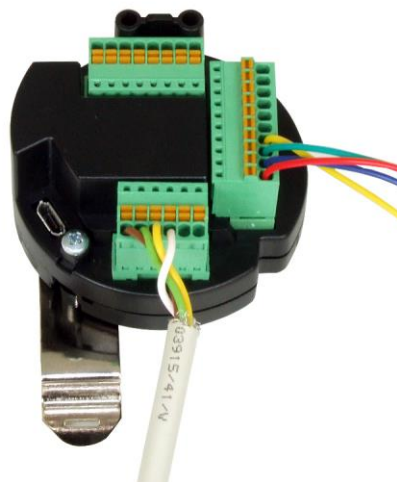




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Manual Datafox KYO Oneloc

Flexible data collection with method



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Änderungen

Alternation in this Dokument

Date	Chapter	Discription
12.07.2018	all	Revision the manual to new version 04.03.11.xx

Alternations of the version

With the device generation IV a new versioning scheme has been introduced. According to this scheme the file name of the device firmware and the setup program (DatafoxStudioIV) is composed as follows:

Product name	XX. Device genera- tion	YY. Compatibility (which versions can be used to- gether)	ZZ. Version number (functional exten- sion)	Build Troubleshooting (with a new version the Build number is reset)
z. B. AE-MasterIV	04.	03.	9.	04

The use of the manual depends on the version of the firmware and the DatafoxStudioIV or the DFComDLL. Gather from the following table which manual matches which version. For different combinations no support can be offered.

Firmware StudioIV and DLL validity

Firmware: 4.03.11.xx.

Studio: 4.03.11.xx

Dll: 4.03.11.xx

The DatafoxStudioIV is backward compatible. This means that you can configure a device with a newer DatafoxStudioIV also older firmware, the device only supports the natural functions that are implemented in the older firmware version. Ie, relevant to the functions that are possible, is always the manual state that the firmware associated with the Setup equivalent. It is not possible to provide a centering firmware configured with a stand of DatafoxStudioIV to who is older than the firmware. recommendation:

If possible, use always the current version of DatafoxStudioIV.

What features are supported in which software versions, is from the file:

Datafox MasterIV, SW version xxx.pdf list as shown.

The file is located on the Datafox DVD and for download on the homepage. Please also note the instructions in each chapter in the manual. The updates are available on our website under www.datafox.de download.

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1. For you Safty

Safety Information for Datafox Products



The must only be operated according to the instructions given in the manual.
Do no insert any foreign objects into the openings and ports.
The device must not be opened. All maintenance work must only be performed by authorized specialists.



Some devices contain a lithium ion battery or a lithium battery.
Do not throw into fire!

Achtung!

Supply voltage: 12 Volt DC
Siehe jeweiliges Typenschild / technische Daten.
See respective type label / technical data.
The device must only be operated with a power-limited power supply according to EN 60950-1. If you do not observe these instructions, the device may be damaged.
The following temperature ranges must be observed
Working area / storage temperature: -20° C bis +70° C
Mobile communications module: -20° C bis +55° C



In areas with cellphone ban, GSM, WLAN and other cellular modems must be turned off.

Persons with heart pacemakers:

When using the device, maintain a distance of at least 20 cm between the heart pacemaker and the device in order to avoid possible interferences.
Turn the device off immediately if interferences are assumed.



Protection class: Observe the technical data of the respective device.
In case of laser devices of class 2, the eye is protected by the blink reflex and/or turning reactions if you briefly and accidentally look into the laser beam. The devices may be used without further protective measures. Nevertheless, avoid looking directly into the laser beam of the laser scanner.

Observe the additional notes in the chapter,
“Proper use and environmental protection”



We declare under our sole responsibility that the product described fulfills the protection requirements of European Directive 89/336 / EEC as amended by 91/236 / EEC, 92/31 / EEC, 93/97 / EEC and 93/68 /. See the manual of the devices for the standards. Evidence is provided by compliance with the following standards:

- EN 55022 : 2006 + A1:2007
- EN 55024 : 2003
- EN 61000 – 6 – 2: 2005
- IEC 61000-3-2 : 2005 + A1:2008 + A2:2009
- IEC 61000-3-3 : 2008

2. introduction

Datafox data terminals have been developed to fulfill the requirements of modern personnel time recording where users have high demands concerning flexible and elegant design. Furthermore, the Datafox Embedded-Concept also covers access control. All relevant data can be recorded with modern technology and be transferred to the analysis software immediately. Billings, calculations or other analyses can be performed in a timely manner; processes can be monitored and controlled actively. This saves time and ensures the data quality and immediacy required.

Datafox data terminals are based on the Datafox Embedded-System which is equipped with modern technology for data collection and of course also data transfer. You make your entries comfortably via keyboard, touch display, RFID or barcode. The device is available with GPS, GSM, GPRS, USB etc. It fulfills all conditions for a flexible usage not only for personnel or order time recording but also for further scopes. This constitutes a real added value. The powerful tools DatafoxStudioIV and DLL facilitate quick and easy integration in any IT solutions. Due to scalability, numerous options are available. You can select according to your company's requirements and only pay what you really need.

2.1. Structure of the Documentation

The manual contains a change history as well as a general part with safety information, the introduction and information concerning system requirements and system structure.

The general part is followed by the main part of the manual. It contains the chapter Product Description Device. In this chapter, device-specific components are described as well as the device's functions.

The final part of the manual provides technical data about the device and a glossary whose purpose it is to ensure a consistent understanding between user and manufacturer.

2.2. Guarantee Restriction

All installers are responsible for the use of the device and its accessories in accordance with its intended purpose and in compliance with the applicable laws, standards and directives.

All data in this manual has been checked carefully. Nevertheless, errors cannot be excluded. Therefore, we offer no guarantee nor accept any liability for consequences that derive from errors of this manual. Of course we are grateful if you point out errors to us. We reserve the right to make modifications in respect of technical progress. Our general terms and conditions of business apply.

Note:



Due to DatafoxStudioIV, Datafox devices offer many functions and combinations of functions not all of which can be tested in the case of updates. This applies especially to setups defined by you as customer. Before updating your device, please ensure by tests that your individual setup works without any errors. If you encounter a problem, please inform us immediately. We will take care of the clarification of the problem on short notice.

2.3. Typography of the Documentation

FW	Abbreviation for firmware (software in the device)
SW	Abbreviation for software
HW	Abbreviation for hardware
GV	Abbreviation for global variable
<Name;Software Version.pdf>	File names



Note:

Useful information which helps you avoiding possible mistakes during the installation, configuration and commissioning is given here.



Caution:

Here, notes are provided which must be strictly observed. Otherwise, malfunction of the system will occur.

2.4. Important General Notes



Caution:

Use the devices only according to regulations and follow the installation, commissioning and operating instructions. Installation and commissioning may only be performed by authorized specialists.

Subject to technical alterations.



Caution:

Due to technical development, illustrations, function steps, procedures and technical data may vary slightly.

The Datafox device has been developed for the purpose of creating a flexible and easily integrated terminal for data recording serving for a great variety of applications. The device is robust and easy to use. Due to the PC setup program, the device is quickly and easily configured for its application field so that you save time.

Numerous optional features, such as bar code reader, transponder reader, digital inputs etc., enable you to use the device for:

- PZE - Personnel time recording
- AZE - Order time recording
- BDE - Operating data recording (I/O-processing)
- ZK - Access control
- FZDE - Vehicle data recording / telematics

This manual describes the creation of setups with the setup program DatafoxStudioIV without covering specific applications. Potential problems and difficulties are pointed out.

This manual describes the functionality of the and explains its characteristic features. For example, installation, operation and equipment of the device are described.

In order to define the behavior of the device, a setup must be created. For this purpose, the DatafoxStudioIV has been developed.

With some practice it will be possible to create a complete compilation for the within half an hour. If you need functions that are not available, please contact us.



Note:

If you need support for the compilation of setups, we offer you our services. Due to our extensive experience with the setup, we work very quickly and can make your setup even more efficient through useful advices, so that the input at the device can be performed quickly and securely.



Note:

Due to DatafoxStudioIV, Datafox devices offer many functions and combinations of functions not all of which can be tested in the case of updates. This applies especially to setups defined by you as customer. Before updating your device, please ensure by tests that your individual setup works without any errors. If you still encounter problems after thoroughly testing your setup, please inform us immediately. We will fix the error on short notice.

3. Intended Use and Environmental Protection

3.1. Regulations and Notices

According to the current state of the art, measures were taken to ensure that the device meets the technical and legal regulations as well as safety standards. Nevertheless, malfunctions due to interferences through other devices can still occur.

Please observe local regulations when using the device.

3.2. Power supply

Only operate the device externally with a limited power source in accordance with EN 60950-1.

Connection voltage of the MasterIV devices: : 12 to 24 volts DC

If the devices run with rechargeable batteries, note the instructions in chapter "Rechargeable Battery".



Caution:

In the event of non-compliance with these instructions, the device or the battery (if any) can be damaged or destroyed!

In order to ensure maximum battery life, it is recommended to recharge the battery only after complete discharge.

See respective type label of the device .

3.3. Environmental Influences

Extreme environmental influences may damage or destroy the device and should be avoided. This includes fire, extreme sunlight, water, extreme cold and extreme heat.

See respective type label of the device.

3.4. Mounting outdoors

3.4.1. Degree of protection

On the backside, only the cable feed / connection area is a restriction with respect to the IP class. If the device is mounted on a flat base, the connection area is protected so that the entire system has IP65

3.4.2. Temperature

The device has an approved temperature range of - 20 ° C to + 70 ° C.

A heater is not necessary for outdoor use.

Due to the inherent heat of the electronics and power supply, the temperatures in the unit are higher even at ambient temperatures below -20 ° C.

Condensation water only occurs when a cold object comes into the heat and would therefore only be an issue for mobile devices.

We recommend, if you use the devices outside, then let it running permanently. Both in terms of temperature as well as condensation, it is recommended to not switch off devices which are used outdoors.

3.5. Repair

Except for the battery replacement in mobile devices , Datafox devices are maintenance-free and must only be opened by authorized professionals. In case of defects, please contact your dealer or the Datafox service hotline.

If a definite defect is present, you can also send the device directly to Datafox.

3.6. Cleaning

CAUTION

Risk of explosion if batteries are replaced improperly.
Dispose used batteries according to the instructions.

3.7. Further Notices

Do not expose the device to strong magnetic fields, especially during operation.

Operate the slots and connections of the device only with the appropriate intended equipment.

Ensure that the device is secured during transport. For reasons of safety, do not use the device while driving a vehicle. Also ensure that technical equipment of your vehicle is not compromised by the device.

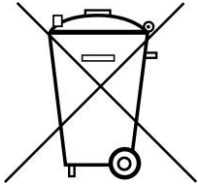
In order to prevent SIM card misuse, have your SIM card blocked immediately in cases of loss or theft of the device.

3.8. Disposal

Observe local regulations concerning the disposal of packaging material, used batteries and scrapped electrical equipment.

This product complies with the EU Directive No. 2002/95/EC, its appendices and the Council Decision laying down the restrictions of the use of hazardous substances in electrical and electronic equipment.

The device is covered by the European Directive on Waste Electrical and Electronic Equipment which came into force on February 13, 2003 and was translated into the legislation of the Federal Republic of Germany on August 18, 2005.



Do not dispose the device in domestic waste!

As the user, it lies within your responsibility to dispose electrical and electronic equipment via the designated collection facilities. The correct disposal of electrical and electronic equipment protects human life and the environment.

For more information regarding the disposal of electrical and electronic equipment, please contact your local authorities or waste disposal companies.

4. System Requirements / Hardware

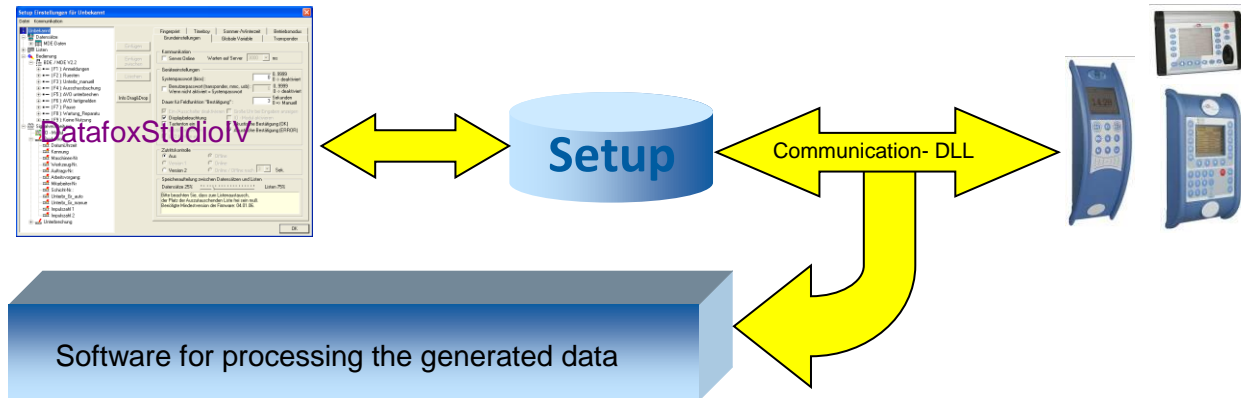
4.1. System Structure

The system consists of the Datafox device, the DatafoxStudioIV, the communication DLL and a software for processing the generated data.

Create setup

Save setup

Transfer setup to device



4.2. Requirements for Operating Datafox Devices

In order to operate the Datafox device, you need a 230 V power connection for the Datafox power supply. Depending on the main communication set, you need a corresponding transfer medium or connection cable.

Main communication:

- USB > one standard USB-A to USB-mirco Cable (see the chapter connection USB).
- RS485 > a transmission path in accordance with the EIA-485 standard (see Connection RS485).
- GSM/GPRS > a distortion-free mobile connection (see Connection GSM).
- WLAN WiFi > a distortion-free channel to an access point (802.11 b/g) within reach (see Connection WLAN).
- at least one standard Ethernet cable, no „cross over“ (see Connection TCP)
- HTTP(internet) via LAN > TCP/IP connection with free internet access. The data are sent to a server.



Note:

With increasing demands on transfer rate and interference immunity, the demands on the transmission path increase as well with regard to quality (interference immunity).

4.3. Kompatibilität Compatibility

The compatibility must be observed urgently between:

- Datafox devices and the device firmware
- Device firmware and device setup
- Device firmware and communication DLL
- Communication DLL and DatafoxStudioIV
- DatafoxStudioIV and device setup

4.3.1. Firmware File Archive (*.dfz)

Description

Device files (*.hex) of the MasterIV devices are delivered in a common firmware file archive. It has the file extension DFZ (stands for Datafox Zip). Now simply the firmware file archives (*.dfz) are indicated instead of the device files (*.hex). This applies to the DatafoxStudioIV and the DLL. The indication of device files (*.hex) is still possible.

Function of the Archive

The transfer routine of the device file selects the right file from the firmware file archive on the basis of the hardware options available in the device. Thus, it is guaranteed that all hardware components available in the device are supported by the corresponding firmware.

Manual Selection of a File

If you do not want to integrate the archive in your installation, you have the possibility to add single device files from the archive to the installation.

The file format of the firmware file archive is ZIP. Hence, you can open the archive with every standard ZIP-program. Via the entry "Open With" in the context menu you can select an appropriate program for opening the file. If necessary, you can call up a program combined with this file format to open the file by renaming the file from DFZ to ZIP.

In the archive you find a file named "Inhalt.pdf"; it contains information which file (*.hex) of the archive matches your device. Extract the desired device file (*.hex) and rename it if necessary. A renaming of a file is possible at any time, because all information are in the file itself.

You can state the device file extracted before as device file in DatafoxStudioIV and at calling the DLL function. It is still tested if the file can be loaded into the chosen device before the transfer takes place.

4.3.2. Datafox Devices and Device Firmware

Each Datafox device has an electronic flat module. The module has specific hardware equipment concerning the options (e.g. mobile radio, WLAN, fingerprint,...). Due to technical conditions, different options are mutually exclusive. Currently, not all hardware options can be supported in one firmware file due to limited program memory. This means that each device with specific hardware options needs a proper firmware to support the hardware options by the software.

Caution:



Hardware generation V 3 is supported from version 04.02.00.x onwards. The DatafoxStudioIV is compatible up to and including firmware version 04.01.x.y. Older versions 04.00.x.y are not supported any more.

4.3.3. Device Firmware and Device Setup

The firmware (operating system) of the device and the device setup (*.aes data file = application program) form a unit. By the device setup, the runtime behavior of the device (the firmware) is determined. This means the response of the device to input events by the user or the environment (e.g. digital inputs). In principle, only those functions of the device are executed that are supported by the firmware and defined via the setup. Prior to the productive commencement, you should there-

fore test each setup with the corresponding device or on a device with the same hardware options and firmware.

4.3.4. Device Firmware and Communications DLL

A firmware supports certain functions, dependent on the hardware options. The communication DLL is the interface between the firmware and the DatafoxStudioIV or your processing software. Therefore, the firmware must always have the same or a lower version number as the communication DLL.



Note:

If your application uses a newer version of the DLL than the firmware does, you can only use functions that are supported by the firmware. Otherwise, you will receive an error message (e.g. function not supported) which has to be analyzed.

4.3.5. Communications DLL and DatafoxStudioIV



Note:

The DatafoxStudioIV and the communication DLL are developed and released as a bundle. Therefore, they have to be used as a bundle. A newer version of DatafoxStudioIV does not work with an older DLL.

4.3.6. DatafoxStudioIV and Device Setup

With the DatafoxStudioIV, you create a device setup (application program) for the Datafox device. That means that in the setup only those functions were defined which were available in the DatafoxStudioIV version at the time of the setup creation. The DatafoxStudioIV you use for opening a device setup may thus only be newer but never older than the DatafoxStudioIV version you used to create the device setup.



Note:

The updates are always available for download on our homepage www.datafox.de.



Caution:

When new devices are delivered, the latest firmware is loaded on the devices. If you wish to work with an older firmware version, please perform a downgrade. Please observe the compatibility notes in the release notes of the respective firmware version.

The data file <Device name>, Software Versionen Stand <version number>.pdf shows which functions are supported by which software release. You will find the file on the product CD. Please also follow the instructions given in the chapters of the manual.

4.3.7. Update / Downgrade

A firmware update or downgrade is a very sensitive process. Possibly, a reset of the main communication to RS232 may occur. In any case, consider the information regarding the compatibility in the software version list.

Firmware Update



Caution:

Before starting a firmware update, please check on the basis of the software version list whether there are any version dependencies that must be observed.

For example: when changing from Version 04.00.xx to version 04.01.xx, at least version 04.00.23.769 or higher must be present in order to run the update to version 04.01.xx successfully.

Firmware Downgrade

A firmware downgrade is not recommended.

We are constantly working towards improving the software/firmware; all functionalities are still included in new versions. New software always offers better functionalities and possible bugs are fixed.



Caution:

When performing a firmware downgrade the firmware has to be transmitted to the device twice. This has technical reasons. Errors shown on the display of the device after the first transfer can be ignored.

5. Device

**Note:**

It has to be taken care of a suitable protection from direct sunlight because the synthetic materials are not 100% UV resistant. Fading simply is an optical defect which does not restrict the function of the device.

**Caution:**

Please keep in mind that MasterIV terminals use a flash memory. According to the manufacturer each memory sector (512 byte) can be written to a maximum of 100,000 times. The firmware of the terminals distributes the access to the memory sectors, this technique is called wear levelling. Bad blocks in case of write or read failures are not used anymore. However, despite this technique it is not advisable to write the memory too frequently. The application should initialize a new list transfer only after a change of the list data but not cyclically.

Keep in mind the message - FlashService - in the display of the device. It means that the live time of the flash memory according to the manufacturer instruction will be reached soon. Then the device has to be sent to Datafox for service.

5.1. Commissioning

On delivery, the device is fully functional and configured with a demo setup so that you can test the input immediately. After establishing the power supply the device will switch on automatically. The device automatically starts booting, recognition of the hardware options and loading the setup. After having finished booting, the device switches to operation. Now the device is ready for use.

**Note:**

On delivery, the main communication is set to USB.

**Caution:**

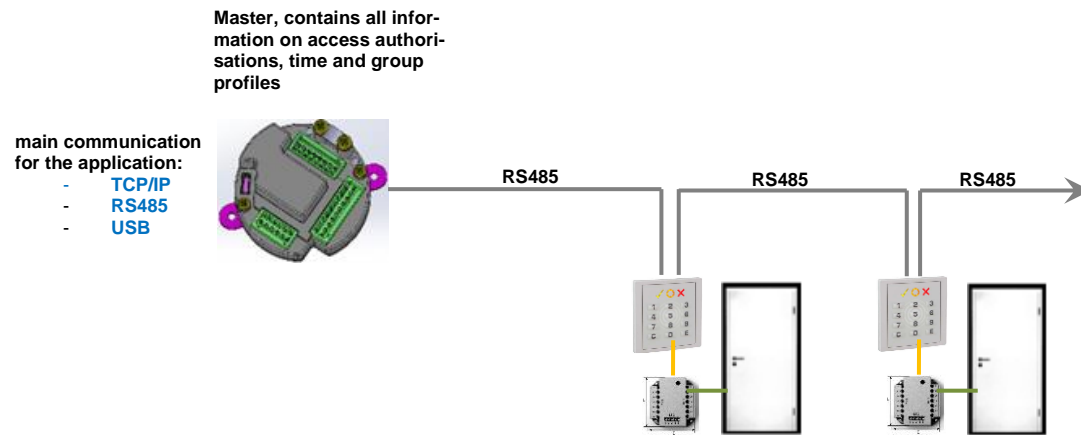
If external modules (e.g. access control, signal processing via the digital inputs) with an external power supply are used, ensure to comply with all limits (max. voltage and current) before commissioning the system.

5.2. Guidline for Commissioning of KYO Oneloc

The KYO Oneloc must be pre-configured for initial operation. Specify how it will be used:

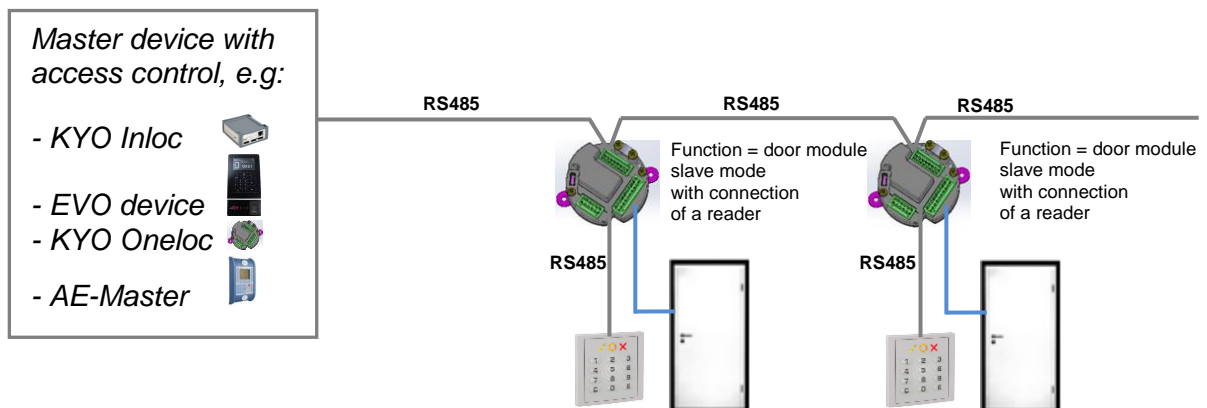
1) Use as access control master:

Schematic structure:



1) Use as door module (relay) and connected reader:

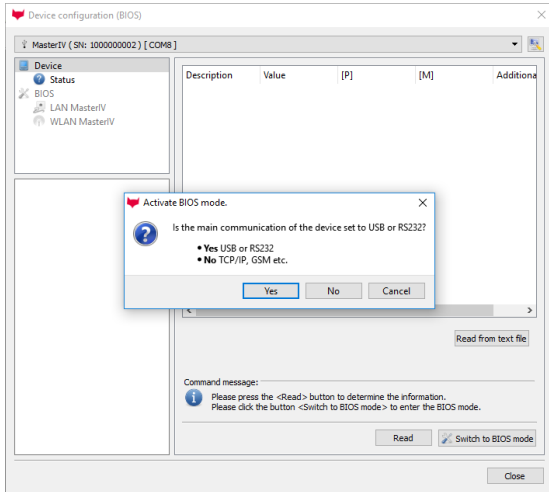
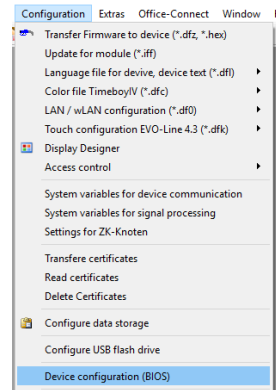
Schematic structure:



5.2.1. Determination of use the KYO Oneloc

In order to make a setting, you must first access the Bios menu via DatafoxStudioIV:

1) To do this, click on „Configuration“ and „device configuration (BIOS)“.



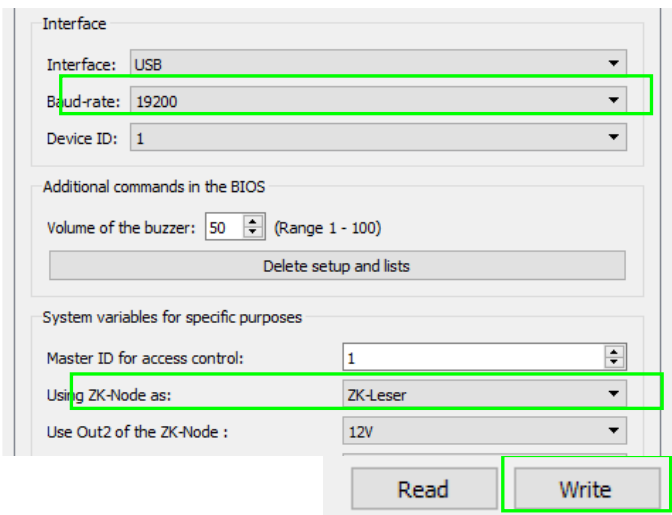
2) Click here on „Switch to BIOS mode“ and then on „yes“.

5.2.1.1. Using Slave as an relaymodul in a RS485 bus

Set the bus-number Device (ID).

choose „access-reader“

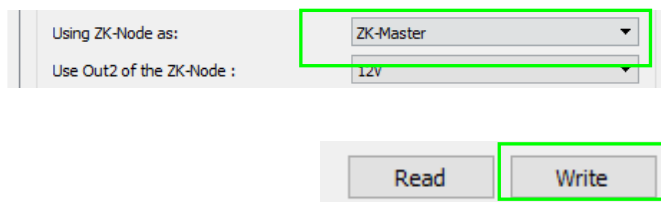
Click on „Write“



5.2.1.2. Using the Access-Control Master

Choose „access control master“

Click on „Write“



5.3. Communication of Hardware V4 Devices



Caution:

The type of communication depends on the device.
All possible communications are listed in the device.



Note:

Datafox-devices are able to communicate encrypted.
Read more in the manual for the „DatafoxStudioIV“.

The switching of the communication can be done via :

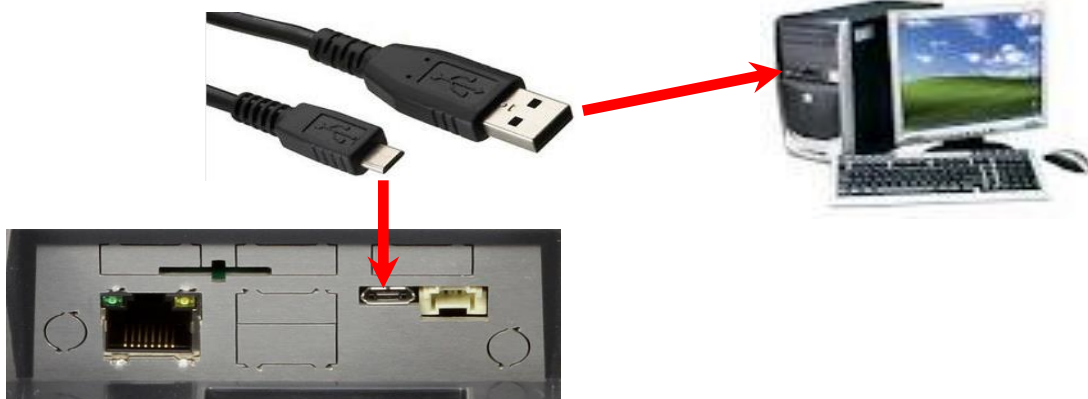
1. the system menu bios on the device
 2. with firmware version 04.02.04 and up with the function „Switch communication“.
 3. from the Firmware version 04.02.04 upwards with the fieldfunktion „switch communication“.
- Read more in the manual for the „DatafoxStudioIV“

Mögliche Kommunikationsarten sind:

1. USB (on PC)
2. USB Host, Save data on a USB-stick
3. TCP/IP over LAN
4. TCP/IP over the internet (with HTTP)
5. TCP/IP over WLAN
6. GPRS connection with mobil cell network.

5.3.1. Communication via USB

Every EVO-Line Device is equipped with an usb interface.
The Micro-USB-B Port can be connected directly to a PC.



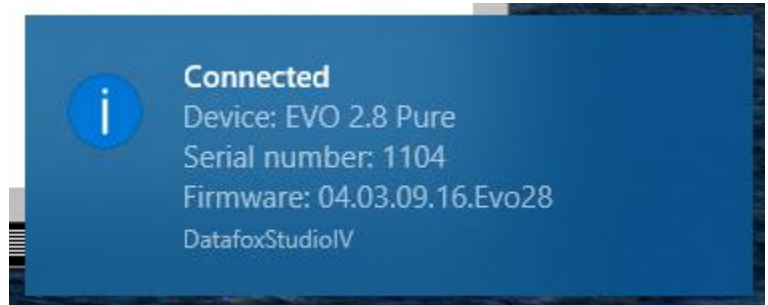
Caution:

The Terminal works with a USB-B Interface. Das heißt, dass das Terminal im Slave-Modus arbeitet und kann daher keine anderen USB-Geräte verwalten. This means that the device works in slave mode only. So it is not possible for the device to control any other devices via USB.

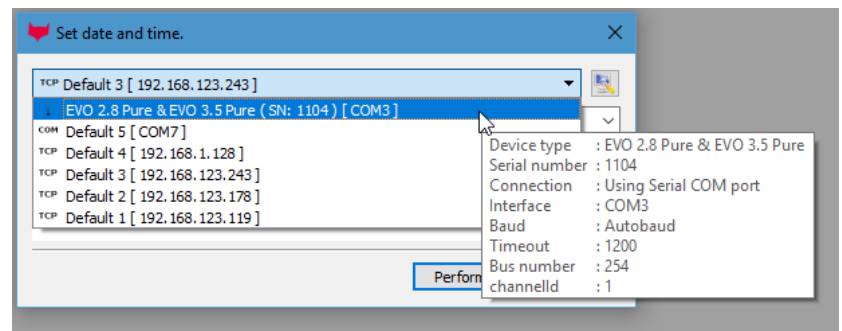
5.3.1.1. Automatic detected conectet USB to PC

If the terminal is connected to a pc it will recognize the connection and will switch the communication to USB.

DatafoxStudioIV will recognize the device and a notification will pop up.



The studio will generate an entry for the device.



On the device the following icon is displayed:



It is not necessary to switch the main communication to usb manually.

It's especially useful for boxed devices.

This will save much time in the parameterizing process.



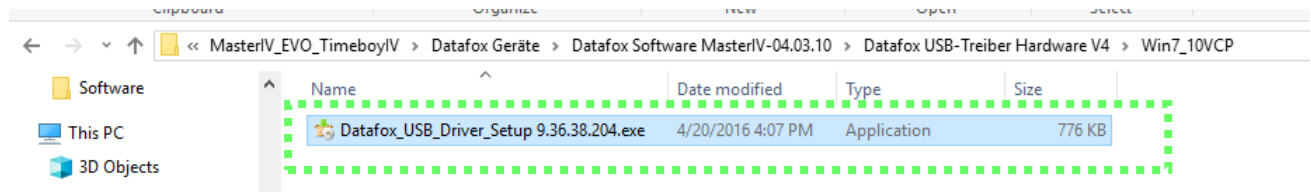
Note:

If the device is connected to a pc no other connections (for example Wi-Fi) will happen. If the USB-cable is disconnected it will automatically switch to the configured main communication.

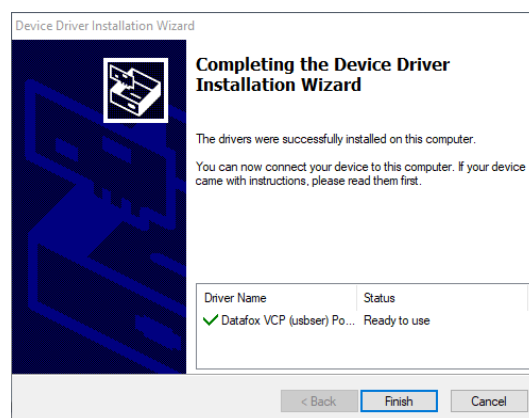
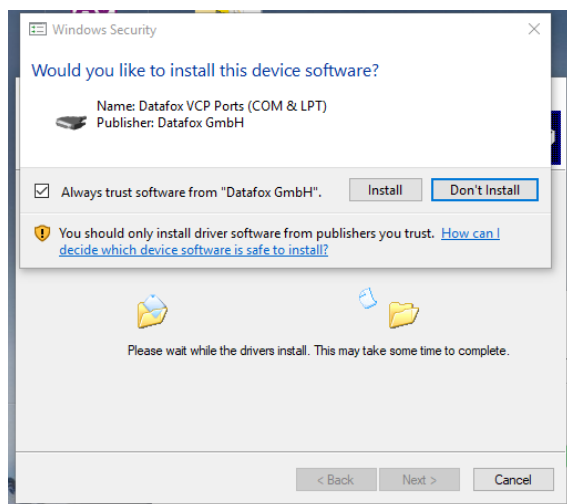
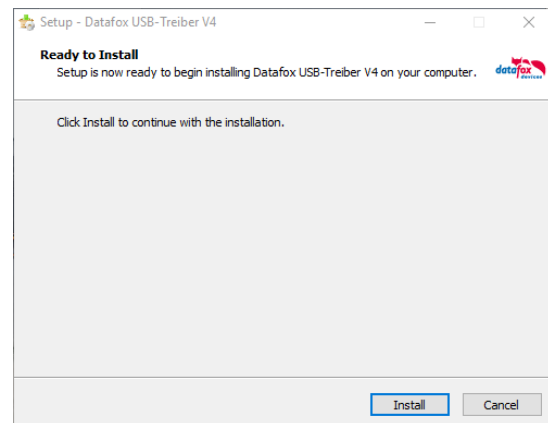
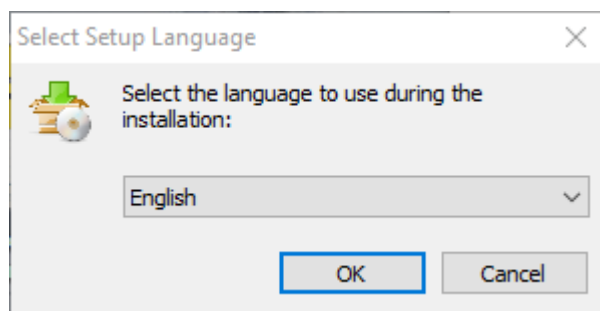
5.3.1.2. Installing USB driver for Hardware V4 Devices

Installation for Windows 7, 8, 8.1 and 10.

The USB-Driver is a small installer which will do the necessary configuration. Just launch the .exe file.



Follow the instructions on the screen:



Caution:

Only use the driver which are delivered with the device!

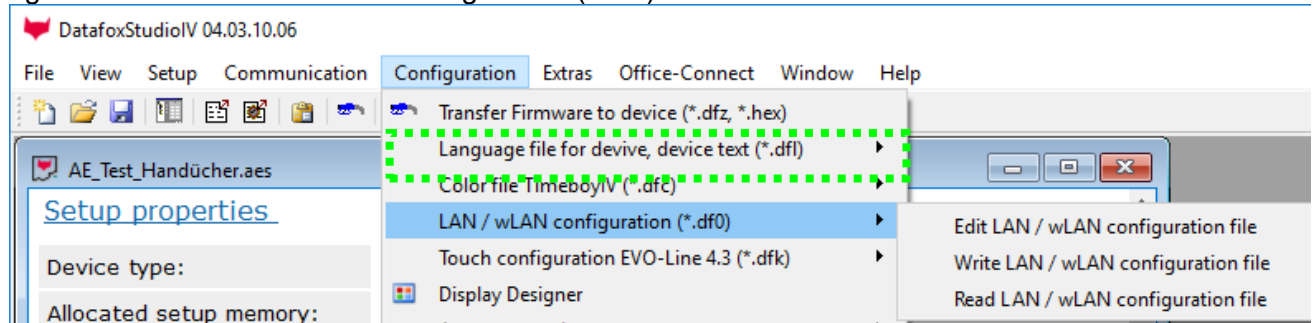


Note:

If you have DatafoxStudioIV installed the USB-driver will already be installed on your pc.

5.3.2. Communication via TCP / IP

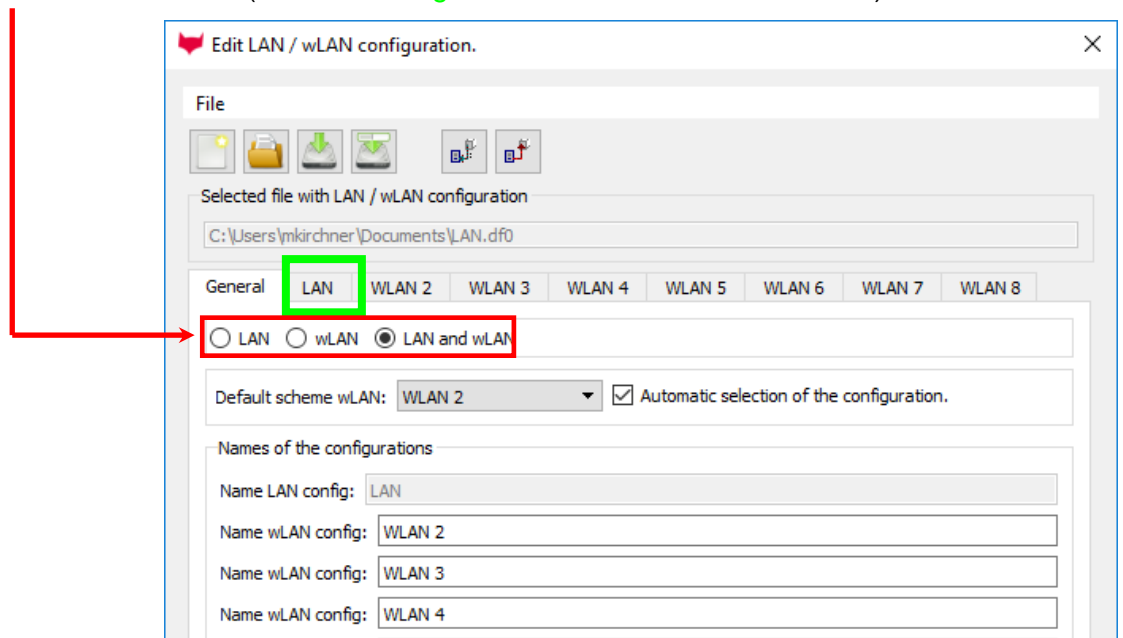
The setting of the LAN / WLAN parameters is done via DatafoxStudioIV under the menu item "Configuration" -> "LAN / WLAN – Configuration (*.df0)".



The LAN / WLAN configurations are saved in a file with the filename extension "*. df0". Here you now have the possibility to edit the file, load it into the Datafox device (upload) or read it from the device (download). When reading the WLAN setting from the device, the currently specified file is overwritten.

In the General tab, first of all, you can set the main communication with which the device is equipped.

- Device with LAN (The first configuration is for LAN connection)
- Device with WLAN
- Device with LAN and WLAN (The first configuration is for the LAN connection)



Coution:

For TimboyIV only this setting (only wLAN) can be used.

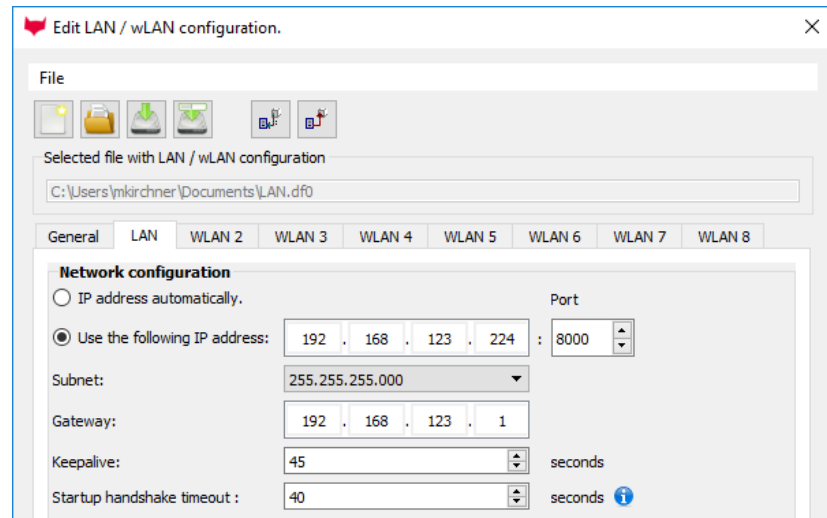


LAN wLAN LAN und wLAN

5.3.2.1. Communication TCP / IP via network-cable

You can make the IP settings on the "LAN" tab.

Please enter the desired IP address, subnet and if necessary a gateway.



For devices with display, the IP address can also be entered directly on the device. Press ESC and ENTER simultaneously to enter the Bios menu of the device.

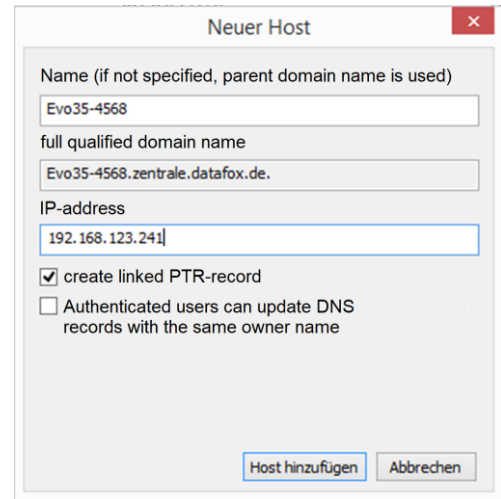
More information can be found in the chapter „bios menu“.

5.3.2.2. Connection of the Terminals via TCP/IP DNS / DHCP

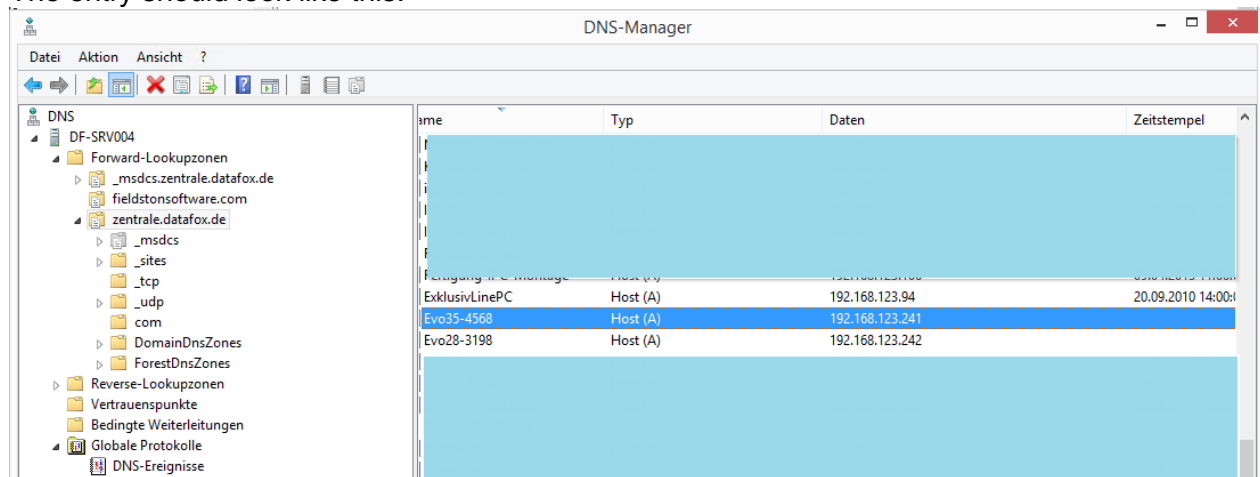
To connect a Datafox EVO-Device with the Hostname it is necessary to set something in the DNS-Server. (In this example Windows-Server 2012)

Create a new Host (A)-value:

Abbreviation	Description
Name	Name of the device Contains the device designation and the serialnumber „deviceXX-serialnumber“ Example: „Evo28-1652“ „EVO43-8552“
full qualified domain name	This is the host name to be entered later.
IP-address	Here you must enter the IP of the device.
Create linked PTR-record	You must create a linked PTR-record. Just put this hook.

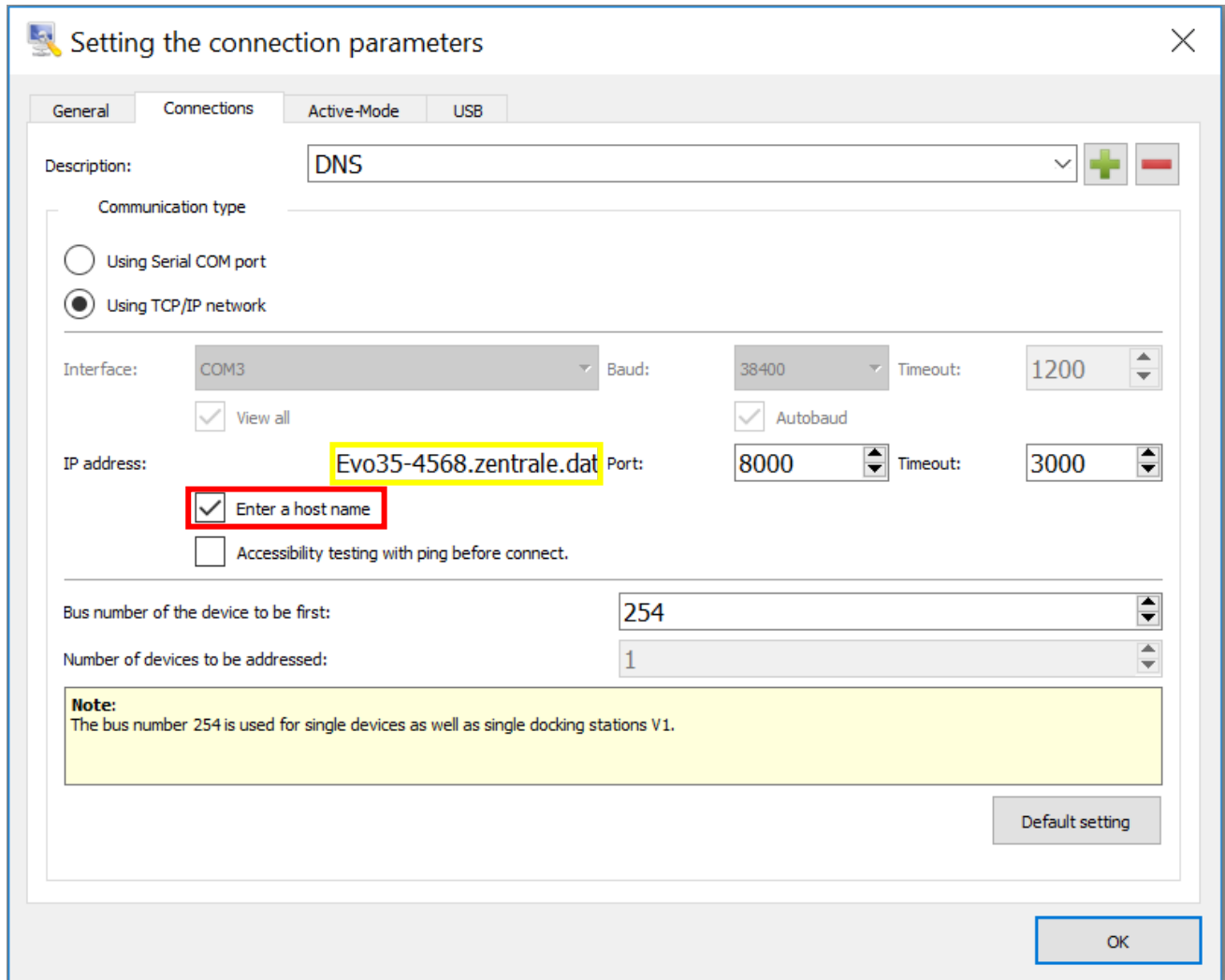


The entry should look like this:



Name	Typ	Daten	Zeitstempel
ExklusivLinePC	Host (A)	192.168.123.94	20.09.2010 14:00:00
Evo35-4568	Host (A)	192.168.123.241	
Evo28-3198	Host (A)	192.168.123.242	

Einstellung im Datafox Studio:



Host name

Before entering, this checkbox must be set.

DHCP- entry for Datafox devices

If a device is set to DHCP, the IP address and the entry in the DHCP server can look like this.

192.168.123.109	Evo43-36100.zentrale.datafox.de	10.07.2017 23:01:31	DHCP	e4f7a100000c		Vollzugriff
192.168.123.223	Evo43-1292.Zentrale.datafox.de	Reservierung (inaktiv)	Keine	e4f7a100072f	Testgeraet Le...	Vollzugriff
192.168.123.226	Support_ZK-Box V4	Reservierung (inaktiv)	Keine	e4f7a100073f		Vollzugriff
192.168.123.112	PZE-17358.zentrale.datafox.de	10.07.2017 23:51:21	DHCP	e4f7a1001964		Vollzugriff
192.168.123.125	Evo28-3705.zentrale.datafox.de	10.07.2017 14:05:02	DHCP	e4f7a100370d		Vollzugriff
192.168.123.72	Evo43-5002.zentrale.datafox.de	10.07.2017 22:58:05	DHCP	e4f7a1005070		Vollzugriff

The entry contains the following:

device	serial number	domain	DHCP- entry
EVO 2.5	10245	.zentrale.de	Evo25-10245.zentrale.de
EVO 3.5	10246	.zentrale.de	Evo35-10246.zentrale.de
AE-Master	10247	.zentrale.de	AE-10247.zentrale.de
PZE-Master	10248	.zentrale.de	PZE-10248.zentrale.de
EVO 4.3	10249	.zentrale.de	Evo43-10249.zentrale.de

5.4. operation with Box-Devices V4

5.4.1. Biosmenu of Box Devices V4



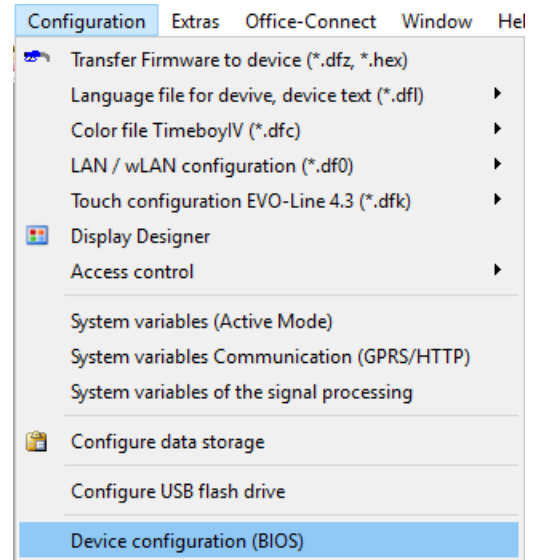
Caution:

This device have no display. All settings you must do via the Programm „DatafoxStudioIV“.

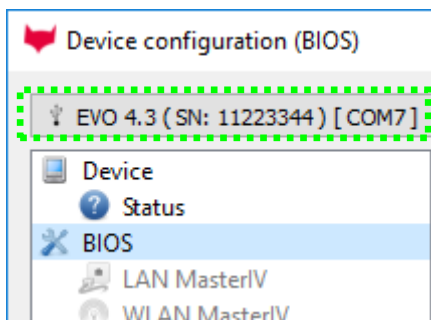
Open the Programm „DatafoxStudioIV and connect the device via usb.

<https://www.datafox.de/downloads-software-masteriv-hardwareversion-v4.de.html>

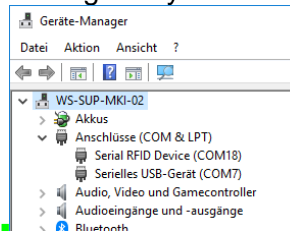
Click on **Configuration**



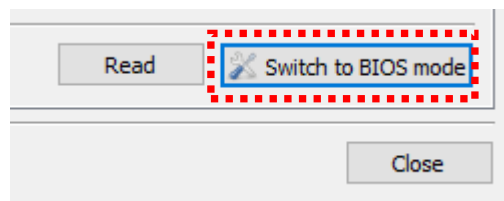
Click on
„**Device configuration (Bios)**“



Use the corectly com port.
You see the Datafox Virtual COM Port in the device manager of you PC:



Click on,
„**Switch to BiOS mode**“



Device

- Status
- BIOS**
- LAN MasterIV
- WLAN MasterIV

Description	Value	[P]	[M]	Additional info
Device name	EVO 3.5			
Serial number	5385			
Firmware version	04.03.10.06.EVO35			
Bootloader version	04.03.03.07			
Password key	0000000000000000			
DataOnCard	Funktion Datenübertragung			
✓ Mainboard	IO-Box Mainboard	0	-	Vers. 1.4c
✓ Default module	029 POE Supply	14		
✓ Default module	014 RS485 + 12V Supply	1	M1	
✓ Default module	012 Digital In-/Output	2	M2	DI 1, DO 1
✓ Default module	012 Digital In-/Output	3	M3	DI 2, DO 2
✓ Default module	037 Single Serial Port	6		
✓ RFID reader	TWN3 Multi NFC Reader	1		
✓ Communication	011 Ethernet Port	8	-	Vers. 2.0.3, Mac: E4-F7-A1-00-2A-6A, Ip: 192.168.123.241:8000
✓ Default module	057 Graphic Adapter	11		
✓ Display	Color TFT 3.5" 320x480	1		

Information [save as text](#) or [Send support mail](#).

Command message:
✓ Execution was completed successfully.

Click on "Switch to BIOS mode"
→

Device

- Status
- BIOS**
- LAN MasterIV
- WLAN MasterIV

Interface

Interface:

Baud-rate:

Device ID:

Additional commands in the BIOS

Volume of the buzzer: (Range 1 - 100)

Command message:

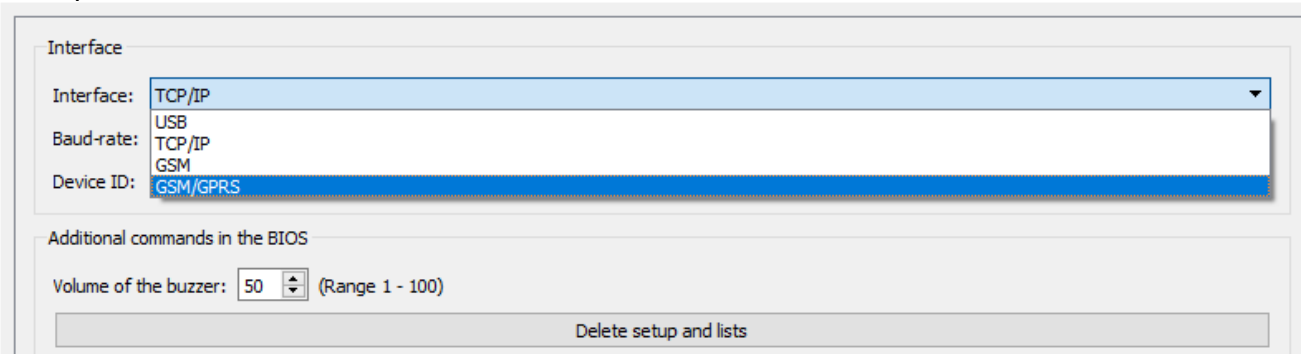
i Please click on the button <Read> to determine the current settings.

Switch communication :

In this menu, the currently set interface can now be read out.

A drop-down menu will show you all the options for the adjustable interface available on the connected device.

Example:



Interface

Interface: TCP/IP
USB
Baud-rate: TCP/IP
GSM
Device ID: GSM/GPRS

Additional commands in the BIOS

Volume of the buzzer: 50 (Range 1 - 100)

Delete setup and lists

The volume of the buzzer can also set here.



Caution:

Alle new settings first accepted after a device reboot.

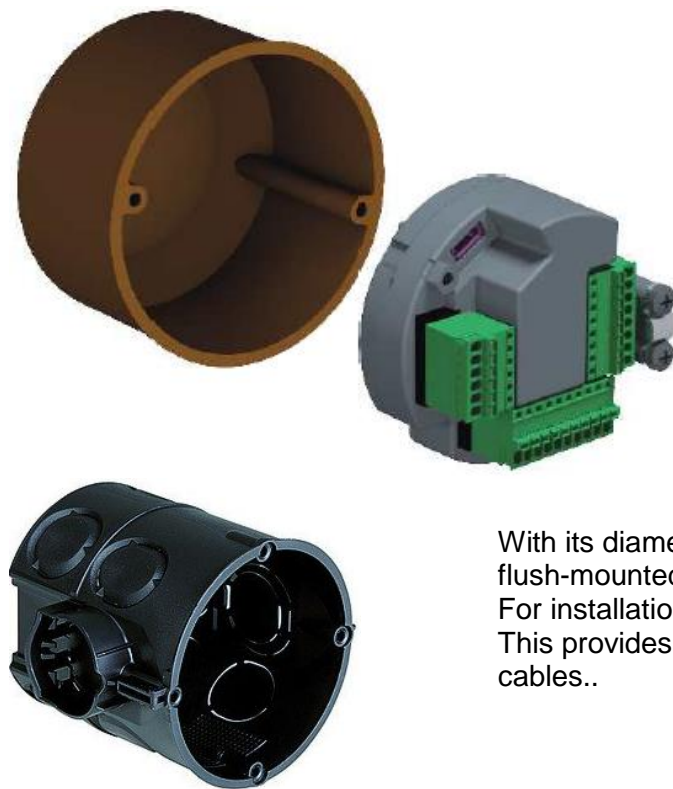


Note:

Further information about GPRS, TCP/IP setting you find in the Manual "DatafoxStudioIV".

5.5. Mounting of the KYO Oneloc

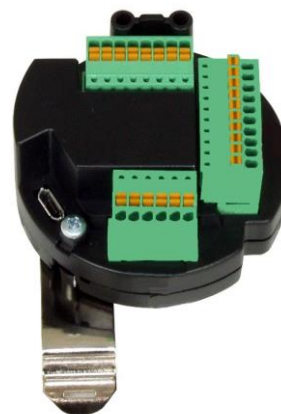
5.5.1. Installation in switch box



With its diameter, the KYO Oneloc fits into any flush-mounted or cavity wall socket. For installation we recommend a depth of 65mm. This provides sufficient space for connecting the cables..

5.5.2. Mounting on top-hat rail

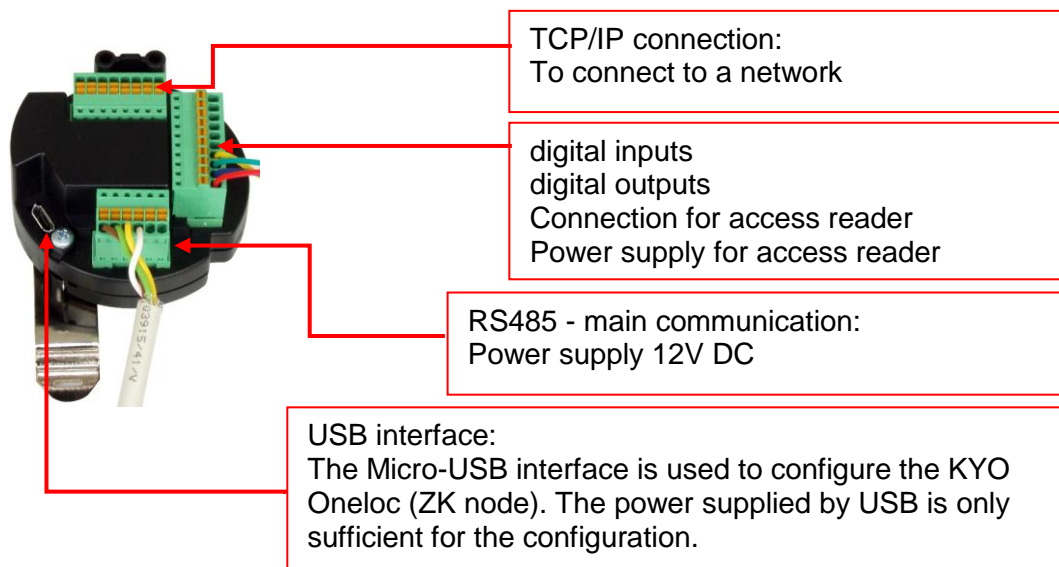
For the KYO Oneloc, a top-hat rail clip can be ordered as an option.
Article No.: 121401
This makes it easy to attach the KYO Oneloc to the DIN rail.



5.6. Connecting of KYO Oneloc and EVO 3.5 Universal

The KYO Oneloc / Universal is connected via three clamps.

- One plug for the TCP/IP connection
- One plug for the access control connection
- A connector for the RS485 bus



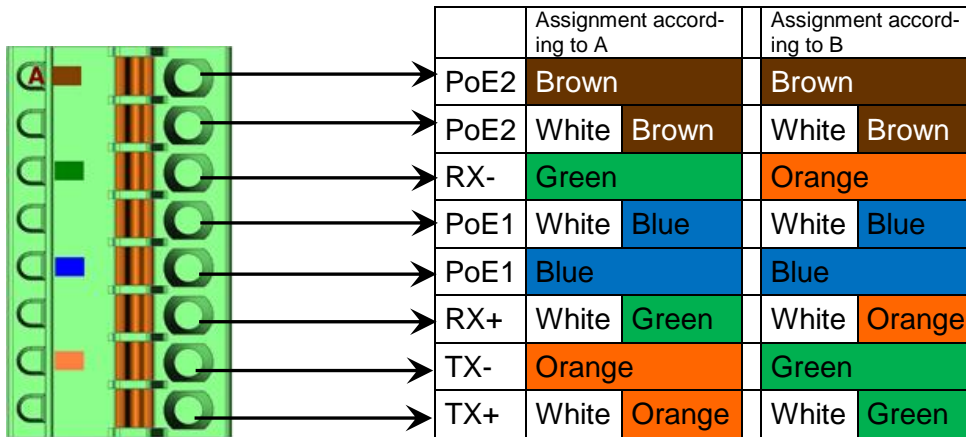
Note:

Please note that the RS485 bus must not be wired in a star configuration. No stub lines are supported either.

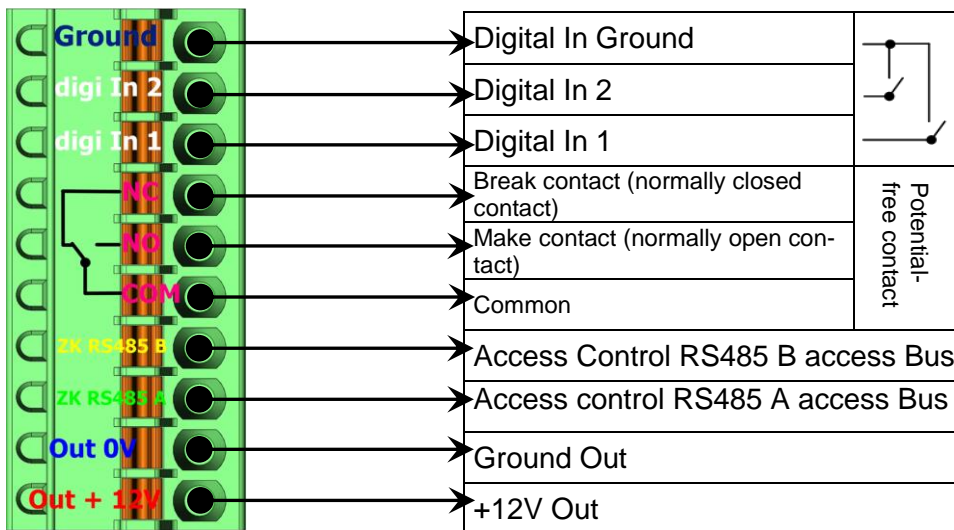
Explanations:

- - Power supply 12V: terminal 3, pin 1 + 2 or via POE
 - - ZK 485 stands for access bus RS485
 - - HK 485 stands for main communication RS485
 - - Voltage output for access control-Bus: terminal 2 pin 1 and terminal 2 pin 2
 - - DigOut active, e.g. for electric door openers:
 - a) Configuration to 12V, max. 500mA,
Terminal 3 Pin 5: 12V switched, terminal 3 Pin 6 Ground permanent
 - b) Configuration to GND (open drain) max. 30V, 2.0A,
Terminal 3 Pin 5: GND switched, positive voltage external or via terminal 2 Pin
- 1.

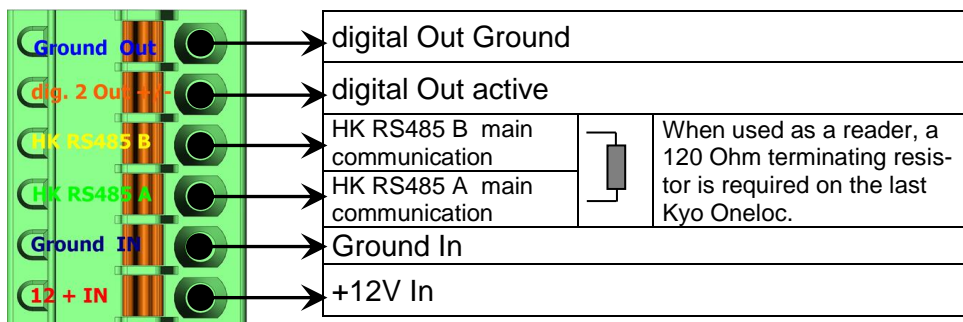
Clamp 1: 8 pole TCP/IP connector



Clamp 2: 10 pole access bus / IO connector



Clamp 3: 6 pole RS485 HK connector



5.6.1. Connecting of digital in-outputs

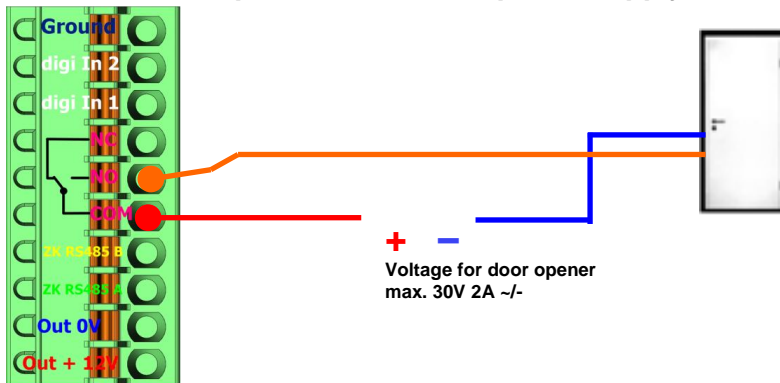
5.6.1.1. Digital output one

The digital output 1 is located on the connector strip 2.

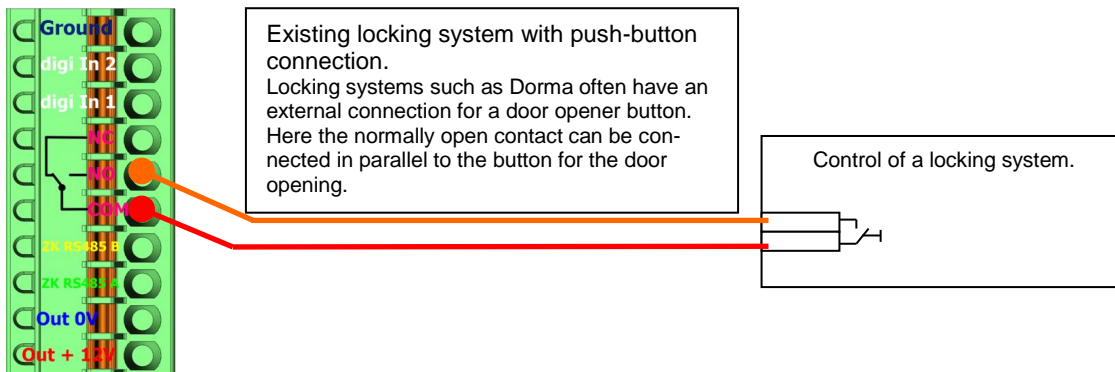
This is a potential-free contact.

This can be used via an external voltage source, e.g. as a door opener or connected in parallel to a push-button. A normally open contact (NO) and a normally closed contact (NC) are available.

Connection example 1 with external power supply:



Connection example 2 Parallel connection to an existing pushbutton / connection



5.6.1.2. Digital output two

The digital output 2 is located on the connector strip 3.

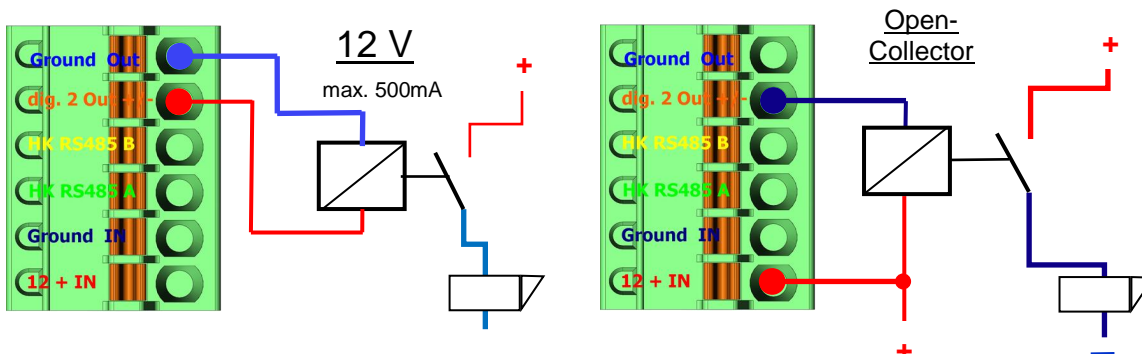
This is a transistor output.

This can supply either ground or + signal.



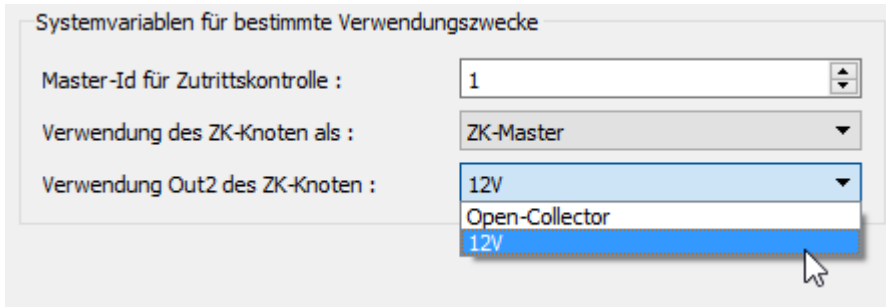
Attention:

If power is supplied via POE, this output must not be used.



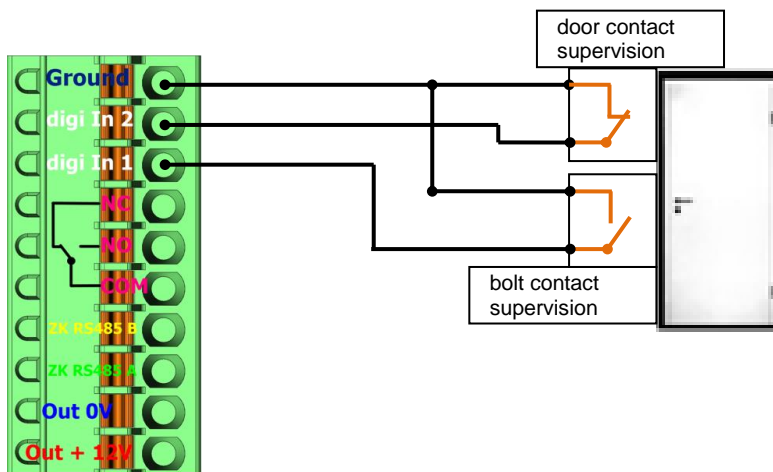
In Datafox StudioIV, the BIOS mode can be used to change the setting between the two methods.

Under Configuration => Device configuration BIOS => Switch to BIOS mode and then under "BIOS" you can switch between "12v" and "Open-Collector".



To change the usage

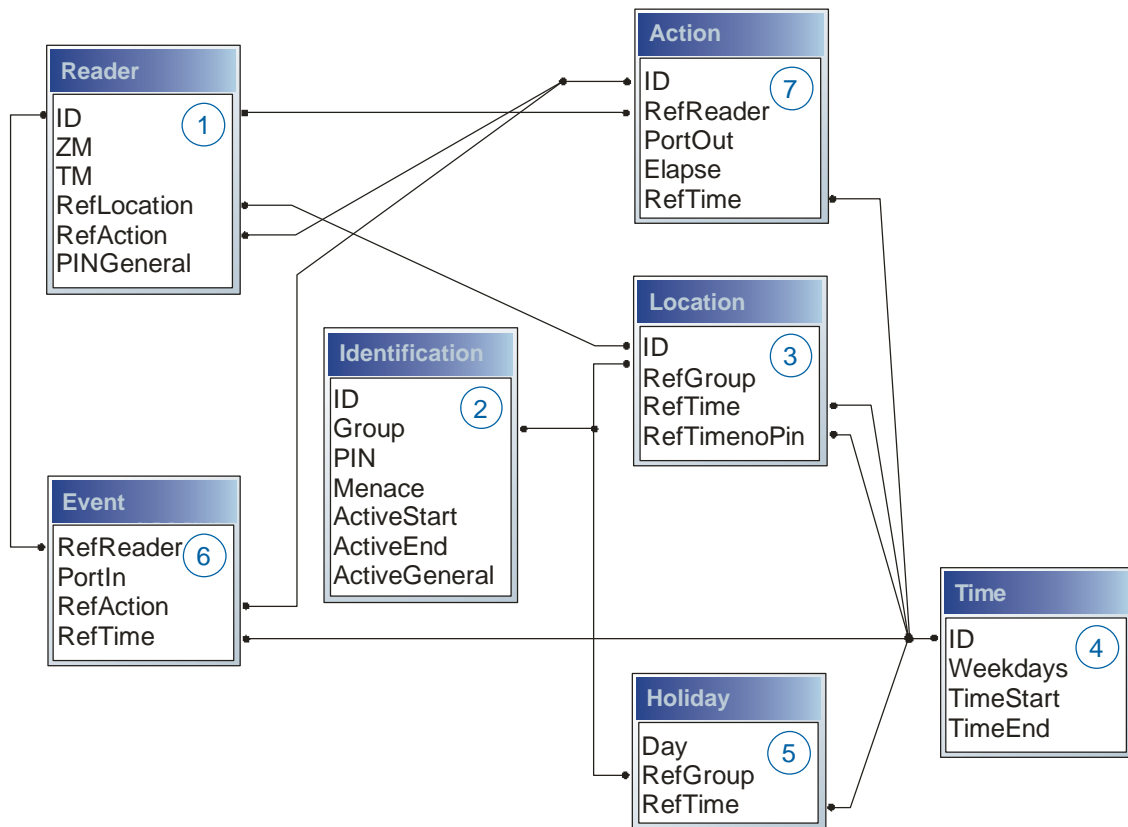
5.6.1.3. Digital inputs



5.7. connection and wiring of the accesscontrol

5.7.1. Configuration of Access control adn stuckture

The basis of the access control II are tables. They store all information about the hardware configuration of the access control system, access right of the employees, periods of time (activation, blocking times, holidays,...). The tables are connected as follows:



The tables are created as text files. For an easier administration you can add comments within the files.

When adding comments, you have to notice that in a comment line no field values can be given and that the comment line has to start with a semicolon.

The table Reader.txt might look like this:

ID	ZM	TM	RefLocation	RefAction	PinGeneral
1	1	320	0	1	0
2	1	000	1	2	0
3	1	010	2	3	0

Holiday Control It is now possible for ZK-II to consider holidays at switching the relay. In order to achieve compatibility with older versions, the function Consider Holidays for the Time Control of Relays has to be activated at the setup page Access Control 2. In the column Group, you specify the **Action ID** of the switched relay output instead of a Group ID. Thus, it is not necessary to alter the table structure of the holiday list. The column RefTime provides the time model applicable that day. A minus sign must be inserted in front of the Action ID in order that the MasterIV terminal can differentiate between Action ID and Group ID. As a result, these Action IDs must be three-digit numbers.

Example:

Action

ID	RefReader	PortOut	Elapse	RefTime
1	10	1	25	0
2	11	1	25	0
3	12	1	0	0

Holiday

Day	RefGroup „Action-ID“	RefTime
2012-05-01	1	3
2012-05-01	2	4
2012-05-01	-3	5

In the action list above, the door module with the ID 12 was assigned the time model 2 which switches port 1 of the module. If separate holiday control has been activated in the setup, time model 2 is not applied to the relay output at May 1, 2012, but time model 5.

Extended Parameterization ZK-II

The value range of the parameter 'ActiveGeneral' has been extended by the value 8. Additionally to the general permission (value 9), a PIN request is executed - if defined so for the user and activated for the reader. Furthermore, at both configurations of the ID cards with the ActiveGeneral value 8 and 9, the validity period of the ID card is checked.

For ZK-II the operation modes online, offline or online/offline after time-out are available. In online mode, configuration lists stored in the device are not considered. A data record is read from the server, analyzed and an action triggered. In offline mode, the configuration lists of the terminal are used to grant or deny access to a person. Online / offline after time-out is a combination. If the server is unavailable, the terminal can decide on basis of its lists whether to grant access to a person or not.

Timing of the Digital Outputs for the MasterIV Device Series:

It is possible to time the digital outputs of the MasterIV device series via tables. Thus, for example turning down the heating system at night, a buzzer control and much more can be realized.

The following tables must be configured:

- ▶ Action
- ▶ Reader
- ▶ Time

Description:

Each action that is to be activated must be entered in the table Action. The table Action refers to the tables Reader and Time. In the table Reader the module is provided on which the relay or the Open Collector is to be switched. The reference to the table Time indicates when the switch is to be done. If start and stop time are entered, the relay is switched on when exceeding the start time and switched off when exceeding the stop time. The entry of the duration Elapse in the table Action is ignored. If the relay is only to be activated for a few seconds, e.g. for a buzzer control, the stop time has to be set on "00 : 00". If the start time is exceeded, the respective output will be switched for X seconds (RefTime in Action table). The entry Elapse in the table Action now indicates the on-time.

Example:

- ▶ A buzzer is to be activated for **3** seconds from Monday to Friday at **10.00** am and 4 pm (**16.00**). The buzzer is controlled by the internal relay of the PZE-MasterIV.
- ▶ The heating system is to be set to the "day mode" at **07.00** am and to the "night mode" at 7 pm (**19.00**) on all weekdays. The corresponding relay is at the door module with the bus number **2**.

Reader.txt

ID	ZM	TM	RefLocation	RefAction	PinGeneral
1	1	320	0	0	0
2	1	020	0	0	0

Time.txt

ID	Weekdays	TimeEnd	TimeEnd
3	12345	10:00	00:00
4	12345	16:00	00:00
5	1234567	07:00	19:00

Action.txt

ID	RefReader	PortOut	Elapse	RefTime
6	1	1	15	3
7	1	1	15	4
8	2	1	0	5

5.7.2. Description of Tables for Access Control 2

Name	Data type	Length	Description
ID	Number (int)	4	Unique Key (value>0) of the Reader table.
ZM	Number (int)	4	In our example, it has number 1. If there are several PZE-MasterIVs in an access system, they can be depicted in one table connection and it is not necessary to have a separate string for each PZE-MasterIV.
TM	Number (int)	3	Contains two information in one number. Both figures on the left (010) indicate the bus number of the door module, the figure on the right (010) contains information about the type of connection. A 0 means a connection via RS485, a 1 stands for a connection via RS232 as stub.
RefLocation	Number (int)	4	Indicates which room is supervised by the reader.
RefAction	Number (int)	4	Indicates which action is worked through after a successful check.
PinGeneral	Number (int)	8	Can contain a numerical sequence by which a person without a card gets access.

Table Reader (List of all devices installed in the system)

Name	Data type	Length	Description
ID	Text (ASCII)	20	Contains the ID card no. which is read at the TMR33 device or terminal. An ID card can occur several times (is assigned to several authority groups).
Group	Number (int)	4	Assigns the ID card to an authority group.
Pin	Number (int)	8	Activates a PIN request if not equal 0. Please note that a PIN must not start with zero. 0815 would be invalid.
Menace	Number (int)	4	Activates (if not equal 0) a "menace-PIN" that can be added to the PIN. If entered, the system sends a data record that can be analyzed by software developed for this purpose and sets off the alarm.
ActiveStart	Text (Date)	10	The tag entered here indicates the start date of the validity of the ID card. (for example 2007-07-12 = yyyy-mm-dd)
ActiveEnd	Text (Date)	10	The tag entered here indicates the end date of the validity of the ID card. (for example 2007-07-12 = yyyy-mm-dd)
ActiveGeneral	Number (int)	1	Activates or deactivates this card record. 0 = card blocked 1 = card active 2= virtual card (use only via DLL) 3 = access only by entering the PIN 8 = general authority (with PIN request) 9 = general authority (no PIN request)

Table Identification (list of all devices installed in the system - master and door modules)

Name	Data type	Length	Description
Day	Text (Date)	10	Date of the blocking day. (form: YYYY-MM-DD)
RefGroup	Number (int)	4	Indicates the authorization group to which the blocking day is applied. Zero defines a global validity for all groups.
RefTime	Text (Time)	4	Indicates the assigned time model. (0 = not used) During this time access is granted. Thus, also "half holidays" like New Year's Eve can be realized.

Table Holiday (setting blocking days like holidays or company holidays)

Identifier	Data type	Length	Description
ID	Number (int)	4	ID of the room. All other tables refer to this data line via this number, if necessary.
RefGroup	Number (int)	4	Reference to the identification table. Labels the access authorized group. All cards of this group have access to this room.
RefTime	Number (int)	4	The time model in which authorized persons get access. (0 = not used)
RefTimeNoPin	Number (int)	4	The time model for which entering an additional PIN is not necessary (at peak times etc.).

Table Location (defines which card groups get access to which room at which time)

Name	Data type	Length	Description
ID	Number (int)	4	ID of the time model. All other tables refer to this data line via this number, if necessary.
Weekdays	Number (int)	7	Indicates the weekdays on which the following period of time should be applied (form: 7 digits at most 1-7 e.g. 134567 = Monday, Wednesday till Sunday)
TimeStart	Text (Time)	5	The start point for the period of time. (form: 24h HH:MM)
TimeEnd	Text (Time)	5	The end point for the period of time.

Table Time (grouping of single time zones (weekday from to) as a time model number)

Name	Data type	Length	Description
RefReader	Number (int)	4	Module (door module or master) where the digital input is.
PortIn	Number (int)	1	Number of the digital input on the module.
RefAction	Number (int)	4	Reference to the action that should be carried out (e.g. switch relay).
RefTime	Number (int)	4	The time model which indicates when the digital input is checked. (0 = not used).

Table Event (assigning an action to a signal at the digital input)

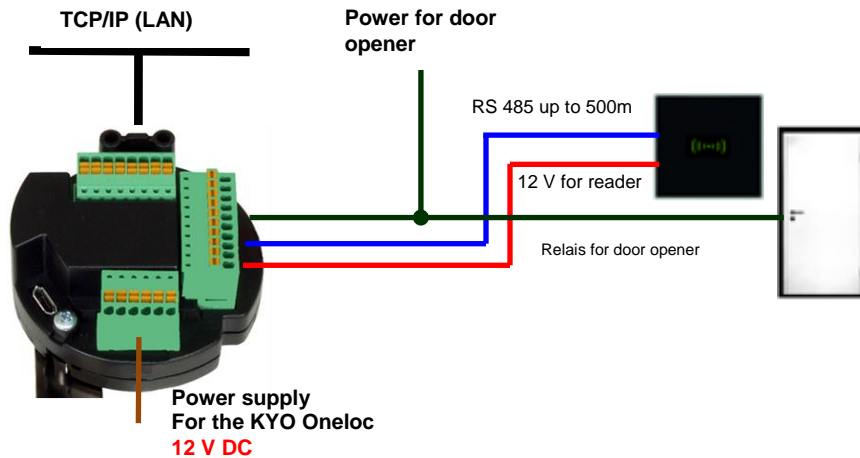
Name	Data type	Length	Description
ID	Number (int)	4	Action number, it can occur several times due to several actions that have to be worked through.
RefReader	Number (int)	4	Module (door module or master) on which an output(relay) is switched.
PortOut	Number (int)	1	Indicates the number of the output on the module.
Elapse	Number (int)	3	The duration of the switching of the relay (0 = permanently). Unit 200 ms
RefTime	Number (int)	4	The time model indicates when the output may be switched. (0 = not used)

Table Action (list of all workable actions in the access control system; an action group, i.e. all actions with the same action number, can switch several relays)

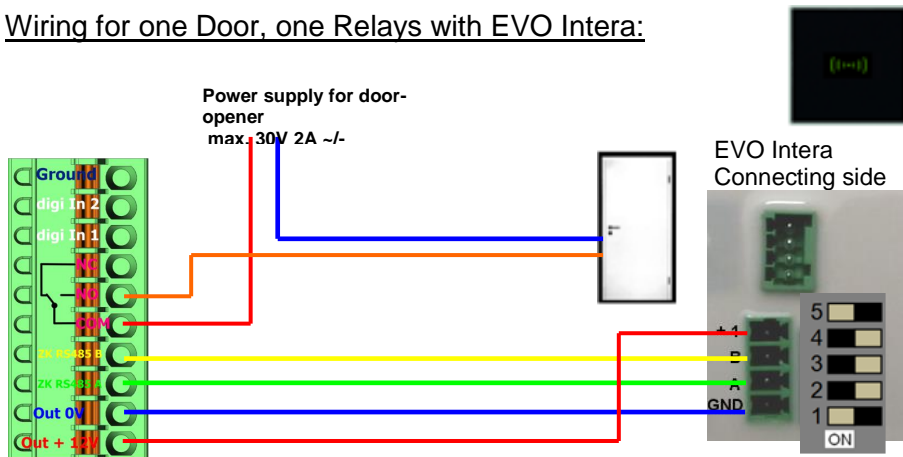
5.7.3. Wiring of the access-control reader

5.7.3.1. Connecting of one access-control reader

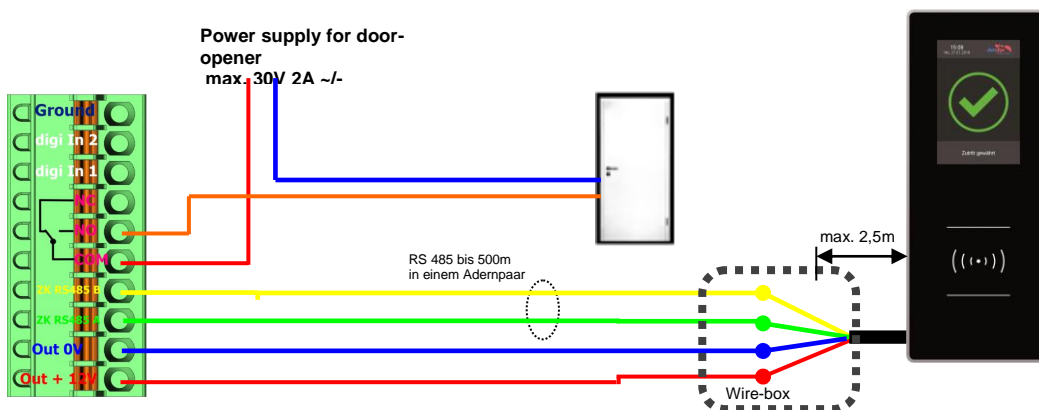
Wiring for one Door, one Relays, Oneloc on tcp/ip:



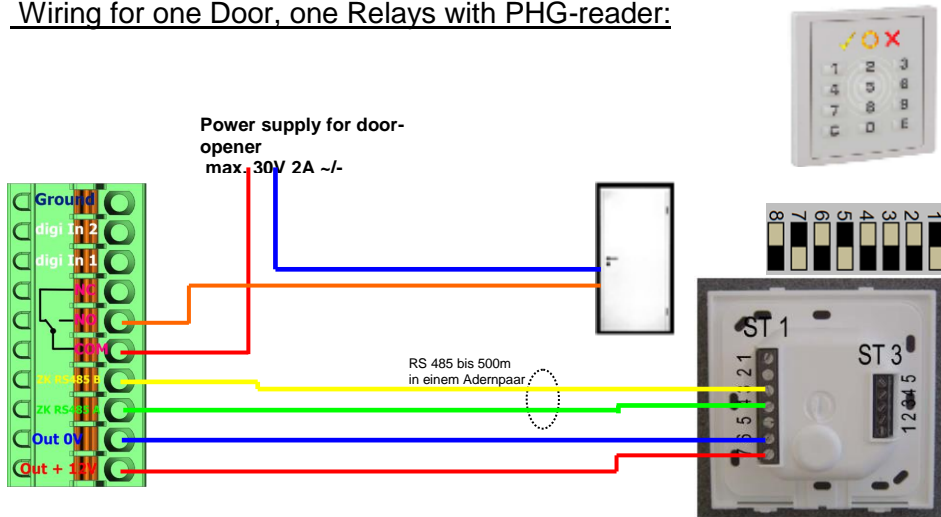
Wiring for one Door, one Relays with EVO Intera:



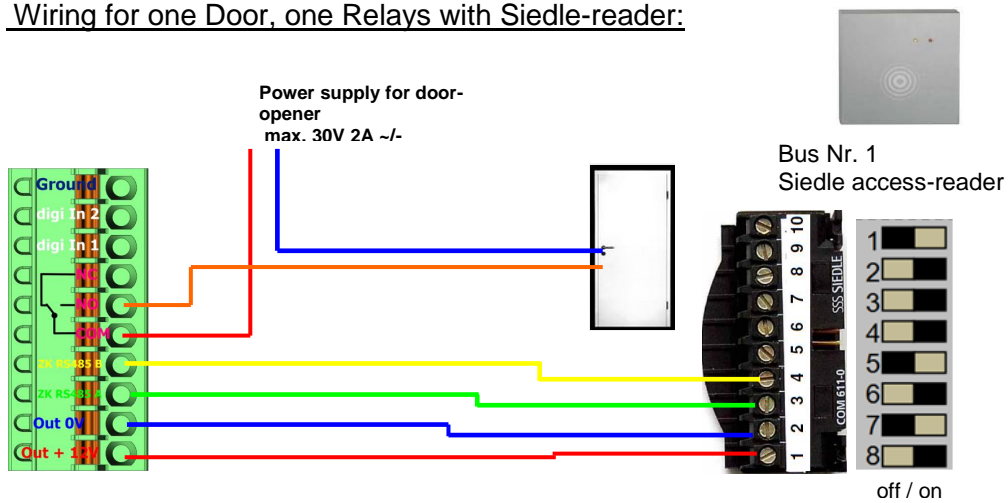
Wiring for one Door, one Relays with EVO Agera:



Wiring for one Door, one Relays with PHG-reader:



Wiring for one Door, one Relays with Siedle-reader:

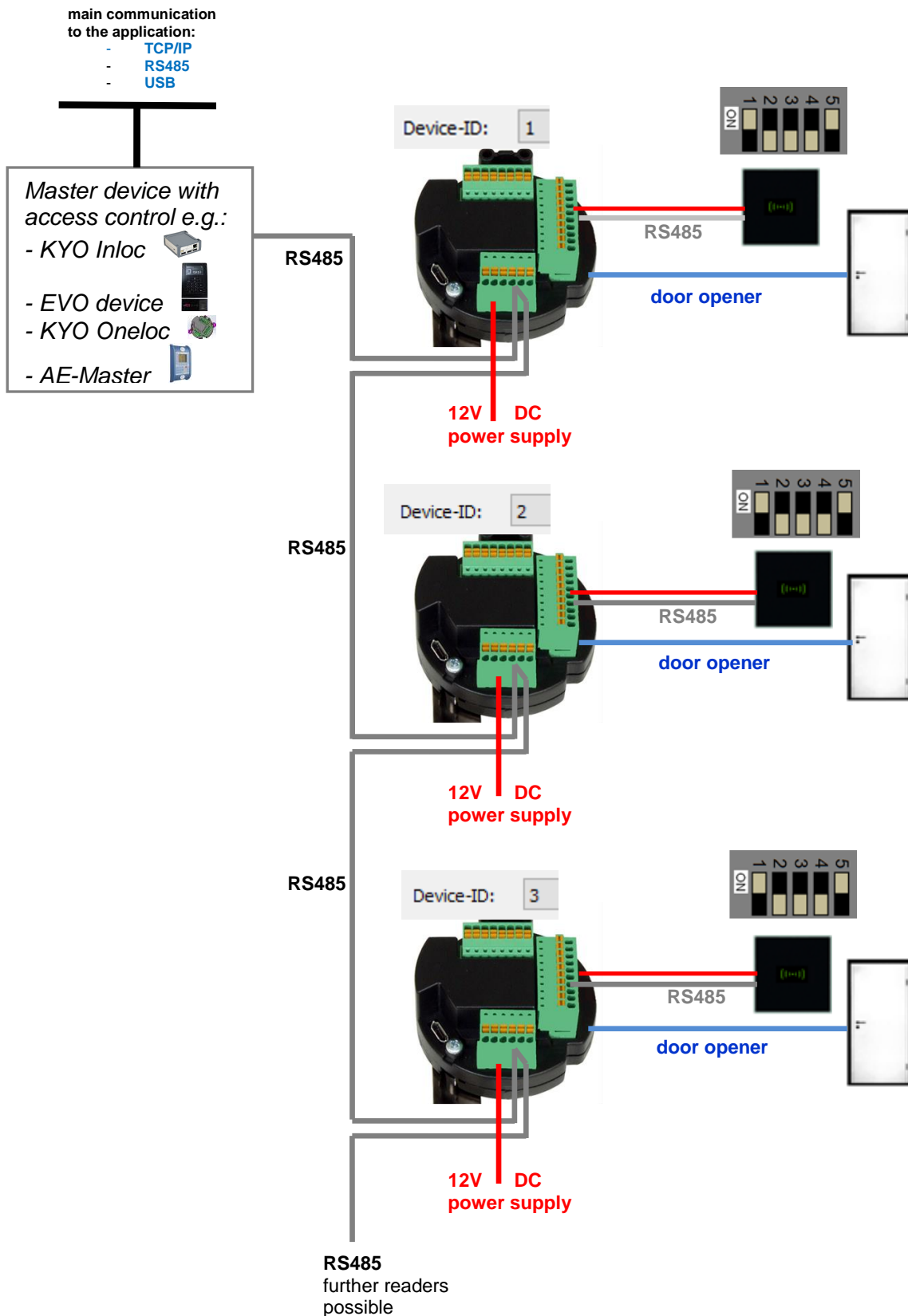


5.7.3.2. Connecting of KYO Oneloc as an dooropener with one Intera





Attention! The KYO Oneloc must be converted to a door module.

See Chapter: [Use as a door module with reader](#)

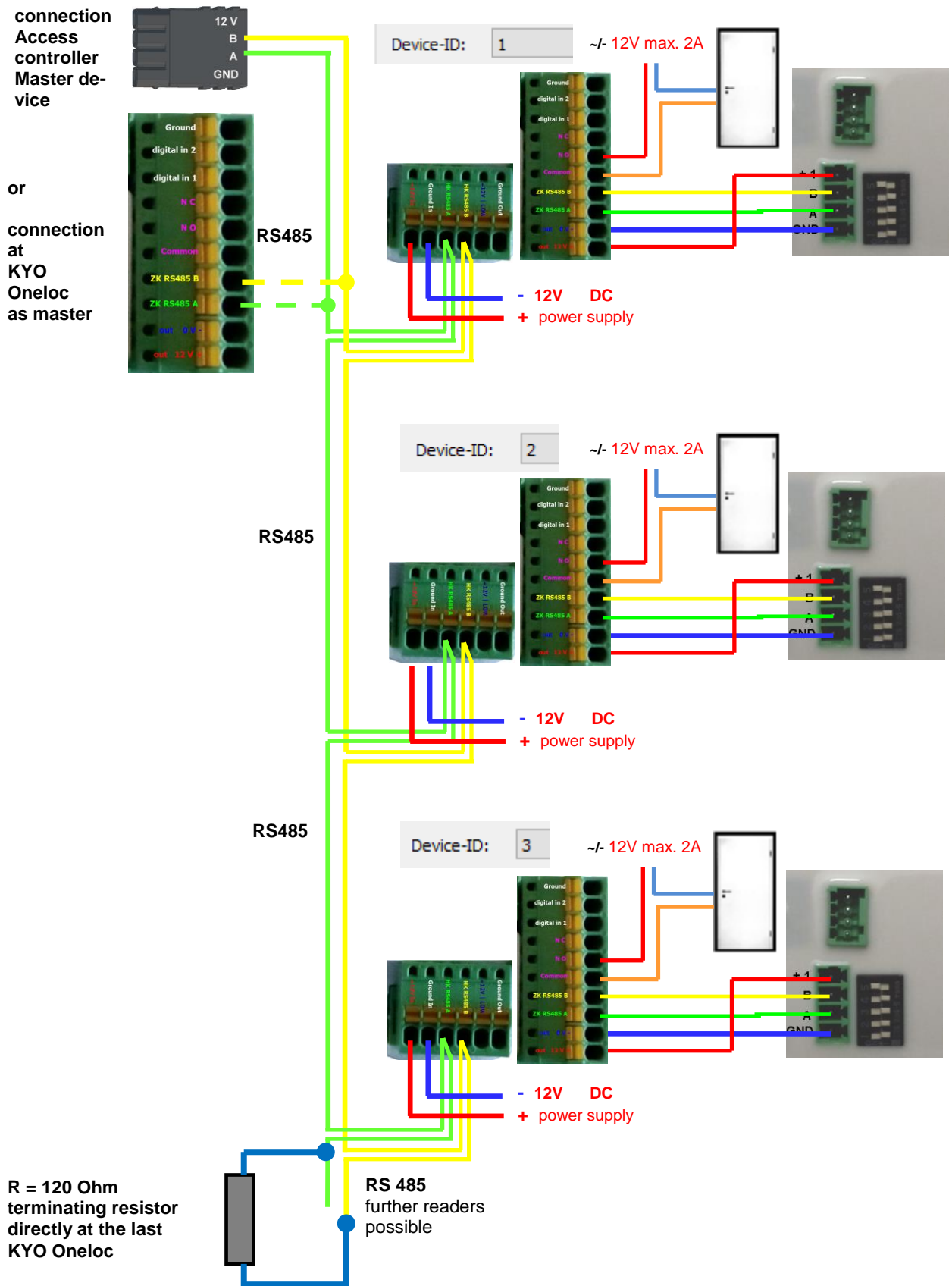
Wiring plan:



Example Readertable

ID	ZM / Bus-ID	TM (Bus-address)	RefLocation	RefAction	PinGeneral	description text
1	1	010	1	1	0	Entry for KYO Oneloc Device-ID: 1
2	1	011	2	2	0	Entry for reader at KYO Oneloc Device-ID: 1 Attention: Dip switch on reader always bus address 1
3	1	020	3	3	0	Entry for KYO Oneloc Device-ID: 2
4	1	021	3	3	0	Entry for reader at KYO Oneloc Device-ID: 2 Attention: Dip switch on reader always bus address 1
5	1	030	3	3	0	Entry for KYO Oneloc Device-ID: 3
6	1	031	3	3	0	Entry for reader at KYO Oneloc Device-ID: 3 Attention: Dip switch on reader always bus address 1
99	1	320	0	0	0	<p><i>Master device with access control e.g.:</i></p> <ul style="list-style-type: none"> - KYO Inloc  - EVO device  - KYO Oneloc  - AE-Master 

Wiring plan:

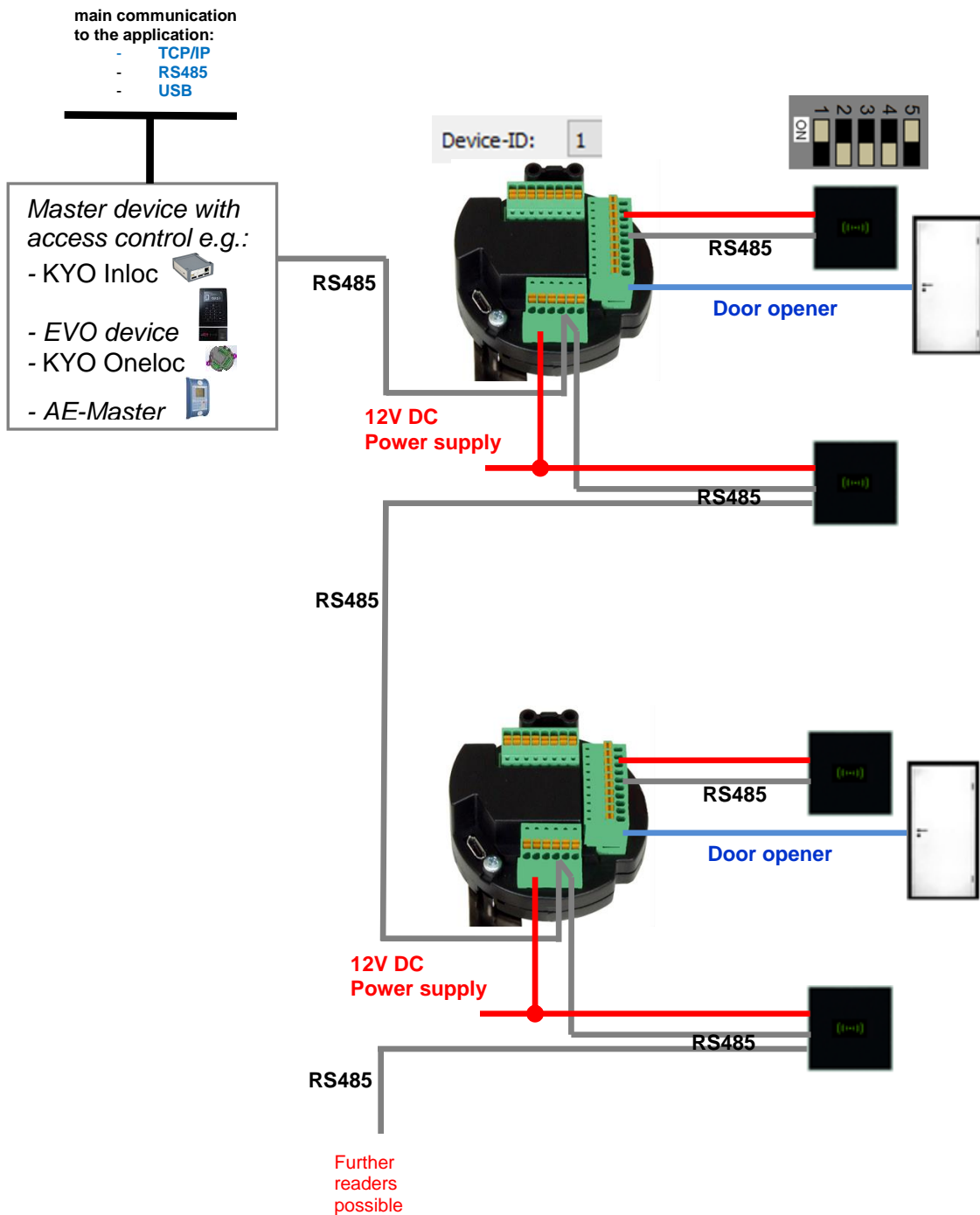


5.7.3.3. Connecting of KYO Oneloc as an dooropener with two Itera





Security lock function!

Attention! Conversion of KYO Oneloc to door module necessary.

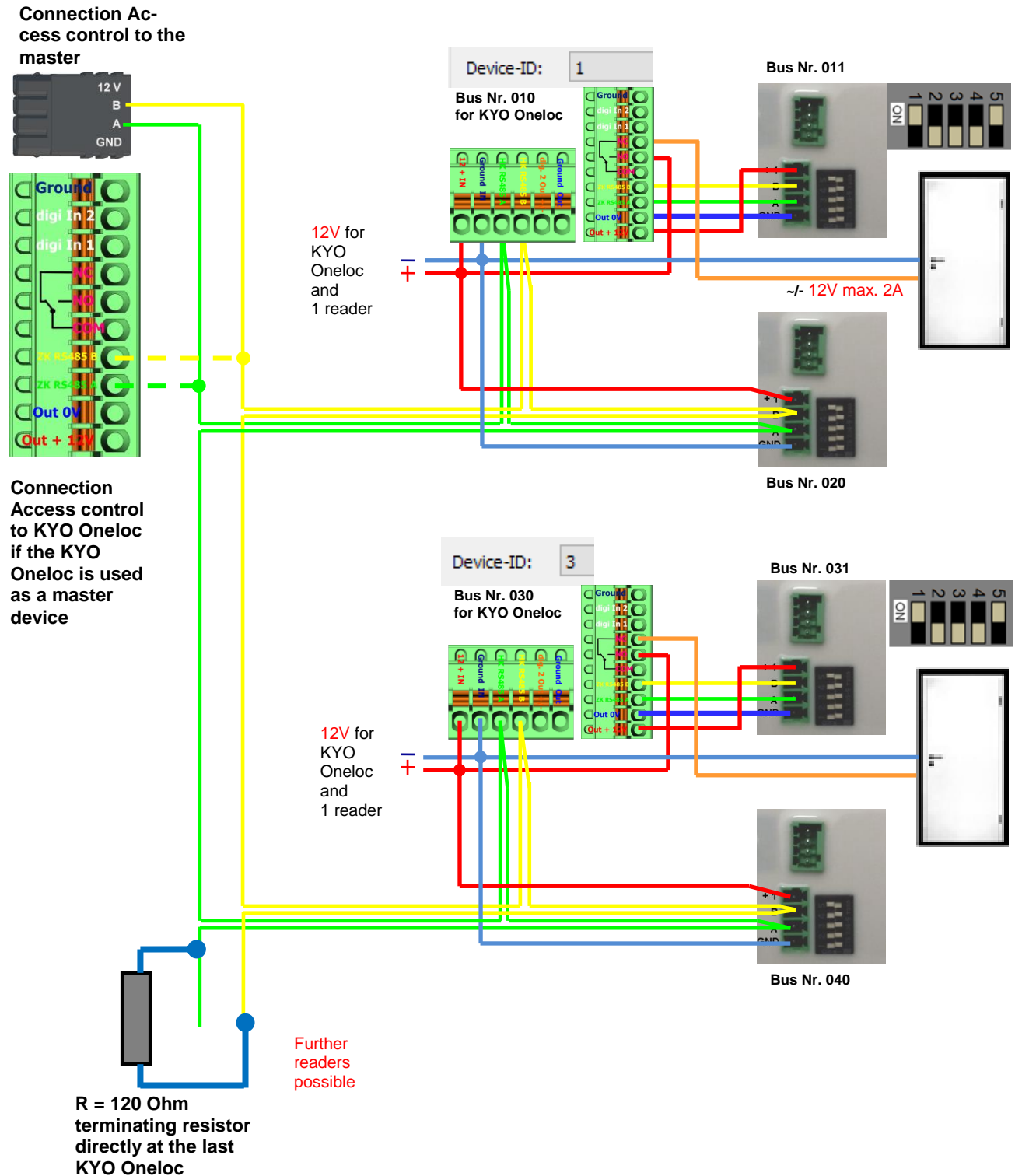
Wiring plan:



Corresponding example reader table for security lock

ID	ZM / Bus-ID	TM (Busadresse)	RefLocation	RefAction	PinGeneral	Beschreibungstext
1	1	010	1	1	0	Entry for KYO Oneloc 1 Device-ID: 1
2	1	011	1	1	0	Entry for reader at KYO Oneloc 1 Device-ID: 1 Attention: Dip switch on reader always bus address 1
3	1	020	1	1	0	Entry 2nd reader Door 1
4	1	030	3	3	0	Entry for KYO Oneloc 2 Device-ID: 3
5	1	031	3	3	0	Entry for reader at KYO Oneloc 2 Device-ID: 3 Attention: Dip switch on reader always bus address 1
6	1	040	3	3	0	Entry 2nd reader Door 2
99	1	320	0	0	0	<p><i>Master device with access control e.g.:</i></p> <ul style="list-style-type: none"> - KYO Inloc  - EVO device  - KYO Oneloc  - AE-Master 

5.7.3.4. Wiring of KYO Oneloc as an dooropener with two Intera



5.7.4. State message off access control

display	Assigned status message
0	module detected everything OK
3	module not in the list defined but found in the bus rs485
4	module in the list reader added but not found in the bus rs485
5	wrong Encryption password
6	login password is wrong
7	RFID-typ (Mifare, Legic, Unique, etc.) wrong
8	Failed to configure the module
9	No modules
10	the Key for communication with PHG-Modules was changed
11	the Key for communication with PHG-Modules was not changed
20	ID ok, acces succesful
21	ID is not in the list identification.
22	ActiveGeneral not correct.
23	Validity period does not fit.
24	Could not find the room. (group definitions)
25	Could not find am Time in time-table.
26	wait for PIN-input.
27	Pin wrong
28	threat code was input.
29	the PIN is right, acces successful.
30	the Master-PIN was input, acces successful.
31	PIN-Timeout.
32	Master-ID right, acces successful.
33	acces successful with PIN input.
34	Online-TP.
35	Online-PIN.
36	Make Action closing
40	digital output 1 is low (off)
41	digital output 1 is HIGH.(on)
42	digital output 1 is for the time ELAPSE, HIGH.
43	digital output 2 is low (off)
44	digital output 2 is HIGH.(on)
45	digital output 2 is for the time ELAPSE, HIGH.
46	digital output 3 is low (Off).
47	digital output 3 is HIGH.(On).
48	digital output 3 is for the time ELAPSE, HIGH.
49	digital output 4 is low (Off).
50	digital output 4 is HIGH.(On).
51	digital output 4 is for the time ELAPSE, HIGH.
52 #	digital output 5 is low (Off).
53 #	digital output 5 is HIGH.(On).
54 #	digital output 5 is for the time ELAPSE, HIGH.
55 #	digital output 6 is low (Off).
56 #	digital output 6 is HIGH.(On).
57 #	digital output 6 is for the time ELAPSE, HIGH.

for new devices hardware version 4

Statusmeldungen der Zutrittskontrolle

display	Assigned status message
120#	digital output 7 is low (Off).
121#	digital output 7 is HIGH.(On).
122#	digital output 7 is for the time ELAPSE, HIGH.
123#	digital output 8 is low (Off).
124#	digital output 8 is HIGH.(On).
125#	digital output 8 is for the time ELAPSE, HIGH.
126#	digital output 9 is low (Off).
127#	digital output 9 is HIGH.(On).
128#	digital output 9 is for the time ELAPSE, HIGH.
129#	digital output 10 is low (Off).
130#	digital output 10 is HIGH.(On).
131#	digital output 10 is for the time ELAPSE, HIGH.
132#	digital output 11 is low (Off).
133#	digital output 11 is HIGH.(On).
134#	digital output 11 is for the time ELAPSE, HIGH.
135#	digital output 12 is low (Off).
136#	digital output 12 is HIGH.(On).
137#	digital output 12 is for the time ELAPSE, HIGH.
138#	digital output 13 is low (Off).
139#	digital output 13 is HIGH.(On).
140#	digital output 13 is for the time ELAPSE, HIGH.
141#	digital output 14 is low (Off).
142#	digital output 14 is HIGH.(On).
143#	digital output 14 is for the time ELAPSE, HIGH.
141#	digital output 15 is low (Off).
142#	digital output 15 is HIGH.(On).
143#	digital output 15 is for the time ELAPSE, HIGH.
144#	digital output 16 is low (Off).
145#	digital output 16 is HIGH.(On).
146#	digital output 16 is for the time ELAPSE, HIGH.
160#	digital input 7 is Low
161#	digital input 7 is HIGH
162#	digital input 8 is Low
163#	digital input 8 is HIGH
164#	digital input 9 is Low
165#	digital input 9 is HIGH
166#	digital input 10 is Low
167#	digital input 10 is HIGH
168#	digital input 11 is Low
169#	digital input 11 is HIGH
170#	digital input 12 isLow
171#	digital input 12 is HIGH
_____	_____continuously until:
210#	digital input 32 is Low
211#	digital input 32 is HIGH

for new devices hardware version 4

Statusmeldungen der Zutrittskontrolle

display	Assigned status message		
100	the access-control is off.		
101	server not online (online accses-control)		
102	the device have no lists.		
103	Type not correct in setup settings (GIS, PHG).		
display	Assigned status message		
	Master (ZK-Box / ZK Master)	GIS / TS-Series reader	PHG / EVO-ZK-reader
60	Digital input 1 Master Low	Digital input 1 Reader Low	Digital input 1 (IO-Box is closed)
61	Digital input 1 Master High	Digital input 1 Reader High	Digital input 1 (IO-Box is open)
62	Digital input 2 Master Low	Digital input 2 Reader Low	Digital input 2 (IO-Box closed)
63	Digital input 2 Master High	Digital input 2 Reader High	Digital input 2 (IO-Box open)
64	Digital input 3 Master Low	Digital input 3 Reader Low	Digital input 3 low
65	Digital input 3 Master High	Digital input3 Reader High	Digital input 3 high
66	Digital input 4 Master Low	Digital input 3 wurde unterbrochen	PHG not used
67	Digital input 4 Master High	Digital input 3 wurde kurz geschlos- sen	PHG not used
68	Digital input 5 Master Low	not used	not used
69	Digital input 5 Master High	not used	not used
70	Digital input 6 Master Low	not used	digital input 1 the Reader Low nicht bei der Voxio-E-Serie
71	Digital input 6 Master High	not used	didigital input 1 on the Reader High nicht bei der Voxio-E-Serie
72		not used	digital input 2 on the Reader Low nicht bei der Voxio-E-Serie
73		not used	digital input 2 am Reader High nicht bei der Voxio-E-Serie
74		not used	tamper switch → OK
75		not used	tamper switch → device manipuliert
display	Assigned status message		
80	alarm-input 1		
81	alarm-input 2		
82	alarm-input 3		
83	alarm-input 4		
84	alarm-input 1		
85	alarm-input 6		
220#	alarm-input 7		
221#	alarm-input 8		
_____	_____ continuously until:		
245#	alarm-input 32		

for new devices hardware version 4

State message off access control in a record:

Note:

Do you want see the status from acces control, to coose this settigs in the Setup.



field name, in accordance	State	▼
Field function :	Access: State assume	▼

5.8. Data on Card

5.8.1. General informations

With the Data on Card - function it is possible to write data with an individual structure on a transponder.

These data are provided in the form of a list of your application.

This list is loaded onto the terminal, and if you're holding the transponder in front of the terminal the data will be written and saved.

The following transponder-procedures support the Data on Card-function:

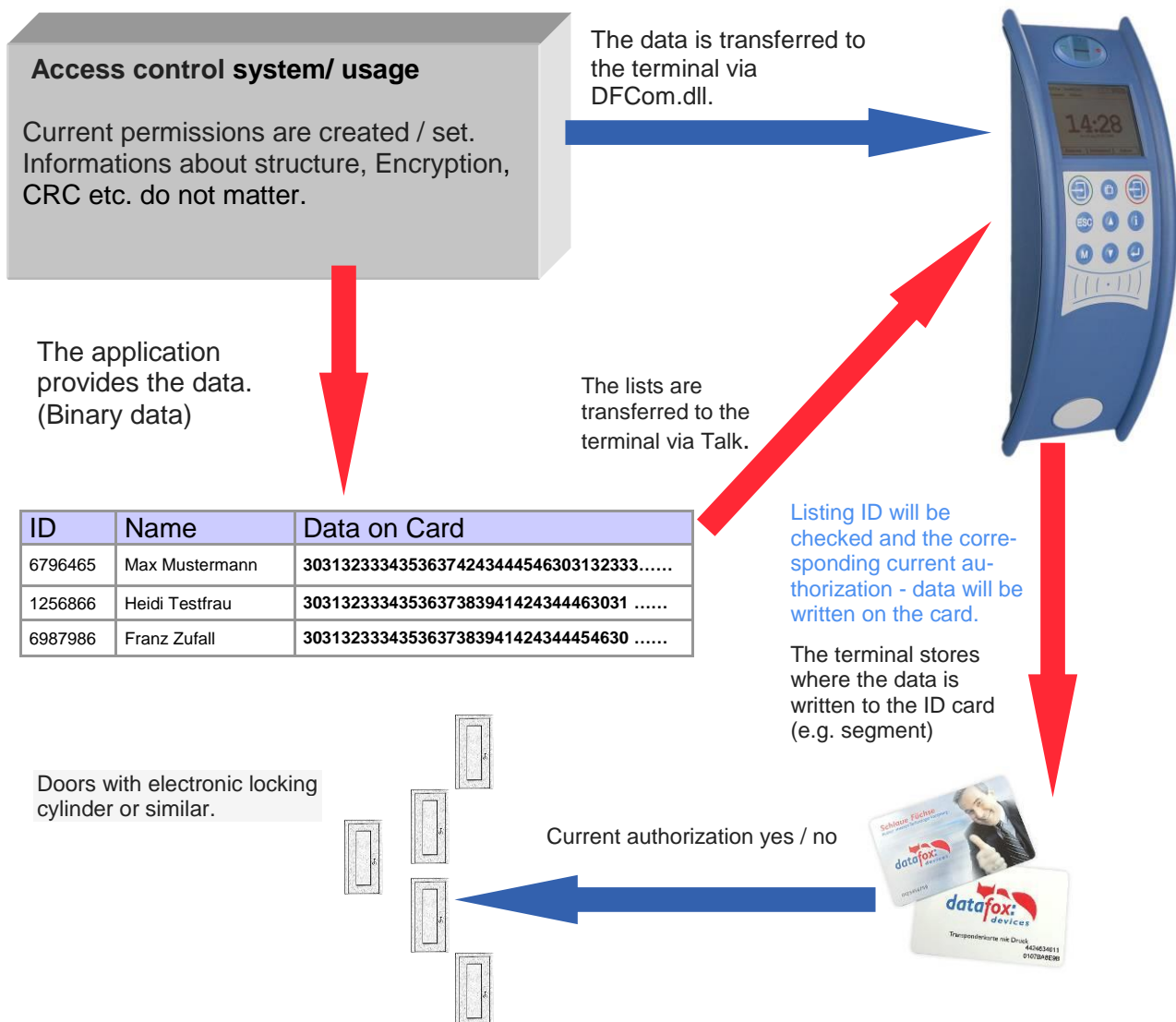
- Mifare
- Legic
- iCode
- MyD

For instance:

In buildings with an electronic closing cylinder should the actual daily authorization for the access be wrote down on a transponder card.

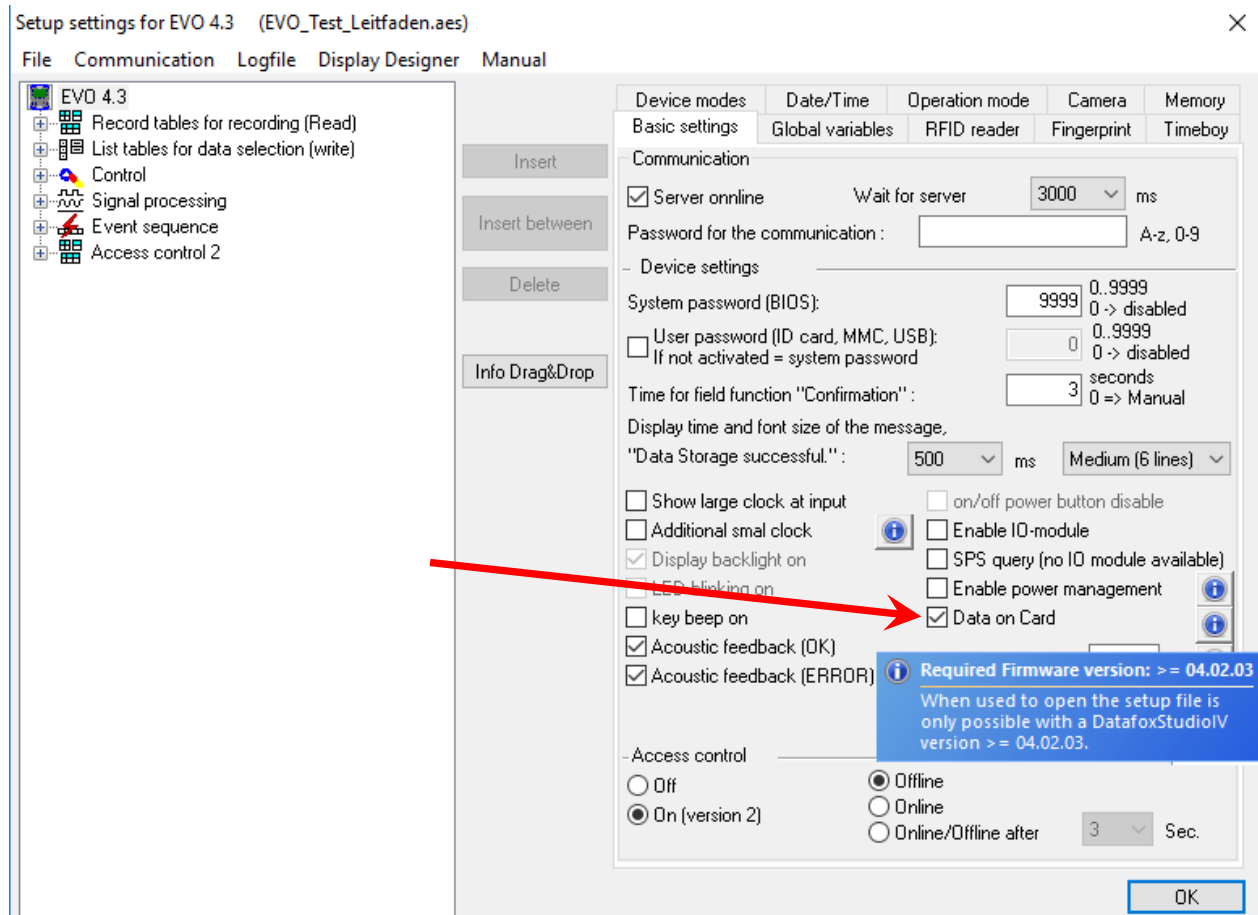
The Personal ID will be checked and the corresponding current authorization - data will be written on the card.

The terminal stores where the data is written to the ID card (e.g. via segment).



5.8.2. Settings for using DataOnCard

Data on Card is an option of the device where data can be written to a transponder from a data list. This option needs to be stated and said while you ordered your product. Those devices who don't offer this option, an error message will be displaying when it's executed.



Data on Card works in 3 steps:

- reading a value from the transponder, e.g. Serial number
- the value is used to select a binary field list to read the binary data
- the binary data is written to the transponder

The return value of the Data on Card function for GV or data record field is the value from the first step "Reading a value from the transponder".

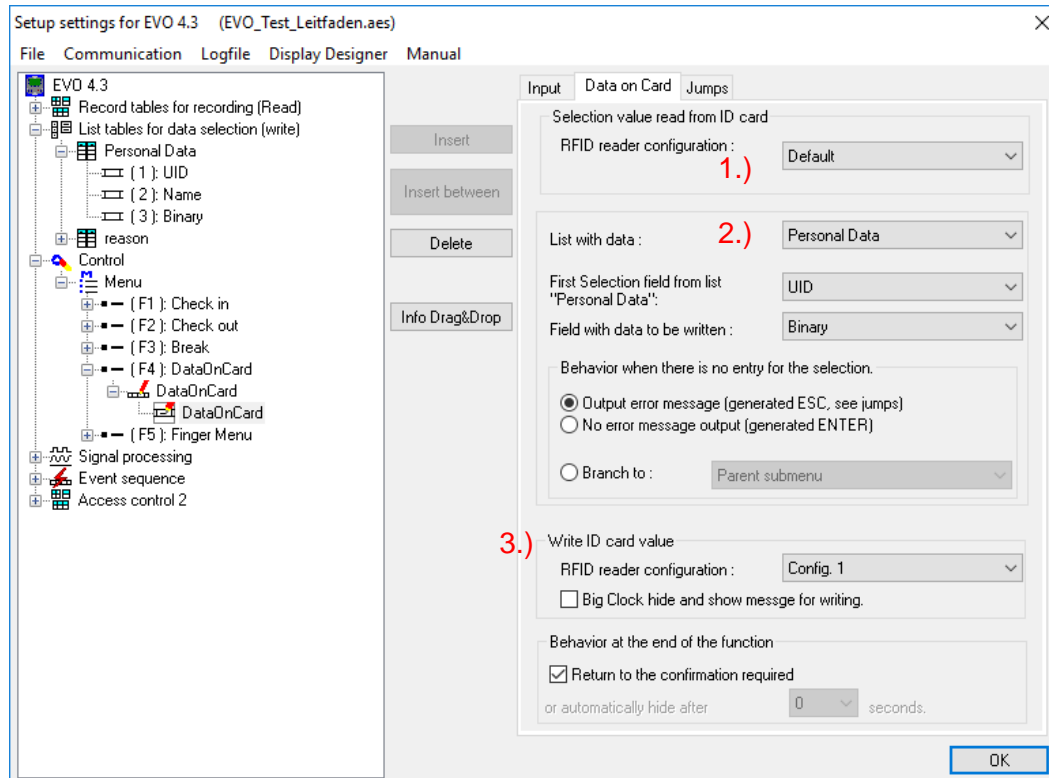
For errors like "the value is not found on the list" or the "writing to the ID failed" the function generates an ESC.

The side steps can then be used to decide how the work continues in the input chain.

The binary field data within the file that the DatafoxStudioIV imports and transmits is to be specified as a hex string. When importing via the DLL, the data needs to be passed on as binary data.

Using the DFC GetField, DFC GetField list functions, you are working with strings, while the firmware converts the hexstrings to and from the binary data.

Einstellungen bei Data on Card



Setup settings for EVO 4.3 (EVO_Test_Leitfaden.aes)

File Communication Logfile Display Designer Manual

1.) Selection value read from ID card
RFID reader configuration: Default

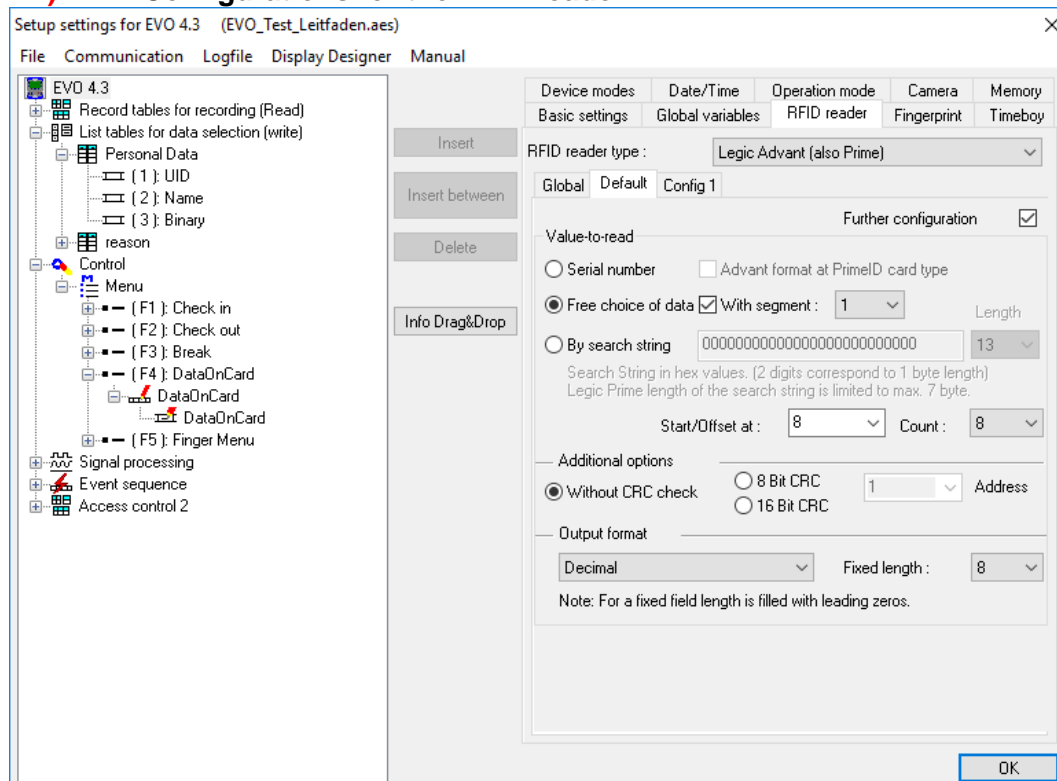
2.) List with data: Personal Data

3.) Write ID card value
RFID reader configuration: Config. 1

Behavior at the end of the function
 Return to the confirmation required
or automatically hide after 0 seconds.

OK

1.) RFID Configurations for the RFID reader



Setup settings for EVO 4.3 (EVO_Test_Leitfaden.aes)

File Communication Logfile Display Designer Manual

Device modes Date/Time Operation mode Camera Memory
Basic settings Global variables RFID reader Fingerprint Timeboy

RFID reader type: Legic Advant (also Prime)

Global Default Config 1

Value-to-read Further configuration

Serial number Advant format at PrimeID card type

Free choice of data With segment: 1 Length

By search string 00000000000000000000000000000000 Length 13

Search String in hex values. (2 digits correspond to 1 byte length)
Legic Prime length of the search string is limited to max. 7 byte.

Start/Offset at: 8 Count: 8

Additional options

Without CRC check 8 Bit CRC 1 Address
 16 Bit CRC

Output format

Decimal Fixed length: 8

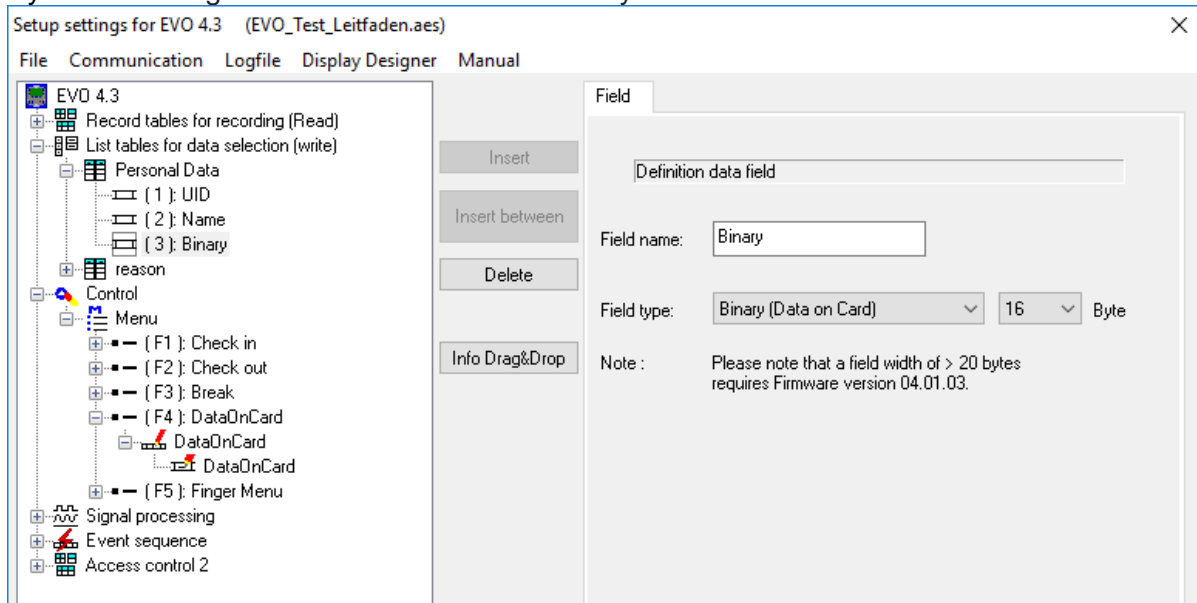
Note: For a fixed field length is filled with leading zeros.

OK

The transponder configuration for the reading can be freely selected. However, firstly it needs to be defined in the basic transponder settings.

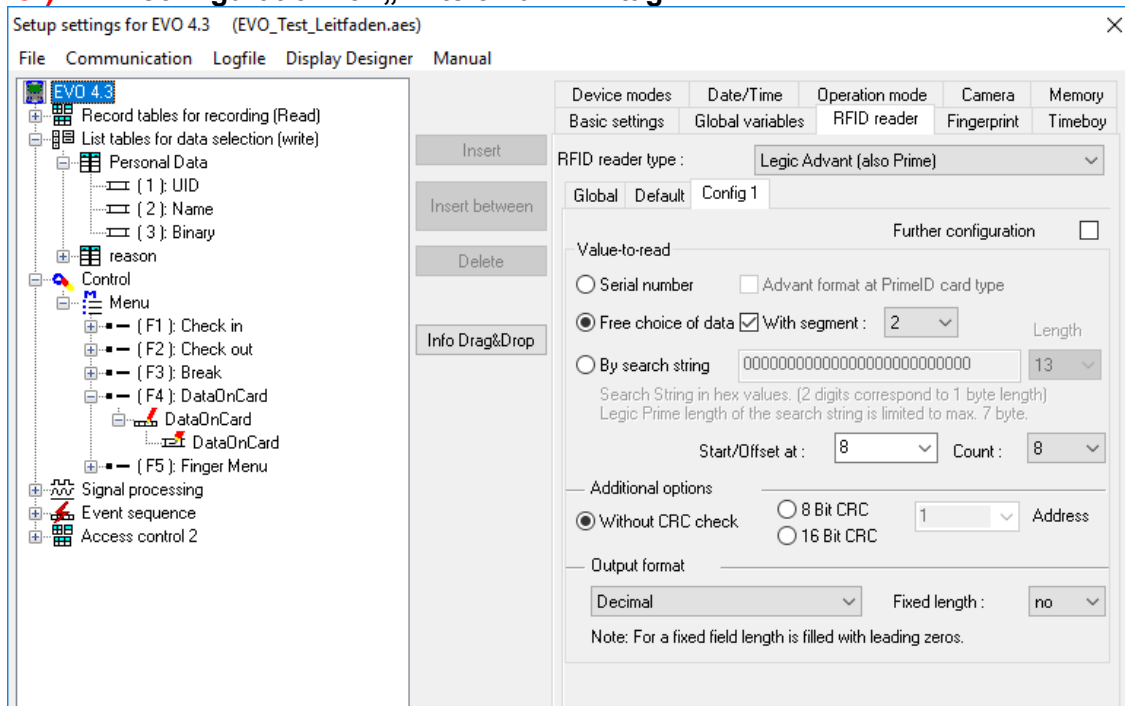
2.) List / binary file sruckture

By the list configuration the list who has a binary field will be selected.



In this example, the value of the transponder reading, who is wanted in the list in the ID field. The data that needs to be written is binary on the Data on Card field. The maximum field size is not allowed to exceed more than 220 bytes. After this, the further procedure can be set for list errors.

3.) RFID configuration for „write on a RFID tag”



The transponder configuration for the reading can be freely selected. However, firstly it needs to be defined in the basic transponder settings.



Please note:

First, complete the transponder configuration, then create the list with the binary field and finally parameterize the field function Data on Card.

Example for Data on Card:

ID with serial number: **1848989745**

List entry for **1848989745** in the file before transferring to the device

Field ID Field Data (binary field) here as hex bytes

1848989745 30313233343536373839414243444546303132333435363738394142434445463031323334353637383941

Data after conversion or within the device

Field ID Field Data (binary field) is binary here

1848989745 0123456789ABCDEF0123456789ABCDEF0123456789A

The following data will be written on the ID card:

0123456789ABCDEF0123456789ABCDEF0123456789A

Binary the data looks like this:

0x30, 0x31, 0x32, 0x33, 0x34



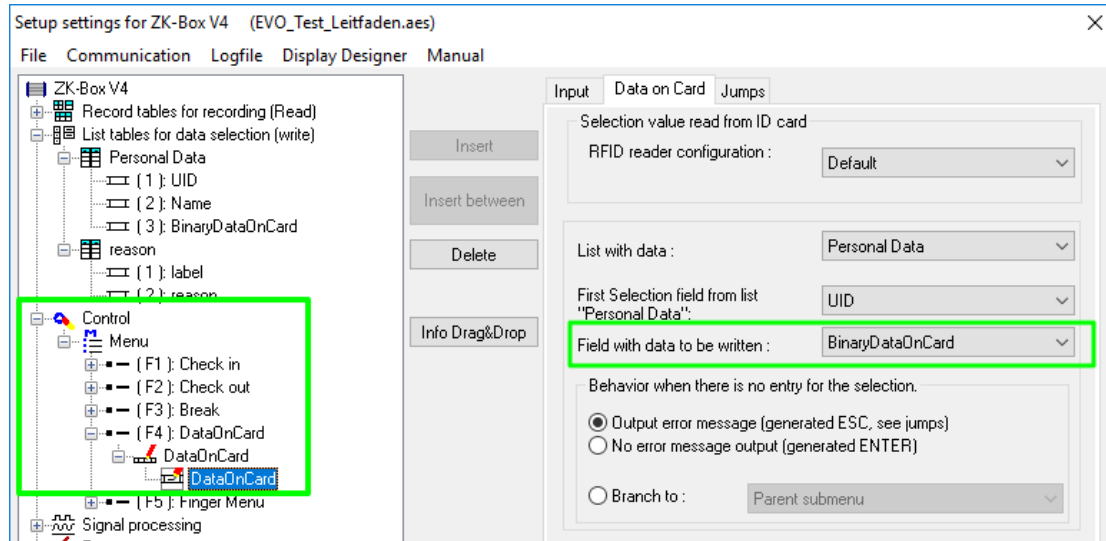
Please note:

When a 3-tone sequence is signaled, the Data-On-Card option is not available on this device. The option has to be purchased afterwards.

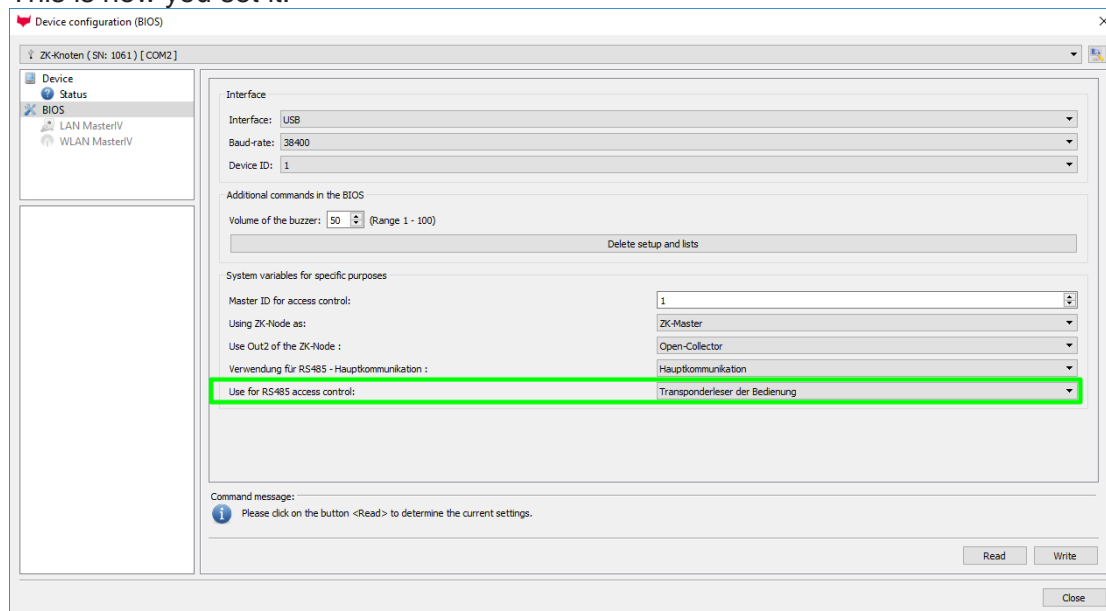
5.8.3. DataOnCard on the access control reader

In order to be able to use on a standard ZK reader of the EVO or the PHG series, the following settings must be made.

The functions for DataOnCard described in the previous chapters can only be set in the setup under Control menu.



Now it is necessary to be able to access the *access control reader* under the control. This is how you set it:



The reader on the *access control reader* (ZK) bus (RS485) is now activated via the Control menu (Transponderleser der Bedienung)



Please note:

Only one *access control reader* (ZK) can be connected to the bus at any time. Dip switch 1 and the termination of the bus must be set to "ON" (Bus address 1).

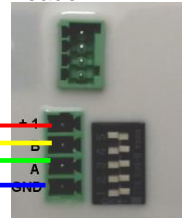
5.8.4. DataOnCard an a access control reader - wiring

Wiringplan for EVO-access reader with using DataOnCard:
 (for each cable line you use the same wiring, Bus Number / Master Number)

connector 4 pole
for Access-Bus
on Modulplace 1



Bus Nr. 1
EVO-access
-reader

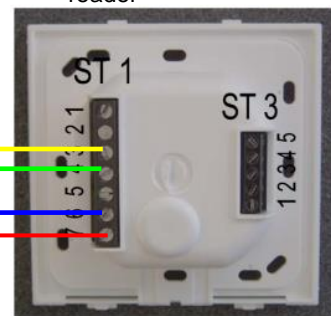


Wiringplan for PHG-access reader with using DataOnCard:
 (hierbei gilt der gleiche Aufbau pro ZK-Strang bzw. ZM / Bus-ID)

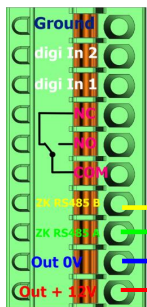
connector 4 pole
for Access-Bus
on Modulplace 1



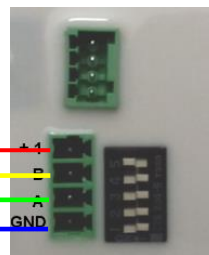
Bus Nr. 1
PHG-access
-reader



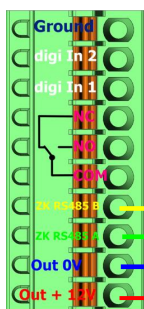
ZK-Knoten Wiringplan for EVO-access reader with using DataOnCard:



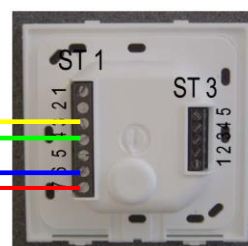
EVO-access-reader
connector



ZK-Knoten Wiringplan for PHG-access reader with using DataOnCard:



RS 485 bus line
up to 500m
in a twisted pair cable



6. Technical Data KYO Oneloc

Datafox KYO Oneloc

EN | TECHNICAL DATA

Housing	Structure	plastic: PC-ABS
	Dimension (w x h x d)	Type I: Diameter 53mm, height 35mm, Type II: height 45mm (e.g. for WLAN or GPRS)
	Weight (without power supply)	Device standard ca. 55g, with PoE ca. 65g
System	Clock	Real time clock
Data-storage	Flash	4 MB, 100.000 write cycles
Display, keys	3 LEDs	2 x Status, 1 x Ethernet
Power	Power supply	12 V Directed Current (10-16V DC)
	PoE (optional)	PoE Module integrated (802.3af)
	Power	TBD
	Clock / Ram buffering	Goldcap, backup of the time up to one day.
Environment values	Ambient temperature	-20 °C to +40 °C (Power supply -20°C to +60°C)
	Protection	IP 20
Software	Configuration program	Setup program (Datafox-Studio) to configure without programming effort.
	Communication tools	http, DLL or C-Source-Code to integrate into the application
Module extensions	For the extension to a variety of functions such as communication, inputs/outputs, sensors 1 expansion slot is available for modules. Requires housing type II.	
Data transmission to PC/Server	USB	Micro-USB integrated
	TCP/IP	TCP/IP with integrated TCP/IP-Stack, 10/100 Mbit
	RS485	RS485 Bus integrated
	WLAN (optional) Type II	wireless LAN module integrated, WLAN 802.11 bg und 802.11 n (nur 2,4GHz)
	GPRS (optional) Type II	online via GPRS, mobile module quadband 850 / 900 / 1800 / 1900 MHz
Access options	RS485 extern	Connection of one access bus with up to 16 external door modules / access readers
	Relay	1 Relay changeover contact, 30V AC, 30V DC, 2A, max. 60 W
	Active output	One active output (12V or GND configurable, not applicable with PoE)
	Inputs	2 supervised inputs
	Sabotage sensor	Tamper sensor can be connected to digital input.
Additional options	Connection of external RFID reader	Connection module for RFID reader via RS232, UART, Clock Data, Wiegand, iButton
	On-wall mounting set	Consisting of mounting plate and cover plate
	Anschluss an Wiegand Controller (CWC)	Ermöglicht den Anschluss eines Datafox Zutrittslesers mit RS485 an einen vorhandenen Controller mit Wiegand-Interface.

7. FAQ

Eine umfangreiche Sammlung von FAQ finden Sie auf unserer Homepage:

<http://www.datafox.de/faq-de.html>

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