

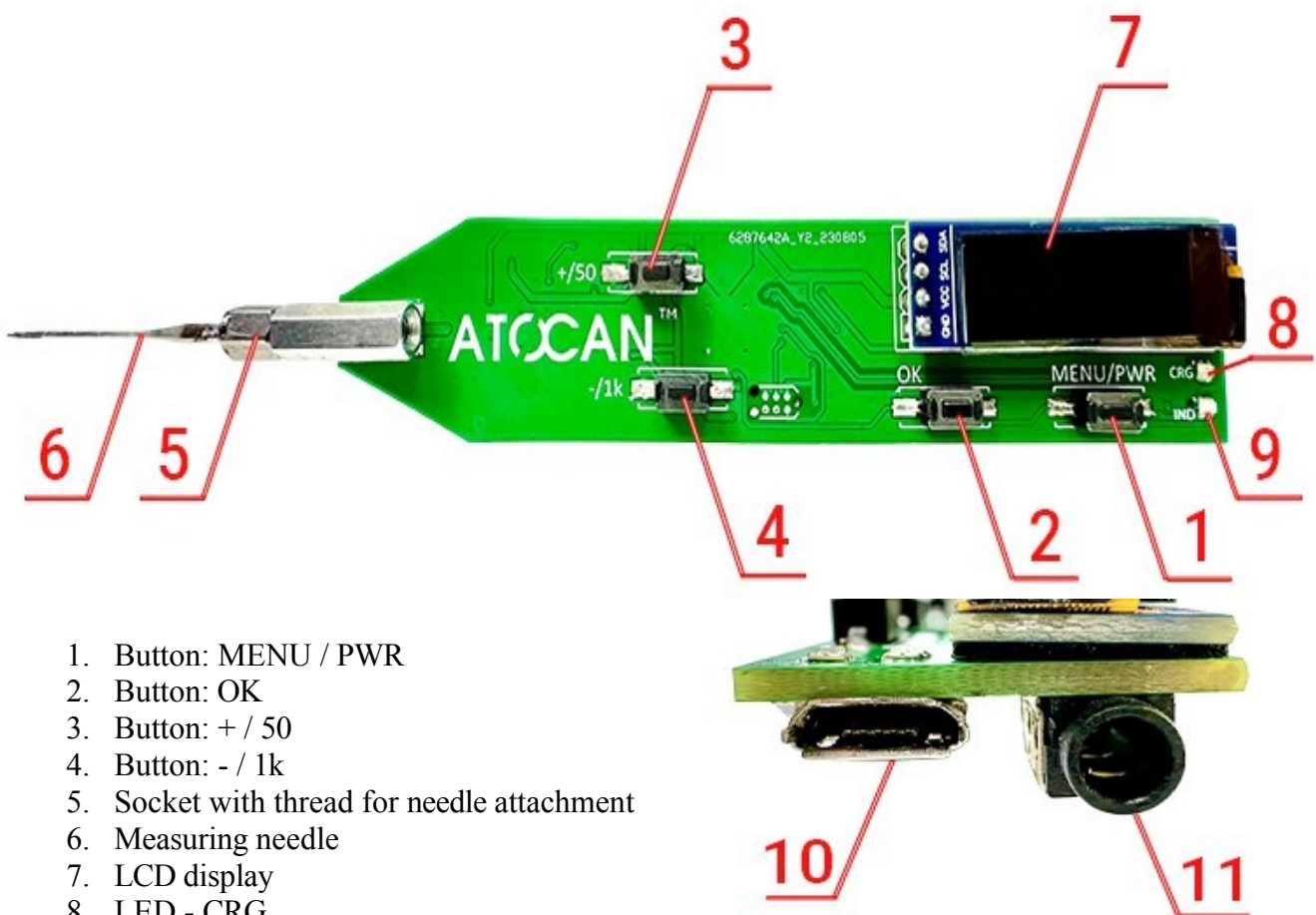
HERMES CAN TESTER

detect confidently the electrical circuits

Hermes CAN tester is designed to work with the electrical installation in vehicles with 12V and 24V (maximum voltage 32V). With the help of the tester we will measure the voltage in the vehicle's installation. The light allows us to find the ground wire and power supply in the wiring harness, is used to view the shape of electronic signals, detection of wires in digital data buses: CAN, K-Line and LIN and to find wires in the vehicles installation. On the tester you will find a battery with a capacity of 360mA and a voltage of 3.7V, which is charged through a micro USB type socket using any phone charger. Hermes is equipped with an LED used to illuminate the work area, as well as an automatic device shutdown after a 5-minute period of inactivity.

We can use Hermes controllers to install accessories, diagnose and solve various electronic problems related to the electrical system in vehicles.

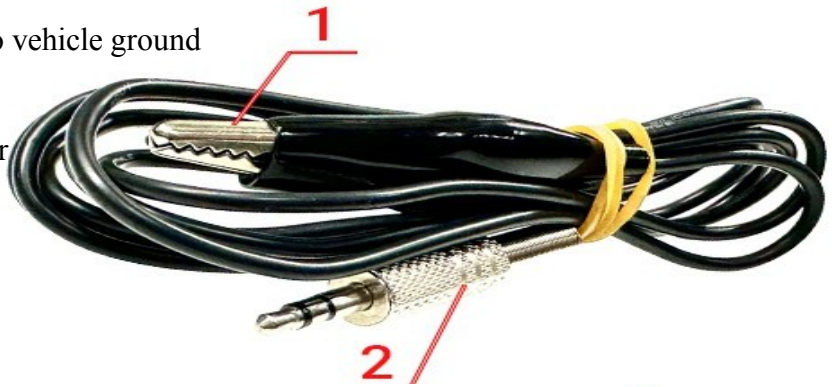
Arrangement of elements on the front of the control



1. Button: MENU / PWR
2. Button: OK
3. Button: + / 50
4. Button: - / 1k
5. Socket with thread for needle attachment
6. Measuring needle
7. LCD display
8. LED - CRG
9. LED - IND
10. Micro USB socket for charging the battery and for software updates
11. 3.5 mm JACK type socket

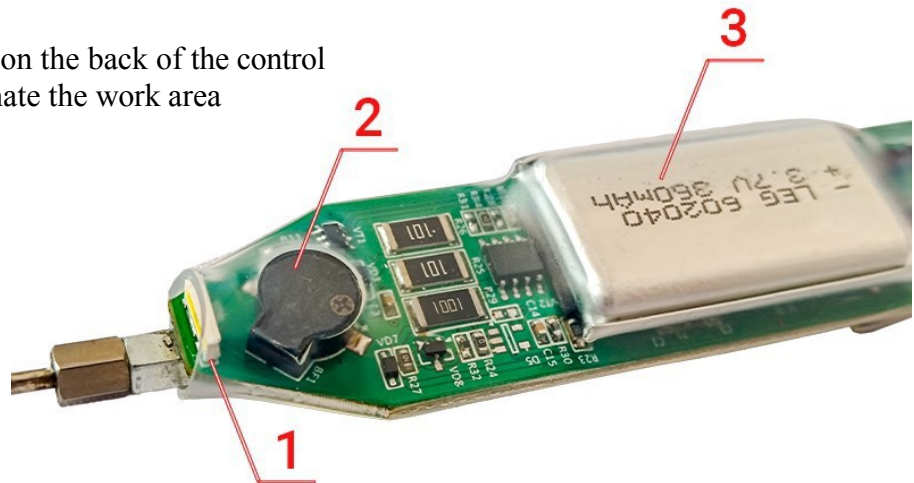
Wire to connect the indicator light to vehicle ground

1. Crocodile in isolation
2. 5.3 mm JACK type connector



Arrangement of components on the back of the control

1. LED light - to illuminate the work area
2. Speaker
3. Battery



Technical parameters

Measurement range: 0.1V - 32V

Current consumption in measurement mode: 40 mA

Standby current consumption 0.057 mA

Backlight current consumption: 105 mA

Battery capacity: 350 mA

Battery life: 250 minutes Full charge time: 300 minutes

Composition of the set

- Pack of 1
- Hermes light 1 pc
- Wire to connect the indicator light to the vehicle ground 1 pc
- An up-to-date instruction manual available on the website:
https://drive.google.com/drive/folders/1LVL1maGRRUIXB9Vw9kjAlrs_w8YnwwAK?usp=sharing

Preparing the control for operation

Connect an additional cable with a 3.5 mm JACK type plug to the 3.5 mm JACK type jack on the control unit. The other part of the cable is terminated with a crocodile in insulation should be connected to any ground point in the vehicle.

NOTES:

Connect the end with the crocodile only to the ground in the vehicle, connecting to other circuits will damage the light.

Battery charging

Plug any cell phone charger into the micro USB socket.

Turning on the light

The light is turned on by holding down the **MENU / PWR** button for about 2 - 3 seconds. Confirmation of the button press is indicated by the flashing of the LED marked **IND** in red. After a while, the tester's logo will appear on the control's LCD, along with the available options and the battery indicator.

Turning off the light

The light is turned off by holding down the **MENU / PWR** button for about 2 - 3 seconds.

NOTES:

The light is equipped with an automatic shut-off function after 5 minutes of inactivity.

Menu navigation

Use the **MENU / PWR** button to navigate the control's menu. Each short press of the button takes you to the next mode of operation: VOLTAGE, OSCIL, DETECT, PULSE and SETTING. We use the **OK** button to activate the selected mode.

Enable and disable the illumination of the workstation

After selecting the appropriate mode, we can turn the workstation backlight on or off by holding down the **OK** button for about 3 - 4 seconds.

Description of the operating modes of the control:

VOLTAGE



Using this mode, we can measure the voltage on the wire and check which wire is the power wire or ground wire.

Voltage measurement

If you touch a wire with a needle, the light will measure the voltage value on this wire and display this value on the LCD. Additional information during the measurement is provided by the **IND** LED, the color of the LED depends on the voltage on the measured wire:

- green color means voltage up to 1V
- red color voltage above 1V

In addition, during each measurement, the light can emit a sound to indicate that a measurement has been taken. You can find the setting of this option in **SETTINGS**.

Finding the power cord

If during the measurement of a particular wire, the indicator light shows the voltage of the installation supply and the **IND** LED lights up red, this means that a supply wire has been found. In addition, one more test should be carried out by loading this wire with an additional 50 ohm resistor. This is done by pressing and holding the button marked **- / 50**. If during the measurement with a load of 50 ohms, the voltage drops below 0.5V, it means that this is not the power supply wire.

Finding the ground wire

If during the measurement the light on the LED display shows the word GROUND and the LED IND lights up green means that the ground wire has been found.

Enable continuous load with 50 ohm or 1k ohm resistor during measurement

To turn on the measurement with a continuous resistance load, press the + / 50 or - / 1k button twice in the speed control. The LCD display will show a smaller inscription indicating the selection of the corresponding resistance and the measured voltage.

Disable continuous load with 50 ohm or 1k ohm resistor during measurement

To turn off the measurement with a continuous resistance load, press the + / 50 or - / 1k button once in the control, additional inscriptions will disappear from the display.

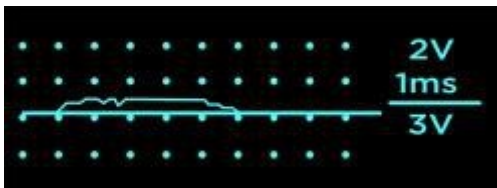
NOTES:

A single voltage measurement with the control light must not exceed 15 seconds

OSCIL



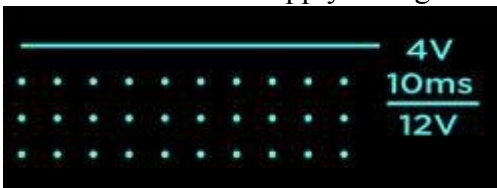
With this mode you read the waveforms from the vehicle's electrical circuits. When you start this mode, you read the waveforms in real time.



The control automatically selects the measurement range, which it shows at the very top right of the LCD display. In the image above, each horizontal line with dots indicates a voltage of 2V, in this case the control has set the measurement range to the maximum range of 6V.

Below is the sampling time of the signal, which we can set with the + / 50 and - / 1k buttons in the range from 1 mS to 200 mS.

Below the dash is a voltmeter, indicating the voltage of the measured sample. Below is the oscillogram, which indicates the supply voltage.



Recording and playback of waveforms

Activate this mode by momentarily pressing the OK button, the LCD will show **wait**. Touch the pin control in the installation slot and then start recording by pressing one of the + / 50 or - / 1k buttons. Recording lasts for 2 seconds. After this time you can view the recorded waveform. Pressing the - / 1k starts playback of the recorded waveform, pressing the + / 50 button stops viewing. From now on, you can browse the oscillogram forward and backward using the + / 50 and - / 1 k buttons.

DETECT



With this mode you can identify the type of digital bus. After entering this mode, you will see "read" on the display when you touch a wire in the vehicle's electrical harness, the light will automatically begin to identify the type of digital bus. If the digital signal is positively identified, the LCD display will show a message with the name of the signal (CAN lo, CAN hi, etc.).



If the light cannot identify the signal the message "read ..." will be shown. After each positive identification of a digital signal, the control should be reset by pressing the button - / 1k, then the LCD display will show "ready" and the light is ready for the next measurement.

PULSE



We use this mode to search for wires in the vehicle's electrical harness.

NOTES:

Use PULSE mode only when vehicle battery is disconnected

Once in this mode, you must turn it on by pressing one of the + / 50 or - / 1k buttons. Turning it on is indicated by the word **ON** on the LCD display, pressing one of the + / 50 or - / 1k buttons again turns off the PULSE function and the LCD display will show **OFF**.



How to use PULSE mode to check wire continuity:

- Refer the battery in the vehicle.
- Connect the light to one of the pins on the block from the vehicle's electrical harness that you want to check
- Start the PULSE mode (the control gives the ground signal to the needle through a 50 ohm resistor every one second, the duration of this pulse is about 0.3 S)
- Connect a multimeter set to continuity test. Connect one of the multimeter's leads to the vehicle's ground and use the other lead to touch the pins on the cube.
- If you hear a sound from the multimeter, it means a wire has been found.

SETTING - control settings

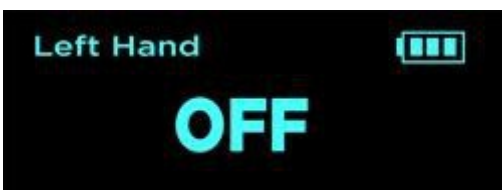


In this mode you can set global options for the control. When you enter this mode, you will see three dots on the LCD display with the word Settings. Each dot corresponds to one of the following options:

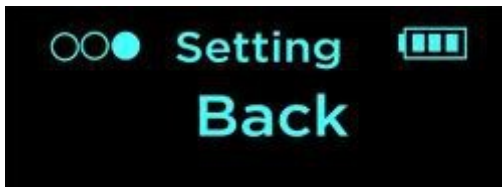
- **Sound** - set sound volume or turn off sounds



- **Left Hand** - converts the LCD display for left-handed people



- **Back** - exit from SETTINGS



You use the **MENU / PWR** button to switch options. You enter an option by pressing the **OK** button. You dock changes in the option by pressing the **+ / 50** button or the **- / 1k** button. You save and exit the option by pressing the **MENU / PWR** button.

Software update

Connect the controller to the USB port on your computer. Your computer will automatically install the appropriate drivers.

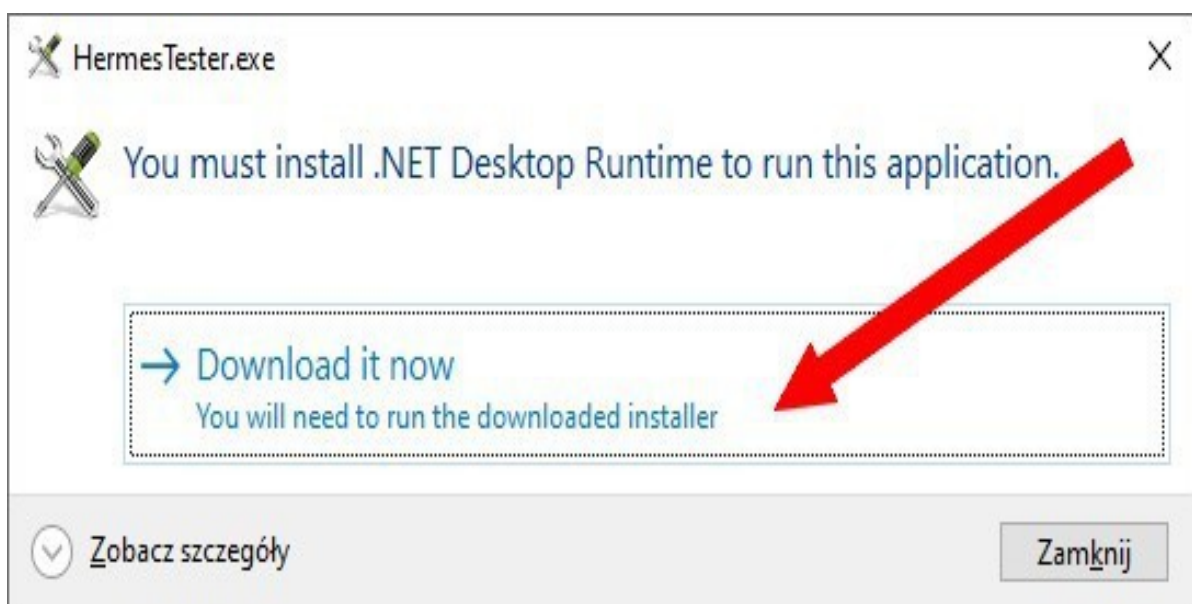
The software for changing the firmware can be found on the site:

https://drive.google.com/drive/folders/1LvL1maGRRUIXB9Vw9kjAlrs_w8YnwwAK?usp=sharing

Download the software and unzip it anywhere on your computer's disk. Run the program named: **HermesTester.exe**.

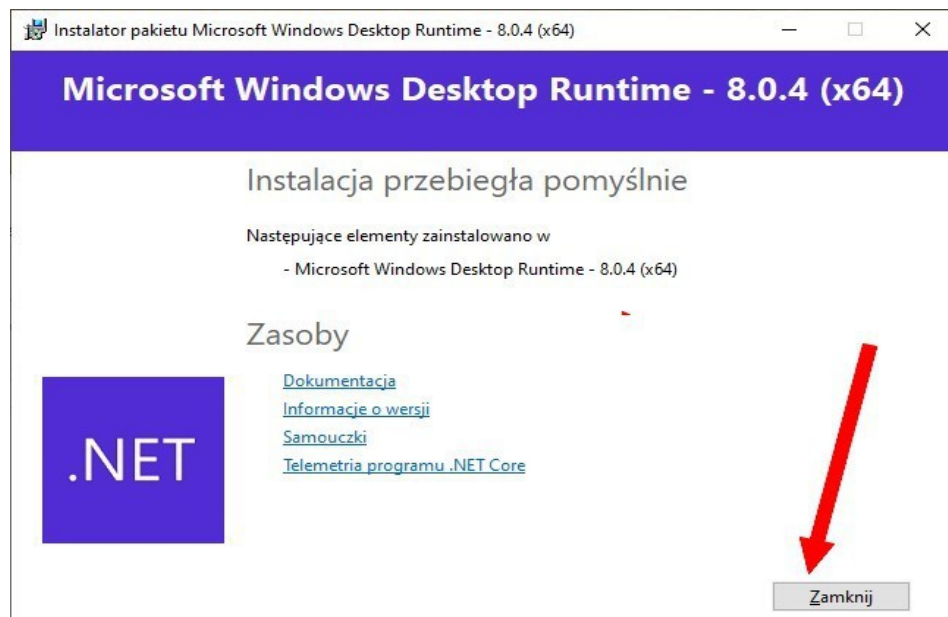
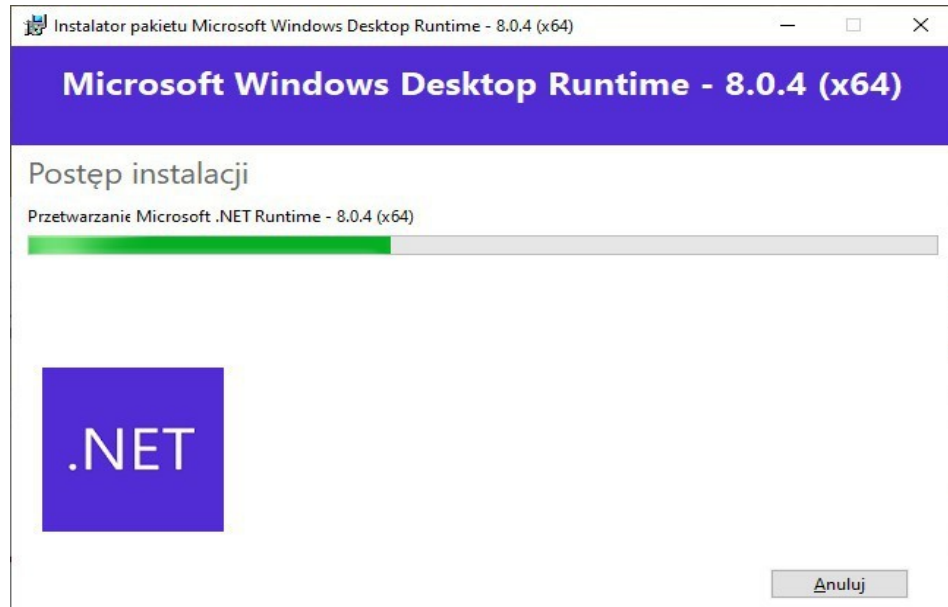
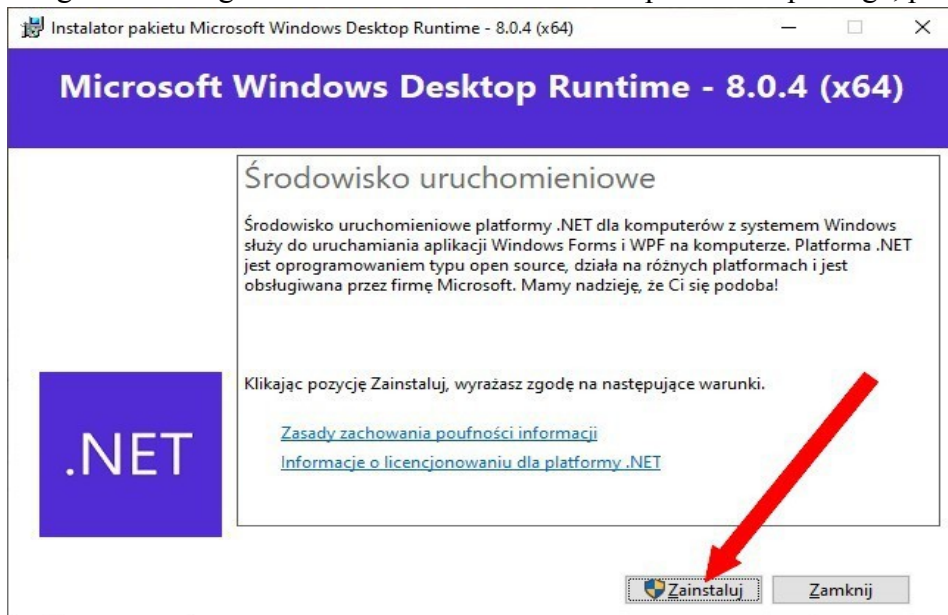


Once started, the application will check if you have the right components installed on your computer. If you do not have the **Microsoft Windows Desktop Runtime** package installed on your system, the program will ask you to download and install the appropriate components.

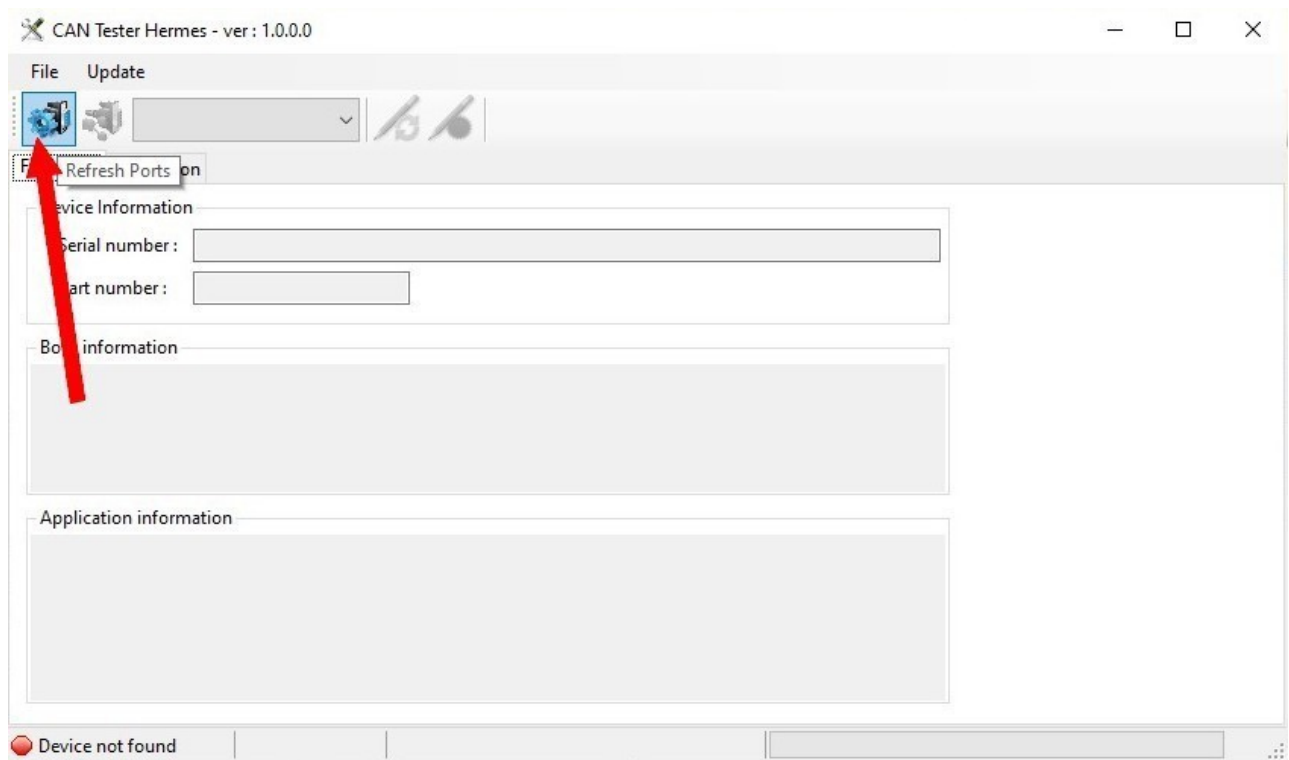


After downloading and running the Microsoft Windows Desktop Runtime package, press the button.

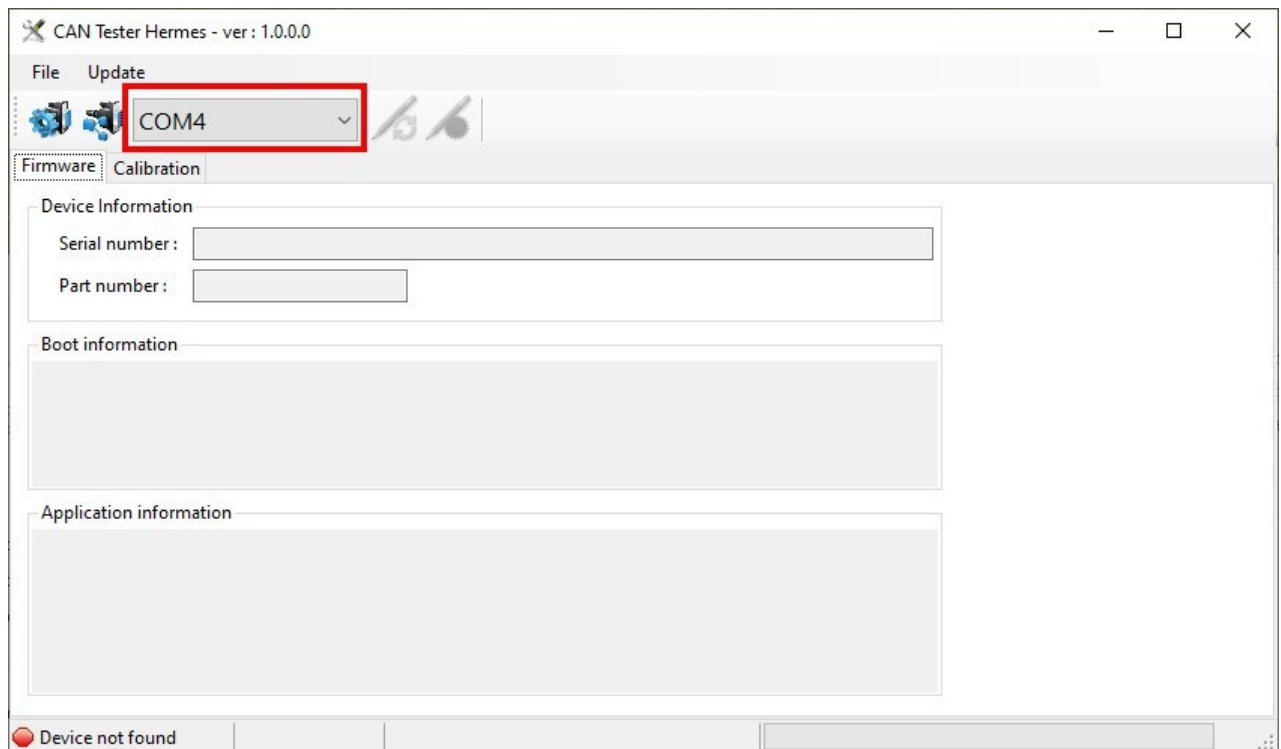
Install.



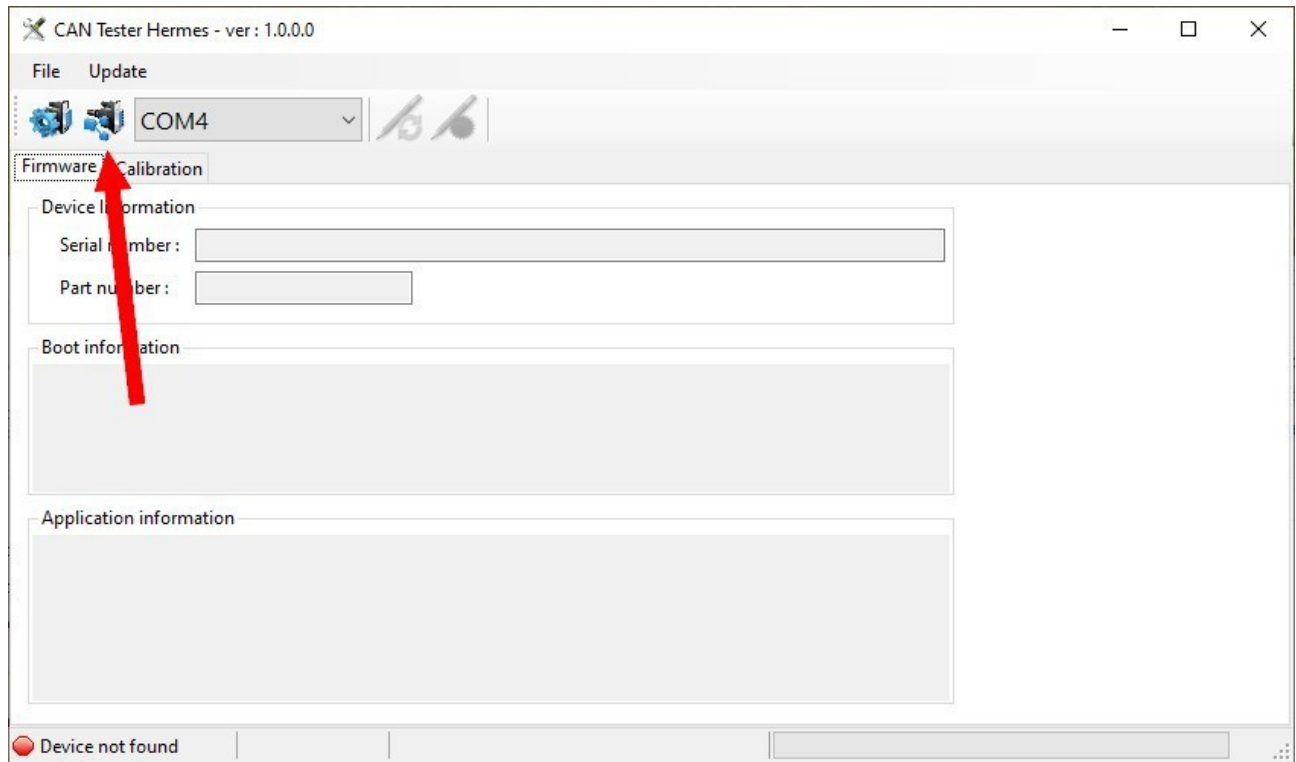
After installing the Microsoft Windows Desktop Runtime package, restart HermesTester.exe and select the first icon located in the toolbar.



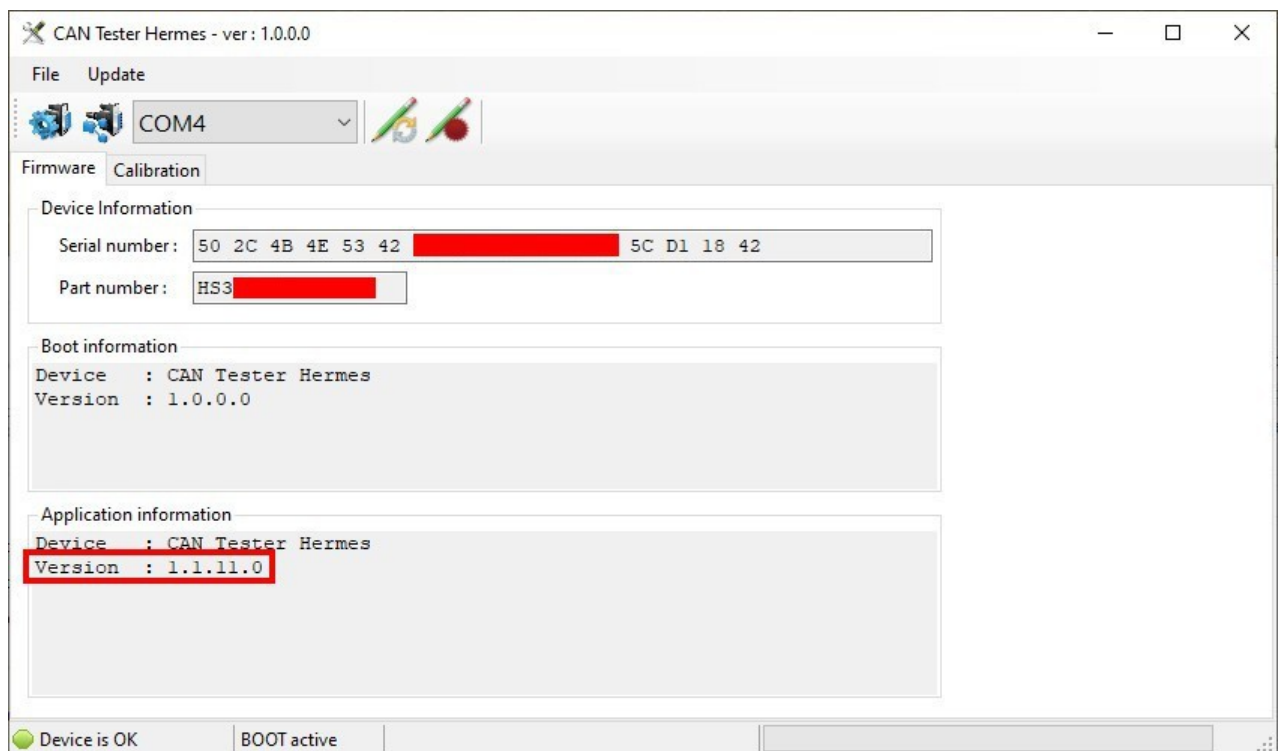
The program will automatically detect the connection of the control to the computer.



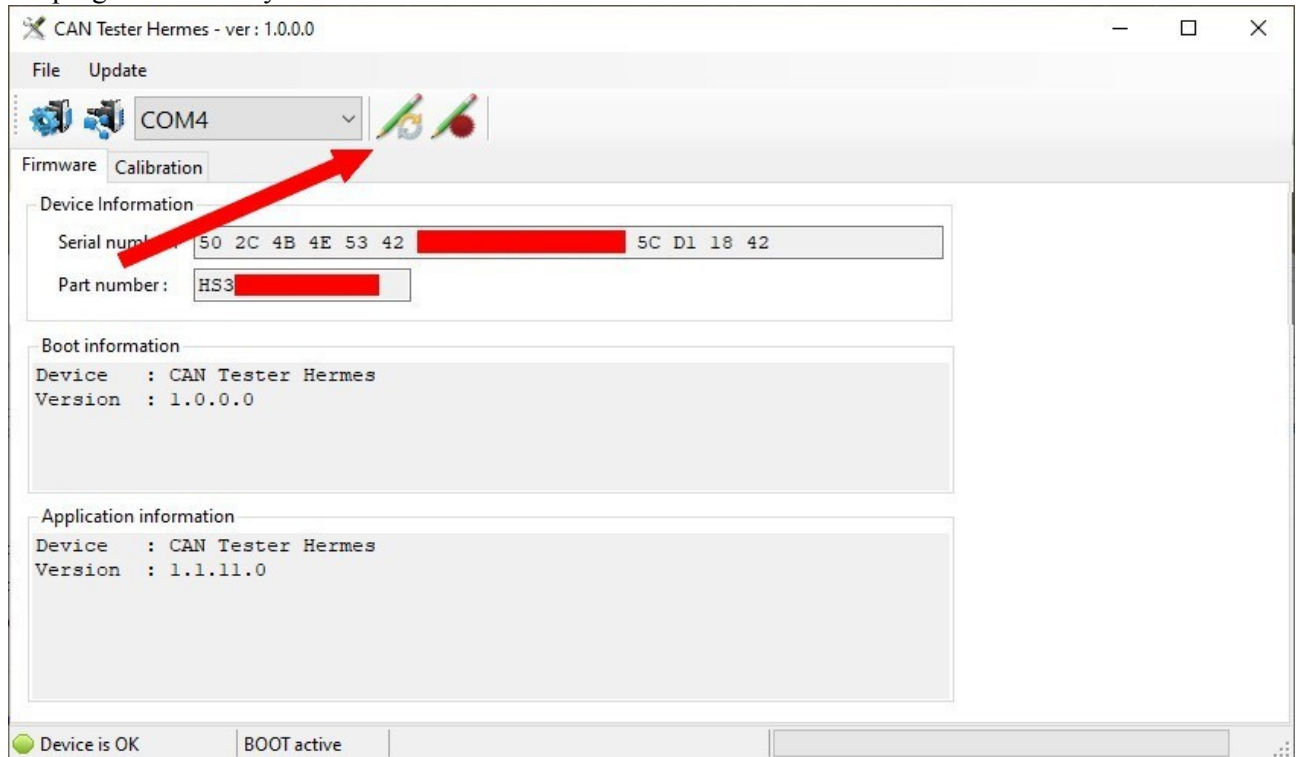
Reading data from the connected control is done by pressing the second icon located on the toolbar.



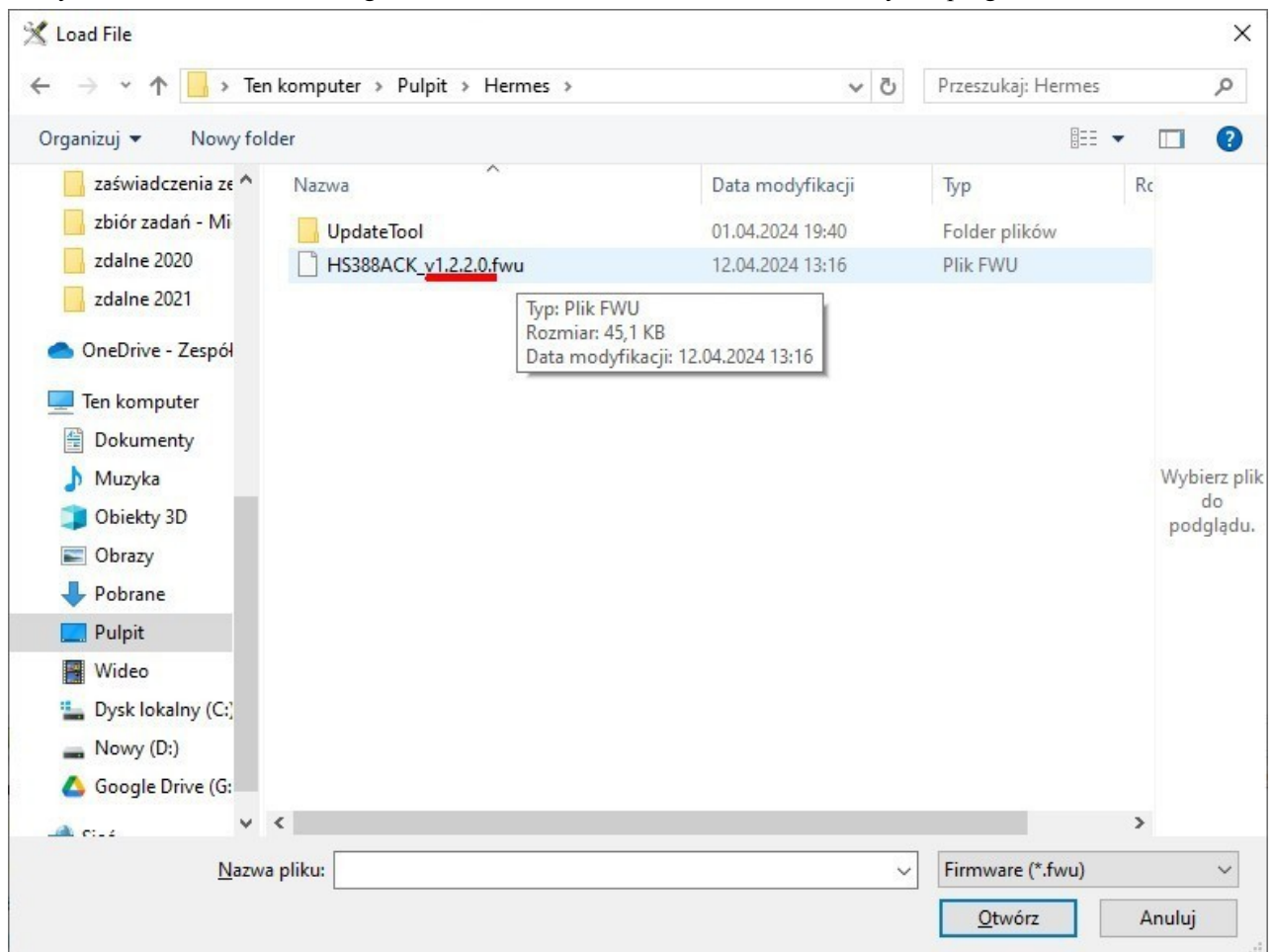
At the very bottom of the program in the **Application information** section you will find the current firmware version number in the control.



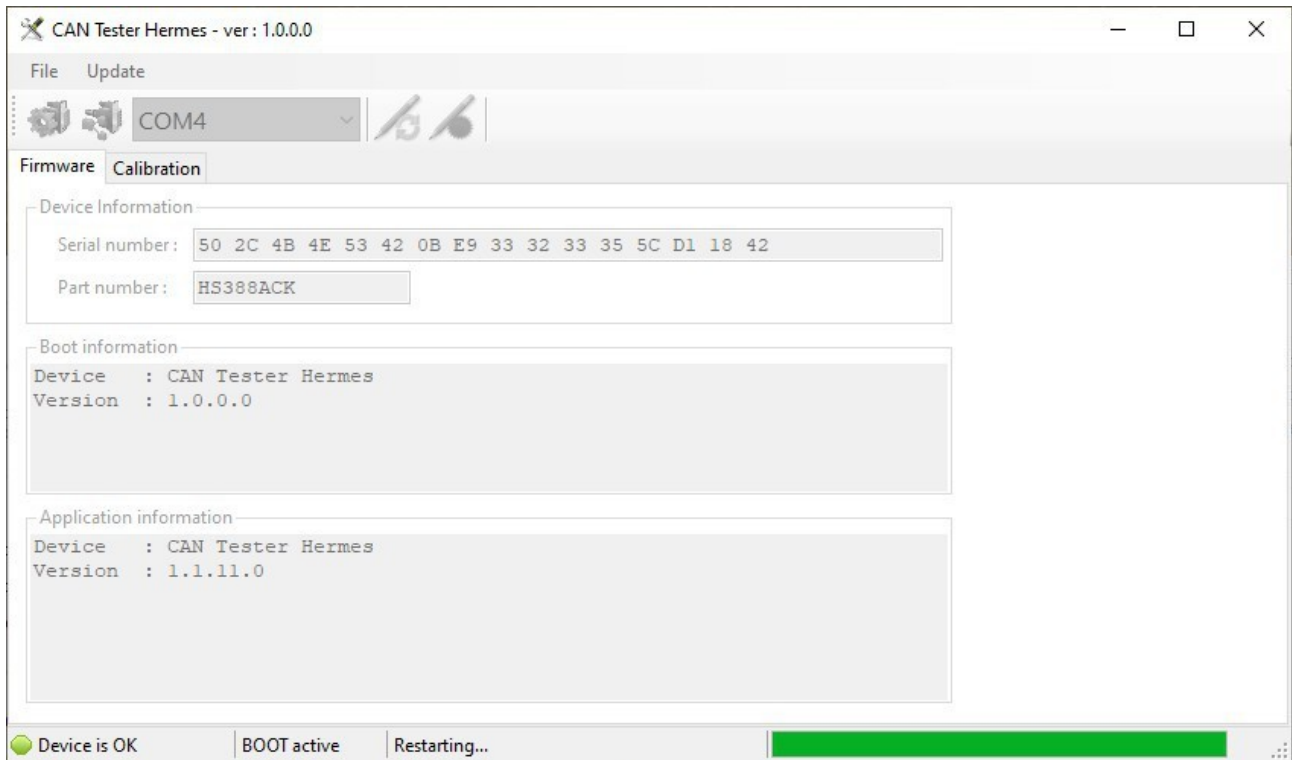
We start uploading the software by pressing the third icon located on the toolbar. The program will ask you to select a firmware file.



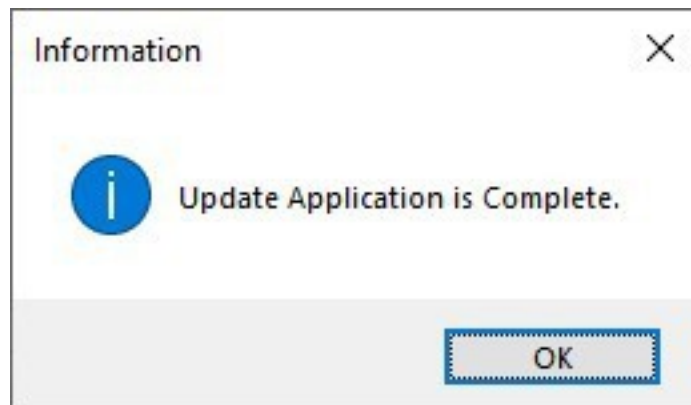
Always select a file that has a larger number in its name than the number read by the program.



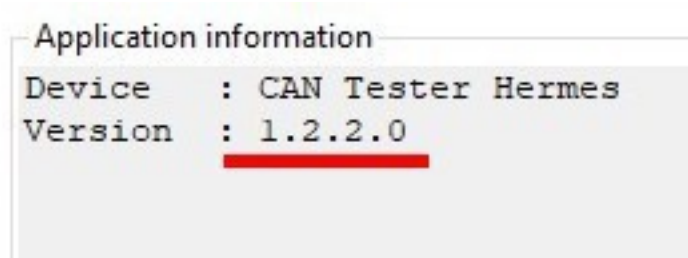
After selecting a file, the program will automatically begin the process of uploading the file.



When the upload is complete, the program will display a message.



Read the data again using the second icon located on the toolbar to see a summary of the firmware upload process.



Warranty card

We provide a 2-year warranty on the HERMES CAN TESTER CONTROL
The control should be sent at your own expense to the following address:
ATOCAN ul.Kilińskiego 5, 09-140 Raciąż POLAND