IT 4715
Fix mounted 2D-code scanner

Quick start user's guide

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Scope of delivery

- **IT 4715 xx-x-xxx**

1. Scanners IT 4715 xx-x-xxx

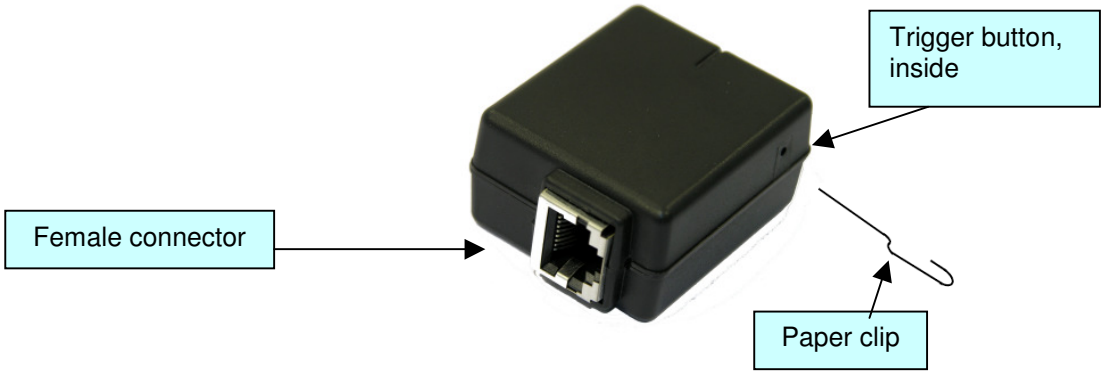
Type overview see page 14

Accessories see page 14

Installation

Connecting the scanner

The figure below shows the cable connection. In the following you will find described several steps of the connection of the scanner to a cable.



Connecting the cable to the IT 4715

To mount the cable at the Scanner, please proceed in the following way:

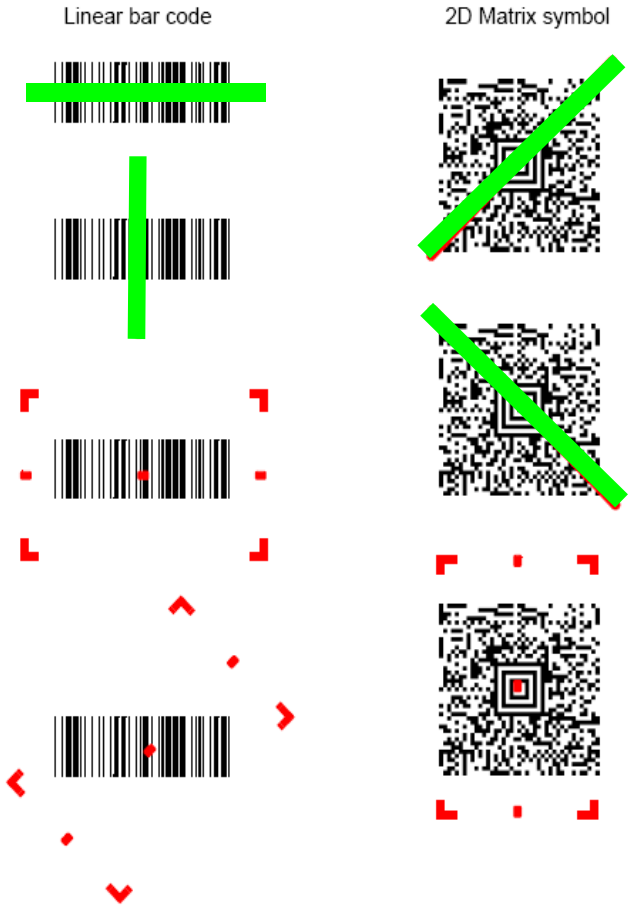
1. Plug in the RJ 41 connector in the socket, until the cable is clicked in
2. Connect the other side of the cable to your PC
3. If you use the RS 232-interface you have to check, if the scanner is supported with power. Please check it with the pinning on page 5, to find the right cable
4. Connect the power supply to the socket (if your PC do not support the power)
5. Check if the scanner is working, hit the trigger button and look for the red LED‘s as well as for the green target line. Scan a code label. The scanner confirms with an acoustic signal, if the code is decoded.

Reading techniques

The imager has a view finder that projects a bright green aiming beam that corresponds to the imager's horizontal field of view. The aiming beam should be centred over the bar code, but it can be positioned in any direction for a good read.

The aiming beam is smaller when the imager is closer to the code and larger when it is farther from the code. Symbologies with smaller bars or elements (mil size) should be read closer to the unit. Symbologies with larger bars or elements (mil size) should be read farther from the unit. To read single or multiple symbols (on a page or on an object), hold the imager at an appropriate distance from the target, activate the trigger, and center the aiming beam on the symbol. If the code being scanned is highly reflective (e.g., laminated), it may be necessary to tilt the code +5° to prevent unwanted reflection.

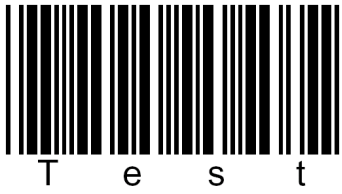
You will find the reading fields on page 5



Testing the scanner

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

Code 39 bar code sample



Technical Data

Please refer to the corresponding data sheet

Pinning of the cables

TTL-RS 232-cable/ ext IT 4xxx Art-No. 501 04442

Pinning 9 pin-D-sub connector (female) at the cable 42203758-04

PIN-number	Signal	Description
1	Shield	Shield
2	TX	Transmit data (-5 to +5V)
3	RX	Receive data (-5 to +5V)
5	GND	Signal ground
7	CTS	Clear to send
8	RTS	Request to send
PIN at power connector	**Signal**	**Description**
1	VCC IN	4,5 - 12 Volt DC
2	GND	Ground

The suitable power supply for the IT 4xxx (100-240 V / 47-63 Hz) is the article number 501 03403.

TTL-RS 232 cable/ PIN9 IT 4xxx Art-No. 501 04586

Pinning 9 pin-D-sub connector (female) at the cable 42203758-03

PIN-number	Signal	Description
1	Shield	Shield
2	TX	Transmit data (-5 to +5V)
3	RX	Receive data (-5 to +5V)
5	GND	Signal ground
7	CTS	Clear to send
8	RTS	Request to send
9	VCC IN	4,5 - 12 Volt DC

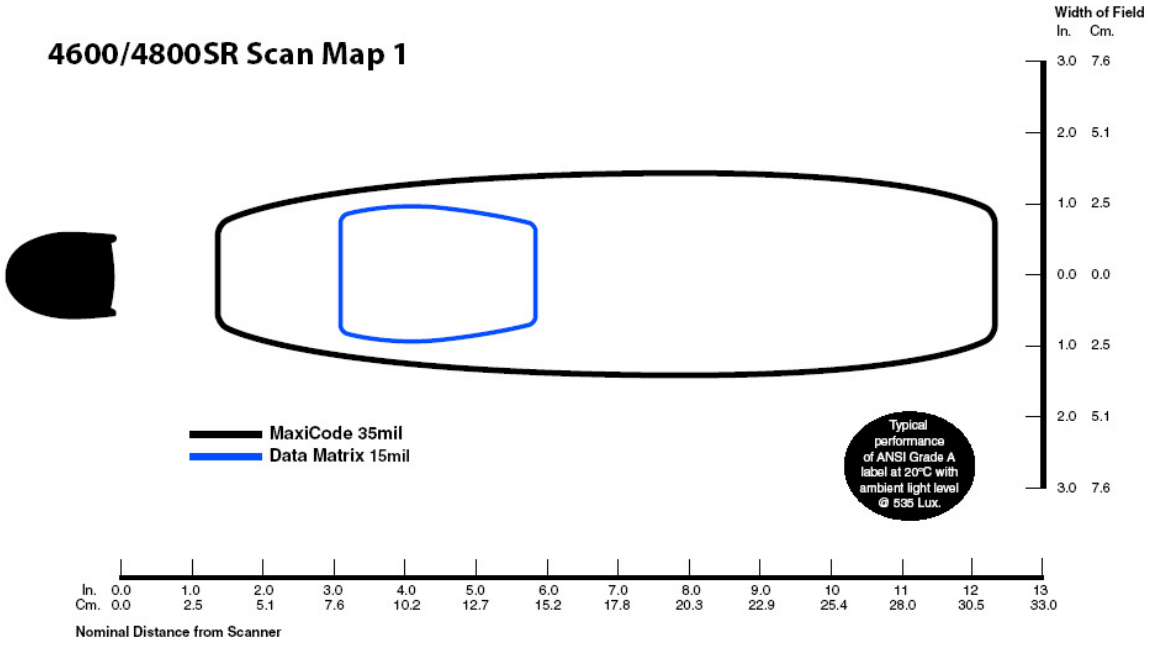
USB-cable IT 4xxx Art-No. 50103404

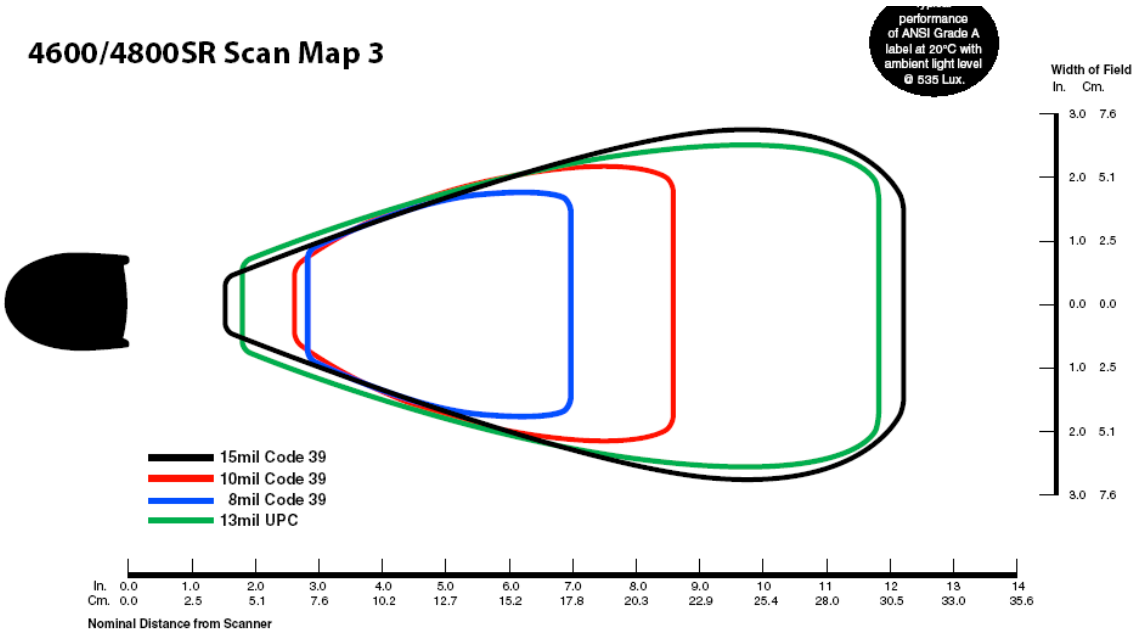
Pinning of the USB-connector at the cable 42203758-03

USB-type A-connector	Signal	Description
1	VCC IN	5 Volt DC
2	Data -	Data -
3	Data +	Data +
4	GND	Signal ground

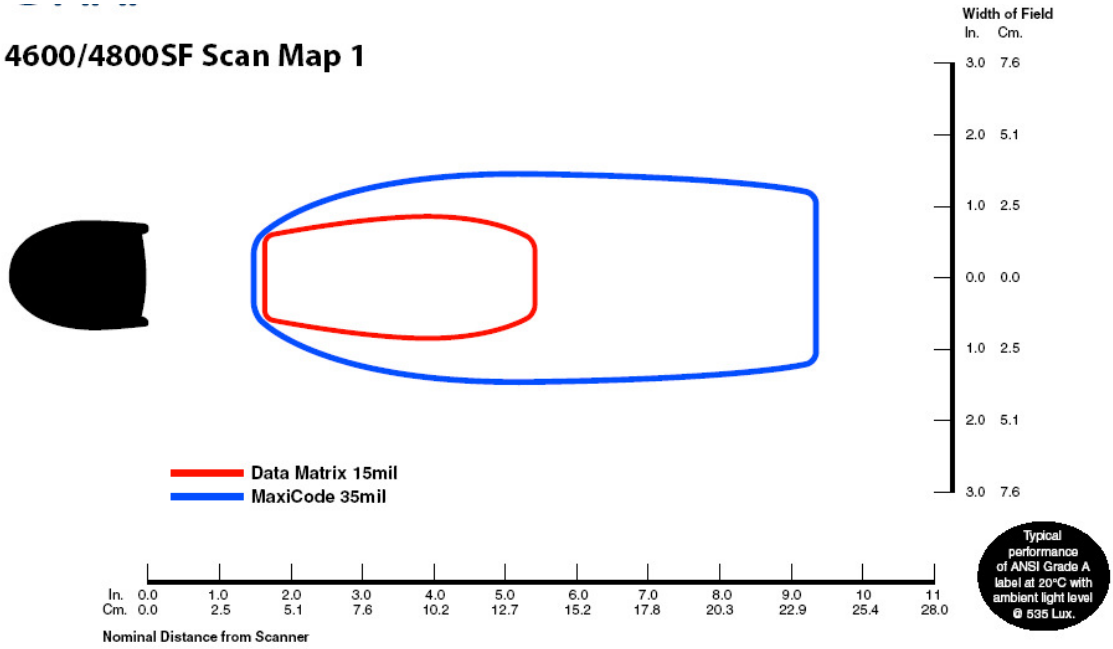
Reading fields

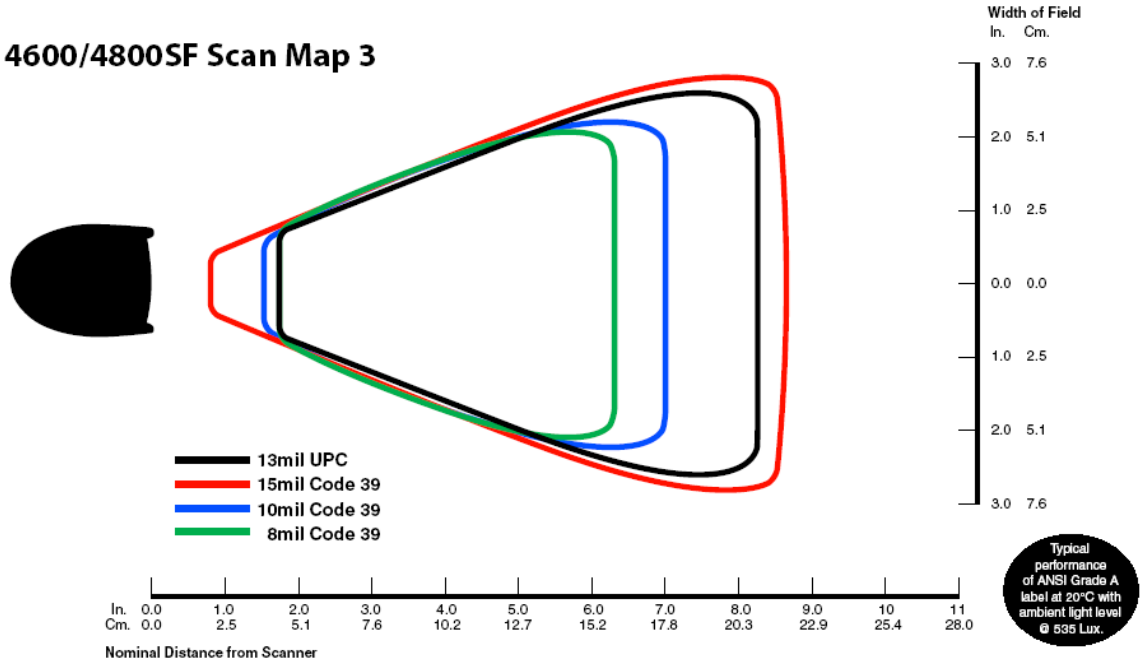
IT 4715 SR-1-xxx





IT 4715 SF-1-xxx





IT 4715 factory settings (default)

To set the IT 4715 back to factory default, you have to scan this bar code.

Warning: All previous settings will be reset!!!!

Standard Product Default Settings

(115200 baud, 8 data bits, 1 stop bit, no parity)

Configuration

The IT 4715 can be configured in two different ways.
One possibility is to read bar codes. You have to select the corresponding bar code and hit the trigger-button to read the code. The configuration will be done immediately and stored in the device.
The most important configurations will be shown in the following.

The second possibility is to configure the IT 4715 with the PC-program VisualMenu over the RS 232 or USB interface. You can download this program from our homepage www.leuze.de. With this program you can configure the IT 4715 via the PC and transmit the configuration to the device. The configuration can also be stored in a file on the PC.
For more informations, please see the user's guide IT 4600/4800.

In the following the most important configurations will be shown.

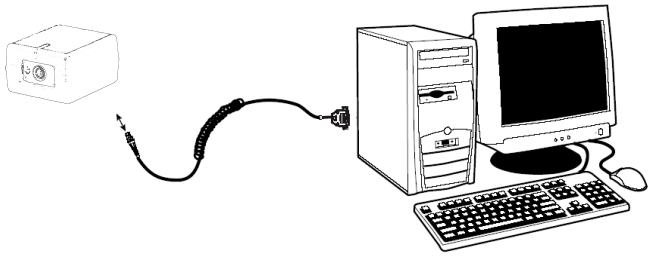
IT 4715 at the serial PC-interface

With powering over PIN 9 at TTL-RS232-cable/PIN9 IT 4xxx Art-No. 501 04586

You have to connect the IT 4715 as shown in the fig. on the right.

Necessary parts:

1x		IT 4715 XX-1-232
1x	501 04586	cable TTL-RS 232/ PIN 9

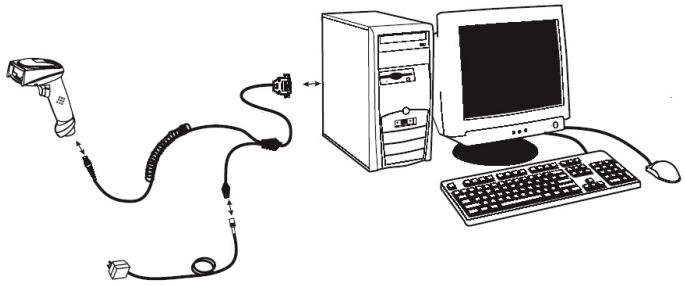


Pinning 9 pin-D-sub connector (female) at the cable 42203758-03

PIN-number	Signal	Description
1	Shield	Shield
2	TX	Transmit data (-5 to +5V)
3	RX	Receive data (-5 to +5V)
5	GND	Signal ground
7	CTS	Clear to send
8	RTS	Request to send
9	VCC IN	4,5 - 12 Volt DC

With powering over the power supply at the RS 232-cable / ext IT 4xxx Art-No. 501 03413

You have to connect the IT 4715 as shown.



Necessary parts:

1x		IT 4715- XX-1-232
1x	501 04 442	TTL-cable RS 232 / ext
1x	501 03 403	power supply

Pinning 9 pin-D-sub connector (female) at the cable 42203758-04

PIN-number	Signal	Description
1	Shield	Shield
2	TX	Transmit data (-5 to +5V)
3	RX	Receive data (-5 to +5V)
5	GND	Signal ground
7	CTS	Clear to send
8	RTS	Request to send
PIN at power connector	**Signal**	**Description**
1	VCC IN	4,5 - 12 Volt DC
2	GND	Ground

The suitable power supply for the IT 4xxx (100-240 V / 47-63 Hz) is the Article-Number 501 03403.

RS 232 data transmission with 115200 Baud, 8 databit, 1 stopbit, no parity, postfixes CR/LF.

RS-232 Interface

Configuration for Leuze standard protocol

Leuze standard protocol:
RS 232 with 9600 Baud, 8 databit, 1 stopbit, no parity, prefix STX and postfixes CR/LF

Leuze standard protocol

IT 4715 to MA 41 DP-k or MA 41 IS

RS 232 data transmission with 9600 baud, 8 databit, 1 stopbit, no parity, postfixes CR/LF.

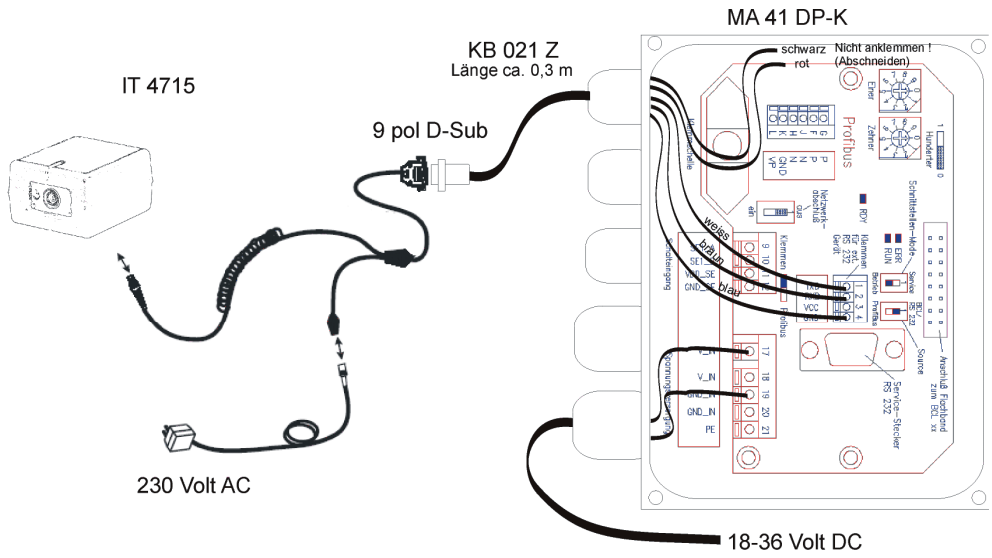
Necessary parts:

1x		IT 4715 XX-1-232
1x	501 04 442	TTL-cable RS 232 / ext
1x	501 03 403	power supply
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)

Pinning KB 021 Z

colour:	Signal	Pin MA 41:
Brown / braun	(RXD)	2
White / weiss	(TXD)	1
Blue / blau	(GND)	4
Red / rot	(VCC)	3
Black / schwarz	(GND)	✂
Shield / blank	(PE)	21

You have to connect the IT 4715 as shown below.



Configuration

Connection for MA 41 in default

IT 4715 for MA 21

RS 232 data transmission with 9600 baud, 7 databit, 1 stopbit, parity even, postfixes CR/ LF.

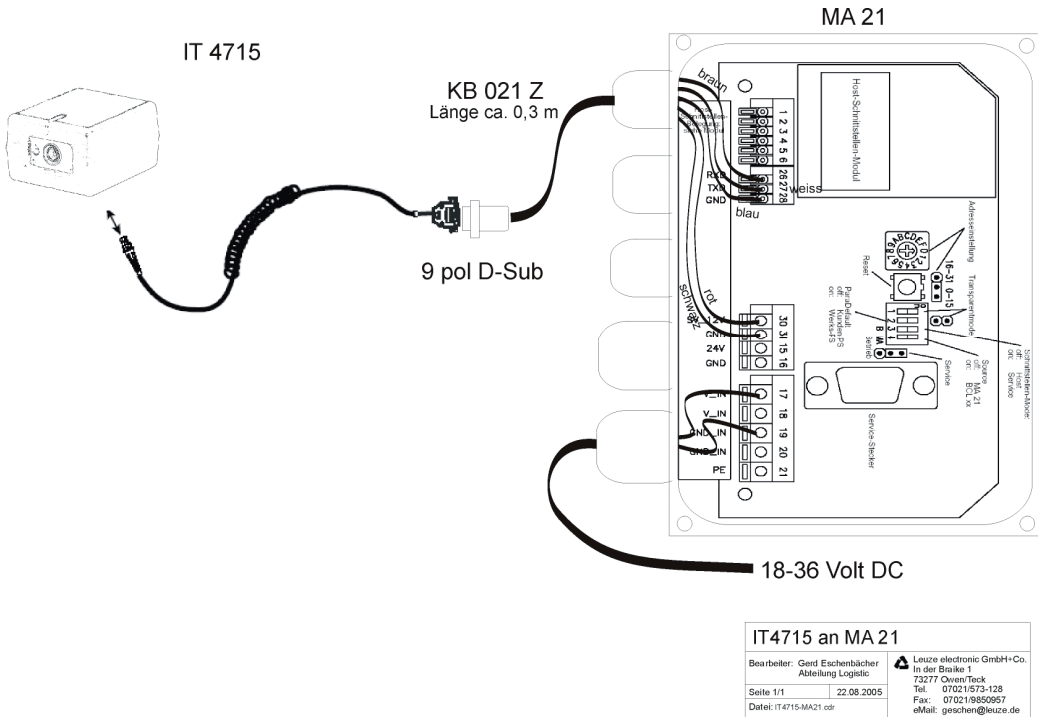
Necessary parts:

1x		IT 4715 XX-1-232
1x	501 04 586	TTL-cable RS 232/ ext
1x	500 35 421	KB 021 Z
1x	500 30 481	MA 21 100

Pinning KB021 Z

colour:	Signal	Pin MA 21:
Brown / braun	(RXD)	26
White / weiss	(TXD)	27
Blue / blau	(GND)	28
Red / rot	(VCC)	30
Black / schwarz	(GND)	31
Shield / blank (Schirm)	(PE)	21

You have to connect the IT 4715 as shown below.



Configuration

Connection for MA21 in default

IT 4715 at the USB-interface (keyboard-emulation)

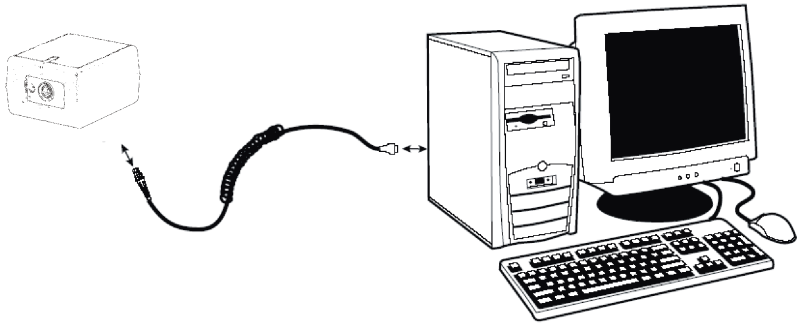
In this chapter the operation of the IT 4715 in keyboard-wedge mode at USB interface is described. The data is transmitted to the open window at the position of the cursor. You can use this mode in all standard-PC-programs.

Necessary parts:

1x		IT 4715 XX-1-USB
1x	501 03 404	cable USB

You have to connect the IT 4715 as shown below.

1. Plug in the cable of the IT 4715 in a free USB-port.
2. The scanner gives you an acoustic signal.
3. Scan the code.



Configuration

USB-keyboard-emulation with CR LF

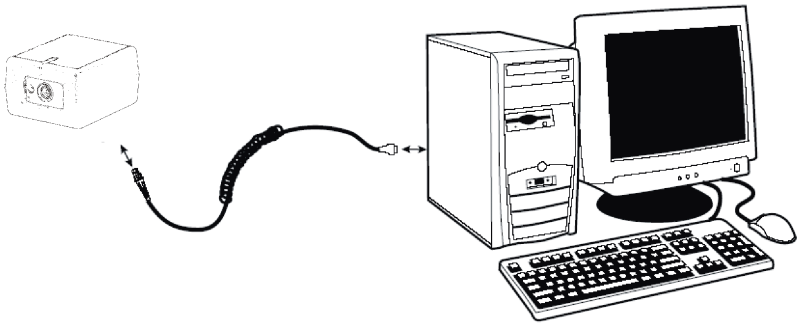
IT 4715 at the USB interface (COM-port-emulation)

In this chapter the operating emulation of a COM-port over the USB-interface is described. The scanned data is sent to an new COM-port. You can download the required driver from our homepage www.leuze.de.

Necessary parts:

1x		IT 4715 XX-1-USB
1x	501 03 404	cable USB

You have to connect the IT 4715 as shown on the right.



1. Plug in the cable of the IT 4715 in a free USB port.
2. The scanner gives you an acoustic signal.
3. Scan the code.
4. Install the USB-serial driver, if Windows asks for it.
5. Open a terminal program, choose the new COM-port, and use baudrate 38400, 8 databits, 1 stopbit and no parity. As postfix (or terminator) CR.

Configuration

COM-port-emulation at the next free COM with 38400 baud,
8 databit, 1 stopbit, no parity and CR as postfix.

Triggering

To activate a read operation, you have to send a trigger command over the RS 232- or USB-interface (only COM-port-emulation). The command has to be transmitted with the baudrate, parity, data- and stopbits which you have configurated.

The command to activate is: **SYN T CR** ASCII-Decimal-Values: 022; 084; 013
The command to deactivate is **SYN U CR** ASCII-Decimal-Values: 022; 085; 013
If you want stop the reading this what you have to send. After a good read it stops automatically.

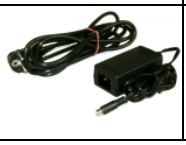
The second possibility is to trigger with the integrated trigger-button. This button is int the inside and can only be reached with an tool (example opened paper clip or similar).

Type overview

series IT			
Art-Nr.	Description	Interface	Picture
Fix-scanner for bar codes and 2D-codes			
50104049	IT 4715 SR-1-RS 232	TTL RS 232	
50104051	IT 4715 SR-1-USB	USB	
... (Special Focus – for small codes)			
50104050	IT 4715 SF-1-RS 232	TTL RS 232	
50104052	IT 4715 SF-1-USB	USB	

All devices are without cable. Please order separately!

Accessories

Accessories for series IT				IT 4715 XX-1-232	IT 4715 XX-1-USB			
Art-Nr.	Description	P/N-Nr.	Picture					
50103404	USB-cable for IT 4600/ 4800/ 4715 and ST 2020	42206161-01E		-	X			
50104442	TTL-RS 232-cable/ ext for IT 4715	42203758-04E		X	-			
50104586	TTL-RS 232-cable/ PIN 9 IT 4715 and ST 2020	42203758-03E		X	-			
50103403	Power supply for IT4600/ 4800/ IT 4715 for RS 232 cable (5 Volt DC)	PS5U-4 + 77900508		X	-			

Connection to Leuze multiNet Plus

- MA 21 100 Interface converter/ multiNet slave
  Art-Nr. 500 30 481
- KB 021 Z cable to MA 21 for IT4xxx
  Art-Nr. 500 35 421

Connection to PROFIBUS

- MA 41 DP-k PROFIBUS gateway
  Art-Nr. 500 33 638
- KB 021 Z cable to MA 41 for IT4xxx
  Art-Nr. 500 35 421

Connection to Interbus

- MA 41 IS Interbus gateway
  Art-Nr. 500 28 994
- MA 41 IS PDP Interbus gateway with "long data protocol"
  Art-Nr. 500 30 085
- KB 021 Z cable to MA 41 for IT4xxx
  Art-Nr. 500 35 421

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