



MANUAL

LEO 5



provisionally

Keller AG für Druckmesstechnik



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1 General information

The LEO 5 is powered by accumulator and will be charged when connected to USB Port. As the accumulator is fix built in the device it cannot be replaced.

2 Operating instructions

2.1 Touch Display

LEO 5 has two keys integrated into the display.

A key press is initiated by touching the key field "SELECT" or "ENTER" and activated by release the key for at least 0.5 second.

(release your finger from the display after touching, for at least 1cm away from the display field)

Turn-on:

Touching the "SELECT" key turns on the display.
The device displays "PRESS ENTER".
Touch "ENTER" to start the manometer.



2.2 Manage the device with touch pannels

choose different functions

→ press „SELECT“

activate commands or functions

→ press “ENTER”

Remark: The display automatically switches back to the main display 10 seconds after the last key touch.





2.2.1 Example: Setting the peak mode

- Turn on the instrument by pressing the SELECT key followed by pressing the ENTER key
- Press the “SELECT”-key 3 times: The lower display part will show “MENU”
- Press “ENTER”
- Press “SELECT” -key 3 times: The lower display part will show “PEAK” and “START”
- Press “ENTER”: In the main display, the segment “PEAK” indicates that the peak mode is on.

2.2.2 Handling example: How to stop the peak mode

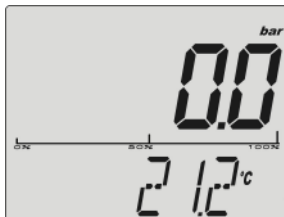
- Press “SELECT”-key 3 times: The lower display part will show “MENU”
- Press “ENTER”
- Press “SELECT”-key 3 times: The lower display part will show “PEAK” and “STOP”
- Press “ENTER”



2.3 Menu structure

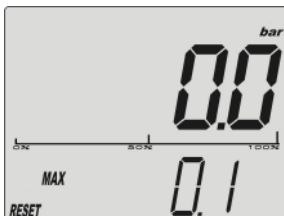
2.3.1 Main menu

Main Display



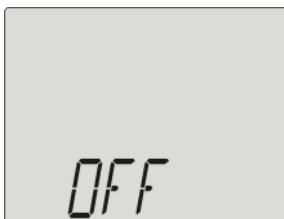
Reset

Min.-/Max.-value are set to the actual pressure



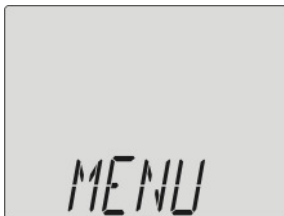
OFF

Turns off the instrument and ends an active record



Menu

Releases the sub menu functions

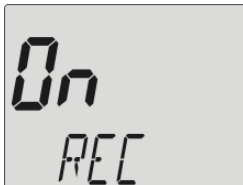




2.3.2 Sub menu

Rec On

Starts a record with the actual configuration (set via the software)



Rec OFF

Ends an active record



Peak START

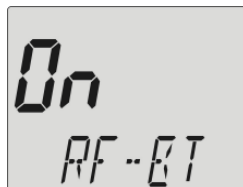
PEAK off: Normal measuring mode with 2 measurements per second.

PEAK on: Fast measuring mode with 5000 measurements per second



RF BT On/OFF

Switch the LEO 5 Bluetooth modul "On" or "OFF" to communicate wireless





Zero SET

Sets a new pressure
zero reference



Zero RESET

Sets the pressure zero to
factory setting



UNIT

Unit selection



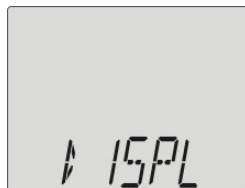
CONT

Activates or deactivates
the automatic turn off function



Display

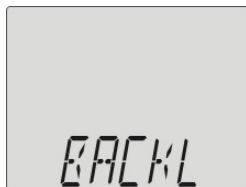
Main display selection





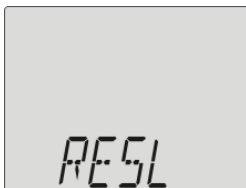
BACKL

Backlight setting



RESL

Choose resolution



ACCU

Accumulator information
and charge status







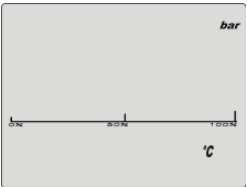
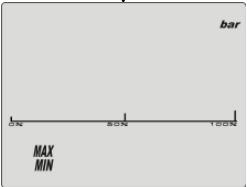
EXIT

Each sub menu can be left
by pressing “ENTER” while
“EXIT” is displayed.
The display will switch back
to the sub menu


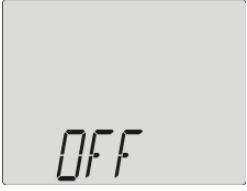


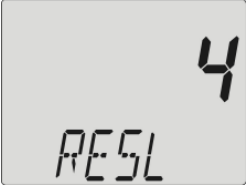






2.3.3 Sub menu settings

Unit selection	Continuous mode	Display selection
 ↓ 	 ↓ 	 ↓ 
bar, mbar, hPa, kPa, MPa, PSI, kp/cm ² , cmH ₂ O, mH ₂ O, inH ₂ O, ftH ₂ O, mmHg, inHg	CONT on: Deactivates the automatic turn-off function. CONT off: Activates the automatic turn off function (the instrument turns off 15 minutes after the last key operation)	select the lower display option. Select between: temperature display or min/max pressure value



Backlight setting	Resolution selection	Accu information	Exit
  	 		
<p>The backlight can be turn “ON”, “OFF” or “ONOFF”</p> <p>“ONOFF” turn on the backlight for 10 seconds after key is pressed</p>	<p>set measurement value resolution between 0 to 4 decimal places</p>	<p>displays accumulator voltage and visualizes the charge level. 3.2 Volt is an empty - 4.2 Volt is a fully charged accumulator</p>	<p>sub menu can be left by pressing “ENTER” while “EXIT” is displayed. The display will switch back to the main menu</p>



2.4 USB connection

To connect the device to USB, remove the backside mounted rubber protection to access the USB plug.



Hint:

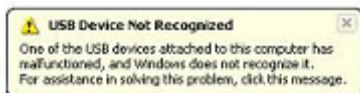
The rubber also acts as over pressure safety valve in case of damages at the pressure sensor when inner pressure is raised to a critical pressure.



2.5 Installing the USB – driver LEO 5

To enable the USB communication you have to install the manually the LEO5 USB – driver.

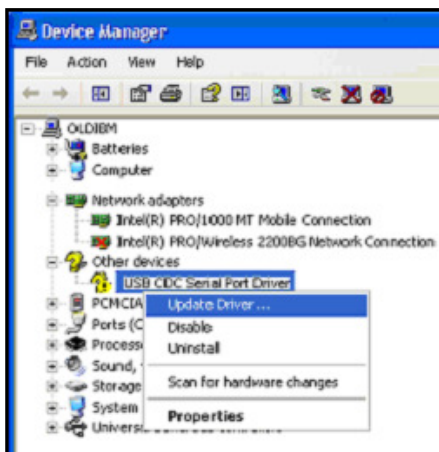
Connect the LEO5 with the PC by a USB cable.
After the PC has detected this device the following message will appear: "USB Device not recognized"



Link to the driver:

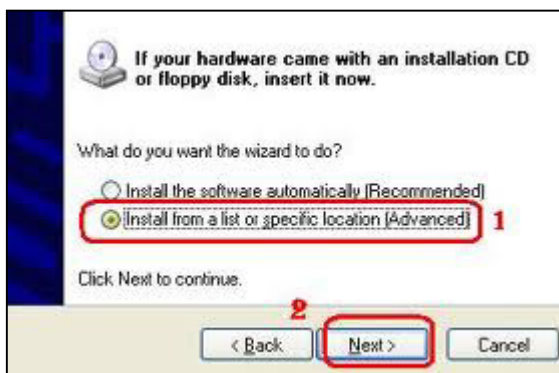
<http://www.keller-druck2.ch/swupdate/DriverManometer/DriverManometer.zip>

Open the device manager and do a right click on the new listed device and select update driver as shown in the picture.

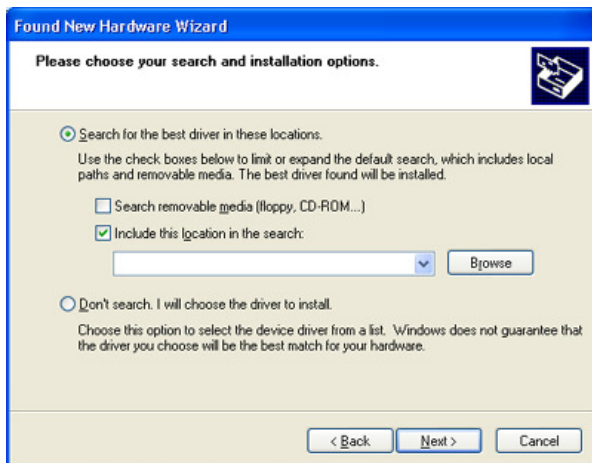




Please follow the introduction shown in the picture to install the driver.

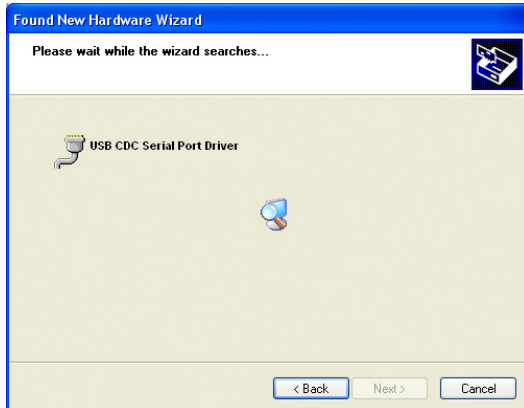


choose the path where the driver is stored.

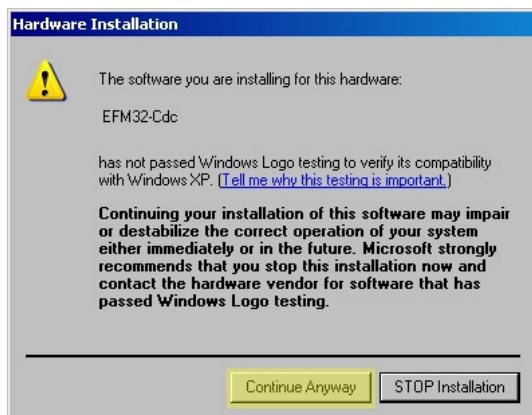




The Computer starts to install the new driver.



Windows doesn't recognize the driver.
Please click on "Continue Anyway".





Now the driver is installed and the device is recognized windows. The device manager is listing the device as “Manometer” with assigned comport number.

This com port number must be select manually in the PC software.

Remark:

If the device is connected to USB and is switched OFF, the device will not be listed in the device manager





2.6 Optional – establish a Bluetooth connection

Make sure your Computer has a Bluetooth Module integrated or it is connected to a Bluetooth USB Dongle, which is activated.

Your module must be capable with Bluetooth 2.1.

Step 1: check/activate Bluetooth on your PC

To activate your Bluetooth device, open the Device Manager and go to the section Bluetooth.

Perform a right click on the Bluetooth device.

If the Bluetooth is ready to use the device status shows “This device is working properly”.

Otherwise please activate the Bluetooth device.

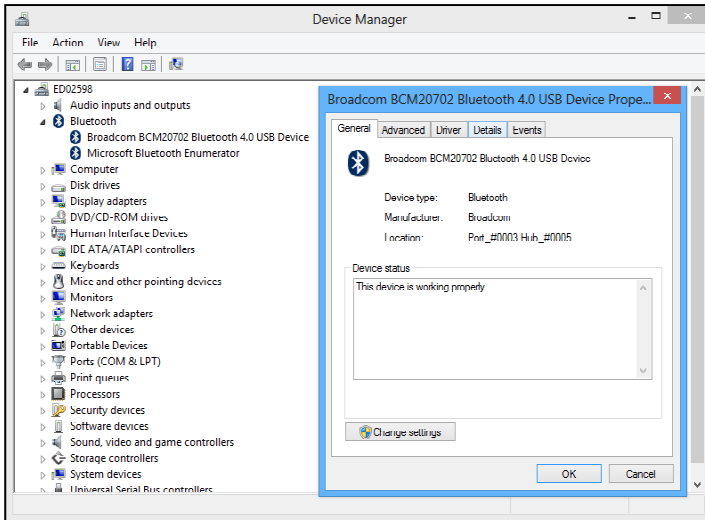
(see picture 1.1)

Step 2: switch the LEO 5 Bluetooth module on

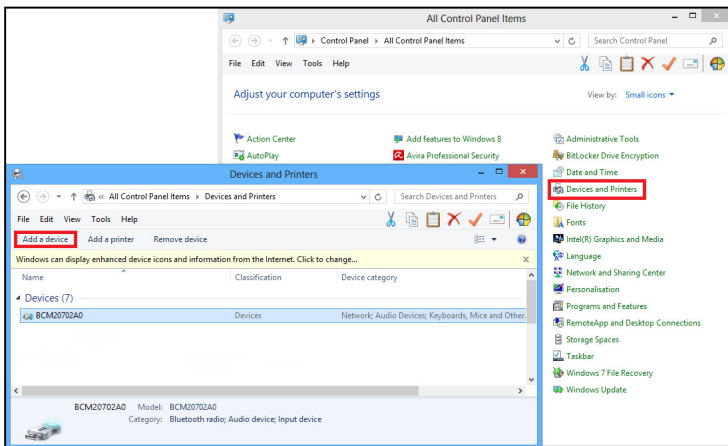
Switch the LEO 5 Bluetooth module on. More information in the chapter menu structure.

Step 3: establish Bluetooth connection

To establish a connection with the LEO 5, open the window “Devices and Printers” and select “Add a device”. (see picture 1.2)



picture 1.1



picture 1.2



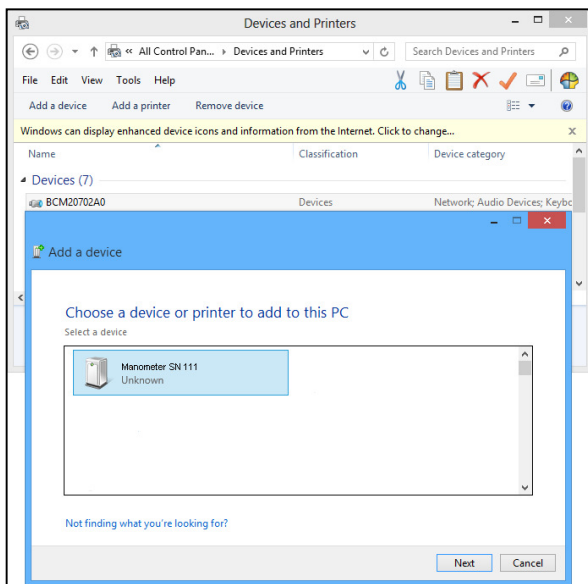
Step 4: search device LEO 5

Wait until the LEO 5 is found.

The name from the LEO 5 is “*Manometer*” and the *serial number*. If device is not found, search again until the device is listed in the window.

May it takes a few tries to detect the device.

After the LEO 5 is found, select it and click on the “Next” button.





Step 5: Confirm the pass code

The LEO 5 will send a pass code. If you want to establish the Bluetooth connection, you have to accept the pass code. After this, you will see a window that confirm the established Bluetooth connection.

2.7 Charge accumulator

To charge the accumulator, connected the device via USB to a PC or USB main adaptor.

Check the charge status with sub menu "Accumulator" on LEO5 or read charge status with the PC software.

3 Disposal

This product must not be disposed of as normal household waste at the end of its useful lifetime. To prevent possible damage to the environment or to health due to uncontrolled waste disposal, this product must be separated from other waste and recycled correctly in order to ensure sustainable use of the raw materials.





4 General Safety Instructions

When installing and operating the digital manometer, attention must be paid to the corresponding safety regulations.

Only mount the digital manometer onto unpressurized systems.

On pressure ranges ≥ 61 bar, the pressure connections could show residual hydraulic oil, determined by production flow.

Please also note the corresponding data sheet.