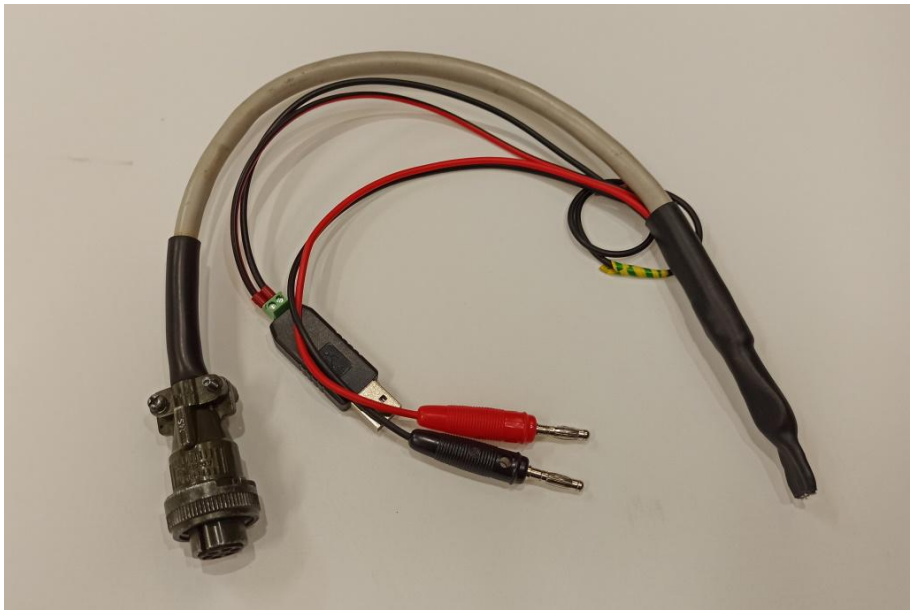
Testing a Modbus DMM:

1) Testing is performed in the example on a Windows computer, using the QModBus program. It can be downloaded for free from:
https://sourceforge.net/projects/qmodbus/files/qmodbus/

2) Make sure the power supply is not on. Connect the military cable with voltage terminals to the military terminal on the DMM and the “banana” terminals to the 12V power supply (red = +12V)



3) Connect the RS485/USB adapter of the cable to the USB connector of the computer, and turn on the power supply.

4) Turn on the laser level nearby so that the laser scans the DMM's light-emitting diodes at a certain point (avoid reflections from the surroundings).

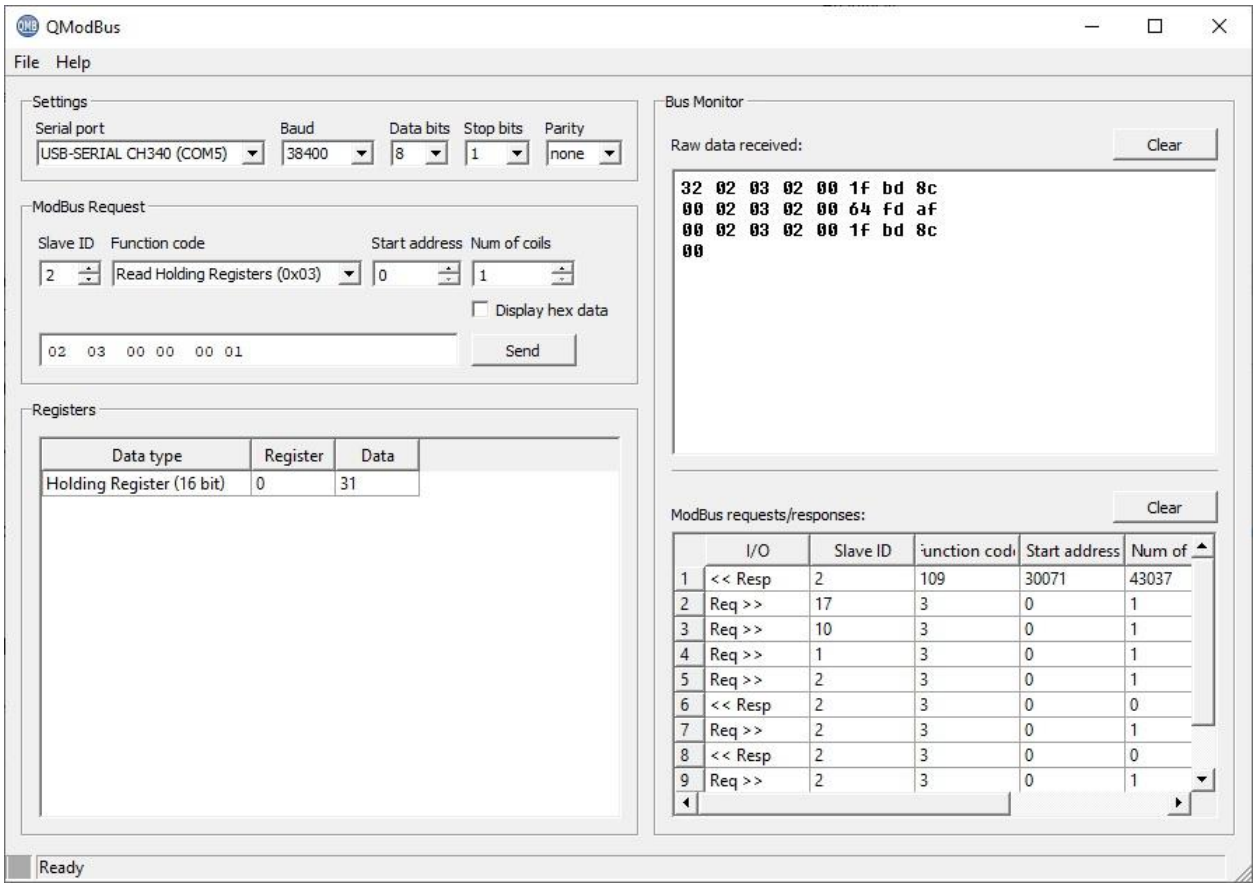
5) Testing is performed, for example, in a Windows operating system using the QModBus program. It can be downloaded for free from:
https://sourceforge.net/projects/qmodbus/files/qmodbus/

6) Open the QModBus program and set the correct settings:

Serial port = serial port in use (check the correct COM port in Device Manager)
Slave ID = Modbus address selected with DIM DIP switches

Other settings are set as shown in the following image.
Baud = 38400

Data bits	= 8
Stop bits	= 1
Parity	= none
Function code	= Read Holding Registers (0x03)
Start address	= 0
Number of coils	= 1



7) Pressing the “Send” key prints the height measured by the DMM multiplied by two to the Registers table. In the example image, Data = 31, meaning **the measurement result is** 31/2 = **15.5 mm** . Raise/lower the DMM to different positions and press “Send” again, the result should change.

8) Finally, turn off the power supply, and disconnect the RS485/USB adapter from the computer and the military connector from the DMM.

9) Assemble the DMM according to the instructions (check the attachment to the housing, the tightening sequence of the front panel, the torques of the screws, the terminal caps, etc.)