

Annex no. 5

Functional Description / User Manual

INSTALLATION



ID ISC.PRH200

Mobile Reader



(English)

Note

© Copyright 2014 by

FEIG ELECTRONIC GmbH

Lange Strasse 4

D-35781 Weilburg

Tel.: +49 6471 3109-0

<http://www.feig.de>

With the edition of this document, all previous editions become void. Indications made in this manual may be changed without previous notice.

Copying of this document, and giving it to others and the use or communication of the contents thereof are forbidden without express authority. Offenders are liable to the payment of damages. All rights are reserved in the event of the grant of a patent or the registration of a utility model or design.

Composition of the information in this document has been done to the best of our knowledge. FEIG ELECTRONIC GmbH does not guarantee the correctness and completeness of the details given in this manual and may not be held liable for damages ensuing from incorrect or incomplete information. Since, despite all our efforts, errors may not be completely avoided, we are always grateful for your useful tips.

The instructions given in this manual are based on advantageous boundary conditions. FEIG ELECTRONIC GmbH does not give any guarantee promise for perfect function in cross environments and does not give any guaranty for the functionality of the complete system which incorporates the subject of this document.

FEIG ELECTRONIC call explicit attention that devices which are subject of this document are not designed with components and testing methods for a level of reliability suitable for use in or in connection with surgical implants or as critical components in any life support systems whose failure to perform can reasonably be expected to cause significant injury to a human. To avoid damage, injury, or death, the user or application designer must take reasonably prudent steps to protect against system failures.

FEIG ELECTRONIC GmbH assumes no responsibility for the use of any information contained in this document and makes no representation that they free of patent infringement. FEIG ELECTRONIC GmbH does not convey any license under its patent rights nor the rights of others.

OBID® and OBID i-scan® are registered trademarks of FEIG ELECTRONIC GmbH.

my-d® is a registered trademark of Infineon Technologies AG

I-CODE® is a registered trademark of Philips Electronics N.V.

Tag-it™ is a registered trademark of Texas Instruments Incorporated.

Contents

1	Safety Instructions / Warning - Read before Start-Up	5
1.1	Safety Instructions / Warning - Lithium-ion battery	6
1.2	Lithium-ion batteries – Return and Transport	7
1.3	Maintenance.....	8
1.4	Assembly of the wrist strap	8
2	Performance Features of the mobile Reader ID ISC.PRH200	9
2.1	Performance Features	9
2.2	Available Reader Types.....	10
2.3	Available Spare Parts	10
2.4	Delivery contents.....	10
3	Start-up	11
3.1	Side view, Button & LED's	11
3.2	Charge the battery	12
4	First Wi-Fi connection with the Reader and scanning transponder	13
4.1	Connection in Access point Mode.....	13
4.2	How to configure the Reader in client mode.....	16
4.3	Set Wi-Fi parameter to default	18
4.4	Wi-Fi Interfaces	20
5	Control and Display Elements	21
5.1	Buttons	21
5.1	HF-ON Motion Detector	22
5.2	LEDs	23
5.3	Buzzer.....	24
6	Configuration and testing the Reader using ISOStart	25

7	Approvals	30
7.1	Europe (CE).....	30
7.2	USA (FCC) and Canada (IC)	31
7.3	Label Information Reader ID ISC.PRH200	33
7.3.1	USA (FCC) and Canada (IC) approved antennas.....	34
8	Technical Data	35

1 Safety Instructions / Warning - Read before Start-Up

- The device may only be used for the intended purpose designed by for the manufacturer.
- The operation manual should be conveniently kept available at all times for each user.
- Unauthorized changes and the use of spare parts and additional devices which have not been sold or recommended by the manufacturer may cause fire, electric shocks or injuries. Such unauthorized measures shall exclude any liability by the manufacturer.
- The liability-prescriptions of the manufacturer in the issue valid at the time of purchase are valid for the device. The manufacturer shall not be held legally responsible for inaccuracies, errors, or omissions in the manual or automatically set parameters for a device or for an incorrect application of a device.
- Repairs may only be executed by the manufacturer.
- Installation, operation, and maintenance procedures should only be carried out by qualified personnel.
- Use of the device and its installation must be in accordance with national legal requirements and local electrical codes .
- When working on devices the valid safety regulations must be observed.
- Please observe that some parts of the device may heat severely.
- For installation and dismantling you should wear suitable safety gloves, because parts of antenna housing could be sharp-edged.



The device is not water proof and should not be exposed to rain or humidity.

Under extreme circumstances water could seep into the device and damage the electronic circuits.

Special advice for wearers of cardiac pacemakers:

- Although this device doesn't exceed the valid limits for electromagnetic fields you should keep a minimum distance of 25 cm between the device and your cardiac pacemaker. Do not holding the reader antenna for any length of time in an immediate proximity of the cardiac pacemakers

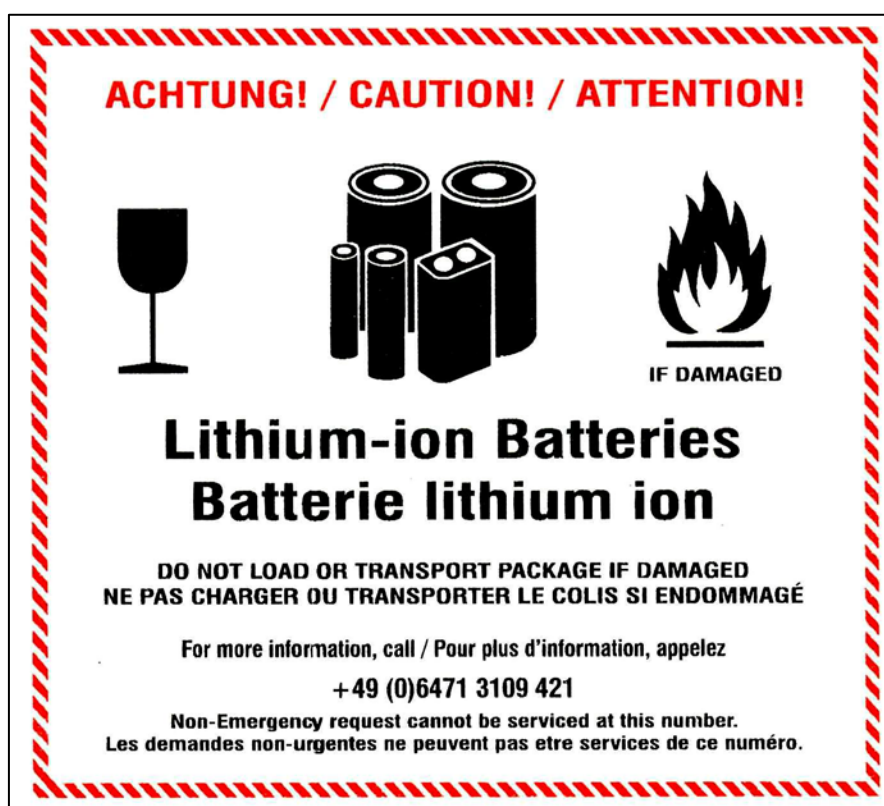
1.1 Safety Instructions / Warning - Lithium-ion battery

- Use the battery only in the intended device from Typ ID ISC.PRH200.
- Improper use, damaged chargers or battery packs of injury and fire hazard
- Expose the battery pack for no deviating from the technical data of environmental influences. Moisture and water, dust, heat, shocks and pressure can damage or destroy the battery pack.
- To use a damaged, deformed or not original sealed battery pack is prohibited. You must be disposed of properly and Expertly and may no longer be shipped in Packet
- Lithium-ion batteries must not be in the trash, they must be disposed of separately. Find out. upon the local authorities to suitable collection
- Charge the battery only with the original by FEIG ELECTRONIC GmbH supplied battery charger.
- During charging, the ambient temperature should be between 10°C and maximum 45 °C. A slight warming of the battery during charging and in use is normal.
- Store your battery in a cool, dry place. Permitted temperature range according to technical data.
- The battery pack must never be shorted out. A short-circuit the battery pack can be very hot, break and break explosively
- Avoid reverse polarity of positive and negative poles. The battery pack may be damaged or destroyed.
- Do not heat or throw the battery pack of in fire. Do not charge and leave the battery pack at the high temperature. The battery pack may ignite explosively and break
- Never disassemble the battery pack. If disassembled battery pack, safety protection circuit may cause breaking and not operated safety system for charge and discharge. May cause heating, igniting and breaking of cell.
- Do not solder to terminal of battery pack. Safety protection circuit may cause breaking and may be not operated safety system for charge and discharge. If heat up battery pack over 90°C, plastic parts may be melting and cell may be leaking and may cause heating, igniting and breaking by short-circuit internally.
- Do not subject the battery and replace the battery, no strong shocks or a strong impact.
- Do not leave the battery unattended during charging.
- Make sure that the battery label always remain on the battery pack. The information's printed on the label have to be visible during handling the battery pack.

1.2 Lithium-ion batteries – Return and Transport

Please note the following instructions for disposal or return and transport of Li-Ion batteries:

- Do not load or transport Li-Ion batteries if damaged. If you have any doubts, please contact our technical support under obid-support@feig.de or phone +49 (0) 6471 3109 421.
- If the packaging is damaged, the packaging must be replaced by an undamaged original packaging before further transport.
- Li-Ion Batteries may only be returned in their original condition and packaging.
- **The shipping regulations must be observed.**
- In the case of a return, the following label is clearly visible attached to the parcel:



Print out this sheet in A4 format in color, cut it out and attach the label clearly visible on the package.

1.3 Maintenance

The reader ID ISC.PRH200 is a design product with high quality surfaces, and should always be handled with caution. The Device was designed to work reliably and flawlessly for years without special maintenance.



Attention! The surfaces should be cleaned with a clean, soft cloth dampened in a dishwashing liquid – water solution.

To improve the durability and the appearance, please follow the instructions below:

- Keep the reader clean and take care the reader is not scratched. Also regularly apply specific antistatic products for acrylic surfaces.
- Regularly remove dust and other impurities with a soft cloth and a solution of water with a little dishwashing liquid.
- Keep the reader dry. All kinds of moisture should be avoided during operation and storage. Precipitation, humidity and liquids contain minerals that will corrode electronic circuits and damaging transparent plastic parts.
- Avoid storing or operating the reader at dirty or wet locations. The surfaces or electronic components may be-damaging.

If any device not working properly, please contact the appropriate representative.

1.4 Assembly of the wrist strap

The included hand strap is mounted on the provided eyelet and tightened.
To avoid damage, the hand strap to secure it against falling should always be used.



Fig. 1: Assembly of the wrist strap

2 Performance Features of the mobile Reader ID ISC.PRH200

2.1 Performance Features

ID ISC.PRH200 is a compact, wireless handheld reader, designed for contactless data exchange with ISO 15693 transponders, especially in libraries. Typical applications are:

- Inventory (Inventory books or other media in the shelf)
- Sorting of books or media in a shelf
- Locate a book or media in a shelf or box,
- automatic checking / rewriting of the AFI bytes of all media.

Further applications are laundries, logistical processes as well as document and asset management. In these areas it is possible to work with ISO 18000-3M3 transponders, optionally.

Depending on the type of media and the reading distance, the output power can be switched between two levels (Standard Mode: 1.5 W and Boost Mode: 4 W). Power supply is a Lithium Ion rechargeable battery that allows for operating times up to 16 hours*.

If necessary, the battery can be replaced easily and quickly.

5 multi-colored LED lights and an integrated sounder act as display elements. Thereby all relevant states are visible on both sides of the device.

Communication with a data base or computer take place through a Wi-Fi interface on the reader, that supports the most common encryption protocols.

2.2 Available Reader Types

Article No.	Reader	Description
4213.000.00	ID ISC.PRH200	Mobile Reader with rechargeable battery and Wi-Fi-Interface

Table 1: Available Reader Types

2.3 Available Spare Parts

Article No.	Spare part	Description
4214.000.00	ID ISC.SRB Spare Rechargeable Battery	Spare or additional battery-pack
4215.000.00	ID CHA.Li-Ion Recharger	Spare charger for battery-pack

Table 2: Available Spare parts

2.4 Delivery contents

- Mobile Reader with battery and Wi-Fi-Interface
- Lithium-ion battery pack
- Wall power charger & Adapter Set for international socket-outlet
- Wrist strap
- Installation instructions

3 Start-up

3.1 Side view, Button & LED's

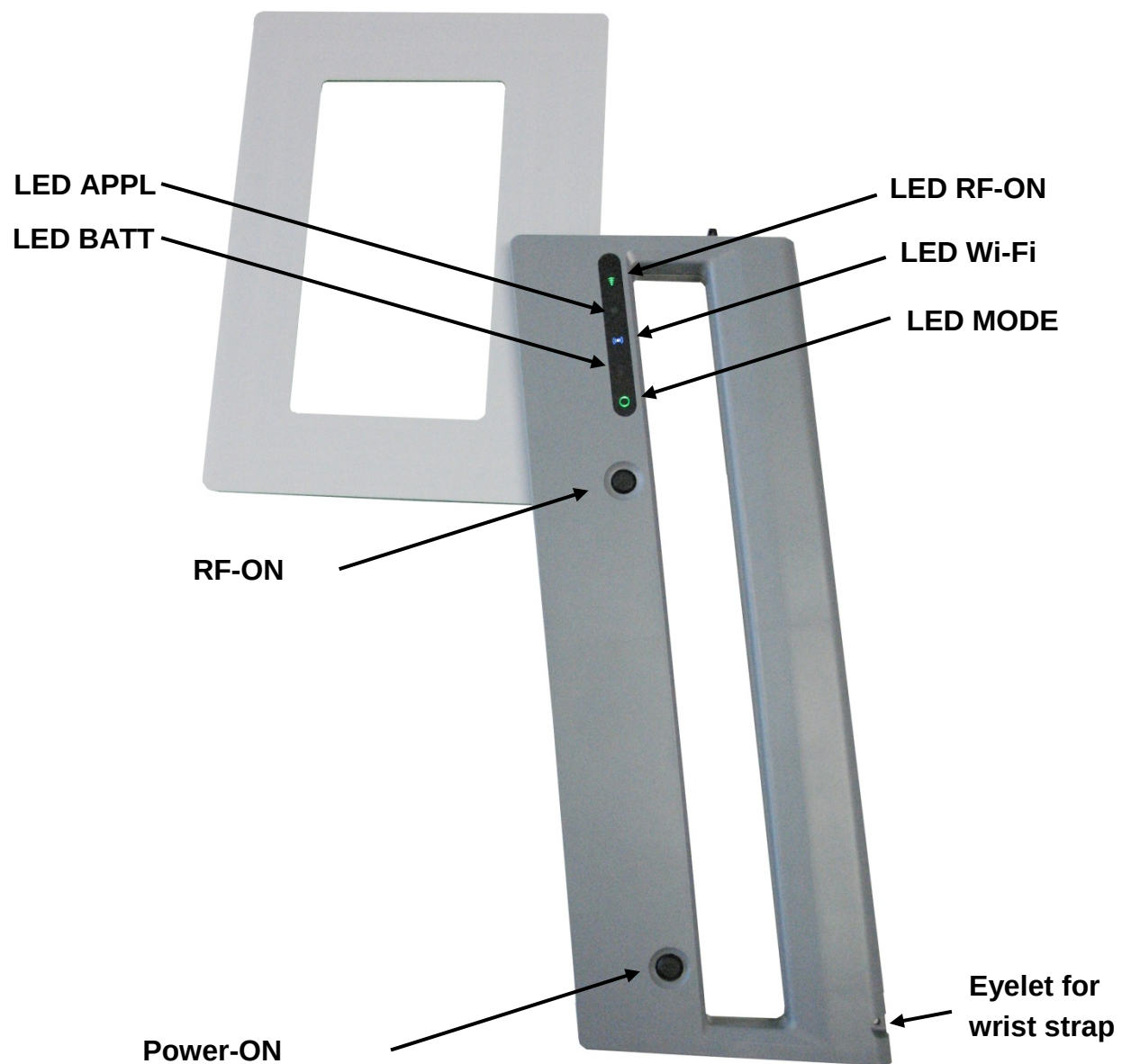


Fig. 2: Housing ID ISC.PRH200

3.2 Charge the battery

The battery pack is charged using the supplied charger. For this, the Mini-DIN connector from the charger is plugged into the side the battery pack. After installation of the adapter socket for the charger, the charger must be connected to the mains. The charging will take 2-4 hours. The battery is fully charged when the green LED remains lit on the power supply.

The device is supplied with three different removable adapter / plug:

Adapter	Country of use
	EU
	US / Canada / Japan
	Great Britain

Table 3: Removable adapter for the charger



Fig. 3: Charger with battery pack

Note:

A new battery is delivered almost uncharged. Therefore, it must be fully charged before use.

A new battery has not until after the second or third charging / discharging the full capacity. This also applies after a break of operation of a few months.

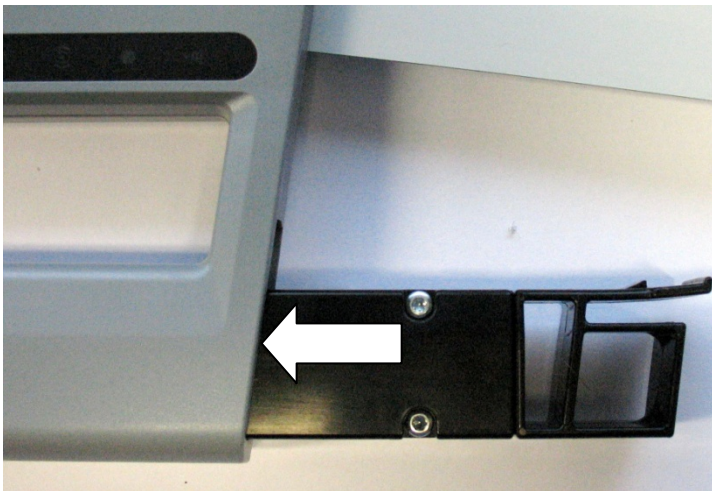
4 First Wi-Fi connection with the Reader and scanning transponder

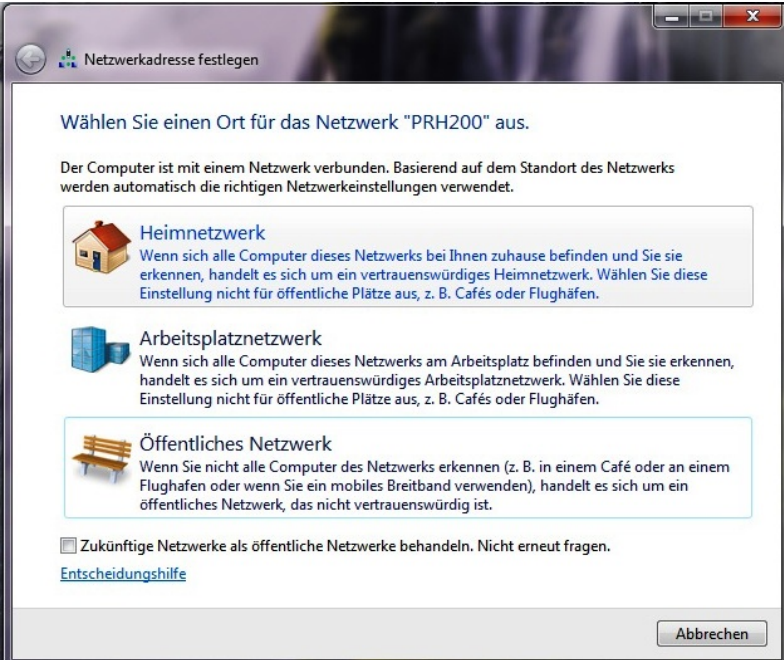
Before first use, the battery pack should be charged. See [3.2 Charge the battery](#). The battery pack must be connected to the charger. The charging will take 2-4 hours. The battery is fully charged when the green LED remains lit on the power supply.

To configure the Reader you will need the software tool ISOStart Version 9.07 or higher on a personal computer running under Microsoft® Windows® with Wi-Fi interface. The service tool can be downloaded from the Download Area of the FEIG Homepage www.feig.de.

The delivered reader is set on to the factory default settings and works as a "Access Point" and generates its own wireless network with the name (SSID) "**PRH200**" without encryption. The wireless interface of the corresponding PC or laptop must be configured to "Client Mode" and DHCP "ON".

4.1 Connection in Access point Mode

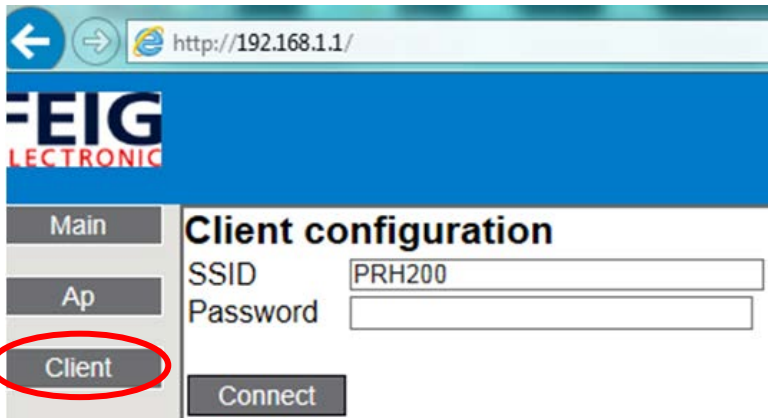
No.	Step	Note
1.	Boot the Computer boot with Wi-Fi on.	
2.	Adopt the battery pack plug into the slot on the reader. The battery pack clicks into place.	
3.	Reader ON: Short press on Power-ON Button.	

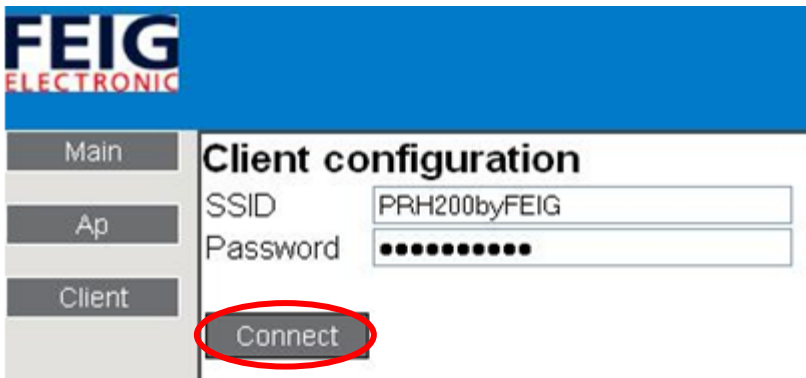
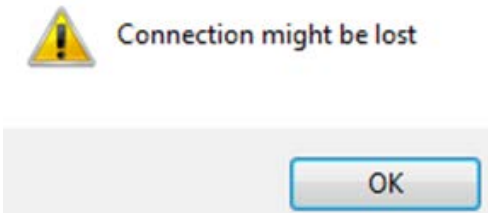
No.	Step	Note
4.	LED MODE (green) will light and LED Wi-Fi flashes slowly. After about 5 seconds, the Wi-Fi LED flashes with about 8 Hz	
5.	Open window "Wireless Connections" on your PC and search for the network name (SSID) PRH200.	
6.	Connect to the network PRH200.	
7.	Confirm the network "PRH200" as a home or workplace network.	
8.	Your Computer connects to the Reader PRH200, now	

No.	Step	Note
9.	The white LED Wi-Fi is off, the green LED MODE remains on.	
10.	For the configuration and testing the Reader the demo program “ISOStart” can be used (Version 9.7.1 or higher). The next steps are described in the chapter: <u>Configuration and testing the Reader using ISOStart</u> Or As an alternative the demo tool „PRH200-Demo“ can be used. The description for this tool you will find in the document H40310-0e-ID-B.pdf	

4.2 How to configure the Reader in client mode

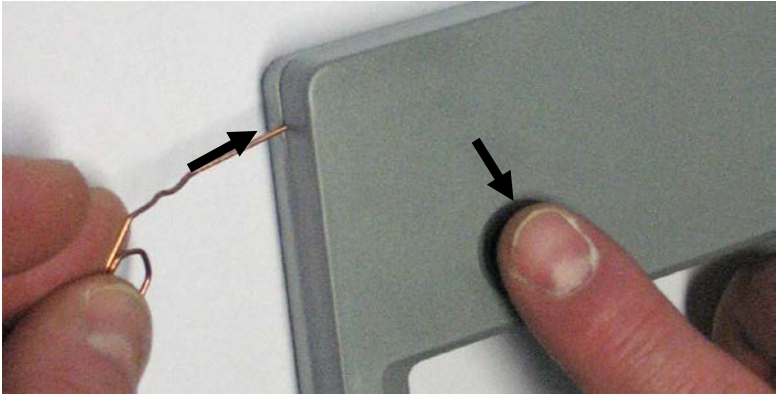
For using the Reader in an existing WLAN infrastructure it will be necessary to configure the reader into the Client Mode. For configuring the reader into the Client Mode the WEB-interface of the reader can be used. With the help of a standard Browser on a Laptop, Smartphone or Tablet PC you can get access to the reader Web-interface by using the reader default IP address 192.168.1.1.

No.	Step	Note
1.	Connect the Reader ID ISC.PRH200	Connect the Reader in the Access Mode via WLAN to a Laptop, Smart Phone or Tablet PC as described in the chapter 4.1 Connection in Access point Mode
2.	Open a Browser and write the TCP/IP Adresse 192.168.1.1.	
3.	Choose the „Client“ button	

No.	Step	Note												
4.	Set the SSID and the Password (Key) of the WLAN network (Router) and confirm with “Connect” button. The IP address and the deciphering keys will be programmed automatically into the reader.													
5.	Confirm the warning message with a click on the „OK“ button.													
6.	The Reader performs a reset. Afterward the Mode LED (green) lights and the WLAN LED flashes slowly. After approx. 5 seconds the WLAN LED flashes with approx. 4 Hz.													
7.	As soon as the WLAN LED goes off the WLAN connection is ready to use.													
8.	Check the WLAN Client-List in the router WEB-interface. There the new IP address assigned by DHCP will be shown.	 <table><tr><th>Client Host Name</th><th>IP Address</th><th>MAC Address</th><th>Expires</th></tr><tr><td>nb272-meissner</td><td>172.168.10.100</td><td>00:14:C2:E5:4D:DC</td><td>23:57:27</td></tr><tr><td>prh200.feig</td><td>172.168.10.101</td><td>00:07:80:86:6E:53</td><td>23:59:20</td></tr></table>	Client Host Name	IP Address	MAC Address	Expires	nb272-meissner	172.168.10.100	00:14:C2:E5:4D:DC	23:57:27	prh200.feig	172.168.10.101	00:07:80:86:6E:53	23:59:20
Client Host Name	IP Address	MAC Address	Expires											
nb272-meissner	172.168.10.100	00:14:C2:E5:4D:DC	23:57:27											
prh200.feig	172.168.10.101	00:07:80:86:6E:53	23:59:20											

4.3 Set Wi-Fi parameter to default

Are the Wi-Fi parameter unknown or should the device be integrated into other network, all parameters to the factory settings can be set to default by a hardware reset..

No.	Step	Note
1.	Insert a thin wire (e.g. paper clip) in the hole for the reset button and hold it down. At the same time press button Power ON shortly	
2.	Hold the Reset Button for <u>5 seconds</u> .	The Reader starts and the 5 LEDs flash alternately
3.	Now, all LEDs flash at 2 Hz at the same time	
4.	Now: Release the Reset Button	
5.	Immediately afterwards, press the Button Power-ON for 5 Seconds. -> The Reader switched off	

No.	Step	Note
6.	Short press on Power-ON Button to reboot the reader	
7.	The Wi-Fi Modul is on default values, now. SSID: PRH200 Unsecured Wireless Network Mode: Access Point	

4.4 Wi-Fi Interfaces

The Reader has a built-in wireless interface according to the IEEE 802.11 b/g /n standard and can be configured in "Access Point" or the "Client Mode". The encryption protocols WEP / WPA / WPA2 are supported.

The Reader on delivery or factory setting is configured as "Access Point" and generates its own wireless network with the name (SSID) "PRH200" without encryption. The wireless interface of the corresponding PC or laptop must be configured to "Client Mode" and DHCP "ON".

The reader default settings of the Wi-Fi interface are:

Parameter	Default setting
SSID	PRH200
Password	-
DHCP	ON
Encryption	OFF
Mode	Access Point

Table 4: Default configuration of the reader Wi-Fi interface

Network	Address
IP-Address	192.168.1.1
Subnet-Mask	255.255.0.0
Port	10001
DHCP	ON

Table 5: Default configuration of the reader (Wi-Fi) Ethernet Interface

Note:

- The Reader has a TCP/IP interface with DHCP that is turned on at the factory.
- It is recommended to configure a new network name (SSID) and the encryption according WPA/WAP2 after commissioning.
- *The minimum WPA2 encryption key length is 8 characters.*

5 Control and Display Elements

5.1 Buttons

Button	Function / Description
RF-ON (upper)	"RF / Antenna power switch ON / OFF" - State antenna OFF Short press -> The RF-Power of the antenna will be switched ON - State Antenna ON Short press -> The RF-Power of the antenna will be switched OFF
Power-ON (Lower)	Power ON / OFF / Reader Mode - State Reader OFF: Short press -> Reader ON, Standard Mode - State Reader ON Short press -> Change Mode between Standard and Boost Mode) Long press -> Reader OFF

Table 6: Function of the Buttons

Note:

- The RF power of antenna is automatically switched OFF after a certain time if no transponder has been detected. The power Management is configurable in CFG21. Use parameter "RF-Field: minimum on-time"
- After the "RF-Field: maximum on-time" has expired the reader antenna power will switch off in any case.
- After switching off the antenna power and end of the "Power on-time" in CFG21, the complete Reader will turn off automatically.

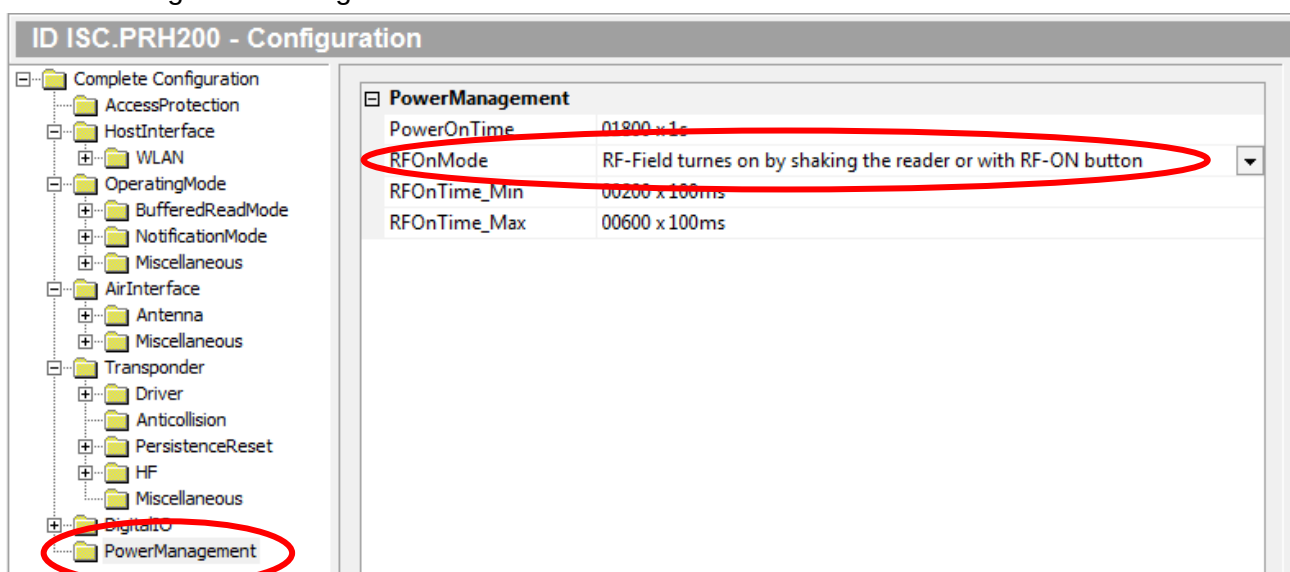
5.1 HF-ON Motion Detector

Due to shaking the Reader in the forward direction effectual and a fast movement the HF-field can be switched on alternatively to the use of the HF-ON button.

For this the reader should be held in the center or the upper part of the handle.



The function of the movement detector can be enabled and disabled in “PowerManagement” of the Reader configuration using ISOStart.



5.2 LEDs



Fig. 4: LED (Double sided)

Table 6 show the function of the LEDs (Order from top to down).

LED	Function / Description
LED RF-ON (green/blue)	"RF-ON / Transponder" - Green: The antenna is powered - Blue: One or more transponder are detected
LED APPL (green, red)	„Application / Special function“ - Controlled by command „Set Output“ - Green: Special functions enabled (Locate Transponder by UID, data, AFI functions) - Red: Special functions: Transponder detected
LED Wi-Fi (white)	„Wi-Fi“ - OFF: Reader is connected via Wi-Fi to the Host - Flash: Wi-Fi connection runs Wi-Fi device lost connection
LED BATT (orange, red)	"Battery Status" - OFF: Battery charged - Orange: Battery reaches 15% of charge capacity, Boost Mode isn't possible. - Red: Battery empty the antenna can't switched on. - Red (flashing): Automatic shut-off after 5 seconds
LED MODE (green, white)	Power-On / Reader Mode - Normal Mode : green - Boost Mode: white

Table 7: Configuration of the LEDs

5.3 Buzzer

The reader has a integrated buzzer.

The buzzer will be activated, if at least one of the configuration bits in the “Digital IO” is enabled.

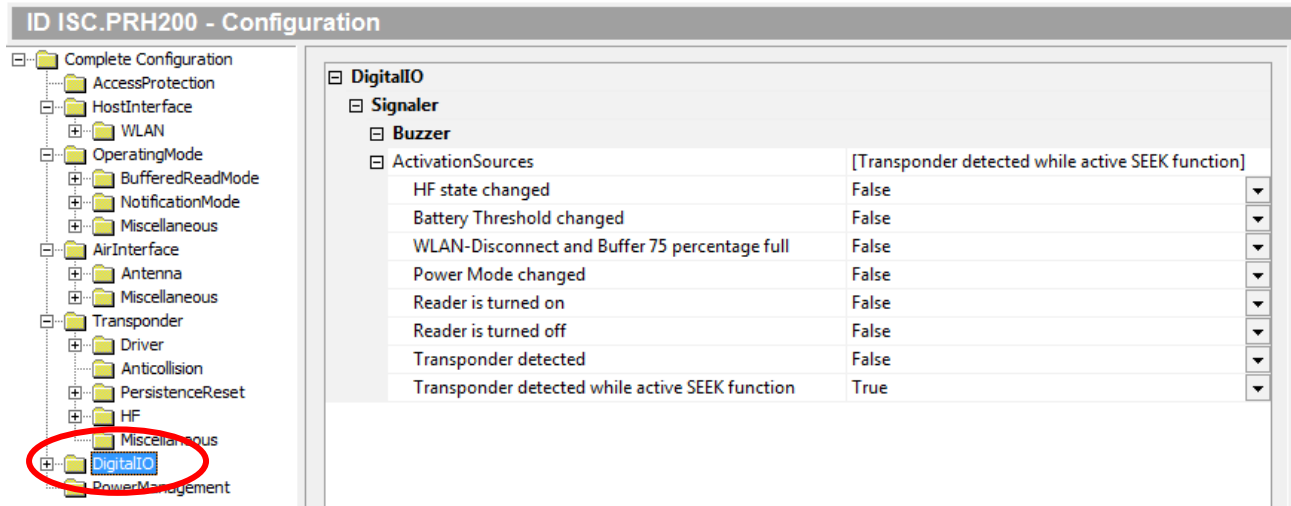
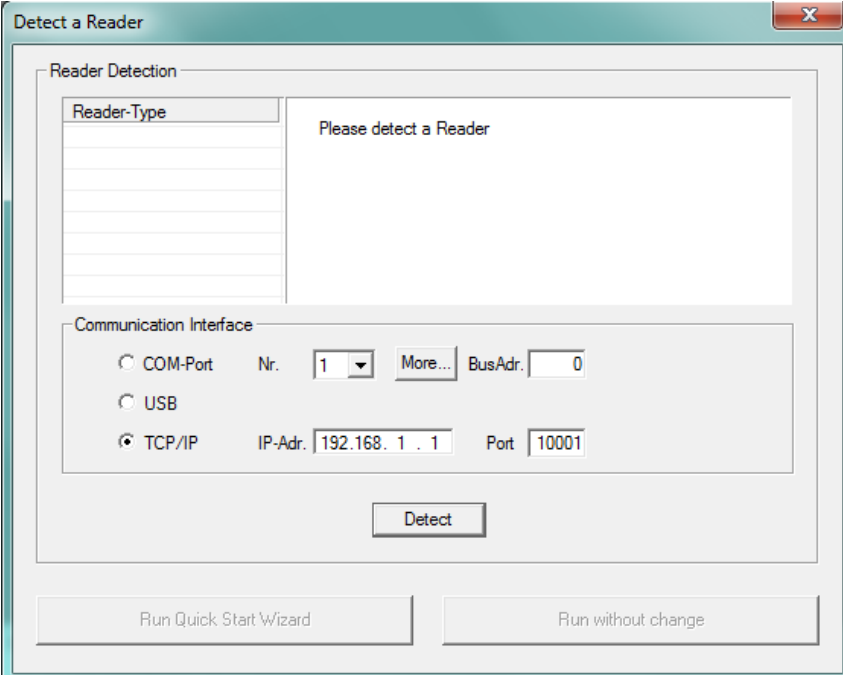
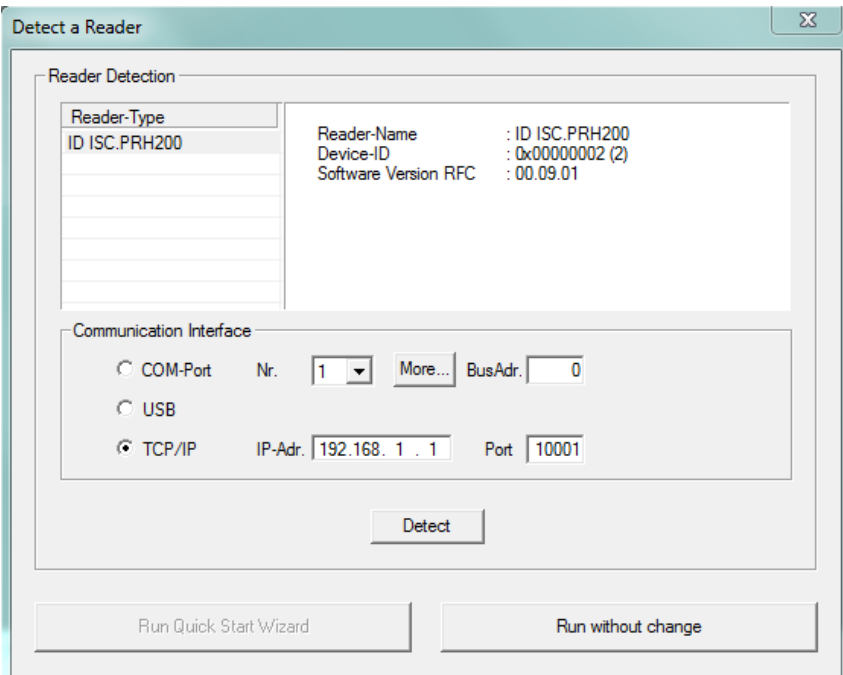
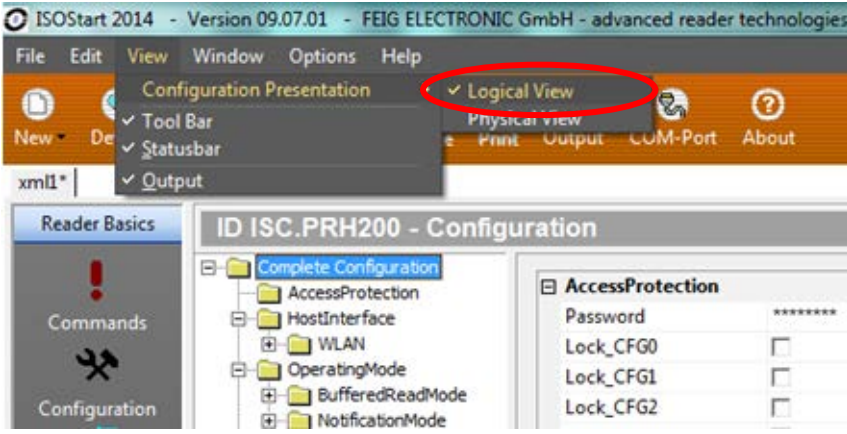
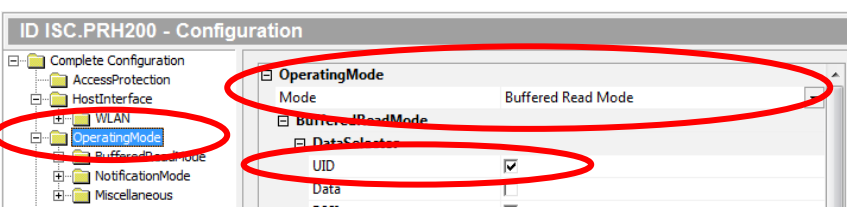
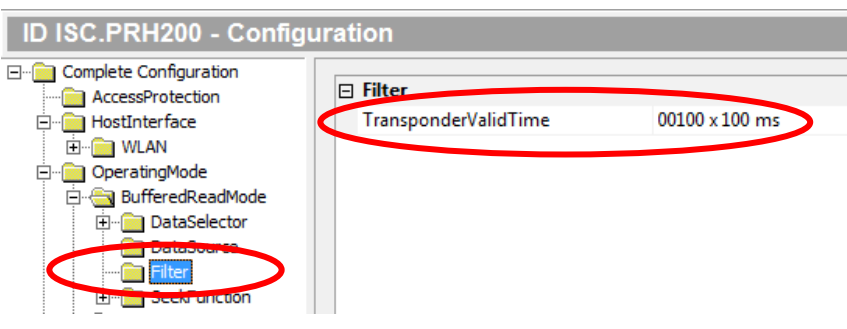


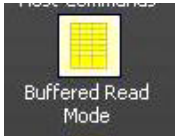
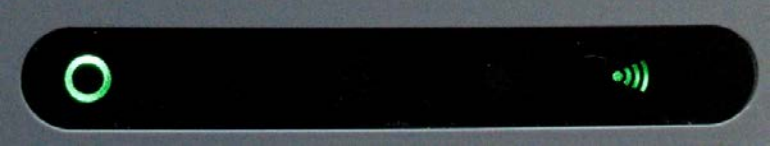
Fig. 5: Configuration of the Digital IO

6 Configuration and testing the Reader using ISOStart



1.	Select „Detect“ with TCP/IP Address 192.168.1.1. and Port 10001	
2.	Select „Run without change“ This has to be done at each start of ISO-Start program otherwise the configuration of the reader will be changed by the wizard.	

3.	Select the "Logical View" for the reader configuration settings	
4.	Select "Configuration"	
5.	Select "Operating Mode" and then choose "Buffered Read Mode" for the reader Mode and mark "UID" as data.	
6.	Set by a click on „Apply“.	
7.	Select "Filter" and set the „TransponderValid Time“. E.g. 10s	
8.	Set by a click on „Apply“	

9.	Select „Buffered Read Mode“	
10.	Select Button „Initialize“ to clear the data buffer of the reader	
11.	Press button RF-ON to enable the antenna power	
12.	The LED RF ON is lit green	

13.	Move the reader antenna along the media or Tranponder	
14.	If valid data is detected LED HF -ON lit blue	
15.	After the end of the reading antenna process, switch OFF the RF antenna power	
16.	LED HF_ON goes off	
17.	Select „Start“ Button to transfer the data from the reader to your Computer	

18.	All stored transponder data sets are listed in the ISO Start window. The number of data sets and the total processing time is displayed in the header	<table><tr><th colspan="4">ID ISC.PRH200 - Buffered Read Mode - 49 Records</th></tr><tr><th>No.</th><th>Type</th><th>Serial No.</th><th>Data Block</th></tr><tr><td>17</td><td>ISO 15693</td><td>E00781BCC18D6815</td><td></td></tr><tr><td>18</td><td>ISO 15693</td><td>E00781BCC18D8366</td><td></td></tr><tr><td>19</td><td>ISO 15693</td><td>E00781BCC18D6116</td><td></td></tr><tr><td>20</td><td>ISO 15693</td><td>E00781BCC18D710E</td><td></td></tr><tr><td>21</td><td>ISO 15693</td><td>E00781BCC18D723C</td><td></td></tr><tr><td>22</td><td>ISO 15693</td><td>E00781BCC18D6712</td><td></td></tr><tr><td>23</td><td>ISO 15693</td><td>E00781BCC18D964E</td><td></td></tr><tr><td>24</td><td>ISO 15693</td><td>E00781BCC18D8451</td><td></td></tr><tr><td>25</td><td>ISO 15693</td><td>E00781BCC18D6929</td><td></td></tr><tr><td>26</td><td>ISO 15693</td><td>E00781BCC18D8458</td><td></td></tr><tr><td>27</td><td>ISO 15693</td><td>E00781BCC18D5F24</td><td></td></tr><tr><td>28</td><td>ISO 15693</td><td>E00781BCC18D6123</td><td></td></tr><tr><td>29</td><td>ISO 15693</td><td>E00781BCC18D835F</td><td></td></tr><tr><td>30</td><td>ISO 15693</td><td>E00781BCC18D653F</td><td></td></tr><tr><td>31</td><td>ISO 15693</td><td>E00781BCC18D5F31</td><td></td></tr><tr><td>32</td><td>ISO 15693</td><td>E00781BCC18D6C2F</td><td></td></tr><tr><td>33</td><td>ISO 15693</td><td>E00781BCC18D6E42</td><td></td></tr><tr><td>34</td><td>ISO 15693</td><td>E00781BCC18D7D4A</td><td></td></tr><tr><td>35</td><td>ISO 15693</td><td>E00781BCC18D8950</td><td></td></tr><tr><td>36</td><td>ISO 15693</td><td>E00781BCC18D8F46</td><td></td></tr><tr><td>37</td><td>ISO 15693</td><td>E00781BCC18D7F31</td><td></td></tr><tr><td>38</td><td>ISO 15693</td><td>E00781BCC18D8869</td><td></td></tr><tr><td>39</td><td>ISO 15693</td><td>E00781BCC18D6E28</td><td></td></tr><tr><td>40</td><td>ISO 15693</td><td>E00781BCC18D682D</td><td></td></tr><tr><td>41</td><td>ISO 15693</td><td>E00781BCC18D7E0F</td><td></td></tr><tr><td>42</td><td>ISO 15693</td><td>E00781BCC18D8F55</td><td></td></tr><tr><td>43</td><td>ISO 15693</td><td>E00781BCC18D6F43</td><td></td></tr><tr><td>44</td><td>ISO 15693</td><td>E00781BCC18D586A</td><td></td></tr><tr><td>45</td><td>ISO 15693</td><td>E00781BCC18D7E16</td><td></td></tr><tr><td>46</td><td>ISO 15693</td><td>E00781BCC18D8D4A</td><td></td></tr><tr><td>47</td><td>ISO 15693</td><td>E00781BCC18D8E4D</td><td></td></tr><tr><td>48</td><td>ISO 15693</td><td>E00781BCC18D6819</td><td></td></tr><tr><td>49</td><td>ISO 15693</td><td>E00781BCC18D8C55</td><td></td></tr></table>	ID ISC.PRH200 - Buffered Read Mode - 49 Records				No.	Type	Serial No.	Data Block	17	ISO 15693	E00781BCC18D6815		18	ISO 15693	E00781BCC18D8366		19	ISO 15693	E00781BCC18D6116		20	ISO 15693	E00781BCC18D710E		21	ISO 15693	E00781BCC18D723C		22	ISO 15693	E00781BCC18D6712		23	ISO 15693	E00781BCC18D964E		24	ISO 15693	E00781BCC18D8451		25	ISO 15693	E00781BCC18D6929		26	ISO 15693	E00781BCC18D8458		27	ISO 15693	E00781BCC18D5F24		28	ISO 15693	E00781BCC18D6123		29	ISO 15693	E00781BCC18D835F		30	ISO 15693	E00781BCC18D653F		31	ISO 15693	E00781BCC18D5F31		32	ISO 15693	E00781BCC18D6C2F		33	ISO 15693	E00781BCC18D6E42		34	ISO 15693	E00781BCC18D7D4A		35	ISO 15693	E00781BCC18D8950		36	ISO 15693	E00781BCC18D8F46		37	ISO 15693	E00781BCC18D7F31		38	ISO 15693	E00781BCC18D8869		39	ISO 15693	E00781BCC18D6E28		40	ISO 15693	E00781BCC18D682D		41	ISO 15693	E00781BCC18D7E0F		42	ISO 15693	E00781BCC18D8F55		43	ISO 15693	E00781BCC18D6F43		44	ISO 15693	E00781BCC18D586A		45	ISO 15693	E00781BCC18D7E16		46	ISO 15693	E00781BCC18D8D4A		47	ISO 15693	E00781BCC18D8E4D		48	ISO 15693	E00781BCC18D6819		49	ISO 15693	E00781BCC18D8C55	
	ID ISC.PRH200 - Buffered Read Mode - 49 Records																																																																																																																																													
	No.	Type	Serial No.	Data Block																																																																																																																																										
	17	ISO 15693	E00781BCC18D6815																																																																																																																																											
	18	ISO 15693	E00781BCC18D8366																																																																																																																																											
	19	ISO 15693	E00781BCC18D6116																																																																																																																																											
	20	ISO 15693	E00781BCC18D710E																																																																																																																																											
	21	ISO 15693	E00781BCC18D723C																																																																																																																																											
	22	ISO 15693	E00781BCC18D6712																																																																																																																																											
	23	ISO 15693	E00781BCC18D964E																																																																																																																																											
	24	ISO 15693	E00781BCC18D8451																																																																																																																																											
	25	ISO 15693	E00781BCC18D6929																																																																																																																																											
	26	ISO 15693	E00781BCC18D8458																																																																																																																																											
	27	ISO 15693	E00781BCC18D5F24																																																																																																																																											
	28	ISO 15693	E00781BCC18D6123																																																																																																																																											
	29	ISO 15693	E00781BCC18D835F																																																																																																																																											
	30	ISO 15693	E00781BCC18D653F																																																																																																																																											
	31	ISO 15693	E00781BCC18D5F31																																																																																																																																											
	32	ISO 15693	E00781BCC18D6C2F																																																																																																																																											
	33	ISO 15693	E00781BCC18D6E42																																																																																																																																											
	34	ISO 15693	E00781BCC18D7D4A																																																																																																																																											
	35	ISO 15693	E00781BCC18D8950																																																																																																																																											
	36	ISO 15693	E00781BCC18D8F46																																																																																																																																											
	37	ISO 15693	E00781BCC18D7F31																																																																																																																																											
	38	ISO 15693	E00781BCC18D8869																																																																																																																																											
	39	ISO 15693	E00781BCC18D6E28																																																																																																																																											
	40	ISO 15693	E00781BCC18D682D																																																																																																																																											
	41	ISO 15693	E00781BCC18D7E0F																																																																																																																																											
	42	ISO 15693	E00781BCC18D8F55																																																																																																																																											
	43	ISO 15693	E00781BCC18D6F43																																																																																																																																											
	44	ISO 15693	E00781BCC18D586A																																																																																																																																											
	45	ISO 15693	E00781BCC18D7E16																																																																																																																																											
	46	ISO 15693	E00781BCC18D8D4A																																																																																																																																											
	47	ISO 15693	E00781BCC18D8E4D																																																																																																																																											
	48	ISO 15693	E00781BCC18D6819																																																																																																																																											
	49	ISO 15693	E00781BCC18D8C55																																																																																																																																											
	19.	Before the next read operation, the display window can be deleted by the “Clear List” button	Clear List																																																																																																																																											
	20.	To read more data, repeat step 22-31																																																																																																																																												

Note:

- To avoid unwanted readings and to save energy the reader antenna turns off the RF antenna power according to a configured time automatically.
- If not all transponder data are read, the "Boost Mode" with greater transmit power can be used. See: [4.1 Buttons](#)

7 Approvals

7.1 Europe (CE)

When used according to regulation, this radio equipment conforms with the basic requirements of Article 3 and the other relevant provisions of the R&TTE Guideline 1999/E6 dated March 99.



Equipment Classification according to ETSI EN 300 330 and ETSI EN 301 489: Class 2

7.2 USA (FCC) and Canada (IC)

Product names:	ID ISC.PRH200
Reader name:	ID ISC.MR102
FCC ID: IC:	PJMPRH200 6633A-PRH200
Notice for USA and Canada	This device complies with Part 15 of the FCC Rules and with RSS-210 of Industry Canada. Operation is subject to the following two conditions. (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Unauthorized modifications may void the authority granted under Federal communications Commission Rules permitting the operation of this device. This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense. Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Warning: Changes or modification made to this equipment not expressly approved by FEIG ELECTRONIC GmbH may void the FCC authorization to operate this equipment.

Installation with FCC / IC Approval:

FCC-/IC-NOTICE: To comply with FCC Part 15 Rules in the United States / with IC Radio Standards in Canada, the system must be professionally installed to ensure compliance with the Part 15 certification / IC certification. It is the responsibility of the operator and professional installer to ensure that only certified systems are deployed in the United States / Canada.

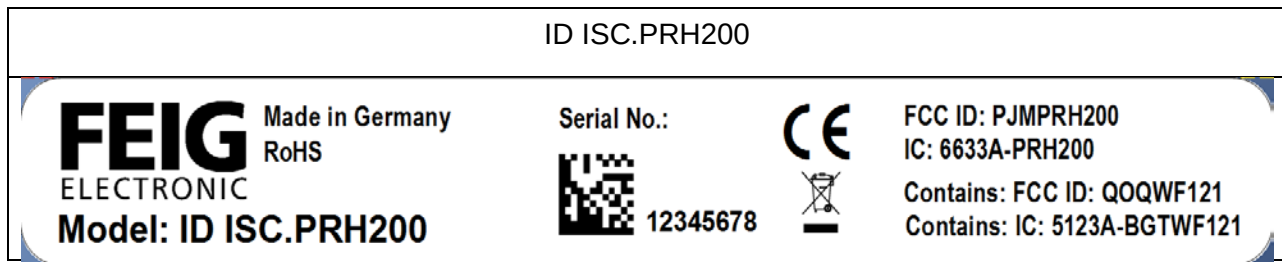
A minimum separation distance of 20cm must be maintained between the Wi-Fi antenna (See picture below) and all persons at all times.

Une distance minimale de séparation de 20 cm doit être maintenue entre l'antenne Wi-Fi (voir picture ci-dessous) et toutes les personnes à tout moment.



7.3 Label Information Reader ID ISC.PRH200

The following labels are placed on the bottom side of the reader:



7.3.1 USA (FCC) and Canada (IC) approved antennas

This radio transmitter (identify the device by certification number, or model number if Category II) has been approved by Industry Canada to operate with the antenna types listed below with maximum permission gain and required antenna impedance for each antenna type indicated. Antenna types, not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device

Le présent émetteur radio (identifier le dispositif par son numéro de certification ou son numéro de modèle s'il fait partie du matériel de catégorie I) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énoncé ci-dessus et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur

8 Technical Data

Mechanical Data	
Reader & Antenna	
Dimensions (W x H x D) – Reader with antenna – Packing	460 mm x 260 mm x 27 mm, antenna ca: 1,5 mm thick 570 mm x 390 mm x 76 mm
Weight – Reader , antenna and battery – Packing	0.6 kg 1.55 kg
Housing	ABS/PC
Color reader & antenna	RAL 7046 / RAL 7047
Color battery pack	black
Enclosure rating	IP 30
Electrical data Reader	
Supply Voltage -Operation Time - Standard Mode - Boost Mode	Battery Pack ca. 8 h ca. 4 h
Operating Frequency	13,56 MHz
RF-Power - Standard Mode - Boost Mode	1,5 W 4,0 W
Button	RF-ON: ON / OFF Power-ON: HF ON / OFF
Reset-Button	Reset to factory settings
LED's	1. RF-ON 2. Application 3. Wi-Fi 4. Battery 5. Power-On / Mode

Signal buzzer	1 Ton
Interfaces	Wi-Fi
Wi-Fi Security Protocols	WEP / WPA / WPA2
Wi-Fi Modes	- Access Point Mode - Client Mode
Interface protocol modes	- FEIG ISO HOST - BRM (Datenfilterung und Datenpufferung) - Notifikation Mode
Supported Transponder	ISO15693
Ambient Conditions	
Temperature range – Operating – Storage	-0°C bis +40°C -25°C bis +85°C
Protection class	IP 30
Humidity	5% - 80%, non-condensing
Freefall	1,0 m
Approvals	
Radio approvals – Europe	EN 300 330
EMC	EN 301 489
Electrical Data Battery Pack	
Nominal Voltage	10,8 V 
Nominal capacitance	3,35Ah (typical)
Maximal charging voltage	12,6 V 
Maximal charge current	1,5 A
Temperature range – Operating – Storage	+10°C bis 45°C - 20°C bis 60°C
Battery connector	Mini-DIN
Dimensions (W x H x D) – Packing (Spare part)	360 mm x 110 mm x 100 mm

Weight - battery – Packing	240g 470g
Electrical data battery charger	
Supply Voltage	100V – 240 V 47 Hz – 64 Hz
Output Voltage	Maximal 12,44V  / 1,2 A
Efficiency	73% - 83%
Type	Wall power battery charger & Adapter Set for international socket-outlet
Dimensions (W x H x D) – Packing	210 mm x 75 mm x 50 mm
Weight – Packing (Spare part)	270g
Approval marks	CE UL listed SELV EN 55011 group I Class B
Charging time	3,5-4 h
Temperature range – Operating – Storage	– 5 °C bis +40 °C –25 °C bis +80 °C
Humidity	Up to 95%, non-condensing