OBID i-scan®

INSTALLATION

ID ISC.PRH101-A
ID ISC.PRH101-B
ID ISC.PRH101-USB

final
public (B)
2005-11-01
M50800-0e-ID-B.doc

FEIG ELECTRONIC

Note

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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.

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Contents

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.
- Special advice for carriers 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.

2. Performance Features of the ID ISC.PRH101

2.1. Performance features

The ID ISC.PRH101 are devices for contactless data exchange with common Transponder according ISO 15693. The readers have an internal antenna and will be delivered ready for connection. The device is designed as a handheld.

An anti-collision function enables simultaneous reading of several transponders per second.

The Reader electronic is fitted in a plastic housing with a protection class IP30.

The Reader ID ISC.PRH101-A has an asynchronous RS232 interface, the ID ISC.PRH101-B has an Bluetooth interface and the ID ISC.PRH101-USB has an USB interface.

2.2. Available Reader-Types

Following Reader-Types are available at present:

Reader-Types	Description
ID ISC.PRH101-A	asynchronous RS232 interface with internal antenna and voltage supply by means of external 5 VDC power supply.
ID ISC.PRH101-B	Bluetooth interface with internal antenna and voltage supply by means of 4 rechargeable Mignon AA batteries
ID ISC.PRH100-USB	USB interface with internal antenna and voltage supply by means of USB-High Powered Interface

Tabelle 1: Reader-Types

3. Control and Display Elements

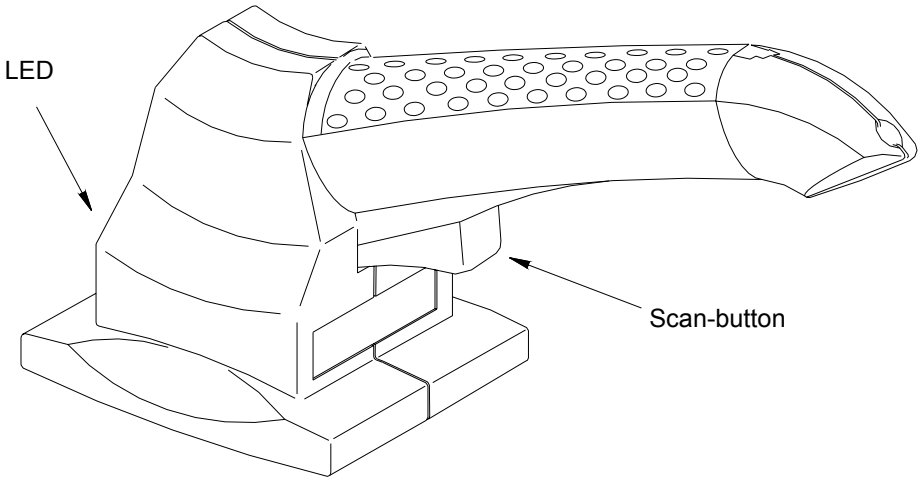

Fig. 1: Control and Display Elements

3.1. Signal buzzer

The signal buzzer can be configured by the software.

In the standard configuration the signal buzzer will be active if a Transponder is recognised.

3.2. Scan - button

The switch of the reader can be configured by the software.

In the standard configuration the serial number of the Transponder is read and is sent to the host after pressing the scan - button.

3.3. LED

The Reader's LED can be configured through software.

Abbreviation	Description
LED green	"RUN " - Turns on when the Reader is ready. - Flashes during Bluetooth initialization. (only ID ISC.PRH101-B)
LED blue	„TRANSPONDER“ - Turns on when a Transponder is detected.
LED red	„WARNING“ - Signals a warning - flashes if battery voltage is too low (rechargeable battery must be charged – only ID ISC.PRH101-B) - Turns on if battery voltage is flat (no more scanning possible - only ID ISC.PRH101-B)
LED orange	„INITIALIZING “ - Flashes during Reader initialization after power-up.

Table 2: Standard configuration of the LEDs

4. Assembly and Wiring

4.1. Reader with asynchronous interface ID ISC.PRH101-A

4.1.1. Asynchronous interface RS232

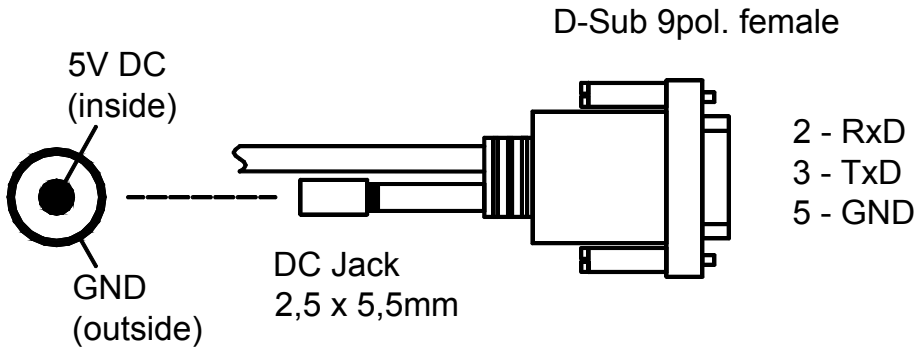

Fig. 2: Connection plug of the readers

The reader has a fixed connected interface cable with a connection for the power supply. The connection of the RS232 interface follows over the 9-pin D-Sub socked.

The COM-port settings can be configured by the software

Pin configuration of the 9-pin D-Sub socked (RS232-Interface):

Pin	Symbol	Description
2	TxD	RS232 – TxD
3	RxD	RS232 – RxD
5	GND	RS232 – GND
1; 4; 6-9	---	n.c.

Tabelle 3: Pin configuration of the RS232 interface

4.1.2. Supply voltage

Voltage supply will be connected via the DC Jack at the end of the interface cable. Connect a regulated 5 V DC supply voltage.

The reader must be supplied with a “Limited power source”. This power-supply is allowed to supply a maximum current of 8 ampere.

DC-Coupler Plug	Symbol	Description
Inside	+5V	+ 5,0 V DC ± 0,2 V – Power Supply
Outside	GND	Ground – Power Supply

Table 4: Connecting of the Power Supply

Note:

- **Reversing the polarity of the supply voltage may destroy the device.**
- **Voltages of more than 5.5 VDC may destroy the device**

Power supply recommendations :

To take full advantage of the Reader module performance, you must use a sufficiently regulated and low-noise power supply. Preferred is a linear power supply with 5V DC / 1300 mA. When using a switching power supply, be sure that its internal switching frequency is less than 300 kHz. (see:7.1. Accessories).

Feig Article No.	Part No.
1689.000.00.00	ID NET.5VDC

Table 5: Recommended power supply

4.2. Reader with Bluetooth™ interface ID ISC.PRH101-B

The Reader has a Bluetooth port. The supply voltage is provided only by rechargeable batteries.

The Reader is activated using the Scan button. This opens a Bluetooth connection automatically within approx. 3 seconds. The Reader is now ready to use. After releasing the button, the Reader remains active for several minutes. During this time the Bluetooth connection remains open. Pressing the button again immediately starts a Scan.

4.2.1. Bluetooth™(BT) interface

Communication to the Reader is through a Bluetooth connection. Bluetooth is a short-distance wireless RF connection which enables permanent wireless communications connections between portable and desktop or peripheral devices. Each Bluetooth device has a unique address and can be optionally identified with a self-explanatory name. Password protection is used for security of a Bluetooth connection, with the Bluetooth partner being added to a confidential list. SSP (Serial Port Profile) is used.

Initial setup of a „paired connection“ to the Reader is done by the host. After initial setup this happens automatically by pressing the button.

All Readers have a factory set name and a preset password. The name "OBID_PRH101B" consists of a fixed (OBID_PRH) and a user modifiable (101B) part.

Description	Default setting
Name variable	101B
Password	1234

Table 6: Standard configuration of the Bluetooth Interface

4.2.2. Supply voltage

The Reader is powerd by rechargeable batteries. Four AA type rechargeable batteries are used. These are inserted into the handle of the Reader. To change the batteries, remove the battery cover. After unlatching the springs the cover can be removed. The rechargeable batteries are placed in the compartment according to the + and – symbols indicated (note polarity). Then replace the cover and listen for the spring to audibly latch.

General type	Europe	USA	Size (D*l)
Mignon	R6 / UM-3	AA	15mm * 51mm

Table 7: Designations for rechargeable Mignon-type batteries

Notes:

- **Use only Nickel/Cadmium (NiCd) or Nickel/Metal Hydride (NiMH) batteries.**
- **Do not use single-use batteries (e.g. zinc-carbon / alkaline) batteries.**
- **Reversed polarity may destroy the device.**
- **Rechargeable batteries should never be discarded with normal trash; please return them to a proper collection location !**

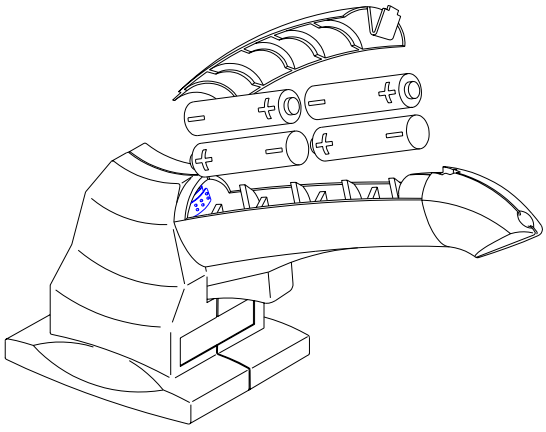

Fig. 3: Inserting the rechargeable batteries

4.2.3. Charging the batteries

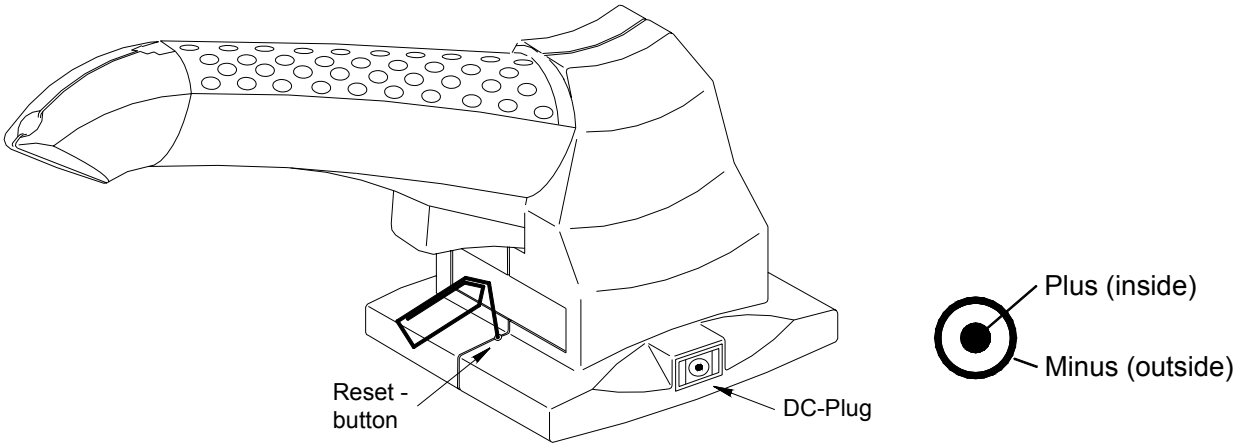

Fig. 4+ 5: ID ISC.PRH101-B: Reset button and DC plug 2.1mm*5.5mm

The rechargeable batteries may remain in the Reader for charging. You will need an external charger connected to the DC jack.

DC jack	Abbreviation	Description
Inside	+	Plus – charge voltage
Outside	-	Minus – charge voltage

Table 8: Charger connection

Note:

- **Reversing the polarity of the charger can destroy the batteries.**
- **The Reader is not functional while the batteries are charging.**

Charger :

Use a charger suitable for the battery type specified (4-cell pack).

Feig Article No.	Name
2650.000.00	ID CHA.NiMH-A

Table 9: Recommended charger

The recommended charger is designed for nickel/cadmium (NiCd) type rechargeable batteries and nickel/metal hydride (NiMH) with a capacity range of 800mAh to 7200 mAh.

Alternately the batteries can be removed from the Reader and charged in a separate battery charger.

4.2.4. Reset - button (ID ISC.PRH101-B only)

The Reader has a reset button. This restores the Bluetooth settings to their original configuration. Below the yellow Scan button is a small hole in the housing. Below this is the Reset button. After activating the Reader with the Scan button the Reader is reset to its factory settings by holding the Reset button down for longer than 3 seconds.

4.3. Reader with USB-interface ID ISC.PRH101-U

The Powersupply follows though the USB-interface (Bus-powered)

The USB-interface must support a current of 500mA (High Powered Interface)

The data rate of the reader is reduced to 12 Mbit (USB high speed).

The reader dispose of a fixed connected interfaces cable with standardized USB-connector. The Reader must only be connected to the USB-port of the PC.

If the reader is used for the first time, it must be registered in the operating system of the computer. For this the instruction "M30100-xde-ID-B: Installation of the OBID USB driver" can be used

5. Technical Data

Mechanical Data

• **Housing**	ABS plastic (enclosed)
• **Dimensions (W x H x D)**	230 x 100 x 80 mm
• **Weight**	320 g
• **Degree of Protection**	IP 30
• **Cable length**	
– ID ISC.PRH101-A	approx. 8,2´/2,5 m
– ID ISC.PRH101-B	no cable
– ID ISC.PRH101-USB	approx. 8,2´/2,5 m
• **Color**	similar RAL 9002

Electrical Data

• **Supply voltage**	
– ID ISC.PRH100-A	5,0 V DC ± 0,2 V regulated
– ID ISC.PRH101-B	4 Mignon AA recharchable batteries
– ID ISC.PRH100-USB	USB - High Powered Interface
• **Power consumption**	max. 2,5 VA
• **Operating frequency**	13,56 MHz
• **Transmitting Power**	0,5 W ± 2 dB
• **Antenna**	internal antenna
• **Interface**	
– ID ISC.PRH100-A	RS232
– ID ISC.PRH101-B	Bluetooth (Serial port profile)
– ID ISC.PRH100-USB	USB (12 Mbit)

Functional Properties

• **Supported Transponders**	- ISO 15693 compatible - I•Code 1 - optional I•Code EPC und I•Code UID
• **Address setting for interface**	
– ID ISC.PRH101-B	Bluetooth MAC address
– ID ISC.PRH100-USB	Device ID of the Readers
• **Indicators**	
– optical	1 LED (multicolor – red / green / blue)
– acoustical	buzzer

Ambient Conditions

• **Temperature range**	
– Operation	0°C to +50°C
– Storage	-20°C to +70°C
• **Humidity**	5 – 95% non condensing

Applicable Norms

• **Radio approval**	
– Europe	EN 300 330
– USA	FCC 47 CFR Part 15
• **EMC**	ETSI EN 301 489
• **Safety**	
- low voltage	EN 60950
- Human Exposure	EN 50364
• **Fall**	Withstands multiple 5´/1,5 m drops to concrete

6. Approvals

6.1. USA (FCC)

FCC ID PJMPRH101

This device complies with Part 15 of the FCC Rules. 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.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user´s authority to operate the equipment.

6.2. Europe (CE)

When properly used this radio equipment conforms to the essential requirements of Article 3 and the other relevant provisions of the R&TTE Directive 1999/5/EC of March 99.

CE

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

Declaration of Conformity

FEIG ELECTRONIC

in accordance with the
Radio and Telecommunication Terminal Equipment Act (FTEG)
and
Directive 1999/5/EC (R&TTE Directive)

Product Manufacturer	:	**FEIG ELECTRONIC GmbH** Lange Strasse 4 D-35781 Weilburg Germany Phone +49 6471 3109 0
Product Designation	:	**ID ISC.PRH101**
Product Description	:	Induktive Loop System
Radio equipment, Equipment class (R&TTE)	:	Class 2

FEIG ELECTRONIC GmbH declares that the radio equipment complies with the essential requirements of §3 and the other relevant provisions of the FTEG (Article 3 of the R&TTE Directive), when used for its intended purpose.

Standards applied :

Health and safty requirements pursuant to § 3 (1) 1. (Article 3(1) a))	EN 60950-1:2001 EN 50364:2001		
Protection requirements concerning electromagnetic compatibility § 3 (1) 2. (Article 3(1) b))	ETSI EN 301489-3	V1.4.1	(08-2002)
Measures for the efficient use of the radio frequency spectrum pursuant to § 3 (2) (Article 3(2))	ETSI EN 300 330-2	V1.1.1	(06-2001)

Weilburg-Waldhausen, 18.10.2005
Place & date of issue

Eldor Walk
Name and signature

This declaration attests to conformity with the named Directives but does not represent assurance of properties. The safety guidelines in the accompanying product documentation must be observed.

7. Appendix

7.1. Accessories

The following accessories are available for the Reader.

Artikel Nr.	Bezeichnung	Beschreibung
1689.000.00	ID NET.5VDC	5 V DC power supply with suitable connector for ID ISC.PRH101-A.
2650.000.00	ID CHA.NiMH-A	Batterie charger with suitable connector for ID ISC.PRH101-B

Table 10: Accessories

7.2. Scope of delivery

Reader	Scope of delivery
ID ISC.PRH101-A	- Reader ID ISC.PRH101-A - Quick user guide - CD
ID ISC.PRH101-B	- Reader ID ISC.PRH101-B - Quick user guide - CD incl. driver
ID ISC.PRH101-USB	- Reader ID ISC.PRH101-USB - Quick user guide - CD

Table 11: Scope of delivery

Note:

Power supply, rechargeable batteries and battery charger are not included in delivery