IT 6300 DPM
2D-code hand-held scanner

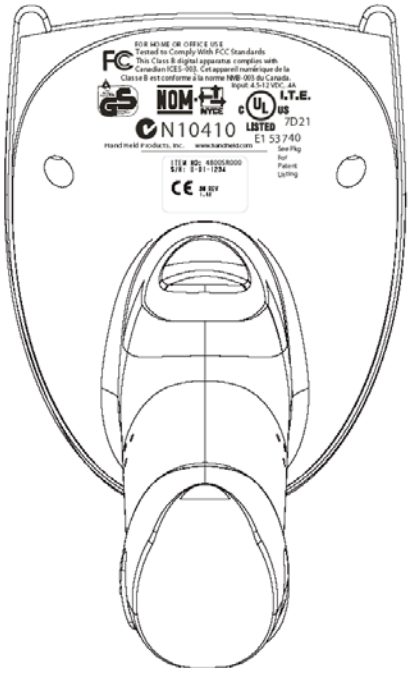
Quick start user's guide

Preface

We congratulate you on the purchase of one of the most powerful hand-held scanners. This document is intended to provide information on the handling and use of the IT 6300 DPM produced by Leuze electronic. It includes explanations of the most important information necessary for operation. In addition, the most important connection types are explained and information is provided on programming with the aid of codes.
Additional information can be found in the online help system, which is installed together with the setup tool.

Contents

Scope of delivery



- **IT 6300**
  Part No. 50105380

1. Hand-held scanner IT 6300 IDP 351 S
2. CD-ROM

An overview of the types can be found on page 16

For accessories, see page 16

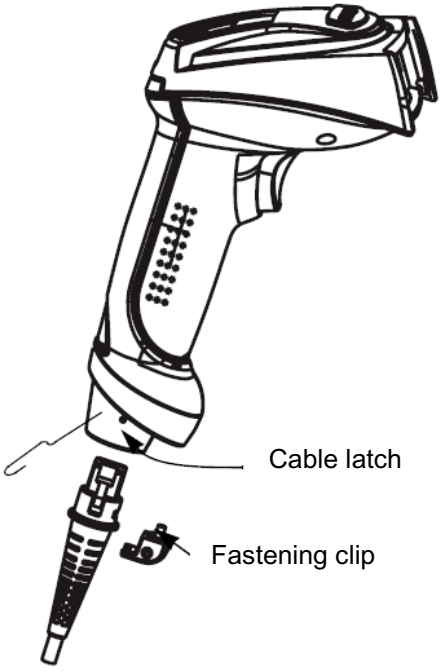
Installation

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 hand-held scanner

Shown in the figure below are the individual steps for installing the cable on the scanner; these steps are described in the following.



Connecting the cable for the IT 6300

1. To secure the interface cable to the scanner, proceed as follows: plug the RJ 41 connector into the socket on the bottom of the hand-held scanner, now use a Phillips screwdriver to secure the supplied clip for locking the cable.
2. Connect the interface cable to the appropriate connection socket on the computer.
3. You will need a power supply unit for the voltage supply. Connect this power supply unit to the interface cable.
4. Connect the power supply unit to the power socket.
5. Check the operational readiness of the scanner by pointing the scanning surface towards a flat surface and pulling the trigger. A green target line 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.

Testing the scanner

The adjacent bar code is for testing the scanner,
the module size is 0.5 mm (20 mil)

Code 39 bar code sample

Specifications

The technical data can be found in the data sheet for the IT 6300.

Pin assignments of the connection cable

TTL-RS232 cable/ext IT 6300 Part No. 501 05422

Pin assignments of the 9 pin D-sub socket (female) for cable 42206139-04

Pin number	Signal	Designation
1	Shield	Shield
2	TX	Transmit data
3	RX	Receive data
5	GND	Signal ground
7	CTS	Clear to send
8	RTS	Request to send
Pin at power supply unit connection	**Signal**	**Designation**
1	VCC IN	4.5…12 V DC
2	GND	Ground

The proper power supply unit for the IT 6300 (230V/50Hz) has part no. 501 03403.

PS2 cable/ext IT 6300 Part No. 50105424

Pin assignments of the Mini DIN socket or connector for cable 42206416-01

Pin connector	Pin socket	Signal	Designation
1	-	PC data	PC data line
2	2	NC	Not used
3	3	GND	Signal ground
4	4	VCC IN	5 Volts DC
5	-	PC Clock	PC clock line
6	6	NC	Not used
-	1	KB Data	Keyboard data line
-	2	KB Clock	Keyboard clock line
Pin at power supply unit connection		**Signal**	**Designation**
1		VCC IN	4.5…12 V DC
2		GND	Ground

The proper power supply unit for the IT 6300 (230V/50Hz) has part no. 501 03403.

USB cable IT 4xxx Part No. 50103404

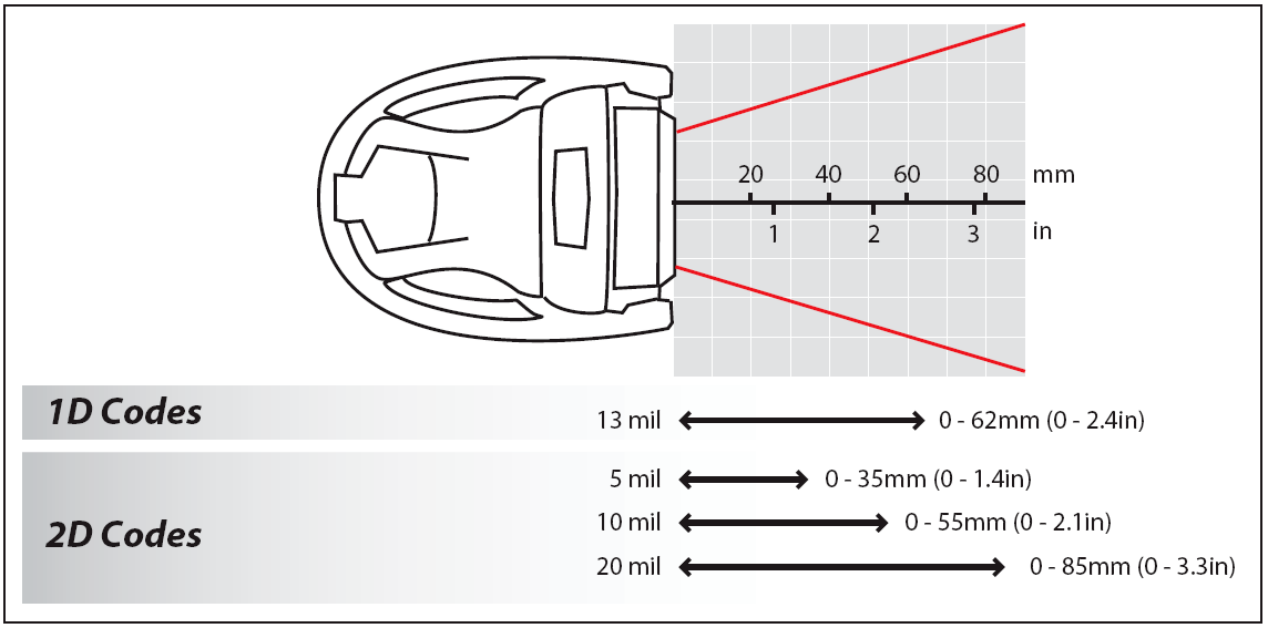
Pin assignments of USB type A connector for cable 42206132-03

USB type A connector	Signal	Designation
1	VCC IN	5 Volts DC
2	Data -	Data line -
3	Data -	Data line +
4	GND	Signal ground
Pin at power supply unit connection	**Signal**	**Designation**
1	VCC IN	4.5…12 V DC
2	GND	Ground

The proper power supply unit for the IT 6300 (230V/50Hz) has part no. 501 03403.

Reading fields

IT 6300 DPM



Resetting the IT 6300 to factory settings

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

Attention: All settings are lost!!!

Configuration

The hand-held scanner can always be configured using bar codes. To do this, first select the bar code in the manual and then actuate the trigger button 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 RS232 interfaces with the aid of the "6300 Series Setup Tool" PC program. You can download and install this program from our homepage at www.leuze.de. 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.

The standard applications are described in the following; each is summarised on a separate page.

IT 6300 on the serial PC interface

With voltage supply via power supply unit with TTL-RS232 cable/ext IT 6300 Part No. 50105422

Please connect the IT 6300 acc. to the adjacent figure.

Required parts:

1x	501 05 380	IT 6300 IDP 315S
1x	501 05 422	Cable TTL-RS232/ext for IT 6300
1x	501 03 403	Power supply unit

Pin assignments of the 9 pin D-sub socket (female) for cable 42206139-04

Pin number	Signal	Designation
1	Shield	Shield
2	TX	Transmit data
3	RX	Receive data
5	GND	Signal ground
7	CTS	Clear to send
8	RTS	Request to send
Pin at power supply unit connection	**Signal**	**Designation**
1	VCC IN	4.5…12 V DC
2	GND	Ground

The proper power supply unit for the IT 6300 (230V/50Hz) has part no. 501 03403.
RS 232 transmission with 38400 baud, 8 data bits, 1 stop bit, no parity, postfixes CR/LF.

Configuration for the Leuze standard protocol

Leuze standard protocol:
RS 232 with 9600 baud, 8 data bits, 1 stop bit, no parity, prefix STX and postfixes CR/LF

Factory setting

Return the IT 6320 to the base station to apply the settings. This procedure is concluded with audible confirmation signals.

To configure the device, please scan the codes in the specified order.
The read operation is confirmed by an audible signal.

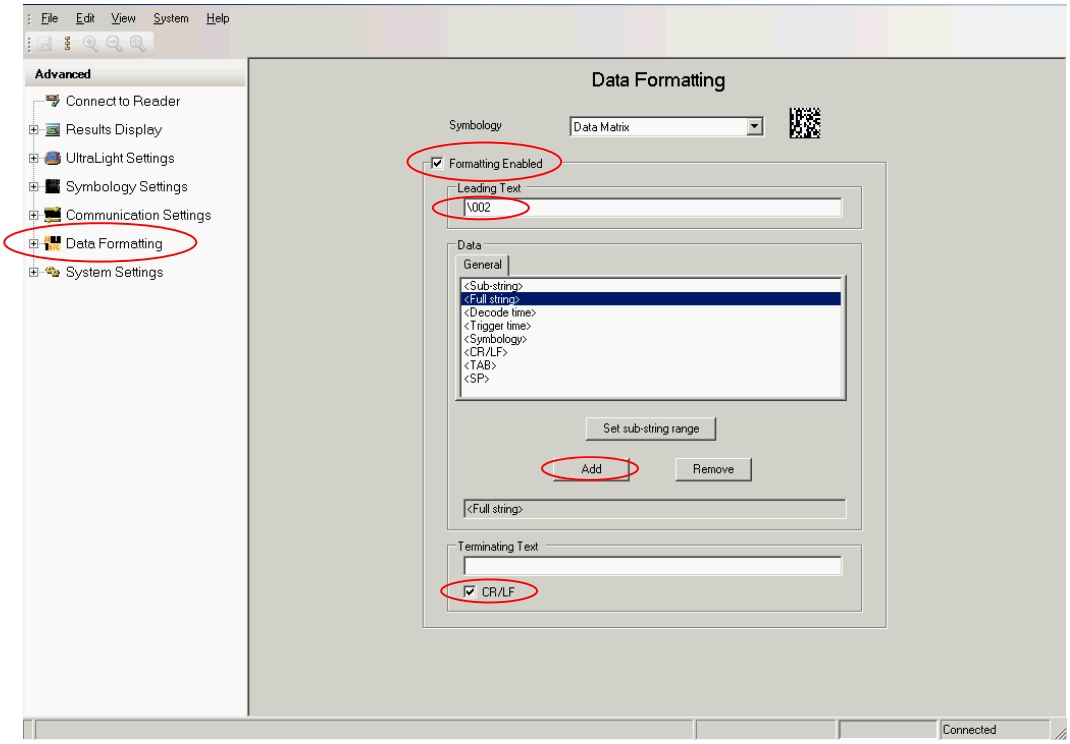
RS 232 interface ①

RS 232 baud rate: 9600 baud ②

Prefix STX ③

The setup tool must be used in order to configure the prefix.
The following settings must be performed:

- Activate the *Formatting Enabled* check box.
- Please enter *\002* in the Leading Text field.
- Select *Full string* and click *Add*.
- Activate the *CR/LF* check box.



IT 6300 on MA 41 DP-K or MA 41 IS

RS 232 transmission with 9600 baud, 8 data bits, 1 stop bit, no parity, postfixes CR/LF.

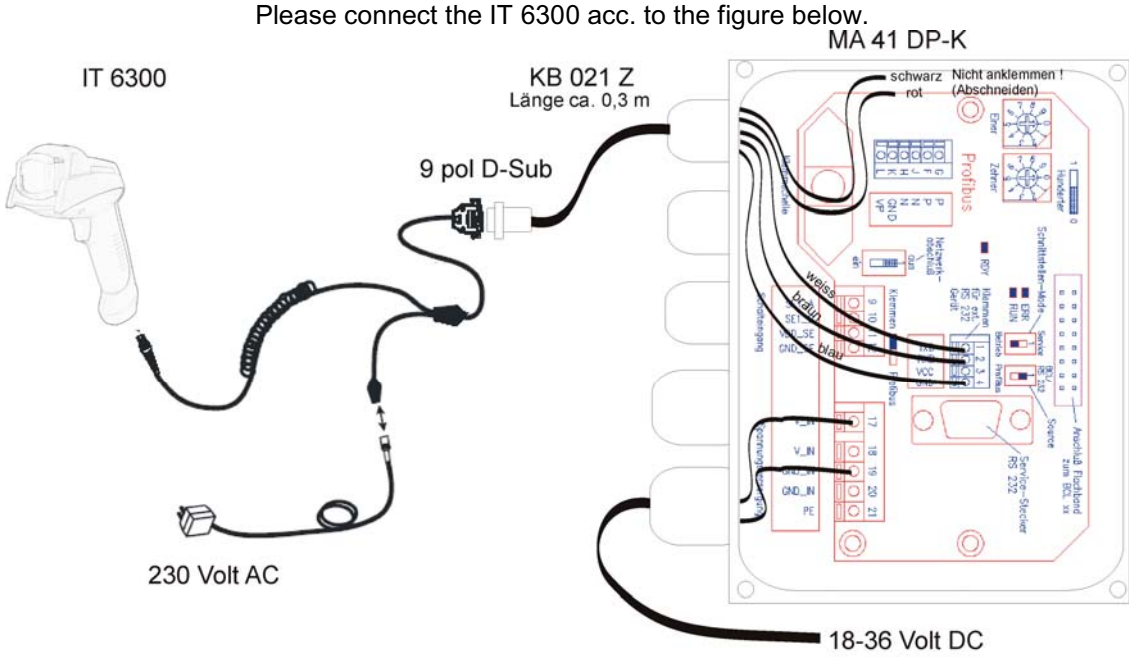
Required parts:

1x	501 05 380	IT 6300 IDP 315 S
1x	501 05 422	Cable TTL-RS232/ext for IT 6300
1x	501 03 403	Power supply unit
1x	500 35 421	KB 021 Z
1x	500 33 638	MA 41 DP-K for Profibus
		(for Interbus: 500 28 994 MA 41 IS or 500 30 085 MA 41 IS PDP)

Pin assignments KB021 Z

Core colour	Signal	Terminal in MA 41:
brown	(RXD)	2
white	(TXD)	1
blue	(GND)	4
red	(VCC)	✂
black	(GND)	✂
bare (shield)	(PE)	21

Please connect the IT 6300 acc. to the figure below.



IT 6300 an MA 41 DP-K

Bearbeiter: Gerd Eschenbächer, Abteilung Logistic
Leuze electronic GmbH+Co.
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Tel. 07021/573-128
Fax: 07021/9850957
eMail: geschen@leuze.de
Seite 1/1 | 22.08.2005
Datei: IT4600-4800-MA41.cdr

Configuration

Connection to MA41 in

standard setting

IT 6300 to MA 21

RS 232 transmission with 9600 baud, 8 data bits, 1 stop bit, no parity, postfixes CR/LF.

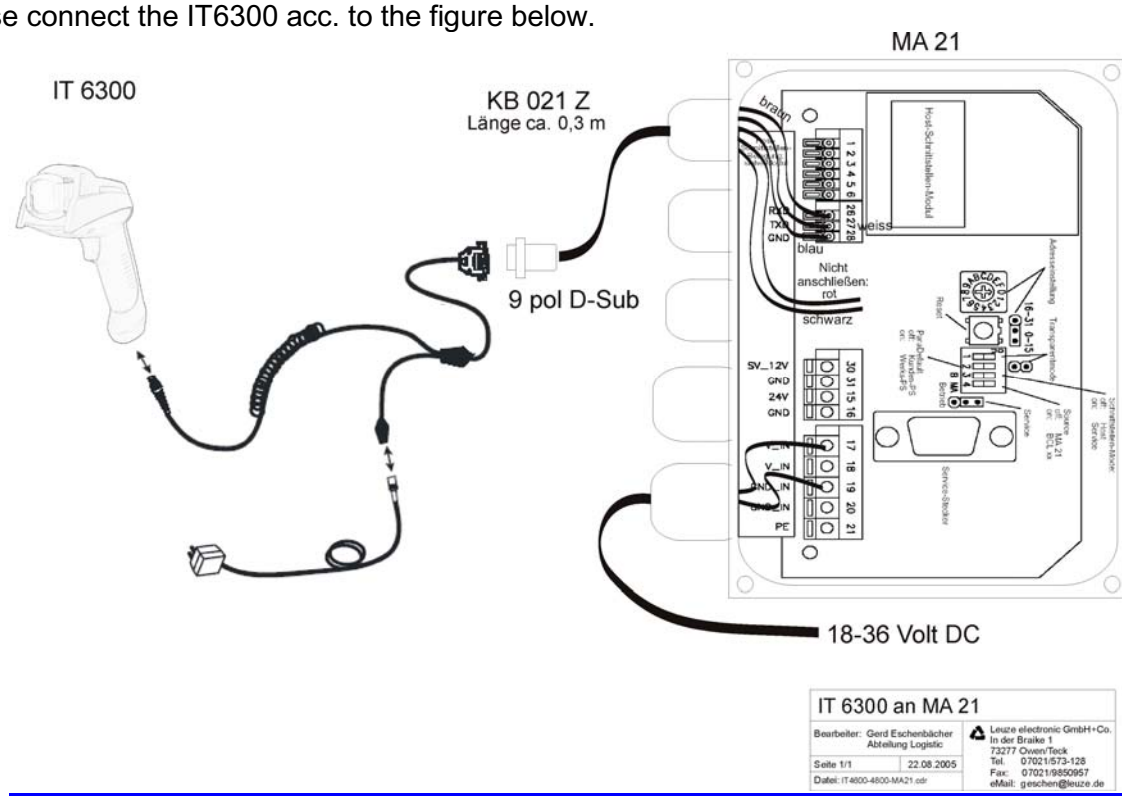
Required parts:

1x	501 05 380	IT 6300 IDP 351S
1x	501 05 422	Cable TTL-RS232/PIN9 IT 6300
1x	501 03 403	Power supply unit
1x	500 35 421	KB 021 Z
1x	500 30 481	MA 21 100

Pin assignments KB021 Z

Core colour:	Signal	Terminal in MA 21:
brown	(RXD)	26
white	(TXD)	27
blue	(GND)	28
red	(VCC)	30
black	(GND)	31
bare (shield)	(PE)	21

Please connect the IT6300 acc. to the figure below.



Configuration

Connection to MA21
with 9600 baud, 8 data bits, 1 stop bit, no parity,
postfixes CR/LF.
Please make these settings on the MA 21.

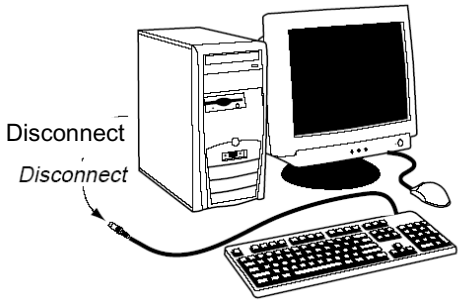
IT6300 to PS2 interface

The operation of the IT 6300 in keyboard-wedge mode is described in this chapter. A PC keyboard is emulated in this operating mode. The data which are read in are written directly to the currently activated program. Thus, the data can be processed further in all standard programs.

Required parts:

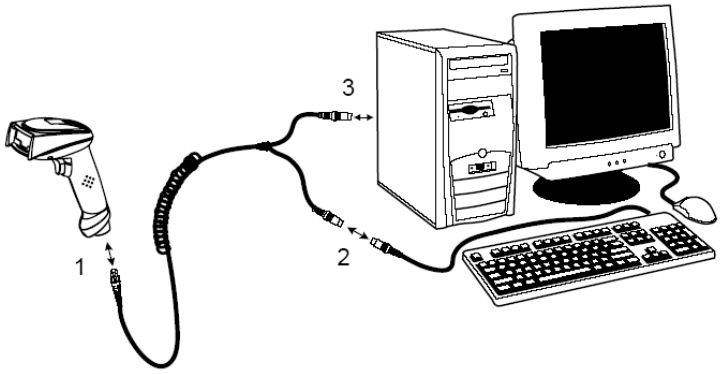
1x	501 05 380	IT 6300 IDP 351S
1x	501 05 424	Cable PS2 for IT 6300
1x	501 03 403	Power supply unit

Please connect the IT 6300 acc. to the adjacent figures.



To do this, proceed as follows:

1. Switch off the PC.
2. Disconnect the keyboard.
3. Plug in the IT 6300 hand-held scanner between the keyboard and the PC.
4. Switch the PC back on.
5. Scan the code shown below.



Configuration

PS2 keyboard emulation with CR LF

German keyboard

IT 6300 to USB interface (keyboard emulation)

The operation of the IT 6300 in keyboard-emulation mode on a USB port is described in this chapter. A PC keyboard is emulated in this operating mode. The data which are read in are written directly to the currently activated program. Thus, the data can be processed further in all standard programs.

Required parts:

1x	501 05 380	IT 6300 IDP 351S
1x	501 05 426	USB cable for IT 6300
1x	501 03 403	Power supply unit

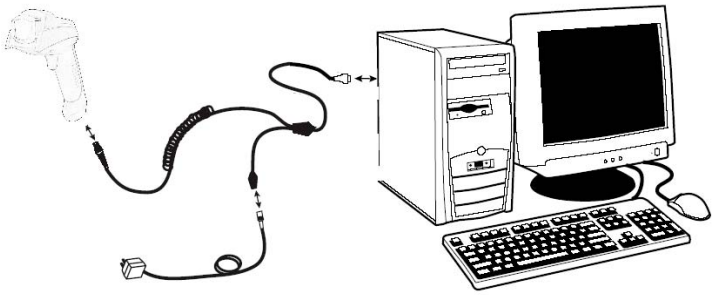
Please connect the IT6300 acc. to the figures below.

To do this, proceed as follows:

1. Plug the IT 6300 hand-held scanner into a free USB port.

2. The scanner acknowledges this connection with a beep.

3. Scan the code shown below.



Configuration

USB keyboard emulation with CR LF

IT 6300 to USB interface (COM port emulation)

The operation of the IT 6300 as a serial interface on a USB port is described in this chapter. A COM interface is emulated in this operating mode. The data which are read in are sent to a new COM interface. The driver with which you emulate this COM interface can be found on the CD-ROM or can be downloaded from our homepage at www.leuze.de. Thus, the data can be processed further in programs which expect data via COM interfaces.

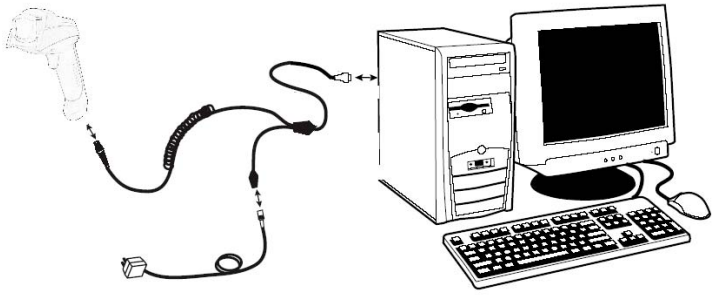
Required parts:

1x	501 05 380	IT 6300 IDP 351S
1x	501 05 426	USB cable for IT 6300
1x	501 03 403	Power supply unit

Please connect the IT 6300 acc. to the figures shown below.

To do this, proceed as follows:

1. Plug the IT 6300 hand-held scanner into a free USB port.



2. The scanner acknowledges this connection with a beep.
3. Scan the code shown below.
4. Install the USB serial driver when you are prompted to do so by Windows.
5. Open a terminal program or your program for the serial interface, select the new COM port, and make the following settings: baud rate 38400, 8 data bits, 1 stop bit and no parity. A CR is still transmitted as terminator.

Configuration

COM port emulation on the next free COM address with 38400 baud,
8 data bits, 1 stop bit, no parity and a CR as postfix.

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: **+** ASCII decimal value: 043
To cancel read readiness, send a deactivation.
The command for deactivation is: **-** ASCII decimal value: 045
Following a successful read operation, the IT 6300 deactivates itself.

The second option is to use the trigger button to establish read readiness.

Troubleshooting

For problem detection and troubleshooting, examine your scanner as follows:

1. Is the scanner supplied with power via the interface cable? For power to be supplied, the scanner and computer must be connected to one another before the scanner is commissioned, whereby the computer must provide a power supply of 5 volt DC for the scanner. Check the manual for your computer to ensure that the power supply is adequate for connecting your scanner.
2. Make certain that the interface cable is securely connected to the computer. You can find information on properly connecting the scanner in the manual for your computer. Support is also available from your technical staff.
3. If your system operates with an external voltage supply, make certain that the power supply unit is securely connected to the scanner and power supply.
4. Check that the interface cable is securely connected to the handle of the scanner. To do this, loosen the Phillips screw on the end cap of the handle with a suitable screwdriver. Remove the cable fastening clip and pull out the cable. Now guide the cable back in and make certain that it is properly seated in the bracket. Remount the fastening clip and secure everything with the Phillips screw.
   With the IT 4600, please loosen the cable with a small pin: the plug is unlocked by inserting the pin into the hole in the side of the end cap.
5. If, even after performing all of these measures, the scanner is not ready for operation, replace the power supply unit with a different recommended power supply unit which you are certain functions properly.
6. Make certain that your scanner's interface is compatible with the computer. Further information on this topic can be found in the manual for your computer. Also check whether the scanner has been configured for the desired application. This information is described in the online help system for the setup tool.
7. Check whether the bar code labels which you would like to scan are of suitable quality and that the used bar code symbol is recognised by your scanner. Sample labels for testing are available from your dealer should you require precise information on the label details. Damaged bar code labels (crinkled, torn or soiled) may be recognised poorly or not at all by the scanner. If you suspect that the problem lies with the quality of the label, check the read readiness with a label of relatively good quality.
8. If the problems are still not corrected, please contact Leuze electronic.

Type overview

IT Reihe / IT series			
Part No.	Bezeichnung/Description	Schnittstelle/Interface	Bild/Picture
Industrie-Handleser (IP54) für direktmarkierte 2D-Codes Industrial hand-held scanner (IP54) for DPM 2D-codes			
50103405	IT 6300 IDP 351S	PS2 / USB / TTL RS232	

Alle Geräte werden ohne Kabel geliefert, Bitte separat bestellen! / All devices are delivered without cables, please order separately!

Accessories

Zubehör für IT Reihe / Accessories for the IT series				IT 6300 IDP 315S				
Part No.	Bezeichnung/Description	P/N no.	Bild/Picture					
50105424	PS2-Kabel/ext IT 6300 PS2 cable/ext for IT 6300	42206132-02S		-				
50105426	USB-Kabel/ext IT 6300 USB cable/ext for IT 6300	42206461-01		-				
50105422	TTL-RS232-Kabel/ext IT 6300 TTL-RS232 cable/ext for IT 6300	42204253-04		**X**				
50103403	Netzteil für IT 4600/4800/IT4715/6300 Power supply for IT4600/4800/IT4715/6300 for ext. cable (5 V DC) 	PS5U-4 + 77900508		X				

Connecting to Leuze multinet Plus

- MA 21 100 Interface converter / Multinet slave
  Part No. 500 30 481
- KB 021 Z Connection cable MA 21 to IT4600/4800
  Part No. 500 35 421

Connecting to Profibus

- MA 41 DP-K Profibus gateway
  Part No. 500 33 638
- KB 021 Z Connection cable MA 21 to IT4600/4800
  Part No. 500 35 421

Connecting to Interbus

- MA 41 IS Interbus gateway
  Part No. 500 28 994
- MA 41 IS PDP Interbus gateway with long data protocol
  Part No. 500 30 085
- KB 021 Z Connection cable MA 21 to IT4600/4800
  Part No. 500 35 421

Codes for fast configuration

Reset scanner to factory setting

Reboot scanner

Only activate setup 1 (default)

Only activate setup 2

Only activate setup 3

Only activate setup 4

Activate USB keyboard

Activate keyboard wedge (default)

Activate keyboard emulation

Activate USB-COM

Activate RS-232 interface

RS232: 9600 baud

RS232: 19200 baud

RS232: 38400 baud

RS232: 57600 baud

RS232: 115200 baud (default)

8 data bits, even parity, 1 stop bit

8 data bits, no parity,
1 stop bit (default)

8 data bits, odd parity, 1 stop bit

Hardware handshake RTS/CTS off (default)

Hardware handshake RTS/CTS on

Keyboard layout USA (default)

Keyboard layout Germany

Keyboard layout France

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