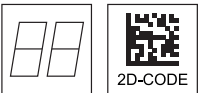


**IT 1911i 2D-code hand-held scanner with Bluetooth suitable for industrial use**

**Dimensioned drawing**



en 01-2013/06 50123747



- Very sturdy hand-held scanner for 2D-codes and bar codes
- Transmission to base station via Bluetooth class 1 V2.1
- Larger reading field through higher resolution and improved decoding
- Robust trigger button
- Acoustic signal, LED and vibration alarm following successful reading
- RS 232, USB and PS/2 interface
- Operating temperature from -20°C through 50°C
- Protection class IP 65



**Accessories**

- **RS 232 cable**  
Part no. 50115105
- **TTL-RS 232 cable**  
Part no. 50114517
- **PS/2 cable**  
Part no. 50114519
- **USB cable, 3m**  
Part no. 50114521
- **USB helix cable, 5m**  
Part no. 50114523
- **Power supply unit for Base IT 1911i**  
Part no. 50123862

**Electrical connection**

for RS 232 cable

9-pin Sub-D	Signal	Base f. IT 1911i RJ41
2	TXD	4
3	RXD	5
5	GND	3
7	CTS	6
8	RTS	8
9	5VDC	7

for USB cable

USB type A	Signal	Base f. IT 1911i RJ41
1	5VDC	7
2	Data -	10
3	Data +	9
4	GND	3

for PS/2 cable

Mini DIN connector	Mini DIN socket	Signal	Base f. IT 1911i RJ41
1	-	PC Data	4
2	2	NC	
3	3	GND	3
4	4	5VDC	7
5	-	PC Clock	5
6	6	NC	
-	1	KB data	8
-	5	KB clock	6

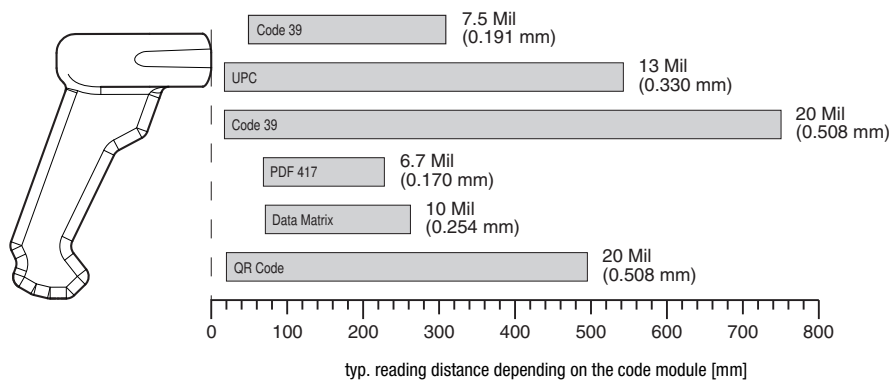
We reserve the right to make changes • DS\_IT1911i\_en\_50123747.fm

**Technical Data**

<b>Electrical data</b>	<b>IT 1911i ER-3</b>	<b>Base f. IT 1911i</b>
Operating voltage $U_B$	3.7VDC internal battery	4.5 ... 5.5VDC
Power consumption		max. 5W @ 5VDC
<b>Li-ion battery</b>		
Capacity	2,000mAh	
Max. number of scans	50,000	
Max. operating time	14h at 1 scan/s	
Charging time at 9VDC	4.5h for complete charge following complete discharge	
<b>Radio transmission</b>		
Frequency	2.4 ... 2.4835GHz (ISM band)	
	frequency hopping, Bluetooth® V2.1, Class 1	
Typ. operating range	100m	
Transmission speed	up to 1 Mbit/s	
<b>Interfaces</b>		
Interface type	RS 232, PS/2 and USB	
Trigger	via button or serial command	
<b>Types of codes</b>		
2D-codes	Data Matrix ECC 200, MaxiCode, PDF417, MicroPDF, QR Code, Aztec, Aztec Mesas, Code 49, EAN/UCC Composite	
Bar codes	2/5 Interleaved, Code 39, Code 128, Code 93, Codabar, UPC/EAN, Codablock, GS1 Databar	
<b>Optical data</b>		
Optical system	high-resolution pixel array 838x640	
Symbol contrast	PCS 20% minimum	
Light source	integrated diffuse LED, wavelength 617nm ± 18nm	
Read direction	omnidirectional, various tilt and rotational angles up to 45°	
Alignment aid	laser pattern 650nm; IEC 60825-1 Class 2	
<b>Mechanical data</b>	<b>IT 1911i ER-3</b>	<b>Base f. IT 1911i</b>
Weight	380g	290g (without cable)
Dimensions	133 x 75 x 195mm	250 x 103 x 65mm
Shock resistance	50 falls from a height of 2m	50 falls from a height of 1.2m
<b>Environmental data</b>		
Ambient temperature (operation)	-20°C ... +50°C	-20°C ... +50°C
Ambient temp. (storage)	-40°C ... +70°C	-40°C ... +60°C
Relative humidity	0 ... 95% (non-condensing)	0 ... 95% (non-condensing)
Protection class	IP 65	IP 51

**Read field**

**IT 1911i ER-3**



**Order guide**

<b>2D-code hand-held scanner (special optics with large operating range)</b>	<b>Part no.</b>
IT 1911i ER-3 with Bluetooth data transmission	50122434
<b>Base station for 2D-code hand-held scanner with Bluetooth data transmission</b>	<b>Part no.</b>
Base f. IT 1911i with RS 232, PS/2 and USB interface	50122431

**Tables**

**Diagrams**

**Remarks**

Hand-held scanner with integrated decoder for high-contrast codes suitable for industrial use.

Data transmission via configurable RS 232 interface.

Or keyboard-wedge operation via PS/2 or USB interface.

For a functional unit, an IT 1911i hand-held scanner and a Base f. IT 1911i base station as well as a power supply unit and corresponding cable must be ordered.



Bluetooth is a trademark owned by Bluetooth SIG, Inc., U.S.A. and licensed to Honeywell.

## IT 1911i 2D-code hand-held scanner with Bluetooth suitable for industrial use

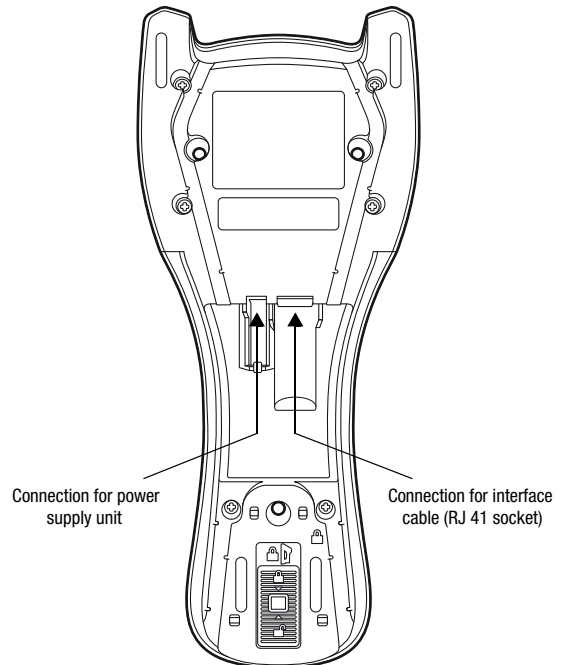
### Switching off the computer

Information on switching off and shutting down the connected computer - which must always be performed before connecting peripheral devices, such as a scanner - can be found in the appropriate operating instructions for your computer.

### Connecting the base station

Shown in the adjacent figure are the locations for installing the cables on the base station. The individual installation steps are described in the following.

1. To secure the interface cable to the base station, proceed as follows: plug the RJ 41 connector into the socket on the bottom of the base station until the cable clicks into place.
2. Connect the interface cable to the appropriate connection socket on the computer.
3. You may need a power supply unit for supplying voltage if you would like to charge the hand-held scanner via the base station or use an RS 232 interface. Use the pin assignments (see "Electrical connection" on page 1) to select the appropriate cable for your application.
4. Connect the power supply unit to the power socket.
5. Use the code for the respective application to configure the hand-held scanner, see chapter "Configuration".
6. Check the operational readiness of the scanner by pointing the scanning surface towards a flat surface and pulling the trigger. A red laser pattern as well as the red illumination should now be visible. Now scan a sample label.  
The scanner emits an audible signal to confirm that the label has been read; if necessary, the data are now passed on to the computer.



#### Notice!

To charge the IT 1911i, the power supply unit must be plugged in and the hand-held scanner placed in the base station.

### Configuration

The hand-held scanner can always be configured using bar codes. To do this, the bar code must first be selected on the package insert and then the trigger actuated in order to read the code. The configuration is then immediately accepted and executed.

Several of the most important configurations are listed in the following.

A second option is to configure the hand-held scanner with the USB and RS 232 interfaces with the aid of the **EZ Config PC** program. You can download and install this program from our homepage at [www.leuze.com](http://www.leuze.com).

The program can be used to make settings and transfer them to the hand-held scanner. The configuration can also be stored so that it can be reused at a later time.

Further information on this can be found in the User's Guide for the IT 1910i/IT 1911i.

The standard applications are described and summarized below.



#### Notice!

Additional information on the device and short instructions can be found on the Internet at [www.leuze.com](http://www.leuze.com).

## Resetting the IT 1911i to factory settings

To reset all parameters to factory settings, scan the adjacent bar code.



**Attention!**  
*All settings are lost!!!*

Return the IT 1911i to the base station to apply the settings. This procedure is concluded with audible confirmation signals. You may then continue making settings or operation of the device.

## Trigger

To activate the read process, a trigger signal is to be sent via the serial RS 232 interface or USB interface (COM port emulation only). The command is to be sent at the set baud rate, parity, and data and stop bits.

The command for activation is: **SYN T CR** ASCII decimal values: 022; 084; 013

To cancel read readiness, send a deactivation.

The command for deactivation is: **SYN U CR** ASCII decimal values: 022; 085; 013

Following a successful read operation, the IT 1911i deactivates itself.

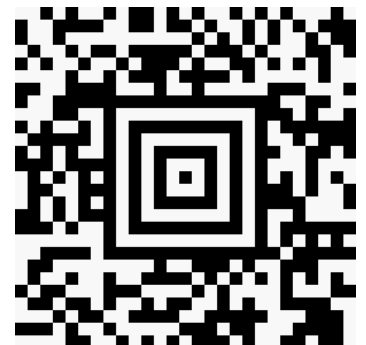
The second option is activation via the built-in trigger button.

## Configuration for the Leuze standard protocol

Scan the adjacent 2D-code.

The IT 1911i is set to the following transmission parameters:  
RS 232 transmission with 9,600 baud, 8 data bits, 1 stop bit, no parity, prefix <STX>, postfixes <CR><LF>.

Return the IT 1911i to the base station to apply the settings. This procedure is concluded with audible confirmation signals.



**Notice!**  
*To charge the IT 1911i, the power supply unit must be plugged in and the hand-held scanner placed in the base station.*

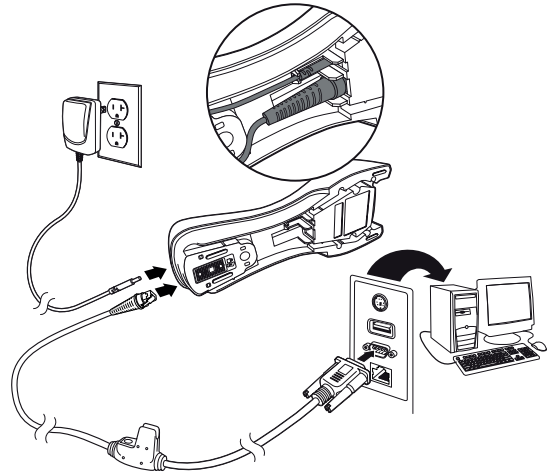
## IT 1911i 2D-code hand-held scanner with Bluetooth suitable for industrial use

### Connecting the IT 1911i to the serial PC interface

With TTL-RS232 cable (part no. 50114517)

Required parts:

- 1x IT 1911i ER-3
- 1x 50122431 Base f. IT 1911i
- 1x 50114517 KB 232-1 IT 190x
- 1x 50123862 Power supply unit for Base f. IT 1911i

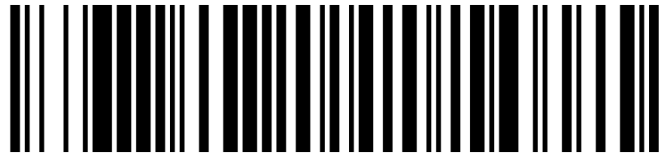


**Notice!**

Cable **KB 232-1 IT190x** (part no. 50114517) uses TTL-level (0V...5V) for data transmission. As an alternative to this, cable **KB 232-2 IT190x** (part no. 50115105) can be used. This cable works with the regular RS232 level (-12V...+12V) and therefore features a higher interference rejection. Both cables are connection compatible.

**Procedure:**

1. Switch off the PC.
2. Connect the interface cable to a free COM port (RS 232) on the computer and to the base station.
3. Plug one end of the power supply unit cable into the base station and the other end into a free power socket.
4. Switch the PC back on.
5. Scan the adjacent bar code.  
The IT 1911i is set to the following transmission parameters:  
RS 232 transmission with 115,200 baud, 8 data bits, 1 stop bit, no parity, postfixes <CR><LF>.
6. Return the IT 1911i to the base station to apply the settings. This procedure is concluded with optical confirmation signals (green LED on the base station).
7. If necessary, adjust the transmission parameters of the used COM port to those of the IT 1911i.



**Attention!**

We recommend connecting the base station directly to a PC or to the MA 21 or MA 41... connector units. If connecting to other components, please note that a voltage level range of 0 ... +5V (TTL level) is maintained on the data lines!



**Notice!**

To charge the IT 1911i, the power supply unit must be plugged in and the hand-held scanner placed in the base station.

## Connecting the IT 1911i to the MA 2xxi

### Required parts:

1x	<b>IT 1911i ER-3</b>
1x <b>50122431</b>	<b>Base f. IT 1911i</b>
1x <b>50114517</b>	<b>KB 232-1 IT 190x</b>
1x <b>50123862</b>	<b>Power supply unit for Base f. IT 1911i</b>
1x <b>50113397</b>	<b>KB JST-HS-300</b>
1x	<b>MA 2xxi</b> for the respective fieldbus system

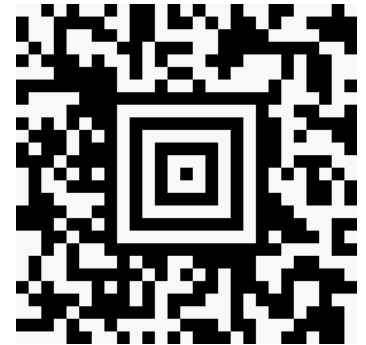
### Procedure:

1. Connect cable KB JST-HS-300 to the system connector on the MA 2xxi.
2. Connect the interface cable to cable KB JST-HS-300. Connect the interface cable and the power supply unit to the base station (see "Connecting the IT 1911i to the serial PC interface").
3. Scan the adjacent 2D code.

The IT 1911i is set to the following transmission parameters:

RS 232 transmission with 9,600 baud, 8 data bits, 1 stop bit, no parity, postfixes <CR><LF>.

4. Return the IT 1911i to the base station to apply the settings. This procedure is concluded with audible confirmation signals.



### **Notice!**

*To charge the IT 1911i, the power supply unit must be plugged in and the hand-held scanner placed in the base station.*

## IT 1911i 2D-code hand-held scanner with Bluetooth suitable for industrial use

### Connecting the IT 1911i to the MA 21

#### Required parts:

1x	IT 1911i ER-3
1x 50122431	Base f. IT 1911i
1x 50114517	KB 232-1 IT 190x
1x 50123862	Power supply unit for Base f. IT 1911i
1x 50035421	KB 021 Z
1x 50030481	MA 21 100

#### Pin assignments KB021 Z:

Core color:	Signal	Terminal in the MA 21:
Brown	(RXD)	26
White	(TXD)	27
Blue	(GND)	28
Red	(VCC)	⊗
Black	(GND)	⊗
Bare (shield)	(PE)	21

#### Procedure:

1. Connect cable KB 021 Z to the MA 21... acc. to the above pin assignments.
2. Connect the interface cable to cable KB 021 Z. Connect the interface cable and the power supply unit to the base station (see "Connecting the IT 1911i to the serial PC interface").
3. Scan the adjacent 2D code.

The IT 1911i is set to the following transmission parameters:

RS 232 transmission with 9,600 baud, 7 data bits, 1 stop bit, even parity, postfixes <CR><LF>.

4. Return the IT 1911i to the base station to apply the settings. This procedure is concluded with audible confirmation signals.



#### **Notice!**

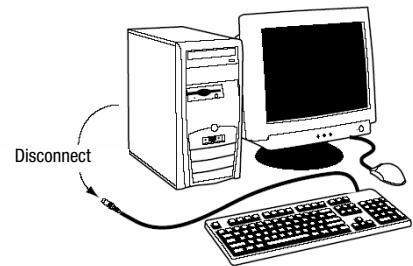
*To charge the IT 1911i, the power supply unit must be plugged in and the hand-held scanner placed in the base station.*

## Connecting the IT 1911i to the PS/2 interface

The operation of the IT 1911i in keyboard emulation mode is described in this section. With this operating mode, a PC keyboard is emulated. The read data are written directly into the currently activated program. The data can thereby be further processed in all standard programs.

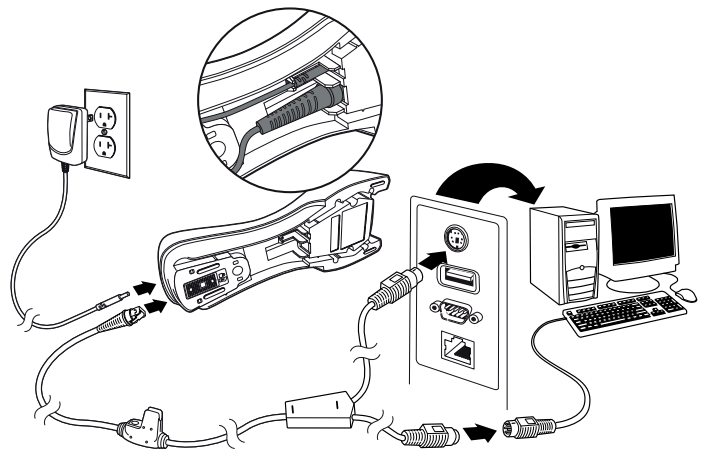
### Required parts:

1x	<b>IT 1911i ER-3</b>
1x <b>50122431</b>	<b>Base f. IT 1911i</b>
1x <b>50123862</b>	<b>Power supply unit for Base f. IT 1911i</b>
1x <b>50114519</b>	<b>KB PS2-1 IT 19xx</b>



### Procedure:

1. Switch off the PC.
2. Disconnect the keyboard.
3. Connect the cable for the base station between the keyboard and the PC.
4. Switch the PC back on.
5. Scan the 2D code shown below.
6. Return the IT 1911i to the base station to apply the settings. This procedure is concluded with audible confirmation signals.



### Notice!

*To charge the IT 1911i, the power supply unit must be plugged in and the hand-held scanner placed in the base station.*



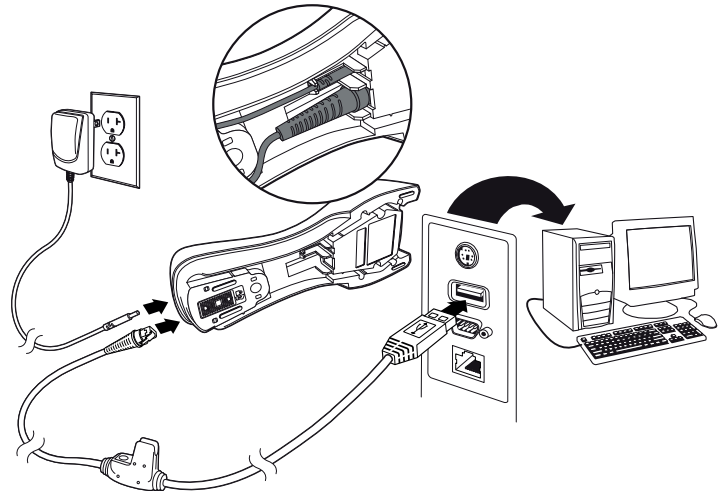
**IT 1911i 2D-code hand-held scanner with Bluetooth suitable for industrial use**

**Connecting the IT 1911i to the USB interface (keyboard emulation)**

The operation of the IT 1911i in keyboard emulation mode on a USB port is described in this section. With this operating mode, a PC keyboard is emulated. The read data are written directly into the currently activated program. The data can thereby be further processed in all standard programs.

Required parts:

- 1x **IT 1911i ER-3**
- 1x **50122431 Base f. IT 1911i**
- 1x **50123862 Power supply unit for Base f. IT 1911i**
- 1x **50114521 KB USB-1 IT190x (3m, straight)**
- or
- 1x **50114523 KB USB-2 IT190x (5m, spiral)**



**Procedure:**

1. Connect the USB cable for the base station to a free USB port.
2. The scanner acknowledges this connection with a beep.
3. Scan the adjacent 2D code.
4. Return the IT 1911i to the base station to apply the settings. This procedure is concluded with audible confirmation signals.



**Notice!**

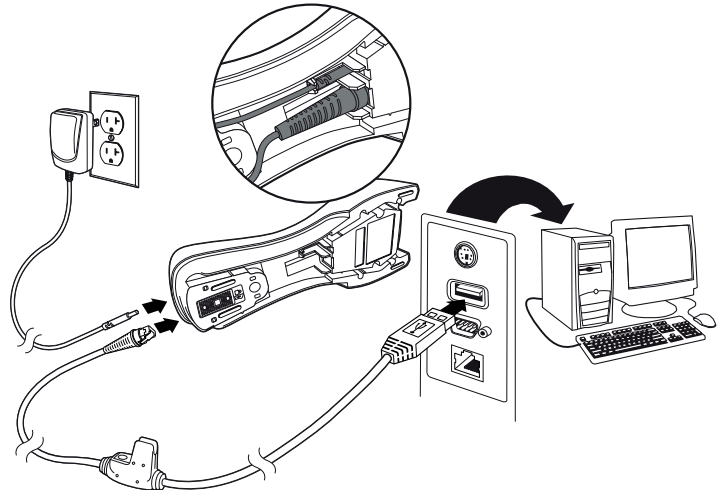
*To charge the IT 1911i, the power supply unit must be plugged in and the hand-held scanner placed in the base station.*

## Connecting the IT 1911i to the USB interface (COM-port emulation)

The operation of the IT 1911i as a serial interface on a USB port is described in this chapter. With this operating mode, a COM interface is emulated. The read data are sent to a new COM interface. The drivers with which this COM interface is emulated can be downloaded from our homepage at [www.leuze.com](http://www.leuze.com). Thus, the data can be processed further in programs which expect data via COM interfaces.

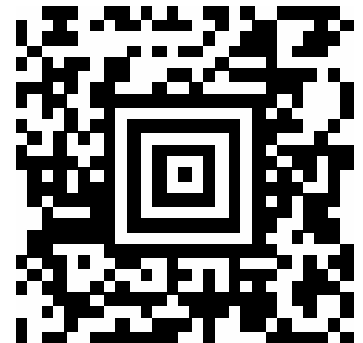
### Required parts:

- 1x IT 1911i ER-3
- 1x 50122431 Base f. IT 1911i
- 1x 50123862 Power supply unit for Base f. IT 1911i
- 1x 50114521 KB USB-1 IT190x (3m, straight)
- or
- 1x 50114523 KB USB-2 IT190x (5m, spiral)



### Procedure:

1. Install the USB serial driver (current version available at [www.leuze.com](http://www.leuze.com)).
2. Connect the USB cable for the base station to a free USB port.
3. The scanner acknowledges this connection with a beep.
4. Scan the adjacent 2D code.
5. Open a terminal program or your program for the serial interface, select the new COM port, and make the following settings: baud rate 115,200, 8 data bits, 1 stop bit, no parity, postfix <CR>.
6. Return the IT 1911i to the base station to apply the settings. This procedure is concluded with audible confirmation signals.



### Notice!

To charge the IT 1911i, the power supply unit must be plugged in and the hand-held scanner placed in the base station.