OBID®

OBID i-scan® HF

INSTALLATION

ID ISC.PRH101-A /-USB

HF Handheld Reader with RS232 or USB Interface

FEIG ELECTRONIC

Note

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 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 V DC/$\overline{}$ power supply.
ID ISC.PRH101-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

LED
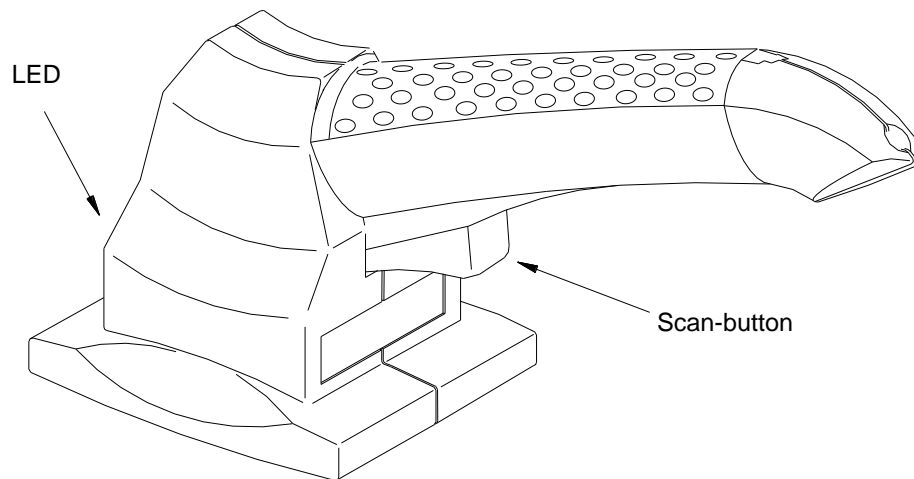
Scan-button

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 recognized.

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.
LED blue	„TRANSPONDER" - Turns on when a Transponder is detected.
LED red	„WARNING" - Signals a warning
LED orange	„INITIALIZING " and „WARNING" - 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
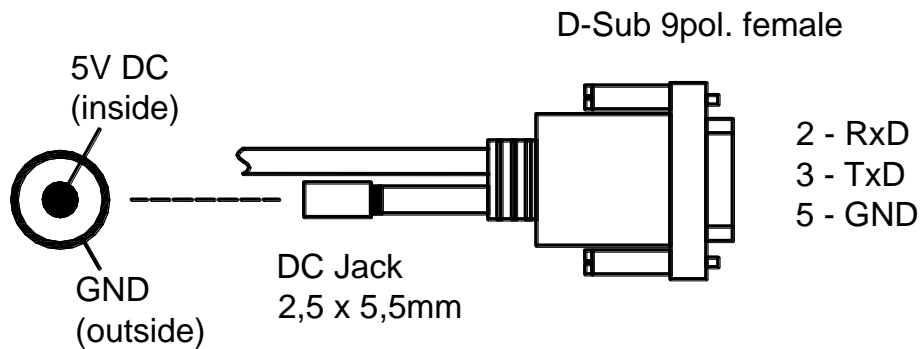
Fig. 2: Connection plug of the readers

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 V DC/⎓ 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.	Article Name
1689.000.00.00	ID NET.5V-EU Power Supply Unit 5V

Table 5: Recommended power supply

4.2. 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 " H70700-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 (9,06 x 3,94 x 3,15 inch)

- **Weight**   320 g

- **Degree of Protection**   IP 30

- **Cable length**
  – ID ISC.PRH101-A   approx. 2,5 m / 8,2 ft.
  – ID ISC.PRH101-USB   approx. 2,5 m / 8,2 ft.

- **Color**   similar RAL 9002

Electrical Data

- **Supply Voltage**
  – ID ISC.PRH101-A   5,0 V DC/$\overline{}$ ± 0,2 V regulated
  – ID ISC.PRH101-USB   USB - High Powered Interface

- **Current Draw**   max. 0,5 A

- **Power Consumption**   max. 2,5 VA

- **Operating Frequency**   13,56 MHz

- **Transmitting Power**   0,5 W ± 2 dB

- **Antenna**   internal antenna

- **Interface**
  – ID ISC.PRH101-A   RS232
  – ID ISC.PRH101-USB   USB (12 Mbit)

Functional Properties

- **Protocol Modes**
  - FEIG ISO HOST
  - Scan Mode

- **Supported Transponders**
  - ISO15693, ISO18000-3-Mode1
    (EM HF ISO Chips, Fujitsu HF ISO Chips, KSW Sensor Chips, Infineon my-d, NXP I-Code, STM LRI ISO Chips, TI Tag-it)

  - NXP I Code 1, I Code UID, I Code EPC

- **Address setting for interface**
  – ID ISC.PRH101-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   (32°F to 122°F)
  – Storage   -20°C to +70°C   (-4°F to 158°F)

- **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**   UL 60950-1
  - **Human Exposure**   EN 50364

- **Fall**   Withstands multiple 5´/1,5 m drops to concrete

6. Approvals

6.1. USA (FCC)

<div style="border:1px solid black; padding:1em;">

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.

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6.2. USA (UL, ID ISC.PRH101 Type A and Type USB)

The following picture indicates the label position.

6.3. 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.

$$C\mkern-2mu\epsilon$$

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

Declaration of Conformity

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

FEIG
ELECTRONIC

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.
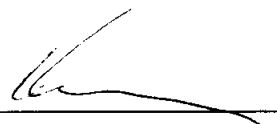
Standards applied :

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.	Product Name	Description
1689.000.00	ID NET.5V-EU Power Supply Unit 5V	5 V DC/‾‾‾ power supply with suitable connector for ID ISC.PRH101-A.

Table 6: Accessories

7.2. Scope of delivery

Reader	Scope of delivery
ID ISC.PRH101-A	- Reader ID ISC.PRH101-A - Quick user guide
ID ISC.PRH101-USB	- Reader ID ISC.PRH101-USB - Quick user guide

Table 7: Scope of delivery

Note:

The Power supply is not included in delivery