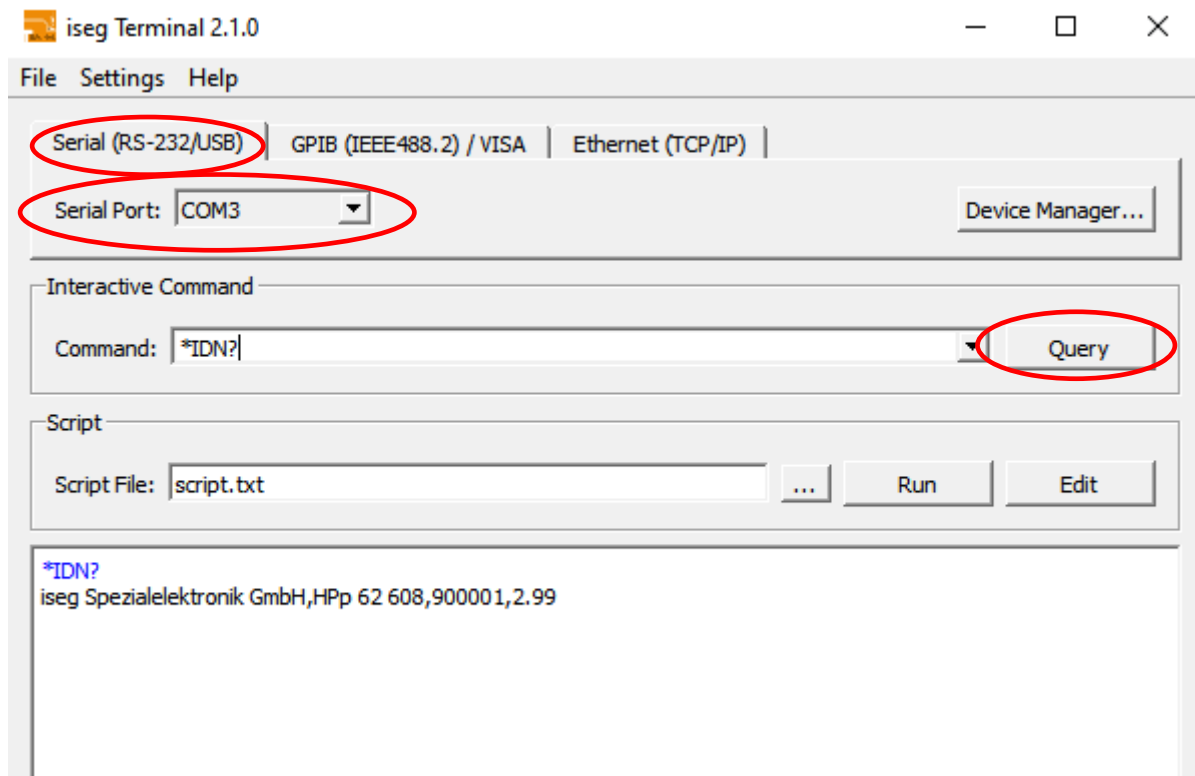


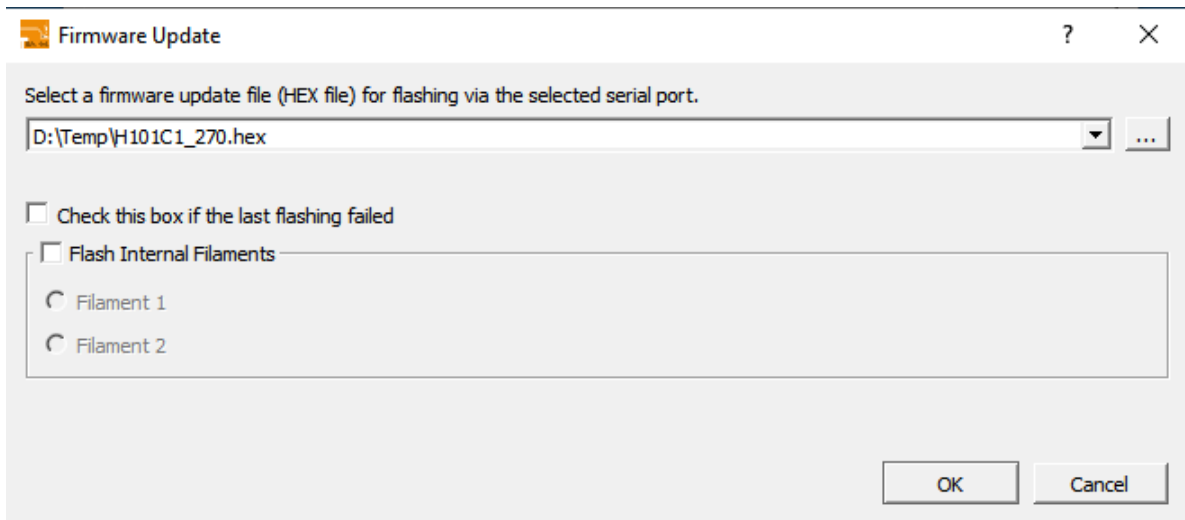
How to firmware update for iseg high voltage devices with serial interface

1. Turn off all devices.
2. Connect the High Voltage supply to your computer with a serial cable (no null modem cable). It is supposed to remove all other devices that are connected to serial ports of your computer during the update.
3. HPS and LPS series devices: open the Safety Loop on the device rear during the update procedure.
4. Switch on your computer and the High Voltage device.
5. HPS and LPS series devices: Select the „RS-232“ interface in device menu.
6. For the update, the serial echo must be on (this is the factory setting).
7. Start the program „isegTerminal“. Choose the tab **Serial (RS-232/USB)** and select the used **Serial Port** (for example, COM3).

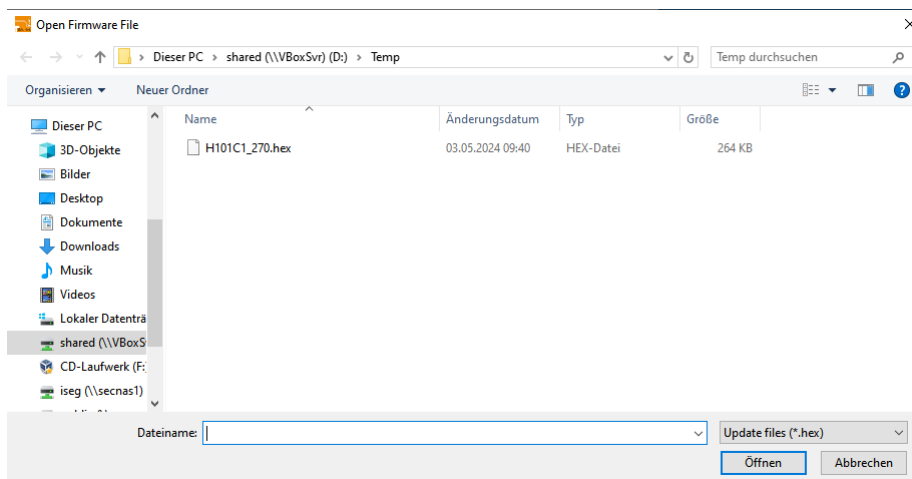


8. Test the communication from computer to HV power supply by sending the command *IDN? with a click on **Query**. You should receive an answer like in the previous picture. If the communication fails, please check the cabling and the COM port number. For USB connections make sure, the correct USB driver is installed.

9. If the communication works, you can apply the update:
- Select **File > Firmware-Update**, the dialog „Firmware Update“ appears:



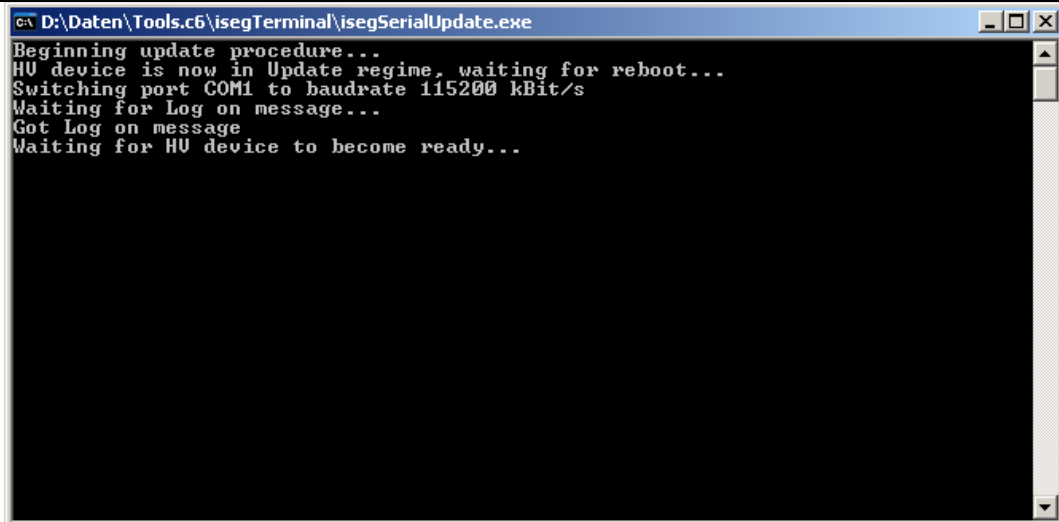
- Choose the firmware HEX file, by clicking the ... button (three dots). The dialog **Open Firmware File** appears:



Select the firmware file and click **Open**. In the dialog **Firmware Update**, click OK and the update starts in a new window. The update process lasts approximately 3 minutes.

Attention:

- Do not disconnect computer and HV device during the update process!
- Do not switch off the HV device or pull the power plug during the update!



```

C:\D:\Daten\Tools.c6\isegTerminal\isegSerialUpdate.exe
Beginning update procedure...
HV device is now in Update regime, waiting for reboot...
Switching port COM1 to baudrate 115200 kBit/s
Waiting for Log on message...
Got Log on message
Waiting for HV device to become ready...

```

10. After update, the device is rebooted and should start with the new firmware version. The device is now ready for usage again.

Frequently asked Questions (FAQ)

- Q: My computer doesn't have a serial interface (RS232). Can I also use a USB-serial converter?
- A: Yes, this is possible. At iseg, we tested the update with Prolific- and FTDI-adapters. (See also next question)
- Q: When connecting the HV device with an USB-serial converter, the update aborts with an error message. (first of all FTDI USB converter)
- A: Go to Windows Device manager and your serial port and set the timeout to 1 millisecond (on the Advanced settings).
- Q: After an interrupted Update, the HV device always starts with the LCD message „Flashing Firmware“.
- A: In this case, you can apply the update once more. Please set the CheckBox „Retry flashing after fail“ in isegTerminal, power on your HV device and start the update procedure once again.
- Q: The program breaks with the error message „Safety Loop is closed“.
- A: From safety reasons, the safety loop at the device rear has to be opened for an update. This prevents the device from creating high voltage during update.