PROCONTROL®

Proxer7

RFID Proximity card reader

User's guide

November, 2015

Contents

Welcome

Thank you for choosing a Procontrol product.

Procontrol Electronics Ltd has grown to an important national company of developing and manufacturing software, hardware, electronic devices, access control systems, work time attendance systems, queue control, client caller, and access protection systems since 1981. Thousands of satisfied customers have experienced the security ensured by our long run planning, reliable works, and the world trademarks standing behind us.

Our total product range can be viewed on our web page: www.procontrol.hu.

Security guide

Please read this guide carefully before installing and using the device. Please use the device properly and as described in the following manual.

The guarantee is insured only if the device is used with the implements approved or specified by the manufacturer, and it is cleaned and maintained as described in this guide.

- The manufacturer does not take warranty for the faults arising from improper use.
- Incorrect installation
- Connecting to inappropriate electric network
- Incorrect maintenance
- Not approved modifications, interventions
- Using non-original spare components
- Do not store and operate the device out of the given temperature ranges, it can lead to malfunction
- Do not try to modify or dismount any part of the device
- Do not allow the indoor version types of this product to come into contact with water or other liquids.
- Do not store the device close to a heat source or direct flame
- Use the device only the proper way as described in the guide.
- Use the equipment only for the purpose it has been designed for.

About the security

Use the power supply provided by manufacturer for the device. Use electric power connection as specified in this guide.

To avoid fire and electrical shock
Be aware that nobody pushes trash, gums and other stuffs into the slots of the device.
Do not install attachments and accessories that are not designed for this device. Unplug the device in case you do not use it for a very long time.

Cleaning
Power down the device before starting the cleaning process. Use wet cleaning rag.

General rights and responsibilities
Procontrol Ltd has the exclusive right for producing the device.

Procontrol Electronics Ltd. reserves the right to modify this documentation and software without notice.

In no event shall Procontrol Ltd. be liable for any claim, damages or other liability out of or in connection with the usage of the device.

Warranty period is 2 years.

General description

The Proxer7 is a proximity card reader, which provides RFID cards and transponders (of various shapes, such as wristbands or keyfobs) to read. The Proxer7 enables a secure and simple authentication. The communication without physical contact allows a long service life. The Proxer7 is a widely used RFID reader device, knows a wide range of communications protocols and encoder types.

Features:

- RFID Proximity card reader
- Desktop version with USB or RS232
- Optional wall-mounted version with RS485 and Wiegand
- 125/134 kHz and/or 13,56 MHz
- Encoders, mobile phones with NFC module
- Size: 79 x 117 x 24 mm
- User-configurable properties
- Extensive integration
- Multicolored LED ligh

Parameters, customization

The Proxer7 has a number of adjustable parameters. The detailed description can be found in these parts of the document:

- Optional card reader- and data transmission modes
- Card data sending to the host device
- Optional communications protocol
- Configurable entitlement feedback
- Variable light and sound signals
- Optional USB peripheral device emulation

Package contains:

- Proxer7(USB): Proxer7 reader+USB A – micro B cable
- Proxer7(RS232): Proxer7(RS232) reader + RS232 serial cable + power supply
- Proxer7(RS485): Proxer7(RS485) reader + 1m patch cable
- Documentation and installation CD, Proxer7Manager program

Option:

- Power supply
- Cable, passive PoE kit

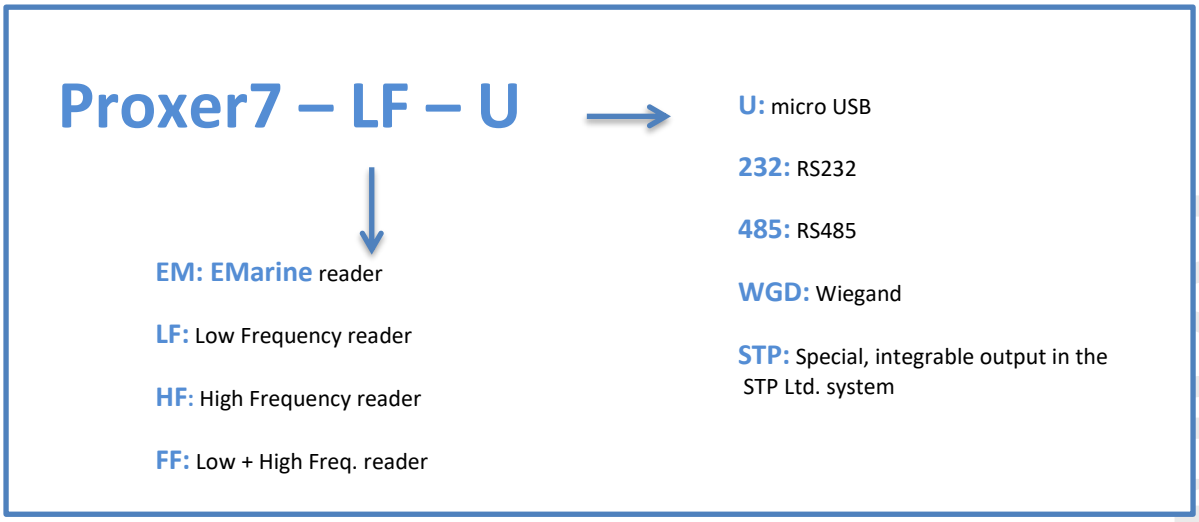
- Cross cable

Types

Type	microUSB	RS232	RS485	Wiegand	Low Frequency reader	High Frequency reader	Outer output	Inner output	STP output
Proxer7-EM-U	√				Only EM		√		
Proxer7-LF-U	√				√		√		
Proxer7-HF-U	√					√	√		
Proxer7-FF-U	√				√	√	√		
Proxer7-EM-232		√			Only EM		√		
Proxer7-LF-232		√			√		√		
Proxer7-HF-232		√				√	√		
Proxer7-FF-232		√			√	√	√		
Proxer7-EM-485			√		Only EM			√	
Proxer7-LF-485			√		√			√	
Proxer7-HF-485			√			√		√	
Proxer7-FF-485			√		√	√		√	
Proxer7-EM-W				√	Only EM			√	
Proxer7-LF-W				√	√			√	
Proxer7-HF-W				√		√		√	
Proxer7-FF-W				√	√	√		√	
Proxer7-T-EM-485STP			√		√			√	√

All the Proxer7 type is available in external design.

Explanation of the type designation



Communication interface and output

Explanation:

External interfaces:	Desktop application. The connector is on one of the shorter outsides of the device.
Internal interfaces:	The connector is in the inside of the device. Fixed reader applications (wall-mounted terminal)
One-way communication:	Only for data sending.
Two-way communication:	Data sending, receiving.

Type	Direction of communication	Configuration	Type of connector
U	2 Direction	Outer	micro USB-B, USB 2.0
RS232	2 Direction	Outer	9 pole D-SUB, 5,5mm DC connector socket
RS485	2 Direction	Inner	RJ45 connector

Wiegand	1 Direction	Inner	4 pole connector

RFID interface attributes

Name	Operating frequency range
Low Frequency reader	125-134kHz
High Frequency reader	13,56MHz

Detailed description

Available versions

The Proxer7 Proximity RFID card reader is a desktop device designed for use in a confined space, it has no special immunity. Accordingly, the basic version available in the two most widely used office types of connections, with USB or RS232. In these versions, the connector is on the outside of the box, can be connected to a personal computer with standard external data cable.

Because nowadays widespread access control using RS485 or Wiegand communication interface, the Proxer7 is available with these versions. The Proxer7 is eligible in wall-mountable design with internal connector for the cables are inside of the housing,

The Proxer7 is basically external input peripherals, responsible for reading the RFID transponder ID and transmission via communication interface, similar to an external keyboard, which is used to input a code. In normal using the success of the communication, transmission with the RFID transponder will be showed with sound and lights signaling, the user can be sure of the reading success. The device sounds, lights and signaling capabilities can be used to further entitlement feedback too, which instructed the eligibility by the computer, in case of bidirectional communication capability interfaces.

The Proxer7 is a great configurable device that allows the use of existing ex-post, in-built system. Changing the parameters often change the basic operation of the device, which in extreme cases can result in even further communications fail. For the easier handling and restore the default settings, on the Proxer7 desktop versions back is a RESET button, by pressing restarts the device with default parameters.

Adjustable parameters overview

To the settings you need a pc, connected reader and the Proxer7Manager program.

All-type parameters

Parameter name	Settings options	Explanation
Card present, transmitter watching	*ON*	The device sends the data of the encoder several times continuously. Card present
	OFF	
Lights	*Regular*	Type of light signals

	Proxer6 scheme	
Tone	*12 tone alarm*	The signals are separately changeable
Sent bit number	*Number: 1 - 64*	It determines whether bit of RFID card will be transmitted.
Sent data type	*Decoded card data*	The device will decode the RFID identifier before the sending
	Undecoded card data	

Only for types with two way communication

(With **RS485**, **RS232** and **USB** cables. With Wiegand the device will not give any result.)

Parameter name	Setting options	Explanation
Sent character number	*Number: 1 - 255*	Determines how many characters of the RFID card code will be sent out.
Supplementary character	*Optional character*	If the RFID code need less character, the code will be supplemented with that character
Message templates	*25 character long template*	Data will be inserted between frames to the sending,
Enter sending	*ON*	Determines, that an ENTER character will follow the sent message or not.
	OFF	
Code into two parts	*2 * 16 bit sending*	Determines, that the code will be sent as 1 32bit number or 2 16bit numbers.
	1 32 bit sending*	
Communication protocol	*ASCII*	Simple text message communication with HOST
	PCS	PCS type communication with HOST
Authority feedback	*ON*	The device needs a command about eligibility or not.
	OFF	
	Automatic	The device starts automatically transmitter searching

Transmitter searching	*Command*	The device needs command to the transmitter searching
Transmitter data sending	*ON*	The device can send the data of the transmitter, not only the ID number.
	OFF	

Only for types with RS232 and RS45

Parameter name	Setting options	Explanation
Baud-rate	*1200, 2400, 4800, 9600, 14400, 19200, 28800, 38400, 56000, 57600, 115200, 128000, 256000*	The serial communication bit rate can be selected.

Only for types with USB

Parameter name	Setting options	Explanation
USB Emulation type	*Virtual serial port*	The PC recognizes the card reader as a virtual serial port or a virtual keyboard.
	Virtual keyboard	
Virtual Keyboard language	*HUN*	The emulated USB keyboard language can be selected
	ENG	

Parameters description

Card present function

The Proxer7 Proximity RFID reader is able to continual card presence observing, thereby further expanding the capabilities of the reader. For example, the RFID card can be used as hardware key, where the computer application will run only as long, as the authorized card is on the reader. The Proxer7 reader with default settings will be reading the ID transmitter only once, if the transmitter does not leave the radio frequency field. The watching of the transmitter presence is a switchable parameter, the effect depends on the

mode of searching, and it has effect only with automatic adjustment. The device in case of RFID transmitter gives sounds-, and lights signal only once, but in activated case sends constantly the ID at regular intervals (333ms) to the HOST device until the owner transmitter is in the reading field.

Condition of card present funtion	Automatic reading	Command to read
Parameter ON	At detecting a new RFID transmitter, the device gives one light signal and as long as the transmitter does not leave the reading field will be in every 250 seconds the ID to the HOST sent.	At detecting a new RFID transmitter (it begins with the command,) the device sends once a light and sound signal, until the transmitter does not leave the reading field. With the command of the HOST will be the last read ID sent.
Parameter OFF	At detecting a new RFID transmitter, the device gives one light signal and until the transmitter in the reading field, sends the ID only one time.	The device detecting for new RFID transmitter only with command. In case of new transmitter, gives one light- and sound signal, send the read ID to the HOST and then switch off the reading field.

Adjustable sound- and light signals

On the Proxer7 device are the sound- and light signals changeable. In case of the sound signals is there 4 versions (ON, OFF, authorized transmitter, unauthorized transmitter), all of them are adjustable parameters. To the customization are available 12 pre-defined audio samples, each of them can be selected as a sound signal. Light signals have two schemes. The „Proxer7" scheme is of the Procontrol Electronics Ltd. own developed light-signaling scheme. The description of the light signaling sees at the end of the document.

Sent bit number

The RFID transponder ID can be represented by number of bits. This parameter is a numeric value; the Proxer7 reader will send the data according to the number of bits. The number of bits interprets by LSB. The following table shows the effect of the parameter on the 32547698 ID. The binary is to 32 bits, the decimal data is to 10 characters supplemented to see.

Sent bit number		Got binary and decimal numbers
32	*Binary*	*00000000***11111000010100011011100010**
	Decimal	*00***32547698**
20	*Binary*	*00000000000000000***1010001101110010**

	Decimal	*00000***41842**
12	*Binary*	*00000000000000000000000***1101110010**
	Decimal	*0000000***882**

Sent datatype

The RFID transponders are from general to allow the verification of the correctness of the data stream in either parity bits, or using 'checksum'. The Proxer7 reader verifies the correctness of the data stream in all cases. It also happens that the transponder's physically printed ID came from the given sequence of data stream. So we talk decoded and undecoded data stream. In both cases the data stream identifies the card. The decoding is the recover to the provided number by the manufacturer, the possibility of individual identification with the transponder is not affected.

The undecoded data stream will be in all cases in hex format forward.

Sent datatype	Explanation
Decoded	If the identification of the RFID type is successful and the decoding information is available, the reader decrypts the specified identification number by manufacturer's and then transmits via communication interface to the user.
Undecoded	The RFID transponder ID will be sent to the PC 1:1, only in hex format

Sent number of characters

The needed characters to the identification of RFID ID may be different, depending on the size of the ID number (the larger the number, the more characters can be represented only). If the connected system wait for constant number of character sending, namely does not handle the dynamically changing number of character IDs, in case of that should be send the independent of the size of ID number, which can be made with this parameter.

If the ID does not fit the here defined number of characters, the Proxer7 automatically send at the length which good for it. If the ID would be fit on shorter character, as the here defined, the Proxer7 supplement. (See under „**Additional character"** parameter).

If the ID does not fit the here defined number of characters, but do not want the Proxer7 send more characters because of foregoing, needed the size of ID reduce with the 'sent number of bits' parameter.

The following example illustrates the operation described above. The value of the additional characters is „0” currently. It is assumed that sending the decoded data stream is set, so the Proxer7 reader will send a decimal number.

ID	Sent number of character [parameter]	Sent number of bits [parameter]	Sent message via Proxer7
32547698	10	32	0032546798
	5	32	32546798
	5	16	41842

Additional character

The co-parameter of the **sent number of character** is the **additional character**. If the addition needed to the right number of character, it would be supplemented with the here defined character.

In the following example the „**sent number of character’**s value **= 10**.

ID	Additional character	Sent message via Proxer7
32547698	„0”	0032546798
	„P”	PP32546798

Message template

The Proxer7 device’s basic function is the reading and sending of the RFID transponder ID. It may be necessary in established system to use a custom frames attach to the message. The Proxer7 device can store a 20 character long message, within the place of ID determined, allowing an individual parcel frame, the opening and closing characters to add to the message. The total length of the message is given here by the number of frame characters and length of ID, so the 20 character length would be not reduced.

In the following example the **sent number of bits = 32**, **sent number of character = 10** and **additional character = 0**.

ID	Message template	Sent message via Proxer7
32547698	ID:[ID place]: Procontrol	ID:0032546798: Procontrol

Enter sending

If the ‘**ENTER sending’** parameter can be sent, then fit at the end of the message an ENTER character

Code into two parts

A significant number of currently widespread RFID systems operate with 32-bit identifier, but the older RFID systems used 16-bit identifier. To ensure the compatibility of such systems, the user practice spread to the more advanced 32-bit identifier 2x16-bit identification number interpreted divided into two sent some readers. The, the Proxer7 can send the code into two parts with enabled parameter.

The parameter will be read with **Sent datatype** = *Decoded card data* and in case of receiving identification of appropriate length (32-bit). The parameter interacts with the **Sent characters** parameter, the number of characters will be read on the full length of message, so the 2x16-bit will be jointly represented on the character number.

The effect of the parameters showed in the following example, **Sent number of bits = 32**, **Sent number of character = 10** and **additional character = 0**

ID	Code into two parts	Sent message via Proxer7
32547698	Enabled	0049641842
	OFF	0032547698

Communication protocol

The Proxer7 device knows two types of communication protocol, the ASCII protocol and the PCSW protocol developed by Procontrol Electronics Ltd. The ASCII is a simple character coder standard, based on Latin ABC. Practically service a simple text output, the ID of card will be sent as a simple numeric character string. The PCS (Procontrol Communication Standard) is the own standard of Procontrol Electronics Ltd. More complex, but more secure, packet transfer based method, the detailed description can be asked at ordering.

ATTENTION! The commands would only be executed of the correct modes and functions are activate (eligibility feedback, card presence, transmitter searching)!

The type of communication protocol is a switchable parameter. The settings vary according to the command structure; this is summarized in the table below.

Set parameters		ASCII		PCS	
		HOST command	**Answer of reader**	**HOST command**	**Answer of reader**
Eligibility feedback: OFF	**Automatically card reading**	-	xxxxxxxxxx(+Enter)		ECRRP
	Manual card reading	:TRNUM?;(+Enter)	:TRNxxxxxxxxxx;(+Enter)* :NO_TR;(+Enter)	CCRRE	ECRRP

Eligibility feedback: ON	:RIGHTOK;(+Enter) :RIGHTNO;(+Enter)	See under: Light and sound signals	EAUAC EAURE	See under: Light and sound signals.

Commands:

ASCII protocol	
xxxxxxxxxx(+Enter)	Card numbers with 10 digits accuracy, if necessary supplemented with 0, opening and closing characters. Example: 0032654396 (+Enter)
:TRNUM?;(+Enter)	To start a reading, requesting the card number.
:TRNxxxxxxxxxx;(+Enter)	Card numbers with 10 digits accuracy, if necessary supplemented with 0, opening and closing characters.*
:NO_TR;(+Enter)	There is no transmitter within range of the reader after 2 seconds.
:RIGHTOK;(+Enter)	The card is authorized.
:RIGHTNO;(+Enter)	The card is unauthorized
PCS protocol	
ECRRPdxxxxxxxxxd	Card numbers with 10 digits accuracy, with 0, opening and closing characters.*
EAUAC	„Event Authentication Accepted”
EAURE	„Event Authentication Refused”.
CCRRE	„Command Card Read Request”

* The answer depends on the „Send transmitter data” parameter.

Authority feedback

The Proxer7 device can be integrated in examining entitlement system, based on the HOST device itself is capable to let the user know about his authority. The eligibility feedback is a switchable parameter, after the activation the sound and light signaling will be changed.

Eligibility feedback	**Alerts**

ON	In case of new transmitter the device indicate with a short light and tone the cognition and ID sending to the HOST. Subsequently in accordance with the command of the HOST (see under: Commands) response give sound- and light signal to show the authority.
OFF	The device does not examine eligibility, gives for each new transmitter eligible tone, light signal is according to the setting.

Device modes – transmitter searching

The Proxer7 proximity RFID reader works basically in two modes, the type of modes is a switchable parameter. In the „automatic" mode the device start the transmitter search, in „the command" mode from the HOST came command stars. The settings of mode are with effect on the speed of reading and on the radio frequency field (and the consequent uneasiness). In the automatic mode the starter of reading is the device (depends on the version) or the user. The modes and their effect see in the table below:

Start of transmitter search	Wire version
Automata reading	The device creates a constant excitation field; search a new transmitter in every 333. seconds. The IDs in the reading field will be automatic send to the HOST.
Command to reading	The device periodically switches on the reading field. The reading starts the command of HOST. During the (2 sec) reading the device read each ID in the reading then switches the field and sends the ID to the HOST.

Sending of the transmitter data

The Proxer7 RFID card reader identifiers in the reading field the transmitter's type and parameters. The settings are for the sending of them. This function allows the user to know not only the ID number, but also the type and bit speed. The following table indicates the effect of parameters in the different communication protocols and transmitter search mode.

Communications protocol/transmitter search mode	Sending of the card data is ON
ASCII / automatic search	EMARIN_2KBAUD_0032547698
ASCII / command to search	:TRD-EMARIN_2KBAUD_0032547698;

PCS*	ECRRPd[decoded ID on 4 bytes]d[producer code on 1 byte]d[undecoded ID on 8 bytes]d[data speed on 1 byte]d[card type ID 1 byte]d

* The PCS (Procontrol Communication Standard) is the Procontrol Electronics own protocol standard, the documentation ask at the ordering process.

Baud-rate

In case of Proxer7 with RS232 and RS485 serial port is possibility to the changing of the bit speed of the communication port. After the change of the parameter need the restart of the device.

The USB peripheral emulation types

The Proxer7 RFID reader can more peripheries emulate with USB port to the PC connected, it allows wide range of integration. The type of emulation parameters can be adjusted by the user. The emulated peripheral devices are as follows.

Emulated periphery via USB	Short description
Virtual serial port	The PC after the install of the right driver knows the device as a serial port. Each communication with the device is easily through a simple terminal program. Parameters of serial communication: 115200kbaud, 8bit, 1 stop bit.
Virtual keyboard*	The PC know the device as a keyboard, the data will detect as a keyboard typed characters.

* In that mode the communication can be only one way, the device can send data to the PC, reverse communication is not possible. To restore the two ways communication see below the detailed description.

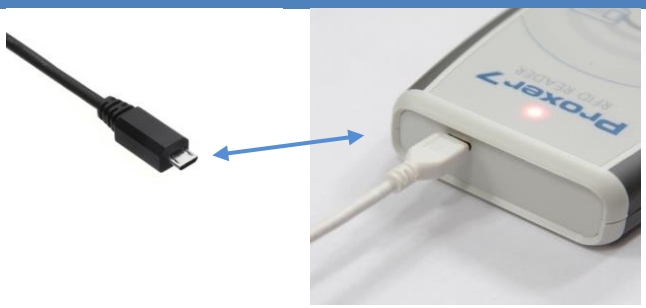
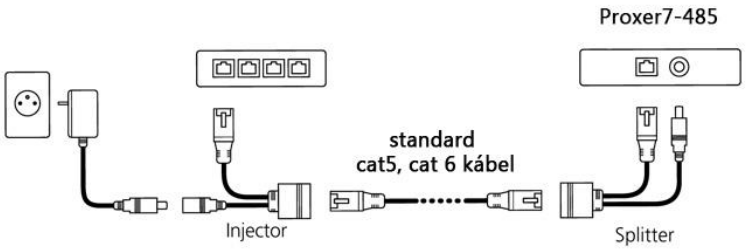
Language of keyboard emulation

The Proxer7 with appropriate settings is suitable for multiple language keyboard emulation. The different language manifests in the practice of the different button allocation. The button code depends on the physical location of button. The same location in two different language keyboard results the same code. The PC's operating system identifies the correct character depend on the language settings. For example: the code of „0" character is on the English and Hungarian keyboard: the code of "0" on the English keyboard is "ö" character code on the Hungarian keyboard. Selecting the appropriate language ensures that the PC interpret the characters from the Proxer7 device properly.

The select of the keyboard language obviously interpreted only in case of USB keyboard emulation application. In case of other type is ineffective.

Using of the Proxer7

Connection to the PC

Description	Illustration
Plug the reader to the pc with the USB cable. *ATTENTION! At the connection of cable be careful, otherwise the connector may be damaged!*	
Connection with PoE cable:	
Wait for the light and sound signal. It takes max. 5 seconds. On Windows PC (at the first connection) a pop-up windows shows the connection.	

Install the adequate software. If the installation of virtual serial port is done, open the Proxer7Manager.exe support program (can be find on the CD).

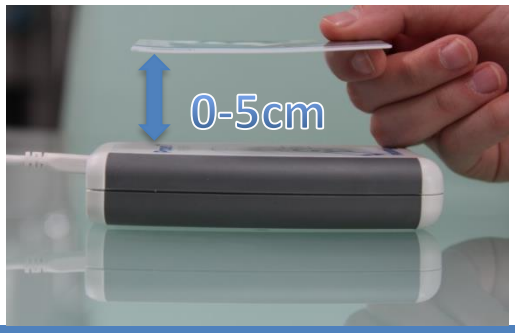
Note: If an error is detected on Windows 7 or newer version, run the program with administrator rights.

Approach the RFID transponder to the reader, approx. 4 cm (or closer) until the device signal has been given). The reader ready to use.

General use of the card reader

Card reading in optimal distance

The RFID measurement field of Proxer7 average is 5cm from the device. The transmitter reading happens in this distance.



Parameter restoring to the default status - RESET

In some cases needed the restoring of the default status – for example if the USB emulates not a virtual serial port and we want the parameters reset. How to restore: with a thin and sharp instruments press through the tiny holes at the back of the device the RESET button

ATTENTION! The button already responding to the fine push. The powerful movements may damage the device.

Program loader mode

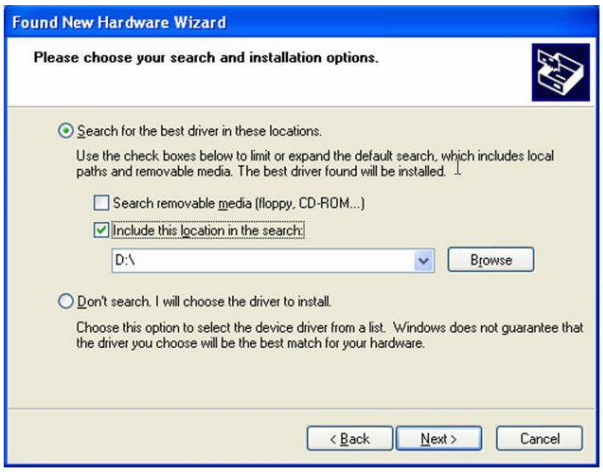
The RESET button pressing and holding of the device takes in the program loader mode. About the program update is a detailed description at the end of the document.

ATTENTION! The button already responding to the fine push. The powerful movements may damage the device.

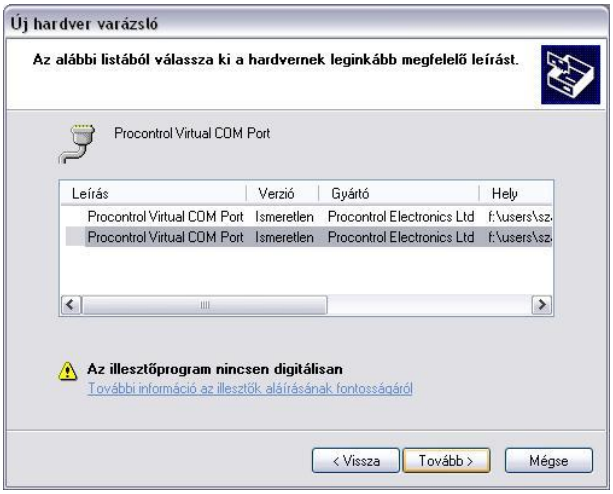
Installation on Windows XP

Description of steps	Illustration
When the reader connected is, the new hardware wizard starts automatically. Click the option „No, not this time" and then click Next to continue.	
„Install from a list or a specific location (Advanced) and click Next to continue.	

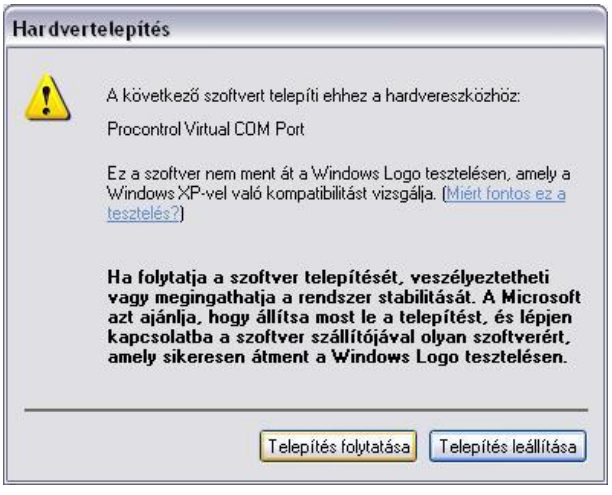
Click Include this location in the search. Click Browse and locate the path of the software driver (Procontrol Virtual COM Port Driver). Click Next.



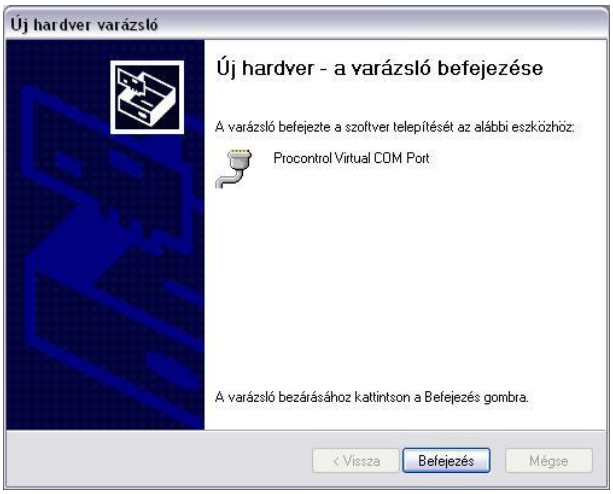
Choose the suitable one to your operating system.



In the next window click „continue anyway”

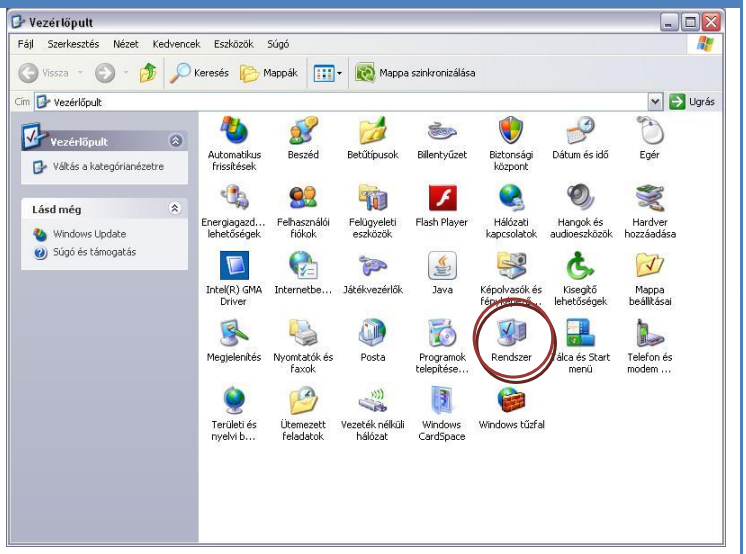
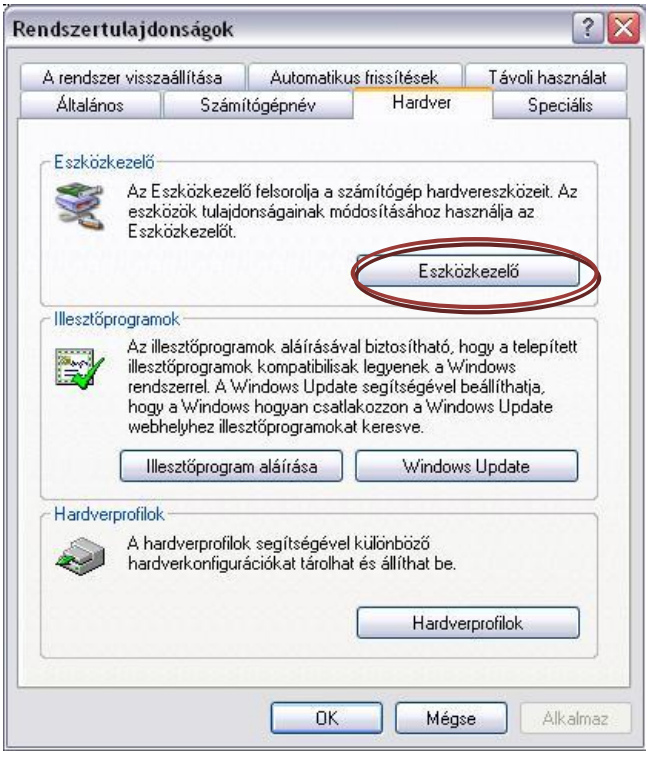


At the end of the installation click „Finish”. The reader ready to use.

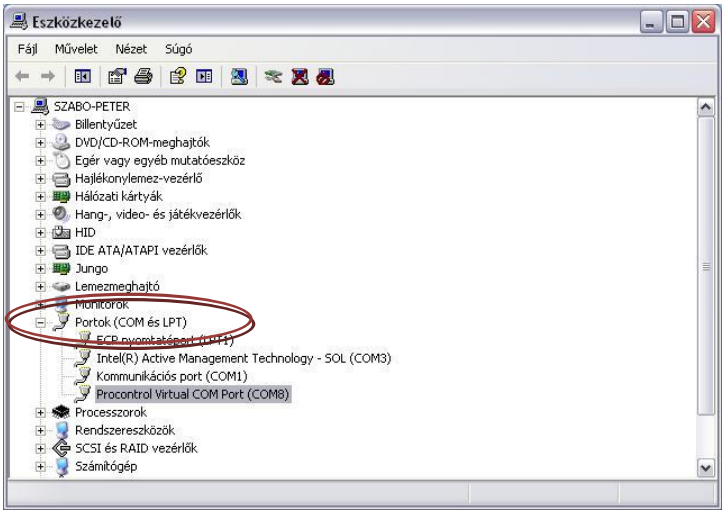


Settings of the serial port, control on Windows XP operating system

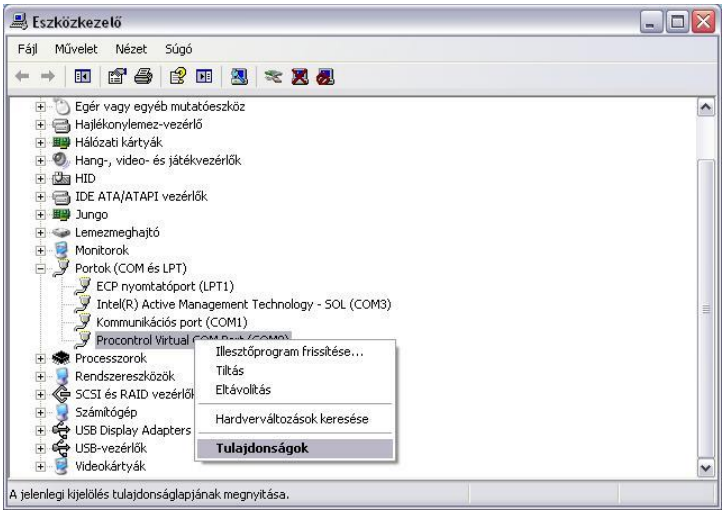
Some application program can not handle a bigger sequential number port as the specific communications port, so it is possible that after the Proxer7 connecting, the installed program still does not recognize the reader. In this case may be necessary the direct modify of communications port. The following guide will help you.

Description of steps	Illustration
Start the control panel (Start menu → Control panel). Click the system icon.	
In the pop-up window choose the „Hardware” tab and click „Device Manager”	

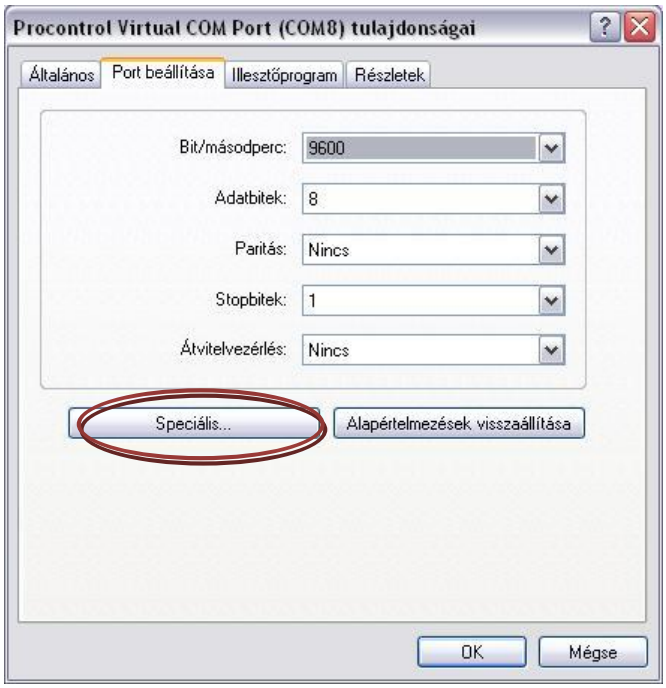
In the next window you can see your personal computer's hardware components.. Search the „Ports (COM and LPT)" menu, then click on the little „+" button the view the devices they connected through serial port to the pc.



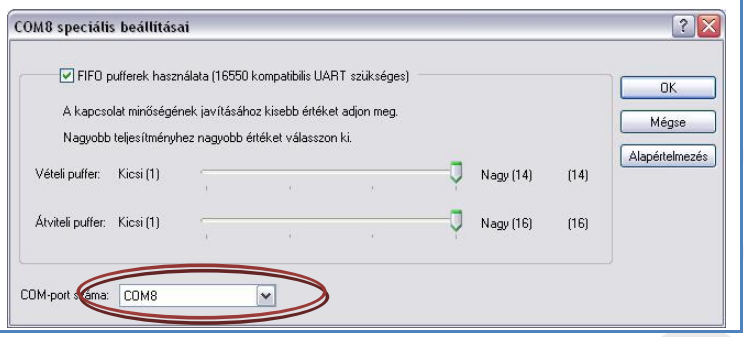
Search the „Procontrol Virtual Com Port" device, and than whit right button choose the „Features" option.



In the pop-up window choose the „Port settings” tab then click „Specials”



In the next window next to „COM-port number” can be chosen the suitable COM-port. From then the Proxer7 available trough this connected port.



The Proxer7Manager program

To the Proxer7 reader is a Proxer7Manager program to try the basic functions and retool some of the parameters. When the program starts automatically search for the communications port to which the Proxer7 connected.

ATTENTION! If the device is not right connected to the pc, the program does not go on.

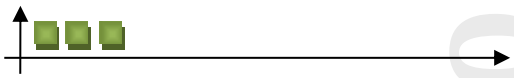
The program shows on the next window the ID of read card. There is an opportunity make a list. Click „Listáz”

Lights- and sound signals

The device is suitable for basic events sign (e.g. card reading, rejection of unauthorized card, faulty operation, service mode, etc.) with LED light and sound signal. The sound signals are customizable, see below „Setting Parameters" section. If the card is continuously within the read range, re-reading give not new light or tone. Each light signals communicate with the following warning message:

Basic function:

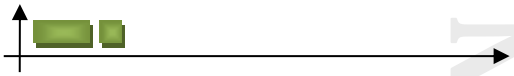
1. Successful starting : 3 short, rapid , green blink



2. Normal operating state ,the reader is ready:
   1 short green flash in every 10 seconds

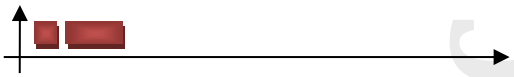
3. The card reader is active: light green frequent blinking

4. Successful card reading
   a. Eligibility without feedback:
      1 long and 1 short green flash



   b. Eligibility with feedback
      i. Authorized cases:
         1 long and 1 short green flash

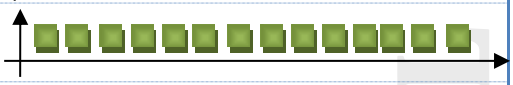
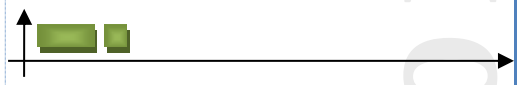
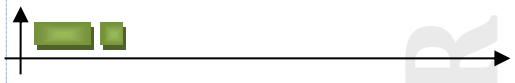
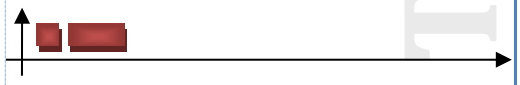
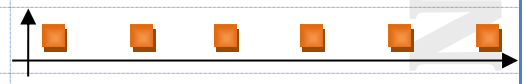
      ii. Unauthorized cases:
         1 quick and 1 long red flash



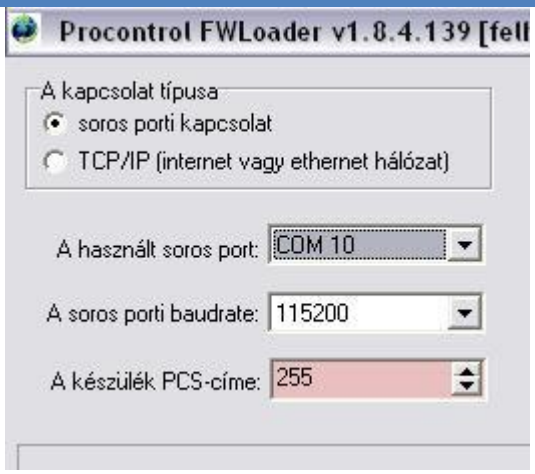
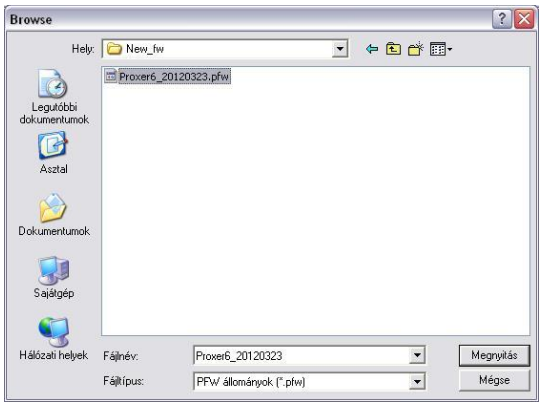
5. Bootloader:
   Orange flash in every 2 seconds

6. Error: uninterrupted red light

7. Knock-off: 3 long, red flashes.

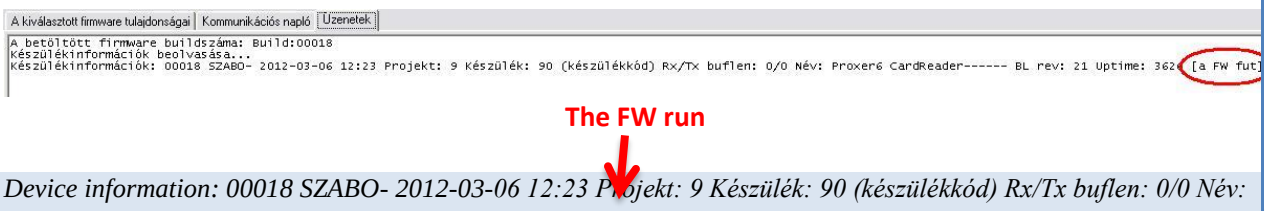
Case			Sound	LED-lights
Successful starting: 3 short, rapid , green blink				
Normal operating state: the reader is ready, 1 short green flash in every 10 seconds				
The card reader is active: light green frequent blinking				
Successful card reading	Eligibility without feedback	1 long and 1 short green flash		
	Eligibility with feedback	Authorized cases:1 long and 1 short green flash		
		Unauthorized cases: 1 quick and 1 long red flash		
Bootloader: Orange flash in every 2 seconds				
Error: uninterrupted red light				
Knock-off: 3 long, red flashes.				

Update in the Proxer7 device

Description of steps	Illustration
Each device has bootloader. This is a special mode to new update download. Before the update, click FWLoader program. As the type of connection choose the „serial port connection”(soros porti kapcsolat) option, then choose the right virtual serial port(használt soros port), (connect the device!), baud rate option(soros porti baudrate): „115200”, PCS-address(A készülék PCS-címe): „255”. Selected the „Firmware update” tab, load the firmware. The program is now ready to update the current firmware.	 

Press the RESET button on the back of device until with a beep restarted. As a result, the device enters in the program loader mode, where the default parameters return (regardless of program loading).

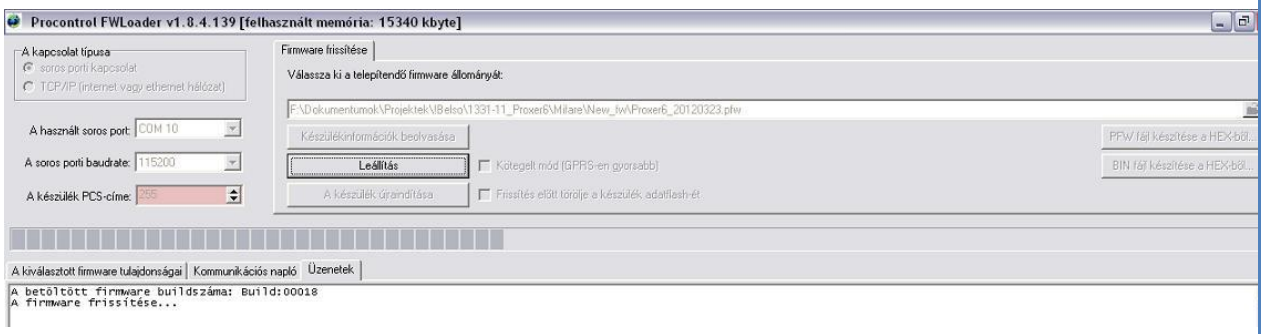
To test the connection, click "View Unit Information" button on the device. Under the "Messages" tab then shall appear the following message:



Device information: 00018 SZABO- 2012-03-06 12:23 Projekt: 9 Készülék: 90 (készülékkód) Rx/Tx buflen: 0/0 Név: Proxer6 CardReader------ BL rev: 21 Uptime: 921 [a FW fut] *A CPU típusa: 060 Feszültség: 000*

The important information of this message is with red highlighted (rest of the message contains variables attached to a sample of the message). This indicates that the connection is established with the device, and this is the normal mode (not in bootloader mode).

To the bootloader mode and to the new firmware automatic install click the „Telepítés", then wait 5-10 seconds.



The firmware installing was successful.	

Technical description

RFID Proximity compatibility, features

Frequency	Card types
Low frequency (125/134kHz)	• eMarine (EM4100,4102,4200) • ProxCard II • Indala • Indala Kantech • ISO 18000 • ISO 11784/85 HDX • ISO11784/85 FDX(-B) • TI RFID (Tiris) • Casi Rusco • HITAG 1/S • HITAG 2
High frequency (13.56MHz)	**ISO-14443A** • Mifare Classic (1k/4k) • Mifare Ultralight • Mifare DESFire • Mifare Plus • Mifare ProX • Mifare SmartMX • SLE66R35 **ISO-15693** • Texas Instruments TAG-IT Plus • Texas Instruments TAG-IT Standard • Texas Instruments TAG-IT Pro • PicoPass • HID iClass • Legic Advant **ISO-14443B** • SRI512, SRT512,SRI4K,SRIX4k • ISO-14443B **ISO-18092/NFC** • NFCIP-1 • NFC card emulation (passive) • Mobile phone with NFC functionality (Android, iOS, Windows Mobile)with the previously mentioned modes

Technical parameters

Electrical parameters		
Name of parameters	**Connector type**	**Technical parameter**
Power supply voltage	USB	5V
	RS232, RS485, Wiegand	12 - 24V
Power consumption	USB	~750mW
	RS232, RS485, Wiegand	~250mW
Average reading distance	All-type	0 – 5cm
Connector type	USB	microUSB AB
	RS232	9 pole D-SUB, 5,5mm DC
	RS485	RJ45
	Wiegand	4pole serial terminal
Communication standard	USB	USB 2.0
	RS232	RS232
	RS485	RS485
	Wiegand	Wiegand 26 (< 37) bit
LED indicator	All-type	1 LED with 3 color (Red, Green, Orange)
Operating parameters		
Operating temperature	-25 – 50 °C	
Relative humidity	0 – 95 %	
Operating Elevation	0 – 3000 m	
Storage temperature	-15 – 45 °C	
Storage relative humidity	0 – 95 %	
Storage altitude	0 – 15000 m	
Volume	max 85 dB	
Physical parameters		
Height	24mm	
Width	78,97mm	
Depth	117,23mm	
Weight	65g	
Color	RAL7035, RAL7012	

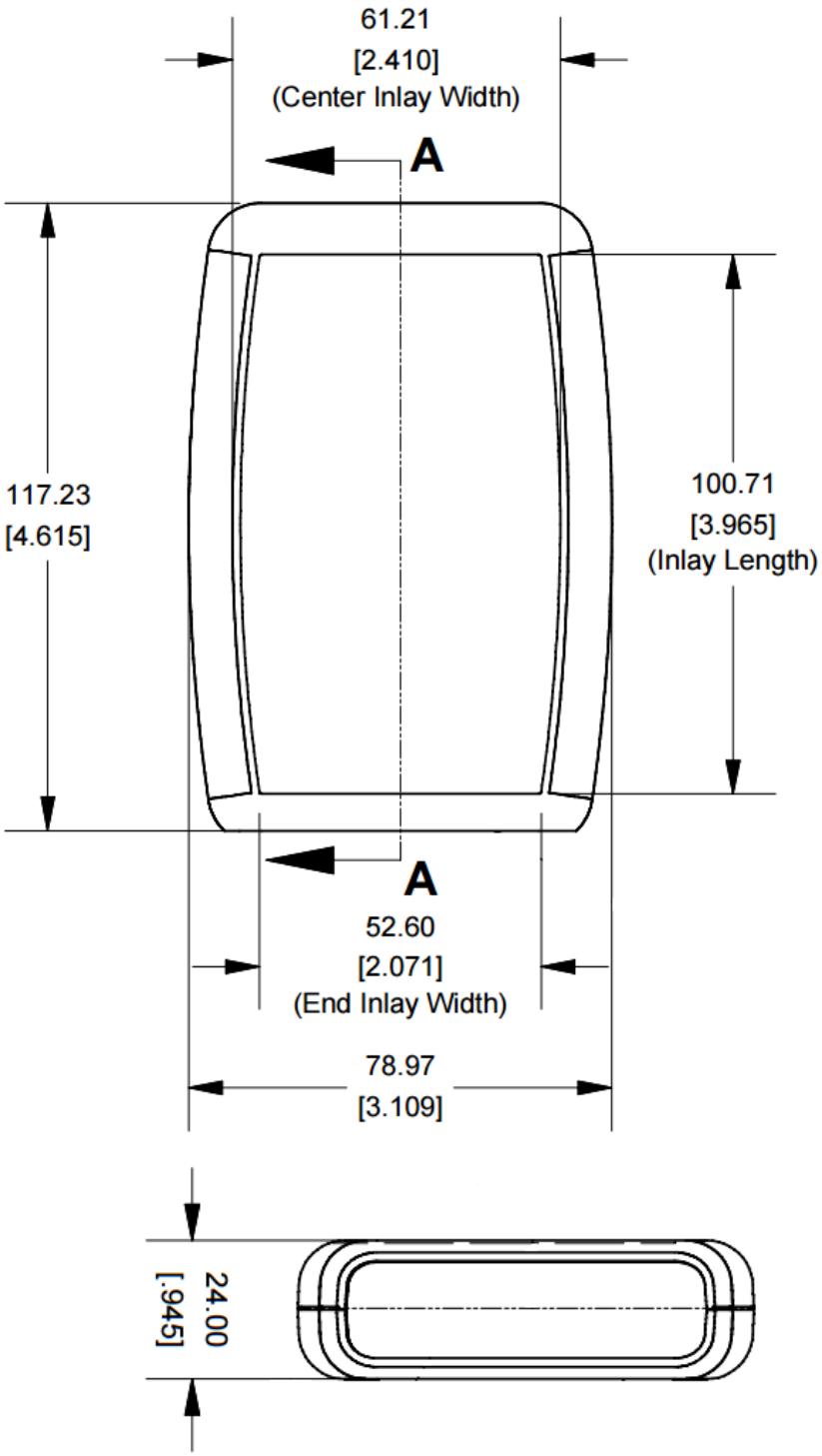
Compatible operating systems

The list of accompanying programs (virtual serial port setup, communications software, etc. ...) Compatible Operating Systems:

- Microsoft Windows 98
- Microsoft Windows 2000
- Microsoft Windows NT
- Microsoft Windows XP
- Microsoft Windows Vista
- Microsoft Windows 7
- Microsoft Windows 8
- Microsoft Windows 8.1

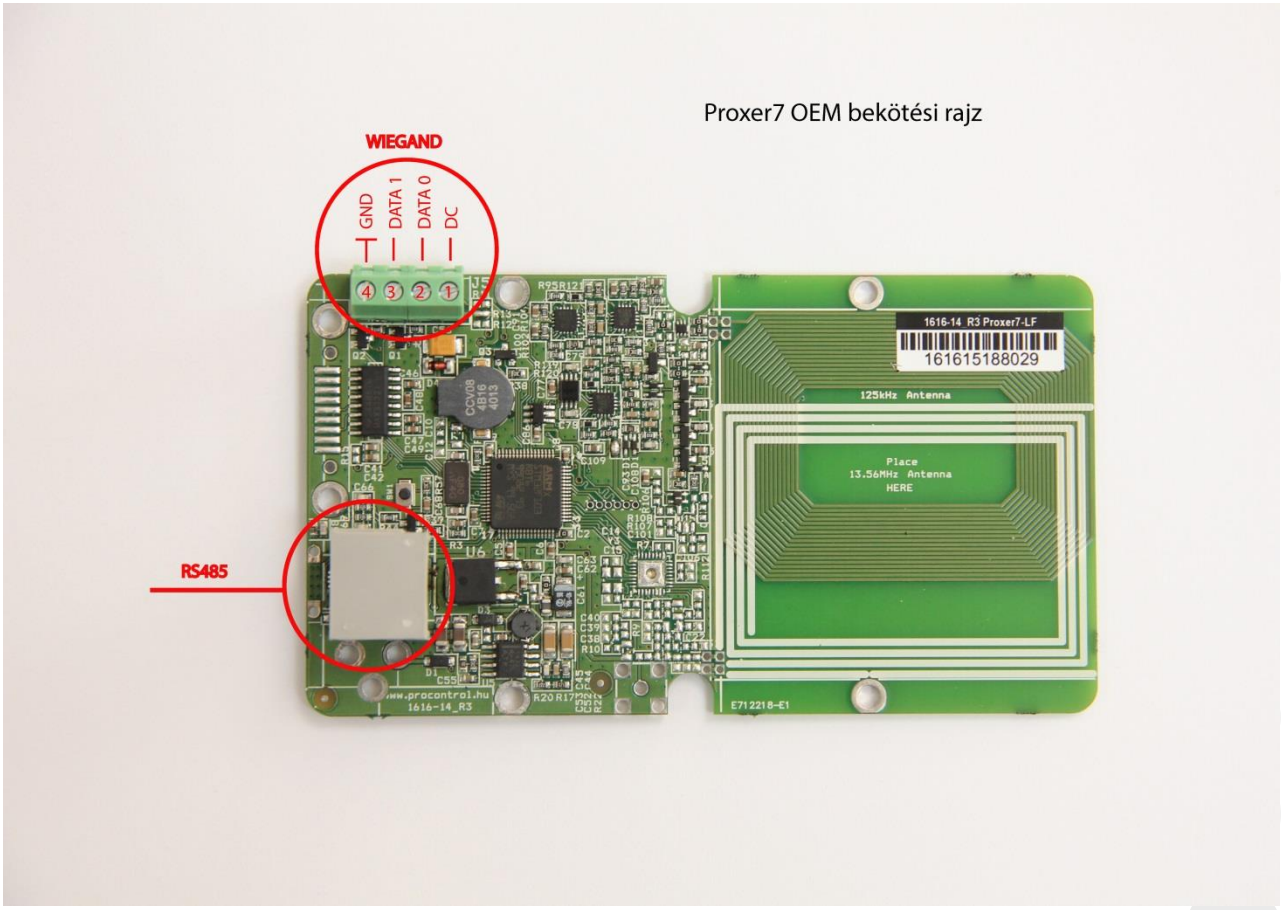
Other operating systems to use (OS X, Linux) we recommend the USB HID device emulation (keyboard emulation).

Technical drawings

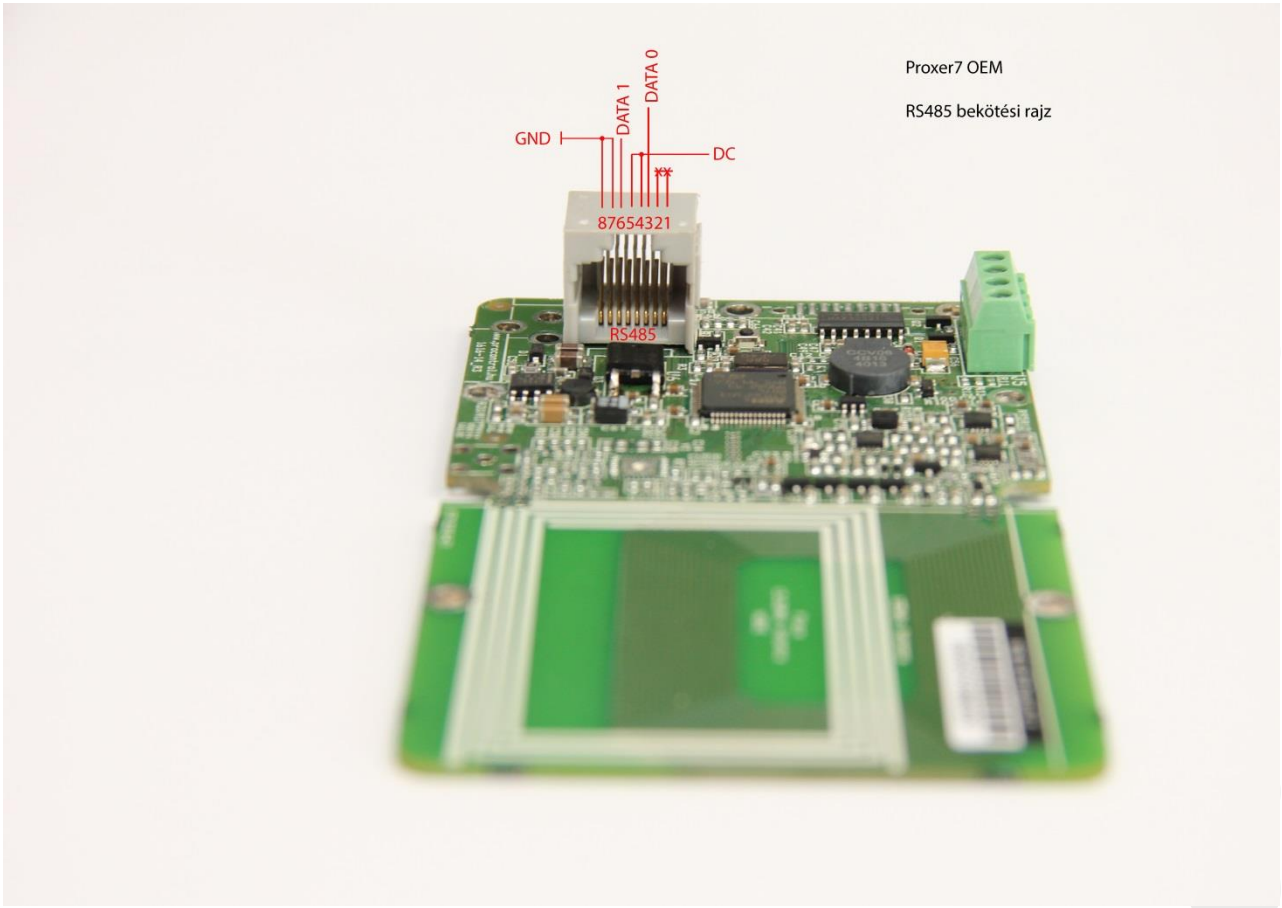


Wiring, connection

Proxer7 OEM (1)



Proxer7 OEM (2)



Proxer7-FF-232

Technical supports

Should you have any problems or need assistance with you Procontrol Products, please feel free to contact our support department by any of the means below:

Procontrol Electronics Ltd.

www.procontrol.hu

6725 Szeged, Cserepes sor 9/b.

Tel: (62) 444-007

Fax: (62) 444-181

Email: info@procontrol.hu

Service:

Email: service@procontrol.hu