

M2428 data interface

OPERATING INSTRUCTIONS



Warranty conditions

The warranty for the device manufactured by Mostec is 2 years from the date of invoice. During this period, defective devices will be repaired free of charge, provided the defect has arisen during normal use. Not covered by the warranty are damages caused by use, such as scratched front panels and display elements, corroded potentiometers, incorrect power supply feeds, etc. Postage and packaging costs for returns under warranty will be paid by the customer or Mostec. Mostec will assume responsibility for long-term damage caused by faulty manufacture for a further two years after the two-year warranty period. This includes in particular non-soldered or poorly soldered solder joints and assembly errors which only become apparent after a long period of time. Transport damages are not covered by the warranty and must be reported to the delivering carrier.

Technical description

The M2428 data interface is a further development of the predecessor device of the same name, which had to be operated with an external power supply. The new USB powered M2428 data interface serves as an electrically isolated communication interface between PC and terminal device.

The integrated LCD display displays the current flow over the 2-wire lines up to 1.5‰ accurately, while the data interface feeds the terminal device by itself. If more accurate measurement values are required, the data interface can be operated in combination with external shunts and measuring devices.

A special feature of the data interface is the customer-friendly operation and portability. The data interface can be used directly in the field with only a laptop to read out or configure devices that are installed or difficult to access.

With the in-house configuration software Mpro, supported Mostec devices can be accessed via the data interface to read out data or configure them.

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1. Safety Instructions



Observe the national regulations and safety regulations for electrical, light and heavy current installations.



Before using the device, read and observe the safety regulations of this operating manual.



The device must be used in such a way that it is protected against moisture, vibrations and heavy soiling.



When working on the control panel or system, all cables leading to the device must be de-energized if there is a risk that the terminals on the device could be touched.



The limits under the specifications must not be exceeded under any circumstances.



Disregarding the safety instructions may damage the device.

2. Operating Regulations

1. Ensure that the correct driver and software are available on the PC.
2. Wire the device according to the wiring diagram.
It is recommended to connect the USB port first and then the output to the terminal device.
3. Select the COM port of the data interface in Mpro and establish the connection with the terminal device.

3. Software

System requirements

Windows 95/98/NT4.0/2000/XP/Vista/7/10® operating system
Free USB 2.0 or higher interface

Disclaimer

The company Mostec AG has developed and tested the software Mpro with great care. However, Mostec AG is not liable for any damages that occur during installation or operation of Mpro. The same applies to consequential damages of any kind.

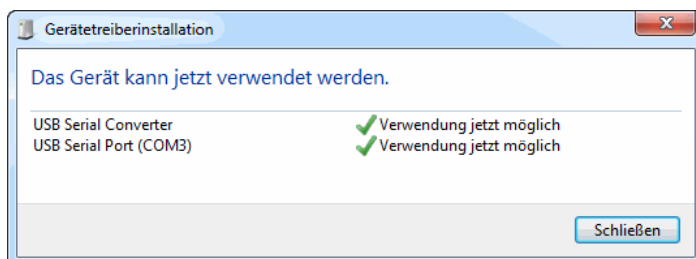
General notes

Close all open programs before you start the installation. Administrator rights are required for installation under Windows XP/Vista/7/10®. The latest Mpro software and drivers can be downloaded free of charge from www.mostec.swiss.

3.1. Installing Drivers

The USB driver for the data interface can be downloaded from www.mostec.swiss under Products → Accessories → M2428 data interface.

1. Do not connect the data interface to the PC.
2. Unzip the driver and start setup.
3. Follow on-screen instructions
→ The driver files will automatically be installed onto your Windows operating system.
4. After finishing the setup, the data interface can be connected.
→ The new hardware will be detected automatically.



5. Check COM Port

On Windows 10:

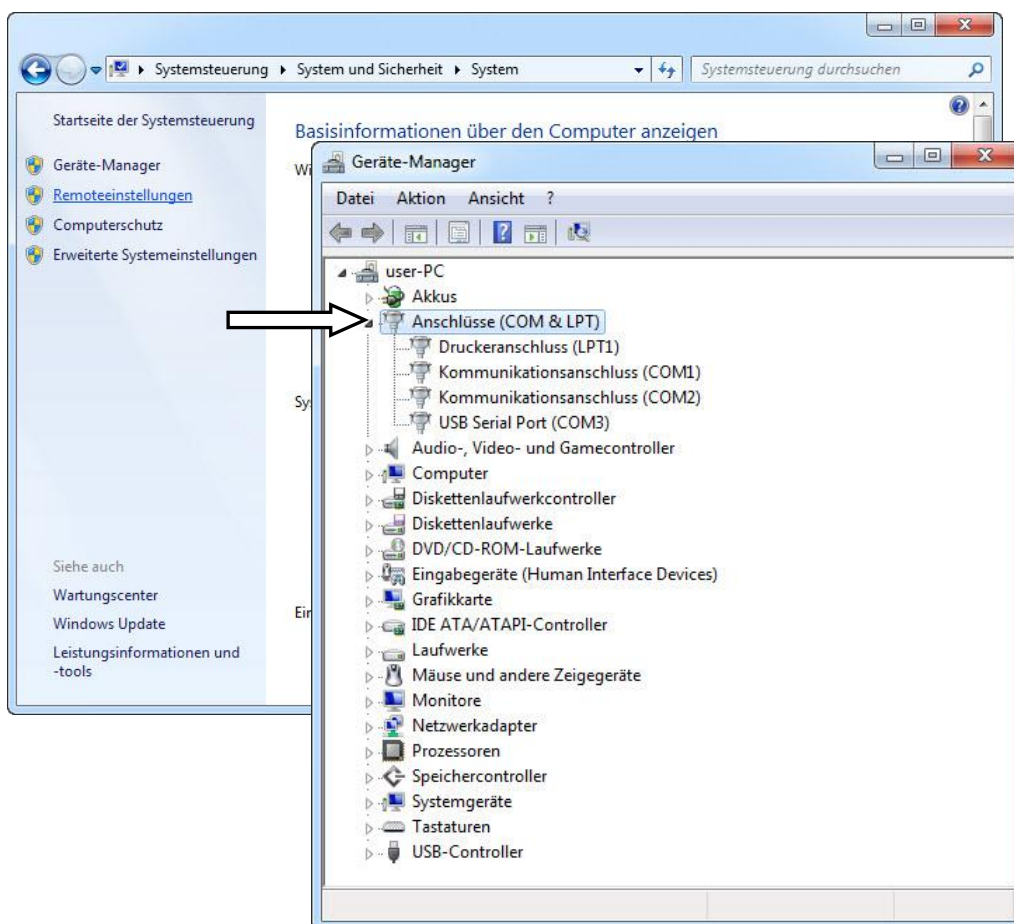
Right-click on the Windows icon at the bottom left → Select Device Manager

On Windows 7 and older:

Click on Start → Control Panel → System and Security → System → Device Manager
or

Key combination **Windows key + Pause (break)** and launch from there the Device Manager.

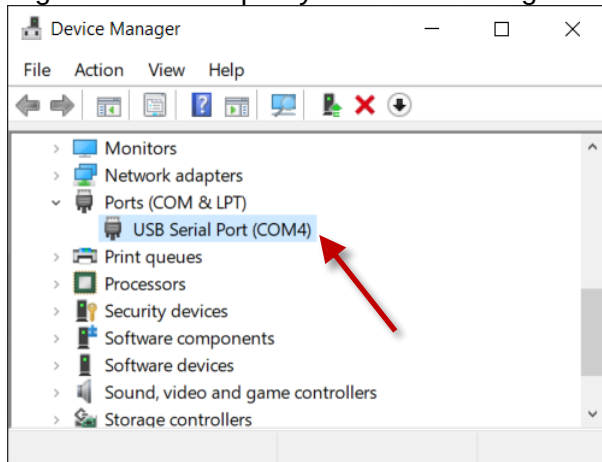
In the device manager under Ports (COM & LPT) the new used COM port is displayed, this must be set in the Mpro software (*).



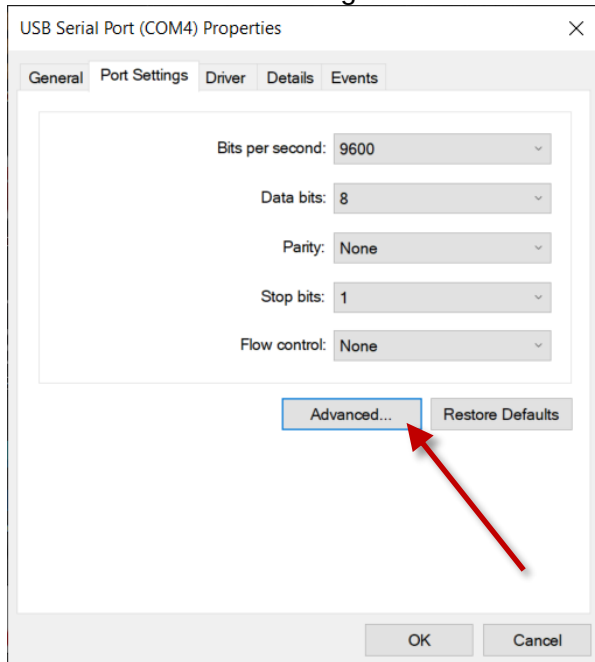
(*) Note: MOSTEC Mpro needs a COM port number smaller than 16. If the operating system has assigned a port greater than COM16, you have to set a port manually. This is described on the next page.

3.2. Changing the COM port number

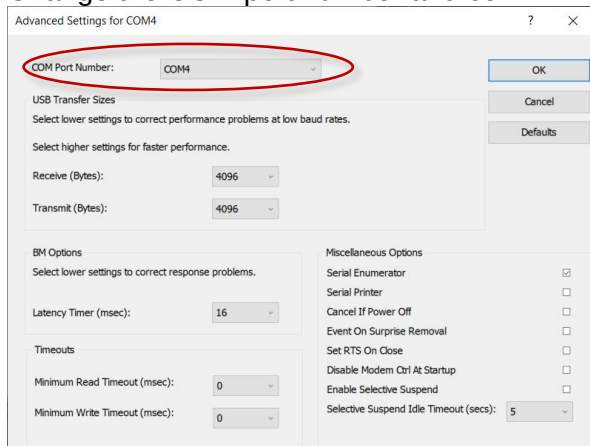
Right-click on the port you want to change and then select Properties.



Under the tab "Port Settings" click on the button Advanced.



Change the COM port number and confirm with "OK".



3.3. Mpro

The in-house programming and configuration software Mpro can be downloaded from www.mostec.swiss under Documents & Support → Software.

3.3.1. Supported terminal devices

- M2428 load cell
- M2428 bending beam
- M2428 platform scale
- M3836 conductivity sensor

3.3.2. Installation

1. Unzip and start the setup
2. Follow on-screen instructions
3. A Mpro icon will be created on the desktop, with which you can start the program. Mpro can also be started under "Start → All Programs → MOSTEC AG → Mpro" or in Windows 10 under "Start → MOSTEC AG → Mpro".

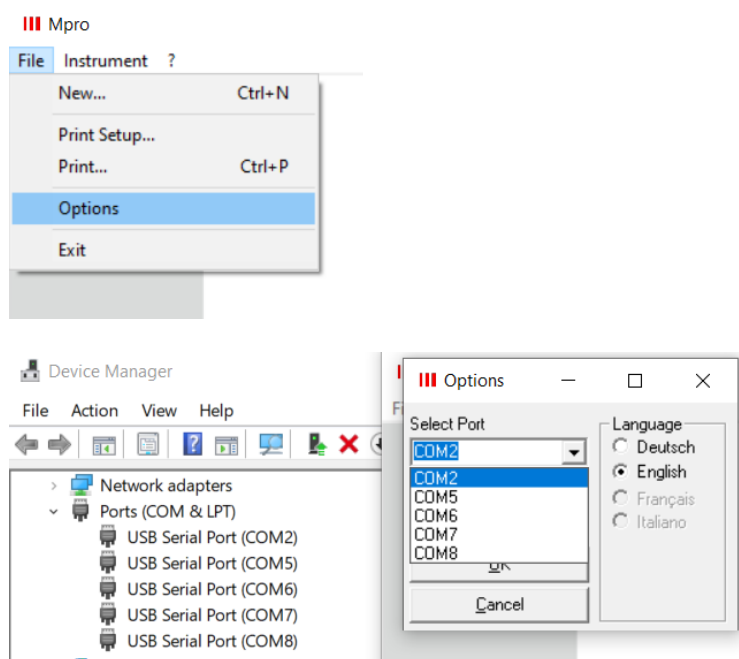
3.3.3. Uninstall

Mpro can be uninstalled under "Start → All Programs → MOSTEC AG → Mpro → Uninstall Mpro" or in Windows 10 under "Start → MOSTEC AG → Mpro → Uninstall Mpro".

3.3.4. Selecting the COM port

After starting the Mpro program and connecting the data interface to the PC, the COM port of the data interface can be selected.

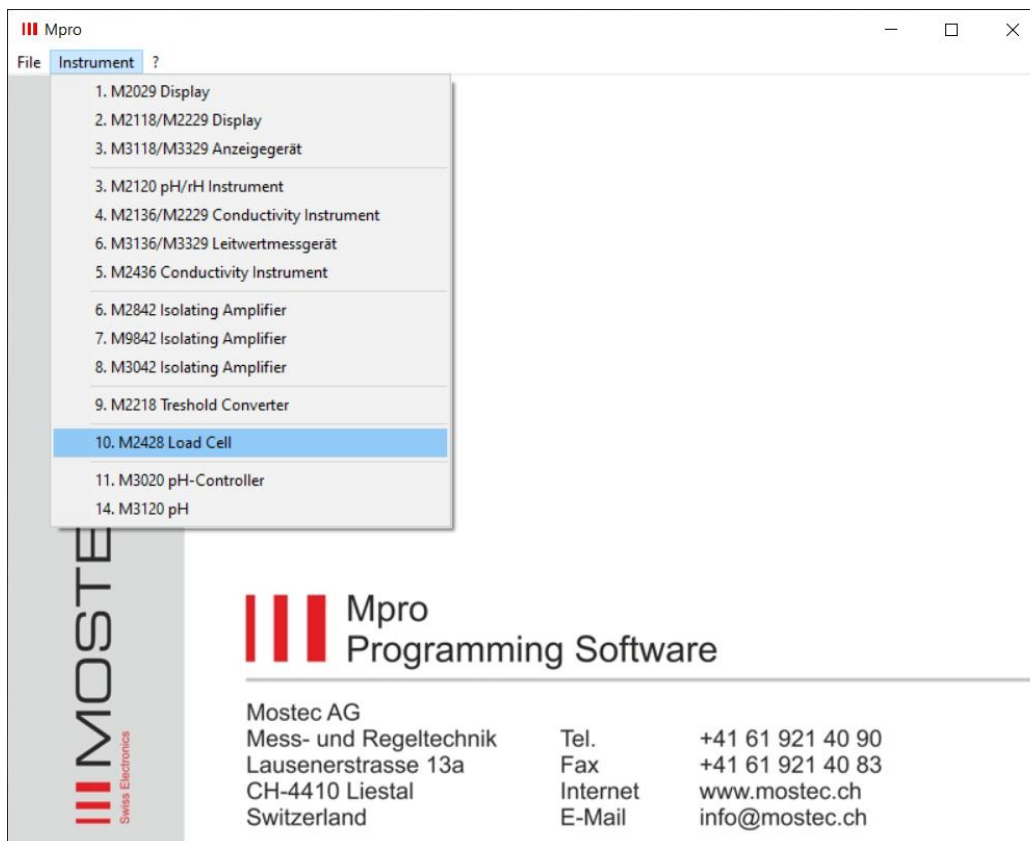
The COM ports are selected under "File → Options".



Please select the COM port number assigned to the M2428 data interface. Then press "OK" to accept the selection.

3.3.5. Select device type

To read and configure with the above-mentioned terminal devices (3.3.1), select the appropriate terminal device from the Instrument section. Please note that the terminal device must be connected to the data interface before clicking on the device type. For the correct connection of the terminal device to the data interface, please read the next page.



4. Wiring diagram

As mentioned in the technical description, there are several ways to connect the data interface to the terminal device.

4.1.1. Direct

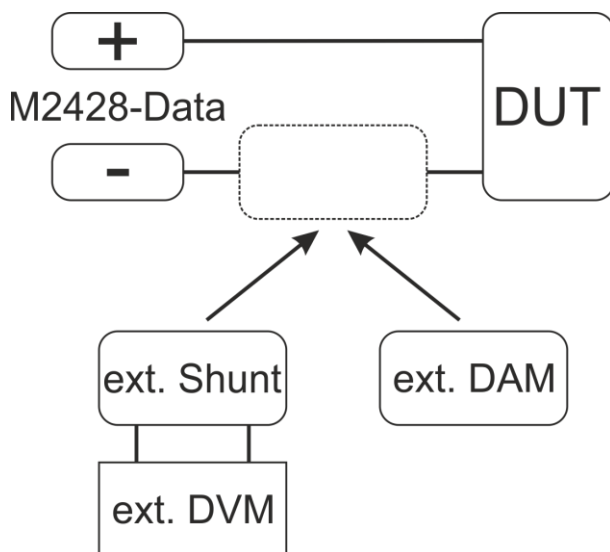
In this case, the data interface is connected directly to the terminal device. This is ideal if the terminal device has to be reconfigured quickly or to check whether everything still works.



Legend: DUT = terminal device

4.1.2. Parallel Measuring System

In this case, a measuring system can be connected parallel to the lead. Other measuring systems than the examples listed below can also be used.



Legend: DUT = terminal device, DVM = digital voltmeter, DAM = digital amperemeter

4.1.3. Information

To ensure communication between the data interface and terminal device, nothing should be connected between the positive poles of the two devices.

Do not connect an external power supply to the output of the data interface as this will damage the data interface. These damages are excluded from the warranty.

5. Technical data

Power supply:	USB 5V / 500mA (from PC)
Power consumption:	Max. 2W
Working temperature range:	-5°C to +45°C
Max. Humidity:	95%, non-condensing
Accuracy:	+/- 1.5‰ @ 25°C
Min. Resolution:	6 µA
Output:	2-wire, short circuit safe
Supported terminal devices:	M2428 load cell M2428 bending beam M2428 platform scale M3836 conductivity sensor
Supported software:	Mpro
System requirement PC:	Windows XP Windows Vista Windows 7 Windows 10
Display:	LCD character display with adjustable contrast
Terminals:	1x USB Gen 2.0 B (compatible with USB Gen 3.x) 1x Lumberg 2P terminal connector
Dimensions (LxBxH):	Compact plastic housing 73x51x25 mm (without clamp) 82x51x31 mm (with clamp)
Weight:	70 g (without clamp) 73 g (with clamp)
Scope of delivery:	1x M2428 data interface 1x USB cable A to B 1.8m 1x Lumberg 2P screw terminal
CE-conformity:	met

6. Notes

[illegible]