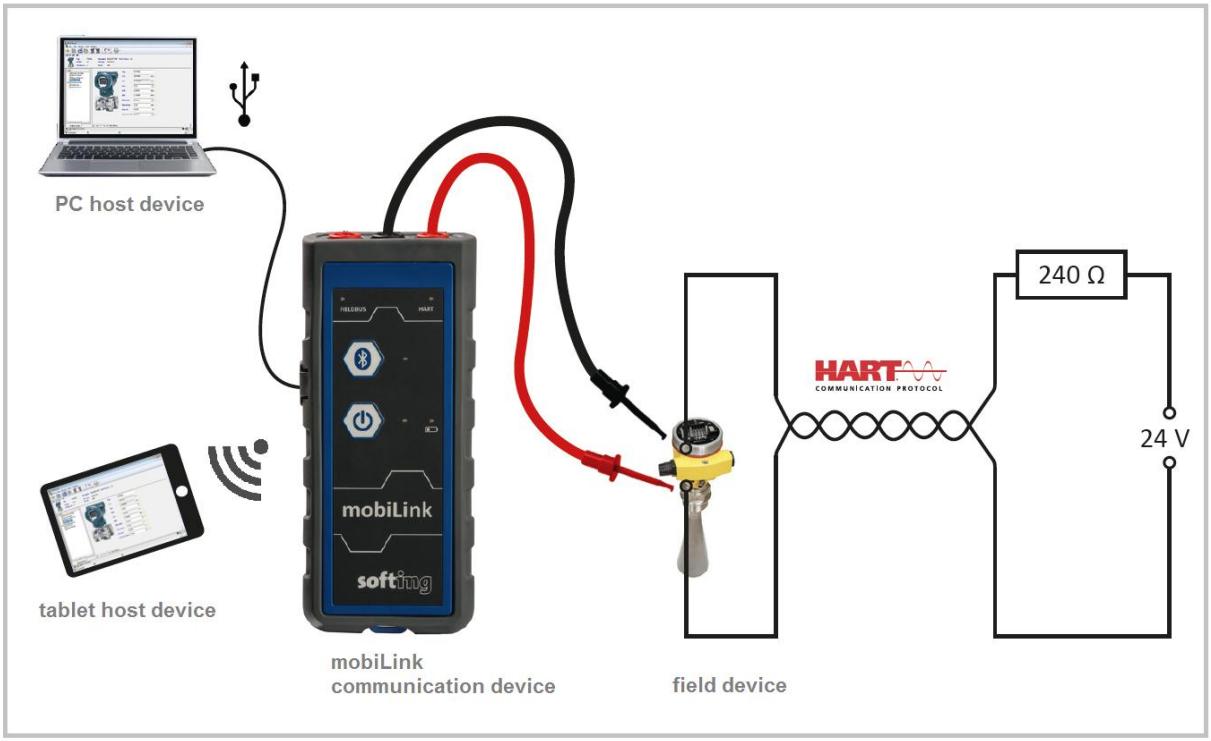
2.2 Scope of delivery

Make sure that the following parts are included in the product package:

- mobiLink unit
- USB cable (2m)
- set of testing cables red/black with clamp (1m)
- 3 AA batteries
- USB memory stick with mobiLinkDTM, application programs and documentation
- printed Getting Started Guide

3 Product overview

mobiLink combines a HART modem and a Manchester encoded bus-powered (MBP) fieldbus interface in a single portable device. It features a full-blown HART master, a FOUNDATION Fieldbus host and a PROFIBUS PA master and therefore supports all three major communication protocols used with process field devices.



Host devices, tools and applications

mobiLink provides access to field devices from FDT frame applications and configuration tools running on host devices (PCs, tablets or smartphones) connected via USB or Bluetooth. If you connect mobiLink to a host device on the USB port, the mobiLink automatically starts USB communication. Conversely, if you switch on mobiLink without a wired USB connection, the device automatically activates wireless Bluetooth communication. It is not possible to use Bluetooth while the USB cable is connected. If the USB cable is disconnected during operation, mobiLink is powered off. Connecting the USB cable during Bluetooth operation will cause mobiLink to reboot.

Power supply and consumption

mobiLink uses three AA batteries. The battery lifetime depends on the mode of operation. Using Bluetooth communication, one set of batteries can last several working days. USB mode increases battery life time, but cannot be used in hazardous areas. mobiLink does not supply power to connected field devices. A powered HART loop or powered fieldbus segment is required. When connected to a fieldbus segment, the mobiLink fieldbus interface draws 10 mA from the fieldbus as required by the specification. To improve the battery lifetime of mobiLink in bench host applications, the host application may set the power drawn from the fieldbus to 18 mA in USB mode.

HART or fieldbus communication

mobiLink can operate as HART modem, FOUNDATION Fieldbus or PROFIBUS PA fieldbus interface. The two different electrical interfaces for HART and fieldbus operation share a common socket. The mode of operation is selected by the host application. mobiLink checks whether the electrical conditions on the interface match the selected mode. mobiLink must therefore be connected to a HART device or fieldbus segment before the host application is started. An LED marking the HART or Fieldbus socket indicates in which communication mode mobiLink is running.

3.1 Functional description

Connector	Foundation Fieldbus	PROFIBUS PA	HART
(1) FIELDBUS red	DATA +	PA +	
(2) Common black	DATA -	PA -	HART N
(3) HART red			HART P

Connector / Button	Function
(4) USB	USB-C Type connector
(5) Bluetooth Button	Activate Visibility for Pairing
(6) Power On/Off Button	On/Off

LED	Function
(7) FIELDBUS	Fieldbus selected
(8) HART	HART selected
(9) Bluetooth	Bluetooth active. Flashing during Bluetooth communication, steady light when in pairing mode
(10) Low battery	Low Battery
(11) Power	Power State

3.2 Power supply

The device requires batteries for operation. Before using mobiLink the first time, open the battery compartment at the rear side of mobiLink and insert three AA non-rechargeable batteries (included with the device) as described in Section 2.2.2 Replacing batteries 12.

The battery power is monitored by the device. A yellow LED indicates that the battery power is low. Check the battery before using the device. See Startup 18 for more details.

Note

The battery life is determined by the operation mode (USB or Bluetooth) and the ambient temperature (see the Specifications 22).

3.2.1 Battery safety and disposal instructions

Read the following instructions to avoid damage to your device in hazardous areas including injury or fire caused by leaking, overheating, explosion or erosion.

- Operate mobiLink only with the type of batteries specified in chapter Technical Data. If mobiLink is operated with batteries other then the type specified, the Ex certification becomes invalid.
- Replace the batteries as soon as low battery is signalled by the Status LED.
- Do not remove or install batteries and do not open the battery compartment within hazardous areas.
- Always replace all batteries at the same time, with new and equal types. In different states of discharge there is a risk of voltage reversal with progressive risk of leakage or rupture.
- Store batteries in a dry place at normal room temperature. Do not store batteries near or on heat sources such as stoves or ovens.
- Discharged batteries must be removed immediately from the device to prevent potential damage.
- For longer times of storage it is recommended to remove batteries from the device to prevent possible damage through leaking batteries.
- Avoid mechanical or electrical abuse. Do not short circuit or install incorrectly. Batteries may explode, pyrolyse or vent if disassembled, crushed, recharged or exposed to high temperatures.
- Install batteries in accordance with equipment instructions. Do not mix battery systems in the same equipment.
- Do not remove the battery label.
- Batteries typically have a reduced performance at temperatures below freezing (0°C). With increasing working temperature the energy output and performance is restored.

3.2.2 Battery lifetime

The battery lifetime depends on the power consumption which in turn depends on the mode of operation. The HART and fieldbus interfaces are galvanically isolated from the USB interface which means that mobiLink is not powered over USB.

The battery lifetime is estimated per operation mode as follows:

Operation	Battery load	Expected Battery Lifetime (continuous operation)
HART via Bluetooth	medium	> 45 hours
Fieldbus via Bluetooth	medium	> 45 hours
HART via USB	low	> 6 days
Fieldbus via USB	very low	> 1 year

When not connected mobiLink changes after 5 minutes to energy saving mode (green LED flashing). After 25 minutes without connection mobiLink switches off automatically.

3.2.3 Replacing batteries

Follow these steps to replace your mobiLink batteries:

1. Switch off mobiLink .
2. Disconnect the device from FIELDBUS or HART.
3. Unscrew the battery cover on the back.
4. Lift off the cover.
5. Remove the batteries.
6. Insert the replacement batteries with correct polarity as shown on the bottom of the battery compartment.
7. Ensure the batteries are correctly seated.
8. Replace the battery cover and make sure it is securely in place.
9. Screw the battery cover hand-tight. Do not overtighten!

4 Safety

mobiLink must be operated by qualified personal only. The operator is responsible for the transportation, operation and maintenance of the product.

To ensure the safety of personnel and equipment, mobiLink must be used as intended by the manufacturer and in accordance with this manual. Local laws and regulations applicable to the use of this device must be observed.

Note

Local laws and regulations may apply to the use of this device and must be observed.

4.1 Explosion protection

With mobiLink you can establish an intrinsically safe connection to HART or FOUNDATION Fieldbus / PROFIBUS-PA devices. The device has been developed for use in hazardous areas, classified as Zone 1/Zone 2 (Gas-Ex Category 2G). It is approved for explosion group IIB and temperature Class T4 or higher. The intrinsically safe fieldbus or HART interfaces may be connected to explosion protected, certified intrinsically safe circuits within Zone 0 classified hazardous areas / locations.

Make sure that you use mobiLink only in compliance with local safety requirements for installation of electrical equipment for use in hazardous areas associated with explosive atmosphere. In addition, please observe the following:

- Do not open mobiLink except for the battery compartment.
- Local requirements for electrical equipment for use within hazardous locations associated with explosive atmosphere shall be considered.
- All information and notices in this document must be fully understood before using this product.
- Make sure that the electrical parameters of mobiLink match the fieldbus installation.
- Do not use a USB connection to your host device inside hazardous areas.
- If mobiLink is connected to non-intrinsically safe electrical circuits or if the device is operated outside the specified electrical parameters the Ex approval is no longer valid. In this case, the device may no longer be used on intrinsically safe circuits and must be clearly marked accordingly for the user to prevent erroneous use.
- Never use mobiLink with an open housing. Opening the housing invalidates the Ex approval.
- Make sure that the battery compartment is closed before you use mobiLink .

- Do not remove or install batteries within Ex hazardous areas.
- Use only approved batteries. The use of any other battery type will invalidate the Ex approval and present a safety risk.
- If the notes stated in this excerpt are not observed or in case of inappropriate handling of the device, Softing reserves the right to waive any liability. In addition, the warranty on devices and spare parts will no longer apply.
- The details of this hardware guide have to be observed as have to be the conditions for use and the applicable details stated on the marking and product label.
- Any selection and operation of the device has to be done under consideration of the local requirements for electrical equipment intended for use within hazardous area/location. In the European Union the requirements of the EN 60079-14 must be strictly observed.
- Suitable precautions have to be taken to prevent unintended actuation or impairment of the device.
- The equipment is only approved for the intended use. In case of non-compliance, the warranty and Softing's liability does not longer apply!
- All connected electrical components have to be suitable for the respective intended use.
- The operator must ensure protection against lightning in compliance with local regulations.

4.2 Warning of use

During startup mobiLink tries to verify the operation mode against the connected fieldbus.

If fieldbus terminals are connected to an operating 4-20 mA link this will compromise the analog process value. Make sure to use the correct connections and mode.

4.3 Transport, cleaning, maintenance

Transport:

For transportation make sure that mobiLink is mechanically protected against inadvertent switching on. Otherwise remove batteries during transport.

Cleaning:

Periodically wipe the case with a damp cloth. Do not use abrasives or solvents. Do not clean mobiLink inside hazardous areas!

Maintenance:

mobiLink does not contain any user serviceable parts. No modifications or repair on the device are allowed. All adjustments and/or repairs have to be performed at Softing.

5 Installing and using mobiLink

5.1 Unpacking and inspecting mobiLink

mobiLink is delivered boxed along with the parts listed in Chapter Scope of Delivery 7.
Before you install and start mobiLink check the integrity of the device as any of the following will render its safety null and void:

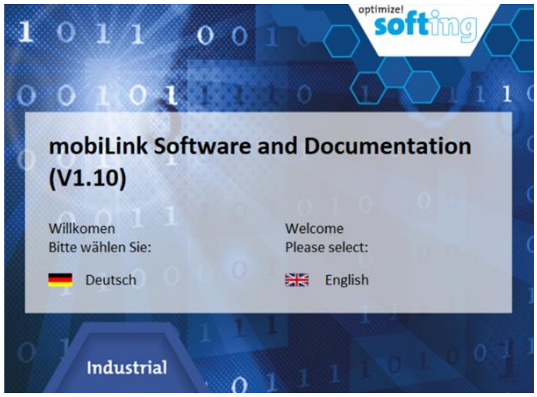
- external damage to the housing
- damage to insulation of the test leads
- damage sustained in transit
- incomplete or illegible certificates or labels

5.2 Installing mobiLink

Before you can work with mobiLink you will need to install either the mobiLinkDTM (for FDT frame applications) or the Softing Configuration Tool on your PC. Which of the two software solutions you need depends on the host system to which you want to connect.

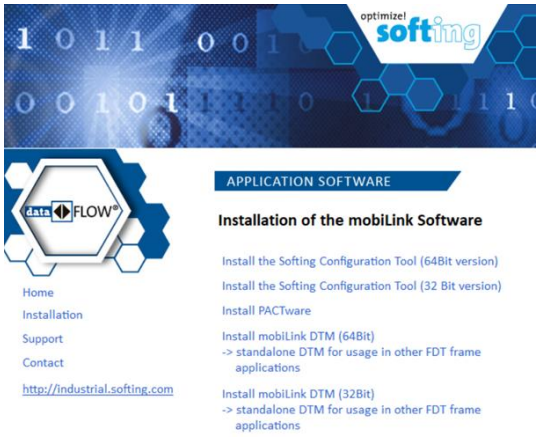
The installation setup of the mobiLink software is provided on the USB stick. In addition you will always find the latest software version under **Downloads** on the mobiLink product site.

1. Insert the USB stick into the USB port of your computer.
   The installation process will launch automatically. If it doesn't start, open the USB Stick in Windows Explorer and start the program by double-clicking the **setup.exe** file.
   The following page will appear.



2. Select German or English as the language of the installation process. This will launch the main menu.

3. Select the installation of the mobiLink software.

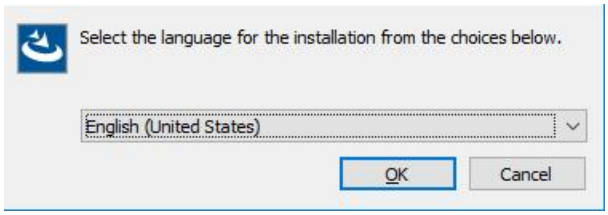


4. Select the installation of the mobiLinkDTM (64Bit or 32Bit).

Note

You will need administration access rights to install the software. Start the setup as described above and authorize the installation with your access data in a UAC dialog. Make sure that "Softing AG" is mentioned in the UAC dialog as verified publisher .If you are logged on as administrator you will only need to confirm your choice.

5. Select the language in which you would like the installation to be done.
This is the language, in which once installed the software will be running.



In the first step of the installation wizard the software components are unpacked. You can stop the installation anytime by clicking **[Cancel]**.

6. Wait until the components have been unpacked and a new window is opened.

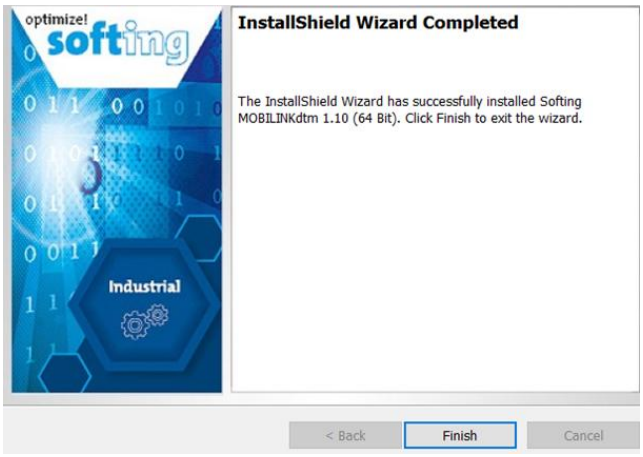
7. Click **[Next]** to get to the license agreement window.
   If you want to stop the installation at this point click **[Cancel]** instead.

8. Read the licence agreement carefully.
   If you have questions, your can **[Cancel]** the installation at this point and contact us.
   Click **[Print]** if you want to print the license agreement to a PDF or on a printer.

9. Select **I accept the terms in the license agreement** and click **[Next]**.

10. Click **[Next]** if you don't want to change the suggested destination folder.

11. Click **[Install]** to install the software component on your PC.
    While the installation is in progress, the above window shows the different steps being executed. If you want to abort the installation, click **[Cancel]** button. The installation wizard will undo all modifications that have been made to your computer up to this point. Otherwise, wait until the installation is complete as indicated by the window below.



12. Press **[Finish]** to complete the installation and exit the wizard.
    You can now use mobiLink . If an error occurs during the installation, please contact Softing Support.

5.3 Preparing for startup

Before you start your mobiLink you need to set up a USB or Bluetooth connection.

1. Ensure that the mobiLink device has batteries inserted. If not, insert batteries as described in chapter Replacing batteries 12.

2. Check if the battery power is sufficient. Low battery power is indicated by a yellow flashing LED. After the device has been switched on, wait 5 seconds until the battery check is performed.

5.3.1 USB connection

The USB connection must not be used in hazardous areas. To communicate with your network devices over a USB connection you must have installed the mobiLink on your PC as described in the previous installation chapter.

If your mobiLink is set up for USB connection, the device automatically assumes USB communication. It is not possible to use Bluetooth while the USB cable is connected. When disconnecting the USB cable during operation, mobiLink will be powered off.

5.3.2 Bluetooth pairing

Bluetooth pairing is required only once per host device.

1. Press the power button (**6**) for about 2 seconds to switch on mobiLink.

2. Press the Bluetooth button (**5**) for more than two seconds to make the device visible to other Bluetooth devices.
   The blue Bluetooth LED lights up. The device is now visible to other Bluetooth devices for 1 minute and can be paired.

3. Start the Bluetooth scan function on your Bluetooth device. When a new device with the name mobiLink followed by the serial number select mobiLink for pairing. It is not necessary to enter a PIN or passphrase.

4. Press the power button (**6**) for about 2 seconds to switch off mobiLink.

Note

When mobiLink is switched on and the device is not connected to a USB cable, the default Bluetooth communication mode is automatically activated. You do not have to press the Bluetooth button prior to operation to establish communication with a paired host device.

5.4 Using mobiLink in hazardous areas

Inside hazardous areas, mobiLink must connect to PCs, notebooks, tablets or smartphones using Bluetooth communication.

CAUTION

Always close the plastic cover of the USB connector for protection.

5.5 Using mobiLink in benchhost mode

Outside of hazardous areas, mobiLink can be connected via USB interface.

It is permitted to connect intrinsically safe circuits to the Fieldbus and HART interface as long as mobiLink itself is used outside hazardous areas and within intrinsically safe parameters. For more details see section Technical Data 22.

Energy coming from the fieldbus is used to extend the battery lifetime of mobiLink. In HART mode no energy is consumed by the HART bus and mobiLink is supplied by battery only.

5.6 Using mobiLink in a fieldbus environment

FOUNDATION Fieldbus and PROFIBUS PA use the same physical layer. The connected fieldbus provides power to the mobiLink fieldbus interface (at least 10 mA at a minimum voltage of 9 Volts). The polarity of the fieldbus cabling has to be observed. mobiLink checks the fieldbus voltage and the polarity during start-up. Before connecting mobiLink to intrinsically safe circuits make sure that the electrical intrinsic safety parameters are observed (see Section Technical Data 22 for more details).

Setting up a fieldbus connection

1. Connect the red fieldbus socket **(1)** to the DATA + wire of a field device or a fieldbus terminal and the black socket **(2)** to the DATA – wire.

2. Connect the USB interface to a PC (when using USB communication).
   Otherwise activate Bluetooth in your host device.

3. Press the power button **(6)** for about 2 seconds to switch on mobiLink.

4. Start the required application on the PC.

5. Select mobiLink as fieldbus interface.

6. Check that the fieldbus LED **(7)** is indicating fieldbus mode.

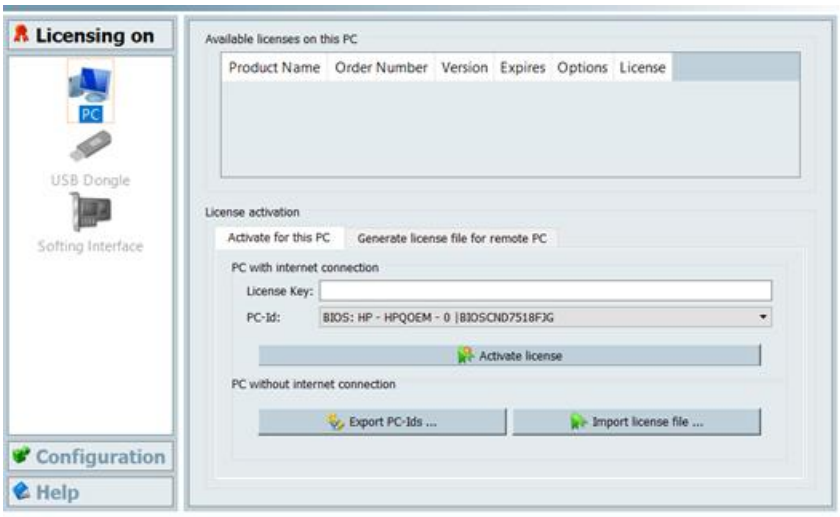
5.6.1 Licencing mobiLink for FF

Before using mobiLink in combination with the FOUNDATION Fieldbus or PROFIBUS PA protocol for the first time, make sure that your mobiLink is running the latest firmware version for the supported protocols and that it has mobiLinkDTM version 1.10 or higher installed. See the mobiLink product page for the lastest firmware version and Chapter Firmware update 21 on how to install the latest version.

How to activate your FF license

To use the full functionality of the mobiLinkDTM in your FDT frame application, you will need to activate a license for each FOUNDATION Fieldbus and PROFIBUS PA. This FF licence is optionally available and not included in the delivery.

1. Locate the Softing License Manager using the Windows search box.
   The License Manager is automatically installed with the mobiLinkDTM software.



2. Select the **[PC] icon** under **Licensing on** in the left pane of the License Manager.

3. Enter the license key from the License Certificate in the **License Key** field.

4. Click **Activate license**.
   The license now appears in the information window **Available licenses on this PC**.

5. Close the Softing License Manager at the top right corner of the License Manager window.

5.7 Using mobiLink in a HART environment

HART communication is performed by means of an FSK modulation on the 4 - 20 mA current loop that powers the HART device and indicates the primary process value. mobiLink does not draw power from the loop.

Before connecting mobiLink to intrinsically safe circuits, make sure that the electrical intrinsic safety parameters are observed (see Section Technical Data 22 for more details).

Setting up a HART connection

1. Connect the red HART socket **(3)** to the HART P wire at a HART device or a wire terminal and the black socket **(2)** to the HART N wire. mobiLink is not able to supply a HART device with power. The HART device must therefore be connected to a current loop or a HART compatible power supply.

2. Connect the USB interface to a PC (when using USB communication).
   Otherwise activate Bluetooth in your host device.

3. Press the power button **(6)** for about 2 seconds to switch on mobiLink.

4. Start the required application on the PC.

5. Select mobiLink as HART interface.

6. Check that the HART LED is indicating HART mode.

5.8 Updating the firmware

For updating the mobiLink firmware you can choose among three different firmware files each addressing one of the three supported protocols (HART, FOUNDATION Fieldbus and PROFIBUS PA).

The update itself is performed with the frame application PACTware and the mobiLink DTM tool, both included in the mobiLink delivery. No licenses are required to update the firmware including the FF firmware. Firmware updates must always be performed with the corresponding commDTM. For example, if you want to update the HART stack you must first select a mobiLink HART device in PACTware.

For a detailed description of the update process please refer to the *MOBILINKdtm User Guide*. See Related Documentation 6 .

6 Technical data

6.1 Specifications

Fieldbus Interface (Foundation Fieldbus / PROFIBUS-PA)	
Connection	Polarized 4 mm banana type jacks (red /black)
Physical Layer	according to IEC 61158-2, Type 1: 31.25 Kbit/s, voltage mode
Nominal input current (Fieldbus)	10 mA (with $U_{fieldbus}$ > 9.0 V) 18 mA for benchhost use (with $U_{fieldbus}$ > 9.5 V)
Fieldbus Terminator	No Fieldbus Terminator included
Input Voltage for use in non hazardous area and non-intrinsically safe circuits	+9 ... +32 V
HART Interface	
Connection	4mm banana type jacks (red / black)
Physical Layer	HART FSK compliant modem
Intrinsic safety Fieldbus / HART	
Intrinsic safety parameters	EX ia IIB, Ui = 30 V, Ci 5 nF, Li negligible low FISCO field device
Isolation	1500 VDC between USB and fieldbus 1500 VDC between USB and HART
Bluetooth	
Bluetooth RF module	Laird BT900
BT mode	BT Classic 2.4 - 2.478 GHz
Output Power	+8 dBm (maximum)
Range	14 m
USB	
Speed	USB 2.0 Full Speed
Connector	USB Type C
Electrical	Non-intrinsically safe Do not use inside hazardous areas 5 V, 100 mA Um = 253 V port sensible to ESD

Batteries	
Battery Type	Alkaline, IEC-LR6, nominal voltage 1.5 V For use in hazardous areas: Energizer E91 or Duracell Procell MN1500. Batteries of other types or manufacturers will invalidate certification.
Environmental Conditions	
Ingress protection	IP54 (with USB covered with cap)
Operating temperature	-20 °C .. +50 °C
Storage	Store batteries in a dry place at normal room temperature.
Drop	1 m
Approvals, Markings	
ATEX	IBExU 18 ATEX 1001 Ex ib [ia Ga] IIB T4 Gb Ex ib [ia Da] IIIC T100 °C Db
IECEx	IECEx IBE 18.0001 Ex ib [ia Ga] IIB T4 Gb Ex ib [ia Da] IIIC T100 °C Db

7 Declaration of conformity

This product is in conformity with the provisions of the following European Directives.

- 2014/30/EU "EMC” The EMC Directive 2014/30/EU “Electromagnetic Compatibility” ensures that electrical and electronic equipment does not generate, or is not affected by, electromagnetic disturbance.
- 2014/34/EU "ATEX" The ATEX Directive 2014/34/EU “Atmosphères Explosibles” covers equipment and protective systems intended for use in potentially explosive atmospheres. The Directive defines the essential health and safety requirements and conformity assessment procedures to be applied before products are placed on the EU market.
- 2014/53/EU "RED" The RED 2014/53/EU “Radio Equipment Directive” ensures a Single Market for radio equipment by setting essential requirements for safety and health, electromagnetic compatibility, and the efficient use of the radio spectrum. It applies to all products using the radio frequency spectrum.
- 2011/65/EU "RoHS" The RoHS Directive 2011/65/EU “Restriction of Hazardous Substances” covers the use and the amount of certain hazardous substances that can be used in electrical and electronic equipment to prevent these substances from entering the production process and thereby keep them out of the waste stream.
- 2012/19/EU "WEEE" The WEEE Directive 2012/19/EU "Waste of electrical and electronic equipment" is closely linked to the Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Directive). It ensures that customers can return there WEEE free of charge.

EG-Konformitätserklärung
EU Declaration of Conformity

softing

Wir
We

Softing Industrial Automation GmbH
Richard-Reitzner-Allee 6
D-85540 Haar

erklären hiermit in alleiniger Verantwortung, dass das Produkt
declare under our sole responsibility that the product

Modell / Typ
Model / Type

mobiLink V1.00

mit den Anforderungen der folgenden Richtlinien übereinstimmt
complies with the requirements of the following directives:

ATEX-Richtlinie 2014/34/EU
ATEX directive 2014/34/EU
EMV Richtlinie 2014/30/EU
EMC directive 2014/30/EU
RED-Richtlinie 2014/53/EU
Radio Equipment Directive 2014/53/EU
ROHS-Richtlinie 2011/65/EU
ROHS directive 2011/165/EU

Angewandte harmonisierte Normen
Applied harmonised standards:

EN 55032:2015, Class B
EN 61326-1:2013
EN 61000-6-2:2005/AC :2005
EN 60079-0:2012+A11:2013
EN 60079-11:2012
EN 300328 V2.1.1
EN 301489-1 V2.2.0
EN 301489-17 V3.2.0
EN 62311:2008
EN 62368-1:2014+AC:2015

Haar, den 26.04.2018

Ort, Datum
Place, Date

Geschäftsführer
Managing Director

Template: V1.07

Seite 1 von 1
Page 1 of 1

Version: 1.00

7.1 Certification marks

mobiLink is an internationally certified product conforming with the required standards and regulations indicated by the following certification marks:

CE
The CE mark indicates that the product conforms to EU health, safety and environmental requirements and that compliance with the above EU Directives has been made and can be requested from Softing Industrial Automation GmbH.

FCC
The FCC mark (Federal Communications Commission) certifies radio frequency devices in the United States. It sets limits on intentional and unintentional electromagnetic radiation to protect the electromagnetic spectrum. mobiLink has been tested and found to comply with the limits for a Class B digital device, under part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.

WEEE
The WEEE mark (Waste of Electrical and Electronic Equipment) indicates that the product including batteries must be disposed of separately from normal waste at the end of its operational lifetime. Packaging material and worn components shall be disposed of in compliance with national law and local waste-disposal regulations.

ATEX
The ATEX/EX mark (Atmosphères Explosibles) indicates that the product is tested and certified for end-users in the European Union and meets the explosive atmosphere standards under ATEX Directive 2014/34/EU.

HART
The HART mark indicates that this product support the HART communication protocol (Highway Addressable Remote Transducer) on 4-20mA loops.

Fieldbus Foundation
The Fieldbus Foundation mark indicates that this product supports the Fieldbus specification for host devices.

Bluetooth
This mark indicates that the product is certified for Bluetooth wireless communication.

7.2 Bluetooth certification

Devices operating with Bluetooth wireless technology must have an identification number assigned by the Federal Communications Commission (FCC), authorizing wireless devices for sale in the USA and an identification number assigned by Industry Canada (IC), authorizing wireless devices for sale in Canada .

mobiLink is certified for Bluetooth wireless communication in the following regions and countries:

- EU
- USA
- Canada
- Japan

7.2.1 Use in the United States of America

mobiLink contains a transmitter with FCC ID grantee code SQGBT900.

The device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- The device may not cause harmful interference.
- The device must accept any interference received, including interference that may cause undesired operation.

mobiLink complies with the limits for a Class B digital device, pursuant to part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

7.2.2 Use in Canada

mobiLink contains a transmitter with the IC identification 3147A-BT900.

Industry Canada (IC) Warning statement:

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

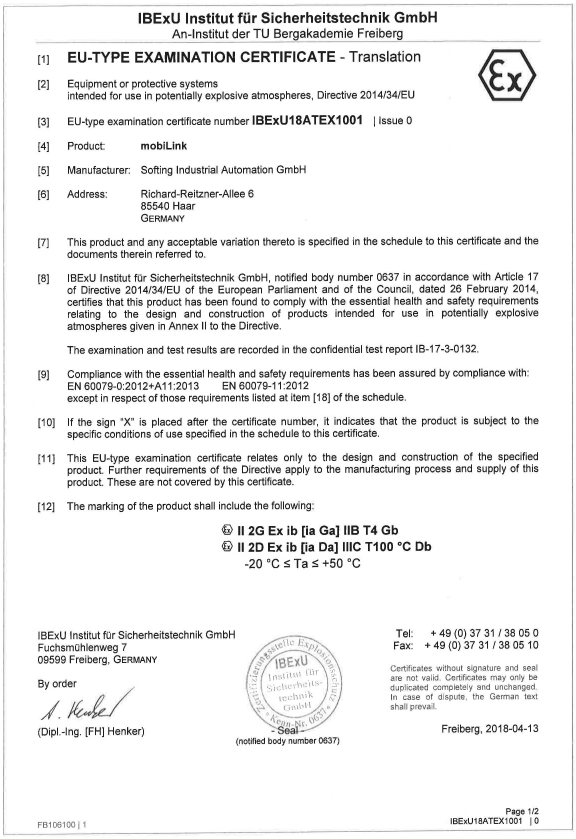
IC Radiation Exposure Statement

This EUT is compliance with SAR for general population/uncontrolled exposure limits in IC RSS-102 and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528.

7.2.3 Use in Japan

The Bluetooth module type BT900-SA which is operated by mobiLink is approved for use in the Japanese market. The module has the certificate number 142-150156/AA/00.

7.3 ATEX EC type certification



IBExU Institut für Sicherheitstechnik GmbH
An-Institut der TU Bergakademie Freiberg

[1] **EU-TYPE EXAMINATION CERTIFICATE** - Translation

[2] Equipment or protective systems intended for use in potentially explosive atmospheres, Directive 2014/34/EU

[3] EU-type examination certificate number **IBExU18ATEX1001** | Issue 0

[4] Product: **mobiLink**

[5] Manufacturer: Softing Industrial Automation GmbH

[6] Address: Richard-Reitzner-Allee 6
85540 Haar
GERMANY

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] IBExU Institut für Sicherheitstechnik GmbH, notified body number 0637 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the essential health and safety requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential test report IB-17-3-0132.

[9] Compliance with the essential health and safety requirements has been assured by compliance with:
EN 60079-0:2012+A11:2013 EN 60079-11:2012
except in respect of those requirements listed at item [18] of the schedule.

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the specific conditions of use specified in the schedule to this certificate.

[11] This EU-type examination certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

[12] The marking of the product shall include the following:

Ex II 2G Ex ib [ia Ga] IIB T4 Gb
Ex II 2D Ex ib [ia Da] IIIC T100 °C Db
-20 °C ≤ Ta ≤ +50 °C

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg, GERMANY

By order

(Dipl.-Ing. [FH] Henker)

Seal
(notified body number 0637)

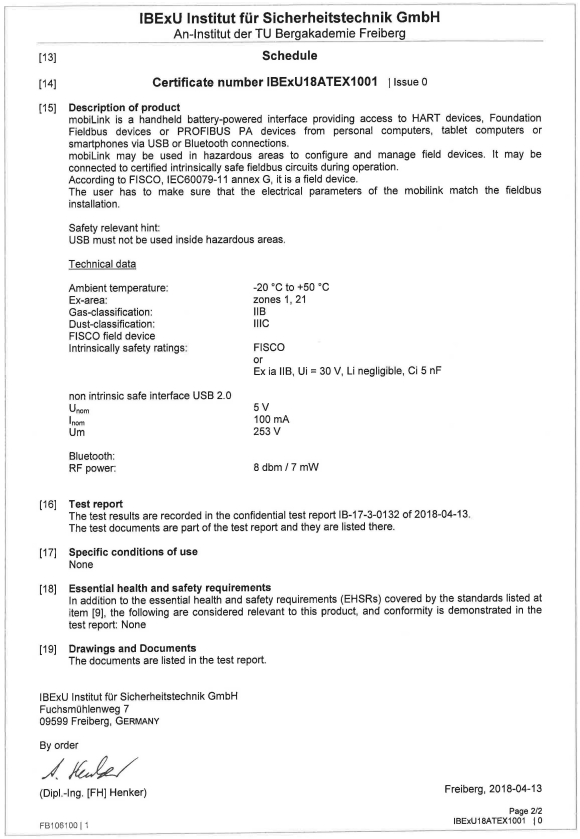
Tel: + 49 (0) 37 31 / 38 05 0
Fax: + 49 (0) 37 31 / 38 05 10

Certificates without signature and seal are not valid. Certificates may only be duplicated completely and unchanged. In case of dispute, the German text shall prevail.

Freiberg, 2018-04-13

FB108100 | 1

Page 1/2
IBExU18ATEX1001 | 0



IBExU Institut für Sicherheitstechnik GmbH
An-Institut der TU Bergakademie Freiberg

[13] **Schedule**

[14] **Certificate number IBExU18ATEX1001** | Issue 0

[15] **Description of product**
mobiLink is a handheld battery-powered interface providing access to HART devices, Foundation Fieldbus devices or PROFIBUS PA devices from personal computers, tablet computers or smartphones via USB or Bluetooth connections.
mobiLink may be used in hazardous areas to configure and manage field devices. It may be connected to certified intrinsically safe fieldbus circuits during operation.
According to FISCO, IEC60079-11 annex G, it is a field device.
The user has to make sure that the electrical parameters of the mobilink match the fieldbus installation.

Safety relevant hint:
USB must not be used inside hazardous areas.

Technical data

Ambient temperature:	-20 °C to +50 °C
Ex-area:	zones 1, 21
Gas-classification:	IIB
Dust-classification:	IIIC
FISCO field device	
Intrinsically safety ratings:	FISCO or Ex ia IIB, Ui = 30 V, Li negligible, Ci 5 nF
non intrinsic safe interface USB 2.0	
U_{nom}	5 V
I_{nom}	100 mA
Um	253 V
Bluetooth:	
RF power:	8 dbm / 7 mW

[16] **Test report**
The test results are recorded in the confidential test report IB-17-3-0132 of 2018-04-13.
The test documents are part of the test report and they are listed there.

[17] **Specific conditions of use**
None

[18] **Essential health and safety requirements**
In addition to the essential health and safety requirements (EHSRs) covered by the standards listed at item [9], the following are considered relevant to this product, and conformity is demonstrated in the test report: None

[19] **Drawings and Documents**
The documents are listed in the test report.

IBExU Institut für Sicherheitstechnik GmbH
Fuchsmühlenweg 7
09599 Freiberg, GERMANY

By order

(Dipl.-Ing. [FH] Henker)

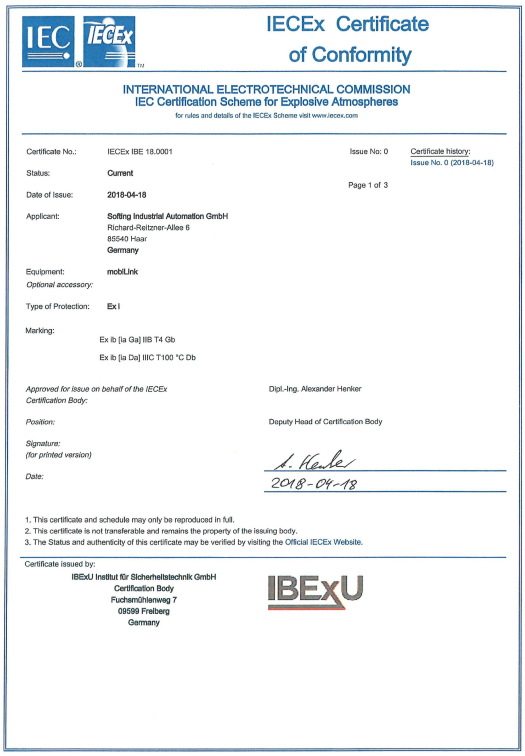
Freiberg, 2018-04-13

FB108100 | 1

Page 2/2
IBExU18ATEX1001 | 0

7.4 IECEx Certificate

For a full size PDF file of the scaled copy of the IECEx Certificate of conformity go to http://iecex.iec.ch and enter "Softing" in the Name field of the search window.



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: IECEx IBE 18.0001 Issue No: 0 Certificate history: Issue No. 0 (2018-04-18)
Status: Current Page 1 of 3
Date of Issue: 2018-04-18
Applicant: Softing Industrial Automation GmbH
Richard-Reitzner-Allee 6
85540 Haar
Germany
Equipment: mobiLink
Optional accessory:
Type of Protection: Ex I
Marking:
Ex ib [ia Ga] IIB T4 Gb
Ex ib [ia Da] IIIC T100 °C Db

Approved for issue on behalf of the IECEx Certification Body: Dipl.-Ing. Alexander Henker
Position: Deputy Head of Certification Body
Signature: (for printed version)
Date: 2018-04-18

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:
IBExU Institut für Sicherheitstechnik GmbH
Certification Body
Fuchsmühlenweg 7
09599 Freiberg
Germany

IECEx Certificate of Conformity

Certificate No: IECEx IBE 18.0001 Issue No: 0
Date of Issue: 2018-04-18 Page 2 of 3
Manufacturer: Softing Industrial Automation GmbH
Richard-Reitzner-Allee 6
85540 Haar
Germany
Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

STANDARDS:
The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2011 Edition:6.0 — Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0 — Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:
DE/IBE/ExTR18.0002/00

Quality Assessment Report:
DE/PTB/QAR11.0002/03

IECEx Certificate of Conformity

Certificate No: IECEx IBE 18.0001 Issue No: 0
Date of Issue: 2018-04-18 Page 3 of 3

Schedule

EQUIPMENT:
Equipment and systems covered by this certificate are as follows:

mobiLink is a handheld battery-powered interface providing access to HART devices, Foundation Fieldbus devices or PROFIBUS PA devices from personal computers, tablet computers or smartphones via USB or Bluetooth connections.

mobiLink may be used in hazardous areas to configure and manage field devices. It may be connected to certified intrinsically safe fieldbus circuits during operation.

According to FISCO, IEC60079-11 annex G, it is a field device.

The user has to make sure that the electrical parameters of the mobilink match the fieldbus installation.

Safety relevant hint:
USB must not be used inside hazardous areas.

Technical data

Ambient temperature: -20 °C to +50 °C

non intrinsic safe interface:

USB 2.0

U_{nom} 5 V
I_{nom} 100 mA
U_m = 253 V

FISCO field device

Intrinsically safety ratings:

FISCO
or
Ex ia IIB, Ui = 30 V, Ii negligible , Ci 5 nF

Bluetooth:
RF power 8 dbm / 7 mW

SPECIFIC CONDITIONS OF USE: NO

Softing Industrial Automation GmbH

Richard-Reitzner-Allee 6
85540 Haar / Germany
http://industrial.softing.com

Tel: + 49 89 45 656-340
Fax: + 49 89 45 656-488
info.idn@softing.com