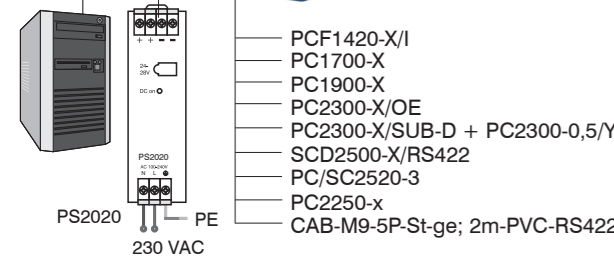


Measurement Setup

for sensors

- of optoNCDT ILD1420 / 1750 / 1900 / 2300 series
- of optoCONTROL ODC2500 / 2520 / 2600 series
- of optoNCDT ILR2250 series
- of confocalDT IFD2421 / 2422 / 2451 / 2461 / 2465 / 2466 / 2471 series
- of colorCONTROL ACS7000 series



ILD1420
ILD1750
ILD1900
ILD2300
ILD2300
ODC2500
ODC2520
ILR2250
ACS7000

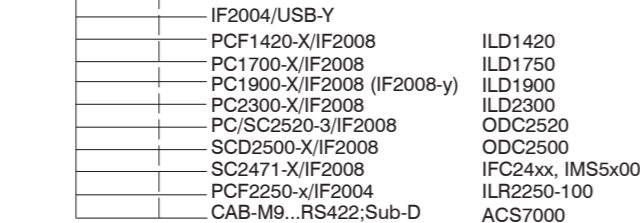
PCF1420-X/I
PC1700-X
PC1900-X
PC2300-X/OE
PC2300-X/SUB-D + PC2300-0,5/Y
SCD2500-X/RS422
PC/SC2520-3
PC2250-x
CAB-M9-5P-St-ge; 2m-PVC-RS422

X = Cable length in m

Connections front side

- ▶ Connect the converter to a power supply unit, for example PS2020.
- ▶ Connect the converter to a free USB interface to start the driver installation.

Use the optionally available Y-adaptor cable IF2008-Y when using 3 or 4 sensors on the 15-pin. Sub-D connectors, see connections rear side.



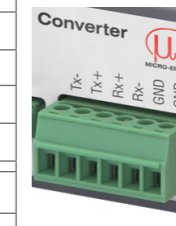
Connections rear side

IF2004/USB-Y
PCF1420-X/IF2008
PC1700-X/IF2008
PC1900-X/IF2008 (IF2008-y)
PC2300-X/IF2008
PC/SC2520-3/IF2008
SCD2500-X/IF2008
SC2471-X/IF2008
PCF2250-x/IF2004
CAB-M9...RS422;Sub-D

ILD1420
ILD1750
ILD1900
ILD2300
ODC2520
ODC2500
IFC24xx, IMS5x00
ILR2250-100
ACS7000

RS422 Connections to 6-pole Terminal Block

Terminal Converter	ILD1420 PCF1420-X/I	ILD1750 PC1700-X	ILD1900 PC1900-X/OE	ILD2300 PC2300/OE PC2300-0,5/Y	ILR2250 PC2250-x	ODC2520 PC/SC2520-x	ODC2500 SCD2500-x/ RS422	ACS7000 CAB-M9-5P-St-ge
Serial numbers up to 000253								
Converter Tx-	Green	Gray	Green	Blue	White	Brown	Yellow	White
Converter Tx+	Yellow	Yellow	Yellow	Red	Brown	Green	Green	Brown
Converter Rx+	Pink	Brown	Pink	Violet	Gray	Yellow	Brown	Green
Converter Rx-	Gray	Green	Gray	Black	Pink	Gray	White	Yellow
Serial numbers from 000300								
Converter Tx-	Yellow	Yellow	Yellow	Red	Brown	Green	Green	Brown
Converter Tx+	Green	Gray	Green	Blue	White	Brown	Yellow	White
Converter Rx+	Gray	Green	Gray	Black	Pink	Gray	White	Yellow
Converter Rx-	Pink	Brown	Pink	Violet	Gray	Yellow	Brown	Green



Assembly Instructions
IF2004/USB
**4-Channel RS422/
USB-Converter**

RS422 Connections to 15-pin. Sub-D, Sensor 1/2 and 3/4

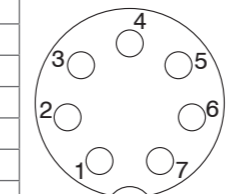
Pin	Assignment	Pin	Assignment
1	Sensor 1/3 Tx-	11	Sensor 2/4 Tx-
2	Sensor 1/3 Tx+	12	Sensor 2/4 Tx+
3	Sensor 1/3 Rx-	13	Sensor 2/4 Rx-
4	Sensor 1/3 Rx+	14	Sensor 2/4 Rx+
5	GND	15	GND
6	Sensor 1/3 TRG+	8	Sensor 2/4 TRG+
7	Sensor 1/3 TRG-	9	Sensor 2/4 TRG-
10	+24 V ¹	10	+24 V ¹



1) Power supply +24 V via power connection, see supply voltage connection

Digital Inputs

Pin 1	IN 1
Pin 2	IN 2
Pin 3	IN 3
Pin 4	IN 4
Pin 5	OUT 1
Pin 6	OUT 2
Pin 7	GND



7-pin. subminiature male cable connector,
Company Binder, series 712, view: solder pin side
male cable connector

Unpacking, Included in Delivery

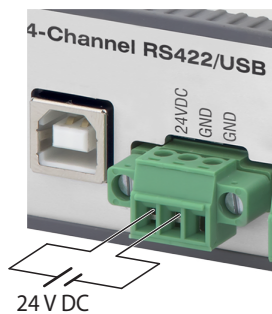
- 1 Converter IF2004/USB
- 1 USB cable
- 1 Operating instructions



Supply Voltage

Nominal value: 24 V DC

- ▶ Only turn on the power supply after wiring has been completed.
- ▶ Connect the 24VDC and GND inputs at the converter with a 24 V power supply.



Supply voltage connection

Digital Inputs

Pin	Assignment
1	IN 1
2	IN 2
3	IN 3
4	IN 4
5	OUT 1
6	OUT 2
7	GND

7-pin, subminiature cable connector, Fa. Binder, series 712, view on solder pin side

USB Driver Installation

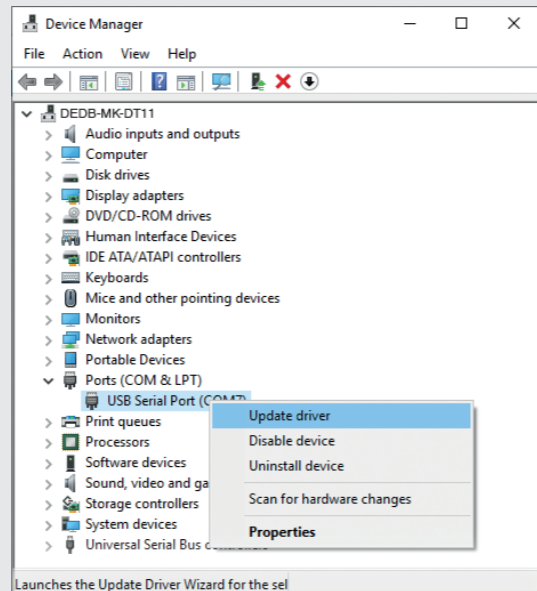
- ▶ Install the corresponding FTDI Virtual COM Port Driver before you use the converter for the first time.

You can find the current driver at:

http://www.micro-epsilon.de/download/drivers/FTDI_VCP_Driver.zip

- ▶ Now install the driver as follows:¹
- ▶ Unpack the driver (.zip file).
- ▶ Connect the sensor/controller with the USB converter.
- ▶ Connect the USB converter with a free USB port of a PC/notebook.
- ▶ Connect the converter with a power supply.
- ▶ Start the device manager under Control Panel > Hardware and Sound > Devices and Printers > Device Manager.

- ▶ Right-click the entry USB Serial Port and select Update driver.

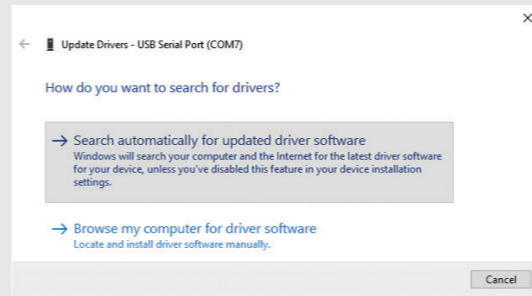


1) Valid for Windows 10

A window opens where you can choose among two possibilities:

1. Automatic Installation

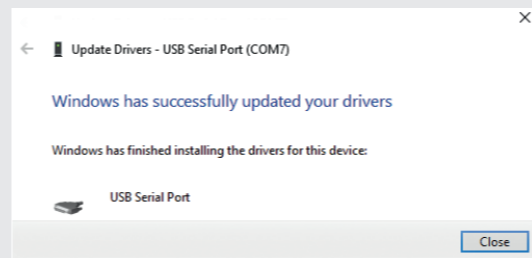
- ▶ Choose Search automatically for updated driver software.



Windows will search your computer and the internet for the latest driver software for your device, unless you have disabled this feature in your device installation settings.

The routine now starts the installation of the driver.

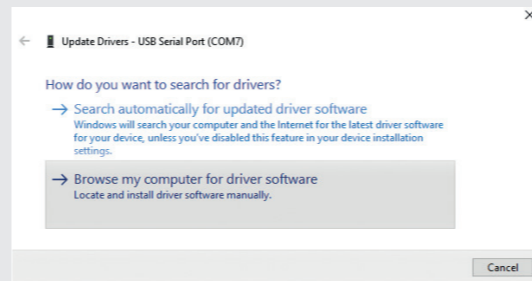
- ▶ Click on the Close button to complete the installation.



1. Manual Installation

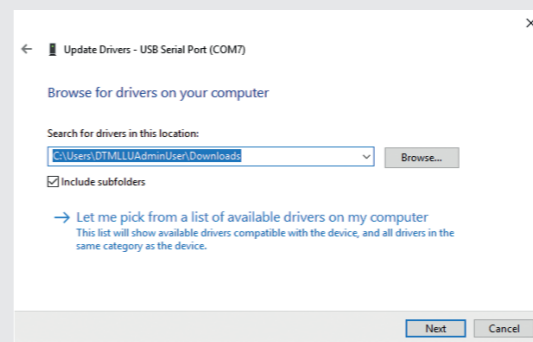
Locate and install the driver software manually.

- ▶ Choose Browse my computer for driver software.



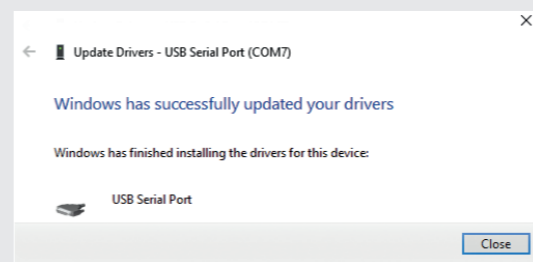
- ▶ Now use Browse to find the driver in the path where you saved it when you downloaded it from the web page.

- ▶ Go to Next.



The routine now starts the installation of the driver.

- ▶ Click on the Close button to complete the installation.



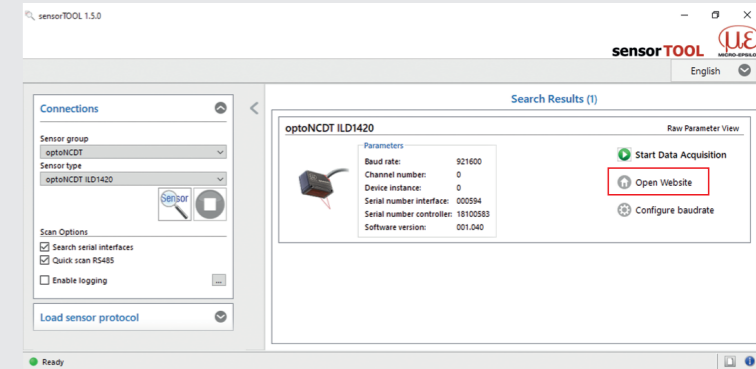
Initial Operation

You can open the web page of a sensor via the sensorTOOL program. The web interface contains, among other things, the current settings of the sensor and the periphery. Operation is only possible while there is an RS422 connection to the sensor.

The sensor is connected to a PC/notebook via an IF2004/USB converter and the supply voltage must be applied.

- ▶ Start the program sensorTOOL.
- ▶ Select the connected sensor.
- ▶ Click the Sensor button with the magnifier symbol.

The program will now search for connected sensors on the available interfaces.



Auxiliary sensor search program and home page

You need an HTML5-compatible web browser on a PC/notebook.

- ▶ Select a desired sensor. Click the Open Website button.

You can find this program Online at

www.micro-epsilon.com/download/software/sensorTool.exe.

You can find more information about the IF2004/USB interface in the operating instructions. They are available Online at:

www.micro-epsilon.com/download/manuals/man-IF2004-USB-en.pdf

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