



MANUAL

# **INTUS Flex Gateway**

## **Installation and Start-up**

G3800-615.01

**INTUS Flex Gateway**

Installation and Start-up

Date 06/2023

Order No. G3800-615.01

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## Safety notes

- **All voltages introduced into the device must conform to the following requirements: LPS (Limited Power Source) and SELV (Safety Extra Low Voltage) according to IEC/EN/UL/CSA 60950-1 or ES1 and PS2 according to IEC/EN/UL/CSA 62368-1).**
- **The operating voltage must be switched off before the Gateway is opened.**
- Only trained technical personnel are authorized to install the INTUS Flex Gateway. Incorrectly executed repair may damage the device.
- Do not connect or disconnect cables during a thunderstorm.



## Installation notes

- Network installations extending over several buildings or in buildings with several grounding areas require appropriate overvoltage protection measures on the network and data lines (overvoltage protection modules according to DIN EN 61643-11 VDE 0675-6-11 or DIN EN 61643-21 VDE 0845-3-1).
- If you intend to add the Gateway to an existing installation, you must set its termination and addressing before connecting the device. Otherwise, the reader may block the existing installation.
- Never install data cables in proximity to fluorescent tubes or parallel to power cables or mains cables.

# 1 About this manual

## 1.1 Symbols used in the manual



This warning symbol indicates hazards to your health and life as well as hazards that may cause damage to the terminal or system. You should always read and follow the text next to the symbol.



This symbol points to information that may facilitate your handling of the product and should be noted.



This symbol points to operational instructions.

## 1.2 PCS service tools and manuals

The following web page offers free download of PCS service tools for installation and maintenance, as well as the respective manuals:  
<https://download.pcs.com/service-tools/>



## 1.3 Additional manuals

- **INTUS RemoteConf Configuration and Operation**  
(Order No. G5000-001) (included in the software package)  
This manual describes the configuration via INTUS RemoteConf.
- **INTUS COM Terminal Management System User Manual**  
(order No. D3000-430)
- **INTUS ACM Manuals**

## 1.4 Operating note

During operation of the INTUS Flex Gateway, please note: While transmission from ClexOsdpTT takes place, the connected PC or laptop must not be coupled with other components, such as a smart phone, bluetooth speaker, or the like, since this may cause the software to terminate.

## 2 Description

The INTUS Flex Gateway, in the following also called Gateway, is a wireless switching module, designed for the use on indoor walls. It constitutes an extension of the INTUS Flex locking cylinder system and establishes a wireless connection to the locking cylinders.

### 2.1 Scope of delivery

By default, scope of delivery only includes the INTUS Flex Gateway.



In addition, a service key card (order No. CKF00-001) is required for starting up the system, as well as the software ClexServiceOSDP, INTUS COM, and INTUS RemoteConf setup and configuration.



Figure 2-1: Service card



For updating the firmware, the software ClexFWProg is required.

### 2.2 Variants of the INTUS Flex Gateway

The INTUS Flex Gateway is available with white rectangular, and with white oval surface-mounted housing.

## 2.3 Dimensions

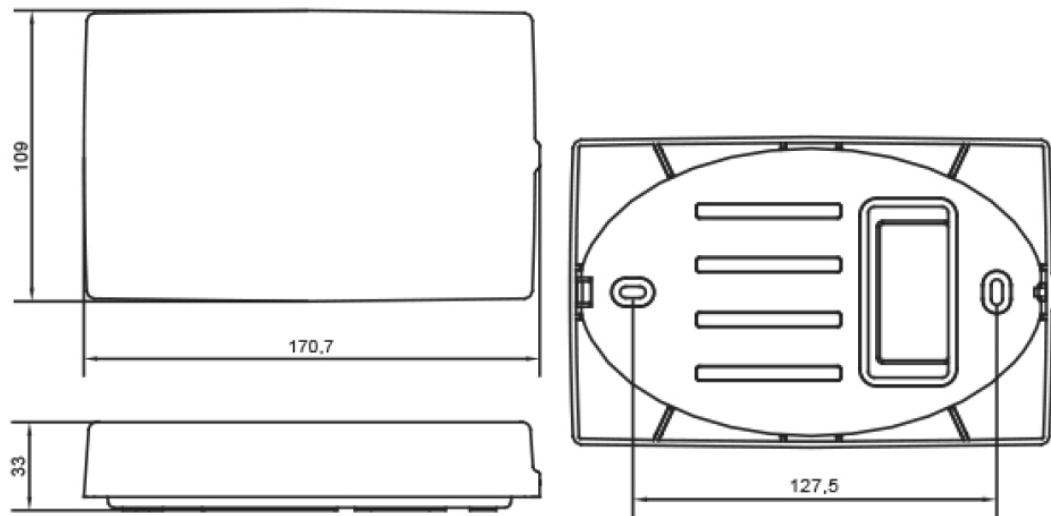


Figure 2-2: Dimensions white rectangular housing

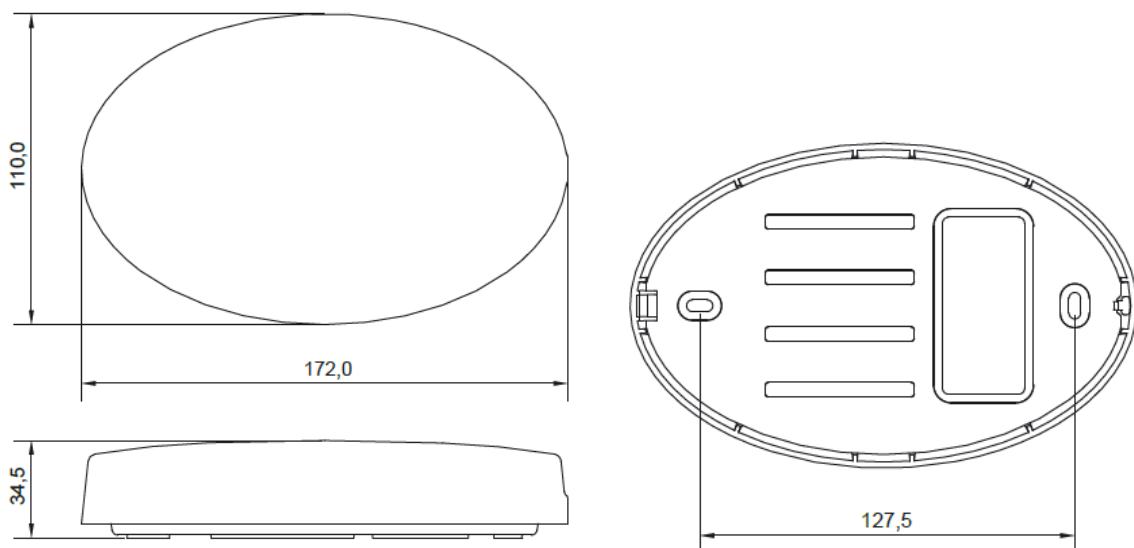


Figure 2-3: Dimensions white oval housing



## 2.4 Components

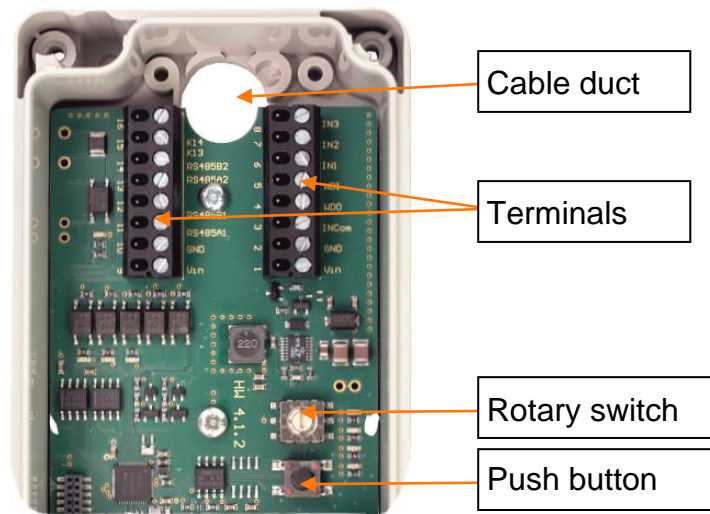


Figure 2-4: Components

The board of the oval and the rectangular device are identical.

### **3 Opening and closing the Gateway**

For opening and closing the device, only a screw at the housing needs to be loosened, or fastened, respectively.

## 4 Stromversorgung

Data line cabling depends on the used type of power supply:

- Centralized: Power supply for the reader via the access manager.
- Decentralized: Direct connection to the mains via a power supply unit.

A shielded twisted pair cable must be used for the data line to ensure electromagnetic compatibility. The maximum cable lengths must be observed in any case.



The control device (INTUS ACM) needs to be shielded as described in the INTUS ACM manual.



Cabling has to be done in de-energized condition. Do not engage the operating voltage before the Gateway is completely mounted.

### 4.1 Terminal assignment

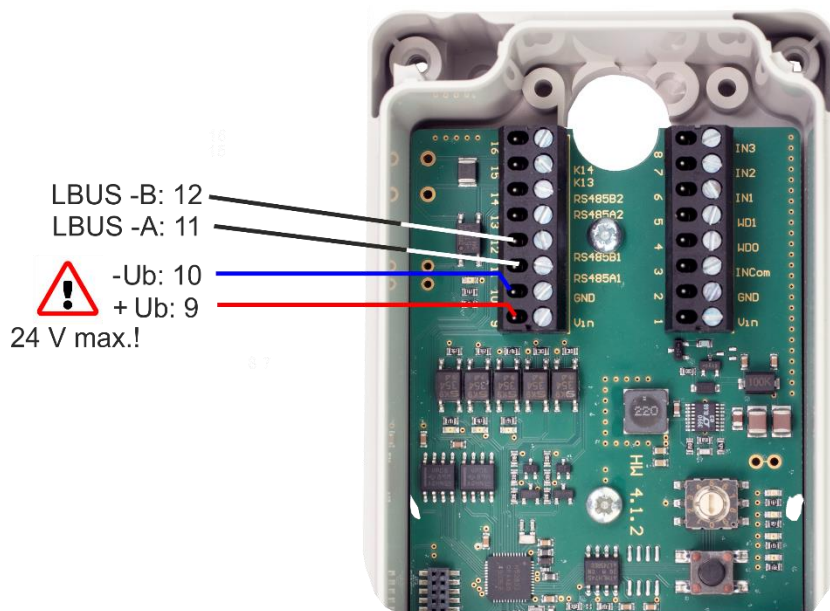


Figure 4-1: Terminal assignment

Pin	Terminal for data and power supply
12	LBus (RS485) - "B" (–)
11	LBus (RS485) - "A" (+)
13, 14	Not used
10	Power supply: GND/mass
9	Power supply: +Ub, 24 V DC (SELV, L.P.S., ES1, PS2)

## 4.2 Centralized power supply



If the reader can be supplied by an INTUS ACM. Please note that the Gateway is **not galvanically isolated**. Cable length is thus limited to 200 m.

All readers as well as the access control manager have to be installed within a building (single grounding area).

Readers outside of the building must be supplied by their own dedicated power adapters.

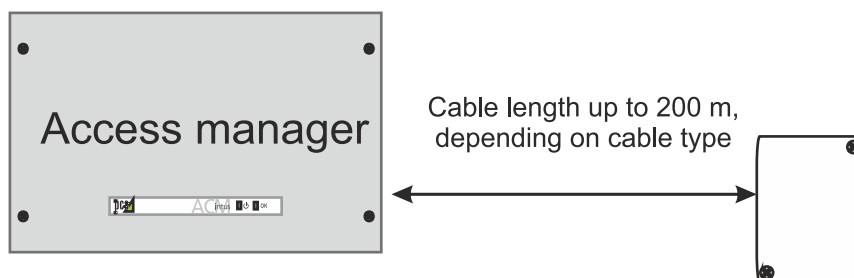


Figure 4-2: Centralized power supply



One wire pair is used for data; one or two wire pairs are used for voltage supply, depending on the distance; please see table below.

Cable type	12 V DC power supply		24 V DC power supply
	1 wire pair	2 parallel wire pairs	1 wire pair
CAT5/6/7 S-STP (AWG 24)	25 m	50 m	150 m
CAT5/6/7 S-STP (AWG 23)	30 m	60 m	200 m
CAT5/6/7 S-STP (AWG 22)	40 m	80 m	200 m
J-Y(St)Y nx2x0,6mmø	35 m	70 m	200 m
J-Y(St)Y nx2x0,8mmø *	65 m	130 m	200 m
LiYCY nx2x0,25mm <sup>2</sup> *	30 m	60 m	150 m
LiYCY nx2x0,34mm <sup>2</sup> *	45 m	90 m	150 m
LiYCY nx2x0,50mm <sup>2</sup> *	65 m	130 m	200 m
LiYCY nx2x0,75mm <sup>2</sup> *	100 m	200 m	200 m

\* Not suitable for patch panel mounting (LSA).

## 4.3 Decentralized power supply



Network installations extending several buildings or in buildings with several grounding areas require appropriate overvoltage protection measures on the network and data lines (overvoltage protection modules according to DIN EN 61643-11 VDE 0675-6-11 or DIN EN 61643-21 VDE 0845-3-1).

### Power supply via a power supply unit



Install the isolated ground receptacle in an easily accessible place. The power plug must be used as a separator.

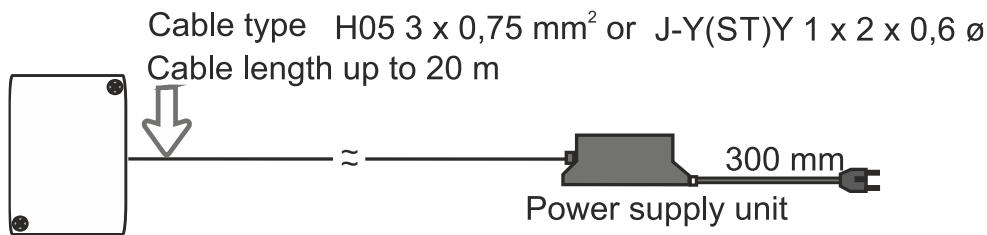


Figure 4-3: Power supply unit connected to the Gateway



Suitable external 230 V power supply units (order number S3851-100) and adapter plates for control cabinet mounting (order number S3851-101) can be obtained from technical support.

The ratings for PCS power supply units may be found in chapter **Fehler!**  
**Verweisquelle konnte nicht gefunden werden..**

## 4.4 Variants and possibilities for LBus cabling



The Gateway is not galvanically isolated. Please note that up to a maximum of 8 INTUS Flex end devices can be coupled to a Gateway. Provided that the device the Gateway is connected to supports this number of devices (e. g. ACM80e, ACM40e with 16Flex license).

#### 4.4.1 Example INTUS ACM80e with up to 8 INTUS readers and up to 8 INTUS Flex end devices, mixed operation



If "LBus 2" is used, an LBus module needs to be plugged in. This is optional and not part of the standard scope of delivery.

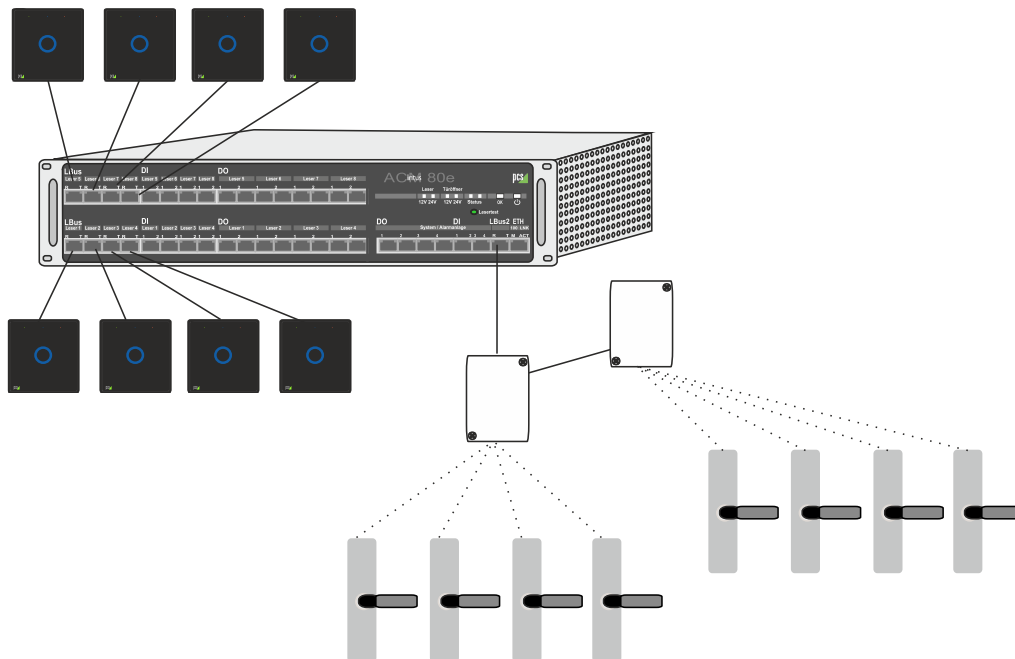


Figure 4-4: Example INTUS ACM80e, 8 INTUS Flex end devices, 8 readers

#### 4.4.2 Example INTUS ACM80e with up to 16 INTUS Flex end devices



If "LBus 2" is used, an LBus module needs to be plugged in. This is optional and not part of the standard scope of delivery.

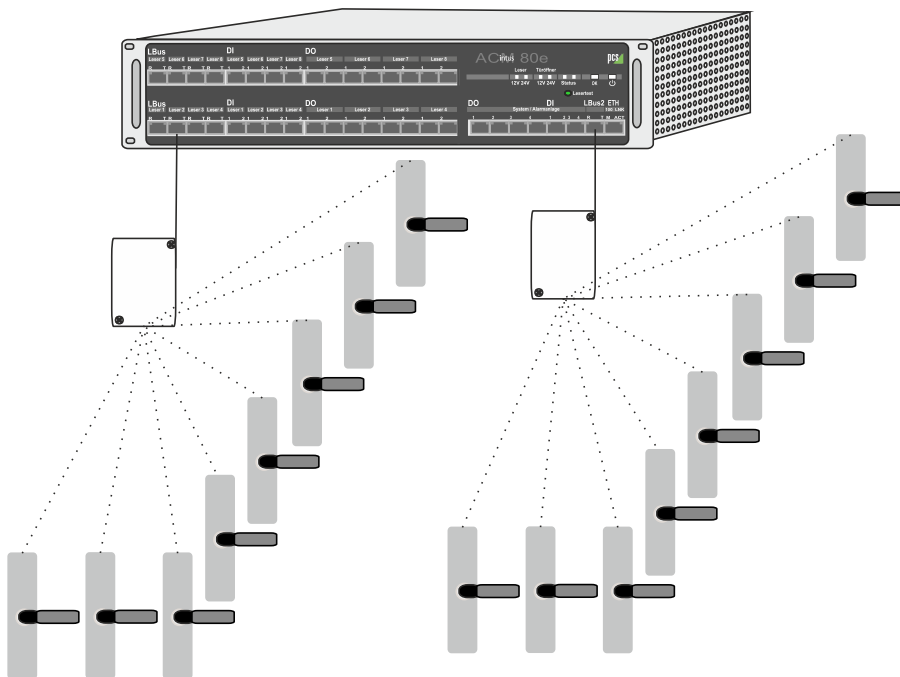


Figure 4-5: Example INTUS ACM80e, 16 INTUS Flex end devices

#### 4.4.3 Example INTUS ACM40e with up to 2 INTUS readers and up to 4 INTUS Flex end devices

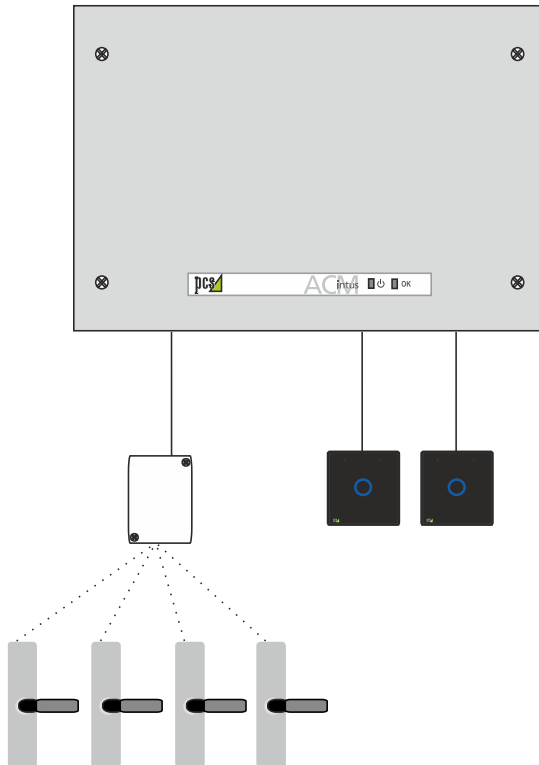


Figure 4-6: Example- INTUS ACM40e, 4 INTUS Flex end devices, 2 readers

#### 4.4.4 Example INTUS ACM40e with up to 2 INTUS readers and up to 4 INTUS Flex end devices

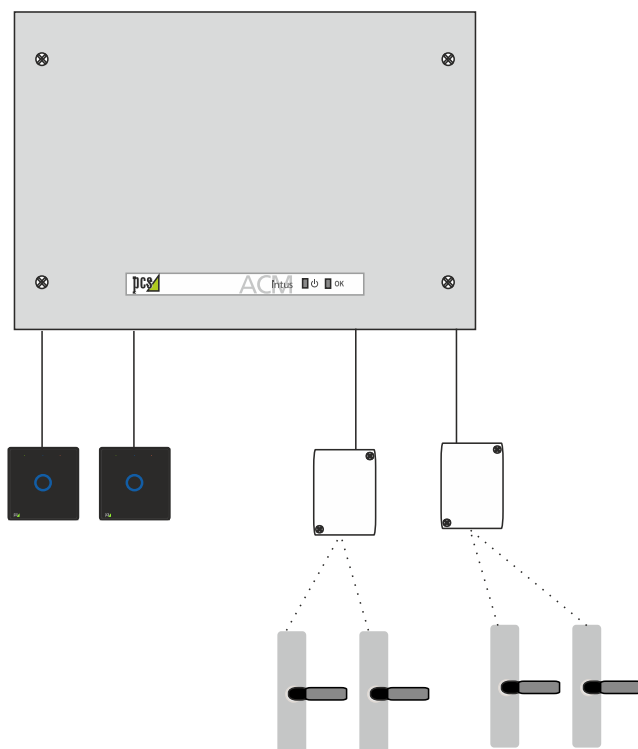


Figure 4-7: Example- INTUS ACM40e, 4 INTUS Flex end devices, 2 readers

#### 4.4.5 Example ACM40e with 16Flex license - 16 wireless INTUS Flex devices

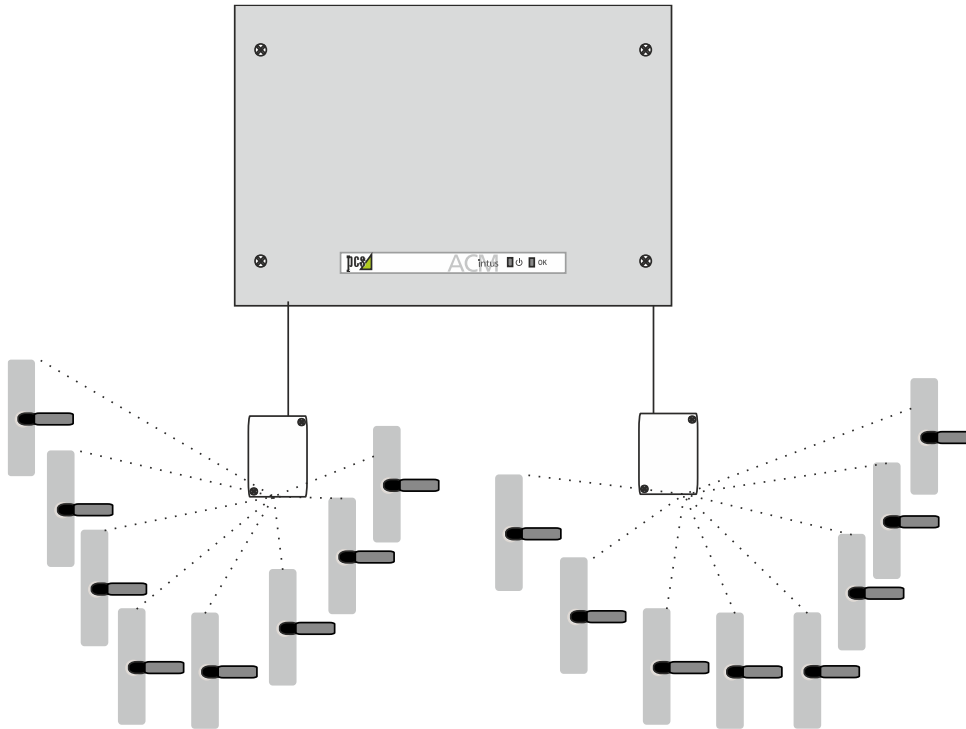


Figure 4-8: Example ACM40e with 16 INTUS Flex devices

#### 4.4.6 Example ACM40e with 16Flex license - mixed operation with star configuration of INTUS readers

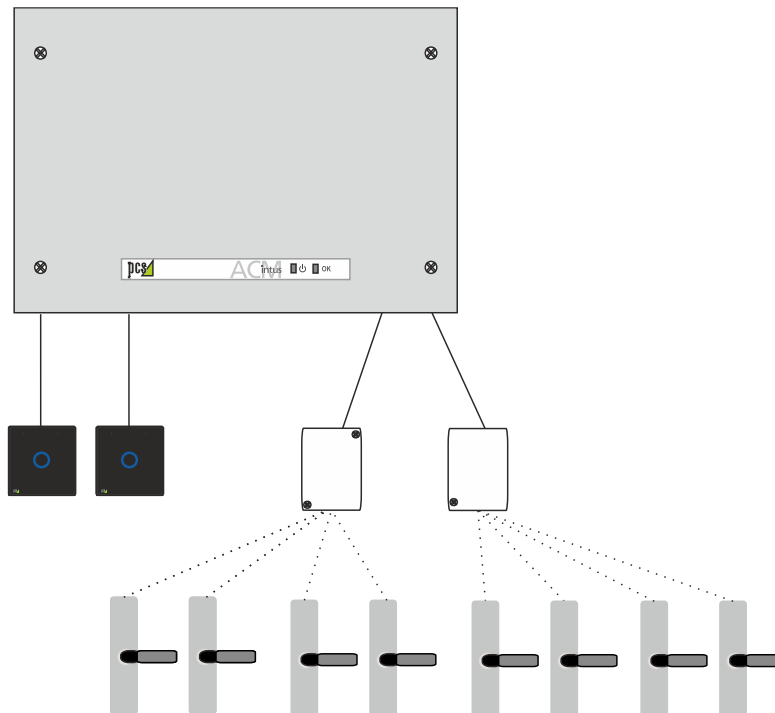


Figure 4-9: Example ACM40e, 2 readers, 16 INTUS Flex devices



#### 4.4.7 Example ACM40e with 16Flex license - mixed operation with bus-cabled INTUS readers

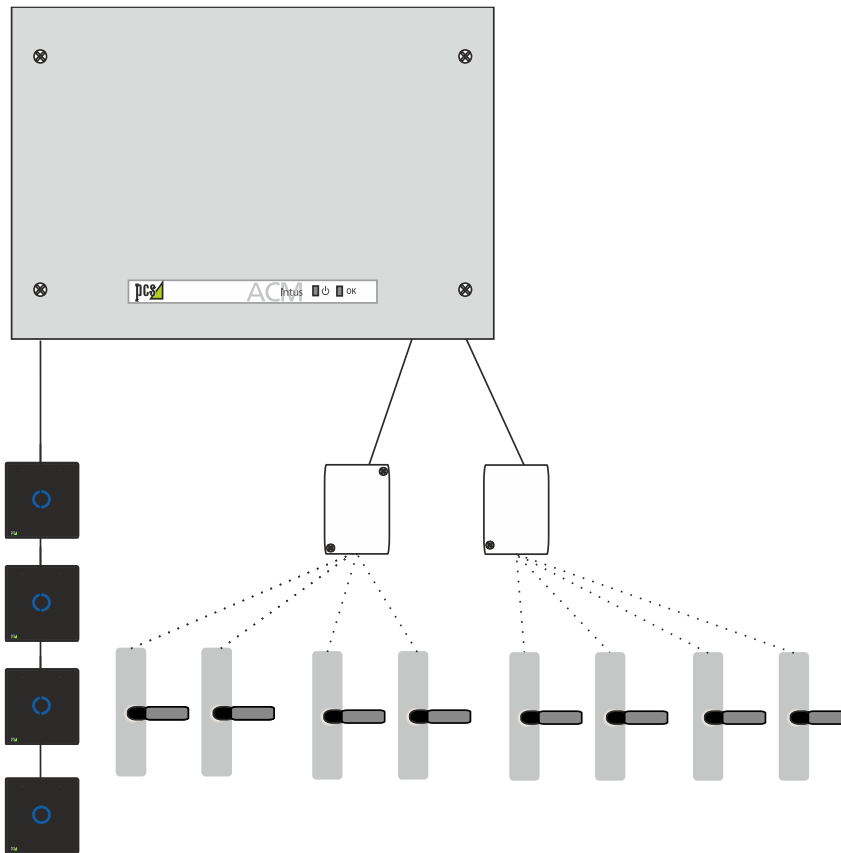


Figure 4-10: Example ACM40e, 4 readers, 8 INTUS Flex end devices

#### 4.4.8 Example INTUS 5200 with 1 INTUS Flex end device maximum

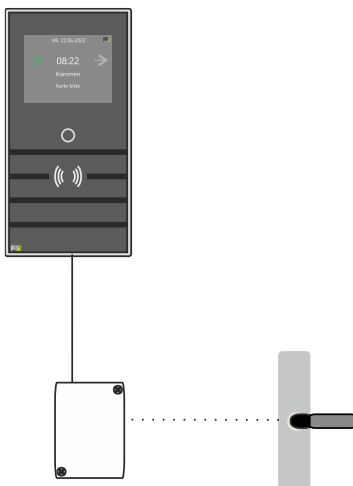


Figure 4-11: Example INTUS 5200, 1 INTUS Flex end device

#### 4.4.9 Example INTUS 5320 with up to 4 INTUS Flex end devices

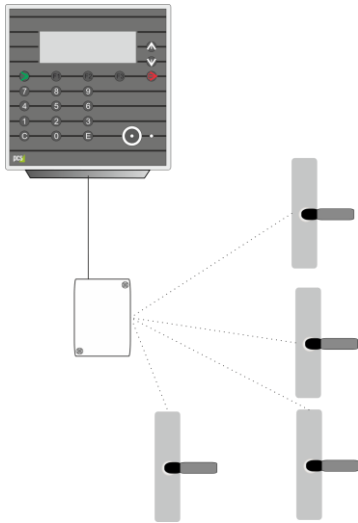


Figure 4-12: Example INTUS 5320, 4 INTUS Flex end devices

#### 4.4.10 Example INTUS 55X0/5600 with up to 16 INTUS Flex end devices

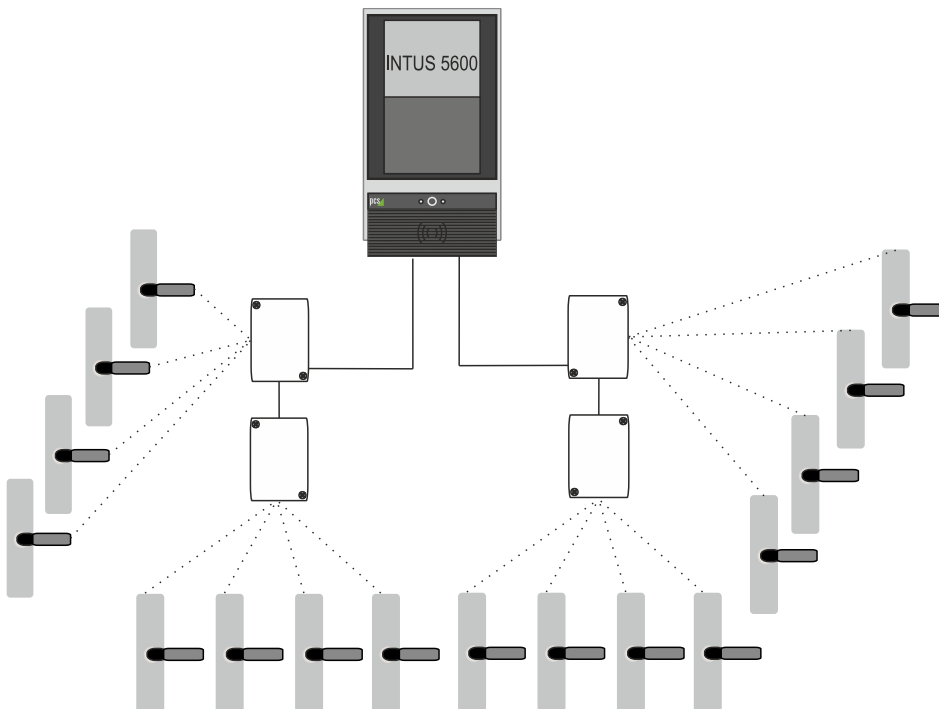


Figure 4-13: Example INTUS 5600, 16 INTUS Flex end devices

## 5 Starting up the INTUS Flex Gateway



After having connected the Gateway to the Access control manager (see chapter 0), please configure the Gateway and the INTUS Flex end devices to be coupled in INTUS RemoteConf (see manual INTUS RemoteConf, order No G5000-001, Version .09 and later). A maximum of 8 INTUS Flex end devices can be connected per Gateway.

### 5.1 Connecting INTUS Flex Gateway

Via the OSDP tool ClexServiceOSDP and the service card, a connection to the INTUS Flex Gateway, and later the INTUS Flex end devices, can be established. Please proceed as follows:



- 1 Activate bluetooth at your laptop.
- 2 Start ClexOsdpTT.
- 3 Click on the button SCAN - BUS to select a COMPort for the INTUS Flex Gateway.

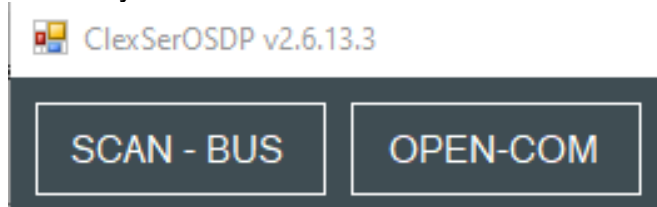


Figure 5-1: ClexServiceOSDP - button SCAN - BUS

The available ports are listed:

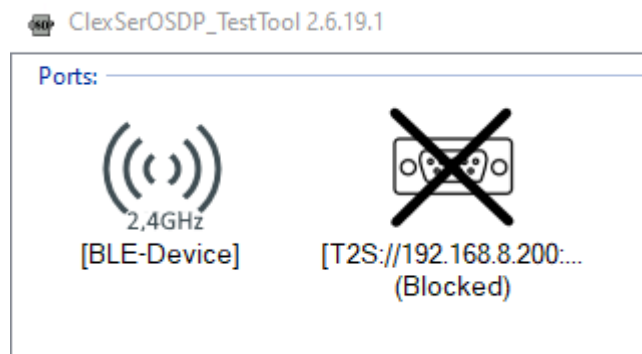


Figure 5-2: Installation - available ports

- 4 Select port "2,4 GHz".



- 5 The INTUS Flex Gateway (FSM) is offered for selection - please select it:

Peripheral Devices: \_\_\_\_\_

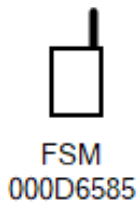


Figure 5-3: Installation - select INTUS Flex Gateway

- 6 Turn the **rotary switch** in the INTUS Flex Gateway (siehe Kapitel **Fehler! Verweisquelle konnte nicht gefunden werden.**) to **4** and then push the push button in order to activate wireless mode.
- 7 Double-click on the FSM(Gateway) symbol to establish the connection to the device.

## 5.2 End device settings

### 5.2.1 Setting the basic address



The basic address is set in ClexServiceOSDP via "Commands - osdp\_COMSET". "Address", in this case, is the basic address from which the counter is incremented, usually 1 for the first end device, 2 for the second end device, etc.



**BaudRate** has to be set to 9600.

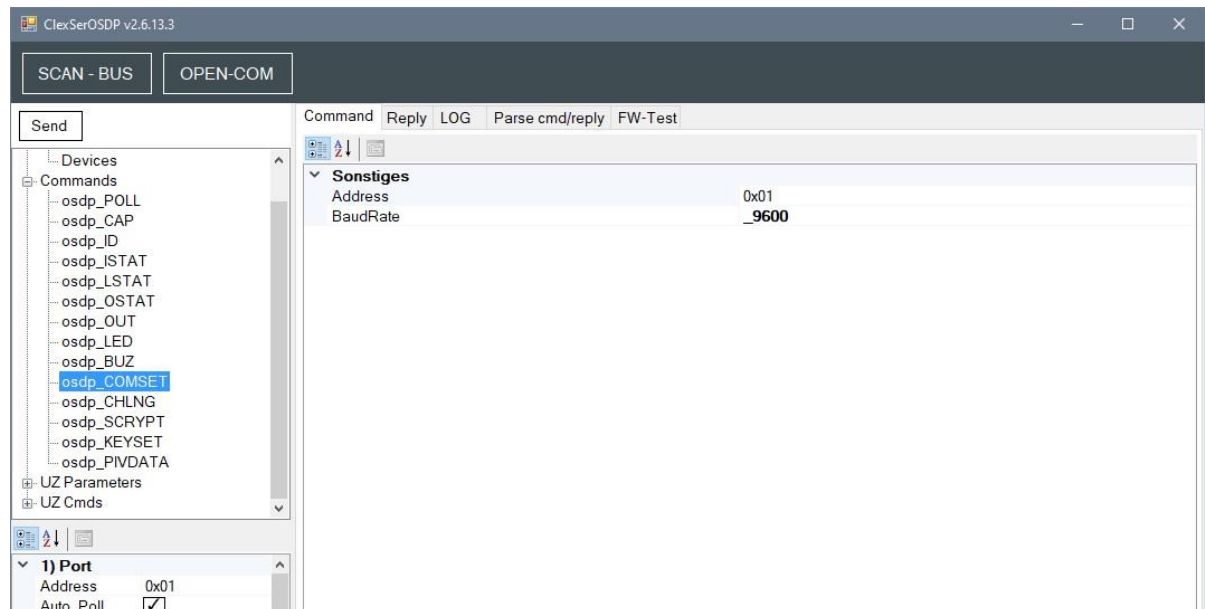


Figure 5-4: Setting the basic address via osdp\_COMSET

## 5.3 Couptling INTUS Flex end devices to the INTUS Flex Gateway



For this step, you need the INTUS Flex service card.

The connection is established via the command „CMD\_UZ\_get\_knobs“.

- 1 Under „Knobs“, you can see which end devices is coupled to which position.

▼	REPLY	
▼	Knobs	String[] Array
	[0]	FFFFFFFF
	[1]	FFFFFFFF
	[2]	FFFFFFFF
	[3]	FFFFFFFF

Figure 5-5: Couple INTUS Flex end device via CMD\_UZ\_get\_knobs



Please make sure to write down the **sequence** of end devices, since this is required for further settings in INTUS COM later on.

Via „Send“, the settings are transferred to the Gateway.

- 2 Turn the **rotary switch** in the INTUS Flex Gateway (see chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**) to **8** and push the push button. Hold the INTUS Flex service card to the INTUS Flex end device to be connected.  
You will hear a beeping sound when the INTUS Flex end device is in wireless mode.
- 3 Quickly push the push button in the Gateway once.  
When you hear another beeping sound, the INTUS Flex end device is coupled.

### 5.3.1 Removing connected INTUS Flex end devices

Via the command „CMD\_UZ\_delete\_knob“, INTUS Flex end devices can be removed. Indicate the knob/end device number (between 0 and 7) to be deleted via "Device Index":

▼	CMD	
	Device Index	0x00 - INDEX_0
	Mfg-Cmd	0x21 - Delete-Knob

Figure 5-6: Removing INTUS Flex end device via CMD\_UZ\_delete\_knob

Via „Send“, the settings are transferred to the Gateway.

## 5.4 Further steps

Via the TPI files provided by PCS, reader configuration files are created.

In INTUS COM, Access control managers, doors, etc., are configured. Please see manual INTUS COM (see chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**).

## 5.5 Firmware update

For firmware updates, the software Clex FW Programmer (ClexFWProg) is required.



- 1 Select the firmware version in ClexFWProg.
- 2 Turn the **rotary switch** in the INTUS Flex Gateway (siehe Kapitel **Fehler! Verweisquelle konnte nicht gefunden werden.**) to **4** and then push the push button in order to activate wireless mode.
- 3 Click on the icon "Port". The icon turns green as soon as the connection is established.
- 4 Click on "Start" to start transmission of the firmware.
- 5 After the update is finished, please click on "Port" again to close the connection.

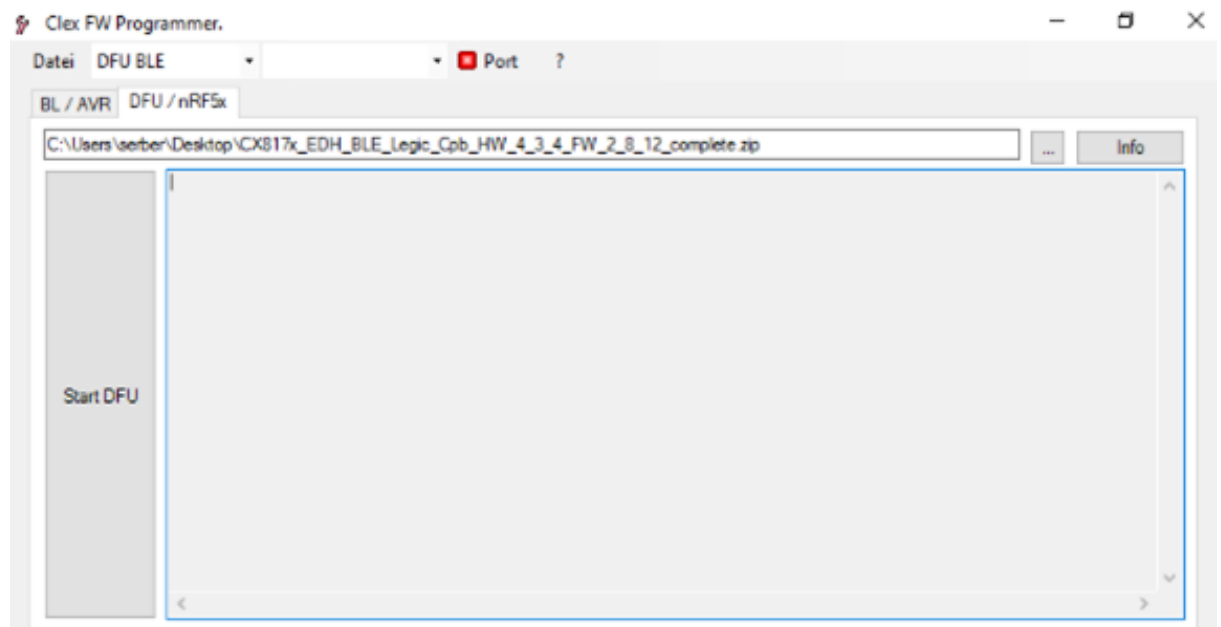


Figure 5-7: Firmware update with ClexFWProg

## 6 Mounting

Before mounting, please be aware that:



- The INTUS Flex Gateway is designed for wall mounting.
- For connecting/replacing/removing INTUS Flex end devices, the rotary switch and push button within the device need to be operated (see chapter **Fehler! Verweisquelle konnte nicht gefunden werden.**). When mounting the device, please make sure the device is easily accessible.
- Metal reduces transmission power. The INTUS Flex Gateway is optimally mounted in direct sight line with the INTUS Flex end devices.

## 7 Factory reset

To perform a complete reset to factory settings, switch the rotary button (see Figure 2-4: ) to position 9 and then push the push button.



Attention: Doing so, all connected devices, all parameters and encryption settings are deleted. After that, the reset is performed.



## 8 Technical data

### Voltage supply

5 - 24 V DC, SELV / L.P.S., ES1, PS2

Power input 0,4 W max.

All voltages introduced into the device must conform to the following requirements: LPS (Limited Power Source) and SELV (Safety Extra Low Voltage) according to IEC/EN/UL/CSA 60950-1 or ES1 and PS2 according to IEC/EN/UL/CSA 62368-1.

### Mounting type

The INTUS Flex Gateway is designed for indoor wall-mounting (surface-mounting).

### Temperature range / atmospheric humidity

Operating temperature +10° C to +55° C

Storage temperature -40° C to +65° C

### Exposure to dirt and humidity (degree of protection)

IP30

### Fire protection

There is no need for special fire protection measures exceeding the property insurers' guidelines.

### Electromagnetic compatibility

See declaration of conformity.

### Wireless operation

Radio frequency: 2402 - 2480 MHz

Transmission power: 4mW

## 8.1 Operational data for the PCS power supply units

Ambient temperature: 0 to + 45° C

Rated voltage: 230 V +6 % / -15%

Rated frequency: 50 - 60 Hz +/- 3 Hz

Rated current: 70 mA

Output voltage: 12 V DC +/-20%

Output current: 0.5 A max.

The power supply units are immune to sustained short circuits and shut down when overheated.

**The Gateway with a PCS power supply unit conforms to the EN 62368-1 requirements and EMC standards specified above.**

## 8.2 Declaration of conformity



### EU Declaration of Conformity EU-Konformitätserklärung

The manufacturer  
Der Hersteller  
**Uhlmann & Zacher GmbH**  
**Gutenbergstr. 2-4**  
**97297 Waldbüttelbrunn**  
**Germany**

declares under his sole responsibility that the products

erklärt in alleiniger Verantwortung, dass die Produkte

**CX6920 / CX6922**  
**CX6930 / CX6932 / CX6934 / CX6936**  
**CX8932 / CX8936**

are in conformity with the provisions of the EU directives **2014/53/EU** (harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC) and **2011/65/EU** (restriction of the use of certain hazardous substances in electrical and electronic equipment).

die Bestimmungen der EU-Richtlinien **2014/53/EU** (Harmonisierung der Rechtsvorschriften der Mitgliedstaaten über die Bereitstellung von Funkanlagen auf dem Markt und zur Aufhebung der Richtlinie 1999/5/EG) und **2011/65/EU** (Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten) erfüllen.

The products comply with the requirements of the following standards:

Die Produkte erfüllen die Anforderungen der folgenden Normen:

<b>Radio</b> Funk	EN 300 220-2 V3.1.1 (HW 1.3.x, HW 1.4.x) EN 300 328 V2.2.2 (HW 4.1.x)
<b>EMC</b> EMV	EN 301 489-1 V2.1.1 EN 301 489-3 V2.1.1 (HW 1.3.x, HW 1.4.x) EN 301 489-17 V3.1.1 (HW 4.1.x)
<b>Health</b> Gesundheit	EN 62479:2010
<b>Safety</b> Sicherheit	EN 62368-1:2014 + AC:2015

Waldbüttelbrunn, 04.03.2021

  
i. V. Matthias Albert, Director Quality Management

Doc. 099A V1.1

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*Zeit für Sicherheit.*



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