

ID ISC.PRH102
ID ISC.PRHD102



Note

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1. Safety Instructions / Warning - Read before start-up !

- The device may only be used for the intended purpose designed by for the manufacturer.
- When installing the device in areas covered under FCC 47 CFR Part 15 a minimum separation of 20 cm between antenna and the human body must be maintained.
- 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 (10 inch) between the device and your cardiac pacemaker.

2. Performance Features of the Readers

2.1. Performance features

The ID ISC.PRH102 and the ID ISC.PRHD102 have been developed for reading passive data carriers, so-called „Smart Labels“, using operating frequencies either in the HF range or in the UHF range. The readers have internal antennas 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.PRH(D)102-B have an asynchronous serial interface and the ID ISC.PRH(D)102-USB have an USB interface.

Depending on if HF or UHF transponder should be detected the reader comes with the following different field areas as shown in the Fig.1 .

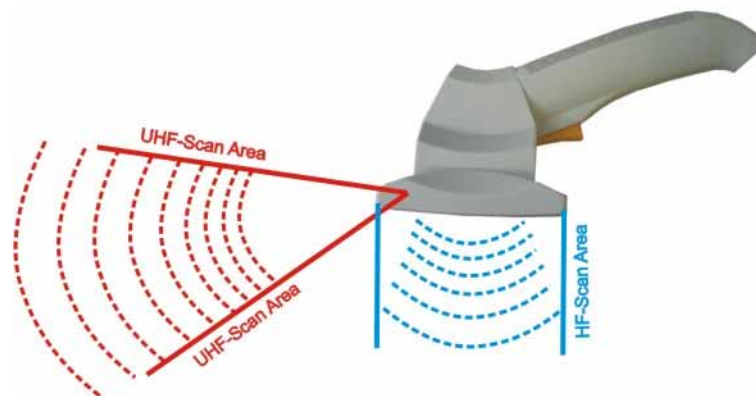


Fig. 1: HF and UHF detection areas

2.2. Available Reader-Types

Following Reader-Types are available at present:

Reader-Types	Description
ID ISC.PRH102-B	HF Reader with serial interface with internal antenna. Powered via external 5 V DC/--- power supply.
ID ISC.PRH102-USB	HF Reader with serial interface with internal antenna. Powered via a high powered USB port.
ID ISC.PRHD102-B-EU	Reader for Europe: HF and UHF Reader with serial interface with internal antenna. Powered via external 5 V DC/--- power supply.
ID ISC.PRHD102-USB-EU	Reader for Europe: HF and UHF Reader with serial interface with internal antenna. Powered via a high powered USB port.
ID ISC.PRHD102-B-FCC	Reader for USA and Canada: HF and UHF Reader with serial interface with internal antenna. Powered via external 5 V DC/--- power supply.
ID ISC.PRHD102-USB-FCC	Reader for USA and Canada: HF and UHF Reader with serial interface with internal antenna. Powered via a high powered USB port.

Table 1: Reader-Types

3. Control and Display Elements

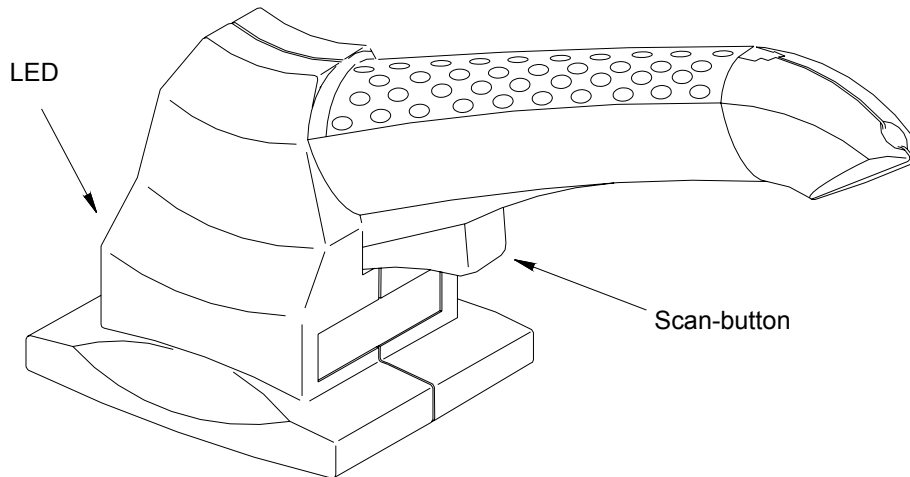


Fig. 2 Control and Display Elements

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 serial interface ID ISC.PRH102-B / ID ISC.PRHD102-B

The communication and the power supply follows through the serial interface. The COM-port settings can be configured by the software.

Note:

If there is an USB/RS232 converter used on the PC/Notebook side, we recommend to increase the „Char Timeout Multiplier“ parameter in the COM-Port settings from „1“ to about „5“.

4.2. Reader with USB interface ID ISC.PRH102-USB / ID ISC.PRHD102-USB

The power supply follows through the USB-interface (Bus-powered)

The USB-interface must support a current of 500 mA (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 (9,06 x 3,94 x 3,15 inch)
- **Weight** 320 g
- **Degree of Protection** IP 30
- **Cable length** approx. 2,5 m / 8,2 ft.
- **Color** similar RAL 9002

Electrical Data

- **Supply Voltage**
 - ID ISC.PRH(D)102-B 5,0 V DC/--- ± 0,2 V regulated
 - ID ISC.PRH(D)102-USB USB - High Powered Interface
- **Current Draw** max. 0,5 A
- **Power Consumption** max. 2,5 VA
- **Operating Frequency**
 - ID ISC.PRH102 13,56 MHz
 - ID ISC.PRHD102 13,56 MHz and 860 ... 960 MHz
- **Transmitting Power**
 - HF 200 mW ± 2 dB
 - UHF 100mW ± 2 dB
- **Antennas** internal
- **Interface**
 - ID ISC.PRH(D)102-B Serial
 - ID ISC.PRH(D)102-USB USB (12 Mbit)

Functional Properties

- **Supported Transponders**
 - HF
 - 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)
 - UHF
 - EPC class 1 Gen 2
18000-6-C (optional)
- **Address setting for USB interface** 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
- **Fall** Withstands multiple 5´/1,5 m drops to concrete

Applicable Norms

- **Radio approval**
 - Europe EN 300 330, EN 302 208
- **EMC** EN 301 489
- **Safety**
 - low voltage EN 60950
 - Human Exposure EN 50364

6. Approvals

6.1. 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 1999/5/EC dated March 99.



Equipment Classification according to ETSI EN 301 489: Class 2

6.2. USA and Canada (FCC)

FCC ID PJMPRH102 / FCC ID PJMPRHD102

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.

NOTICE:

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

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.