XP Terminal (Demo-Software)

Power Supply Device Software Manual

Operating instructions
(Translated from German)

Version 1.0

Contents

Table of Figures Page

This manual was created by: XP Power FuG, Am Eschengrund 11, D-83135 Schechen, German

1.Introduction

The XP Terminal offers our customer an easy way to communicate with our power supplies via USB, Ethernet, Profibus und IEEE488 without having to develop their own software. First and foremost, it should enable a quicker introduction to test the command set of our devices or to use their full range of functions.

2. Safety

These operating instructions refer exclusively to the XP Terminal software.
Detailed operating instructions are supplied with every DC power supply from XP Power FuG.
Commissioning and working on this DC power supply is only permitted if you belong to the target group mentioned and have read the operating instructions completely and carefully.

⚠ DANGER

Incorrect handling can result in death or serious injury!

3. Test the connection with the XP Terminal

The XP demo terminal program can be used to test the connection to the power supply unit. This can be downloaded under the Resources tab on each XP Power FuG high voltage product page.

4. GUI

4.1. Connection

To communicate with an XP Power supply unit there has to be a working connection to the device. The following interfaces are supported:

- RS232
- USB
- Ethernet
- Profibus
- IEEE 488

Connection options depend on the chosen interface.

Example Ethernet:

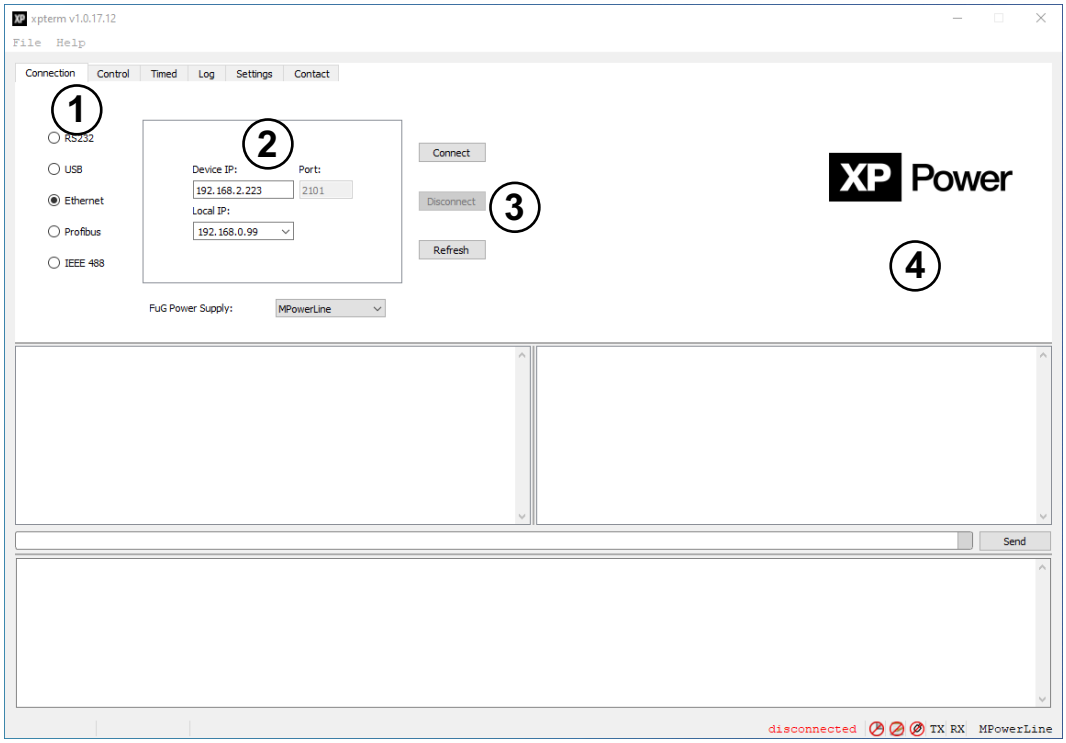

Figure 1 GUI part 1

1. Interface selection.

2. Connection settings – depending on the chosen interface.

3. Connect to, disconnect from, or look for new devices.

4. Company logo including a hyperlink to our homepage.

4.2 Input/Output

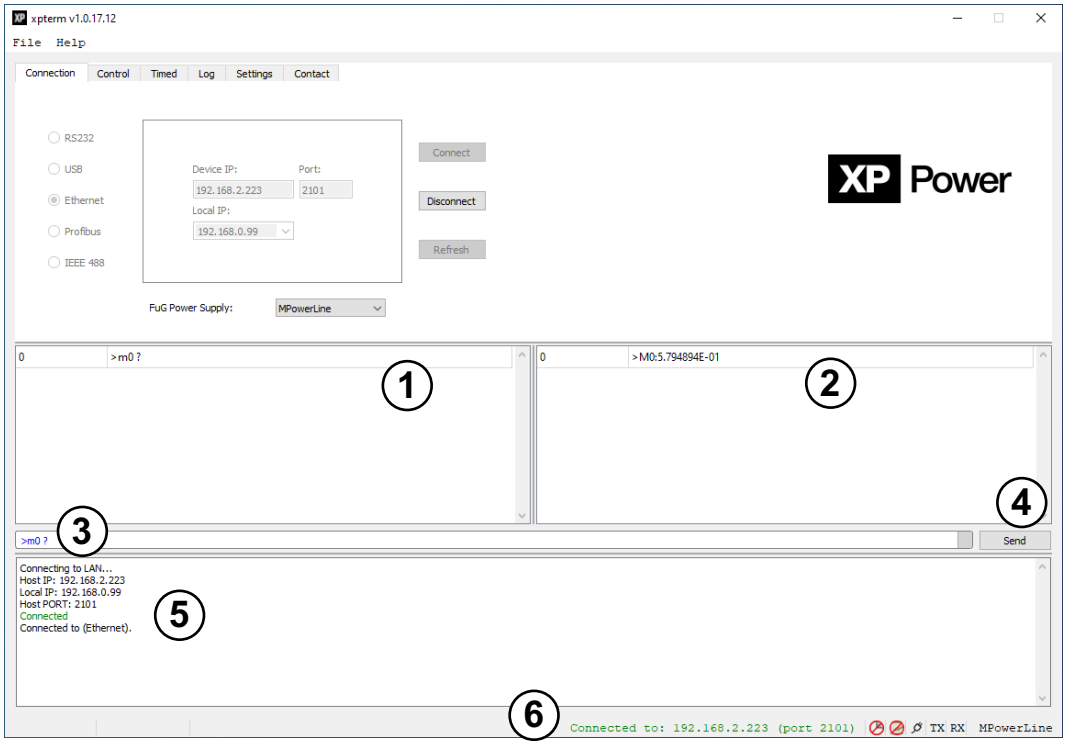

Figure 2 GUI part 2

1. List of sent commands (up to a thousand).

2. List of received commands (up to a thousand).

3. Command line input.

4. Transmits the command to the connected interface.

5. Debug window showing notifications.

6. Notification panel showing connection status and running timers.

5. Types of interfaces

5.1 RS232

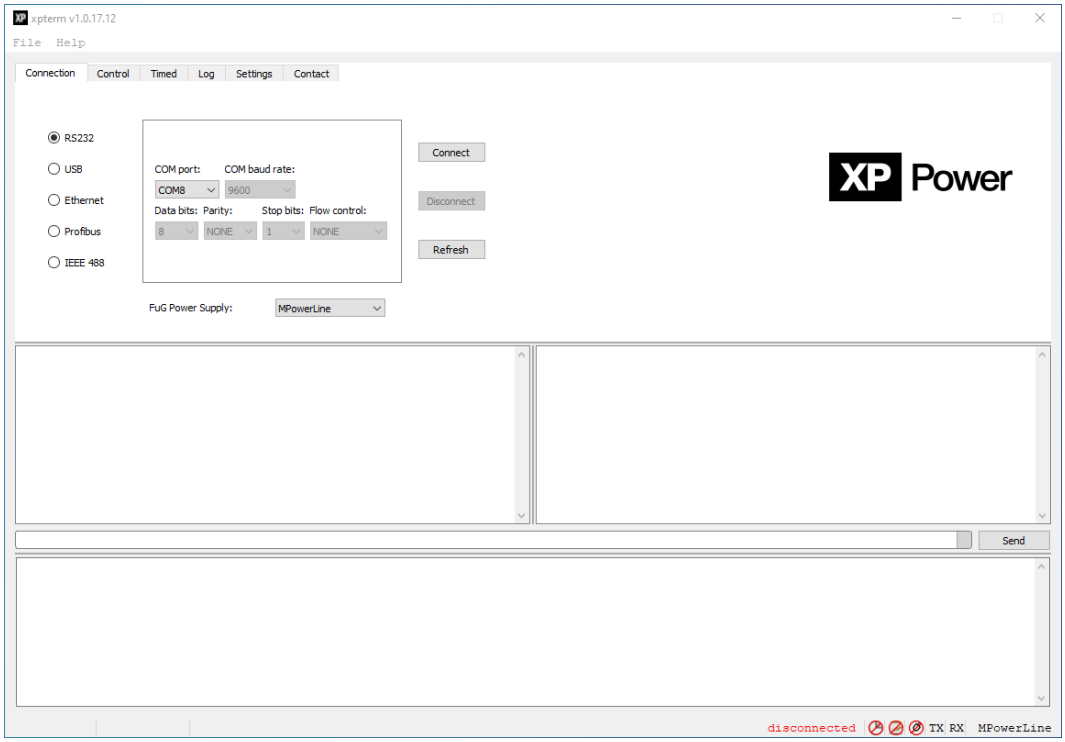

Figure 3 RS232

RS232 connection options:

- COM port.
- Baud rate (default value: 9600).
- Data bits/Parity/Stop bits/Flow control (default values: 8 – NONE – 1 – NONE). To change these values, the advanced connection settings option in the settings tab, has to be enabled

5.2 USB

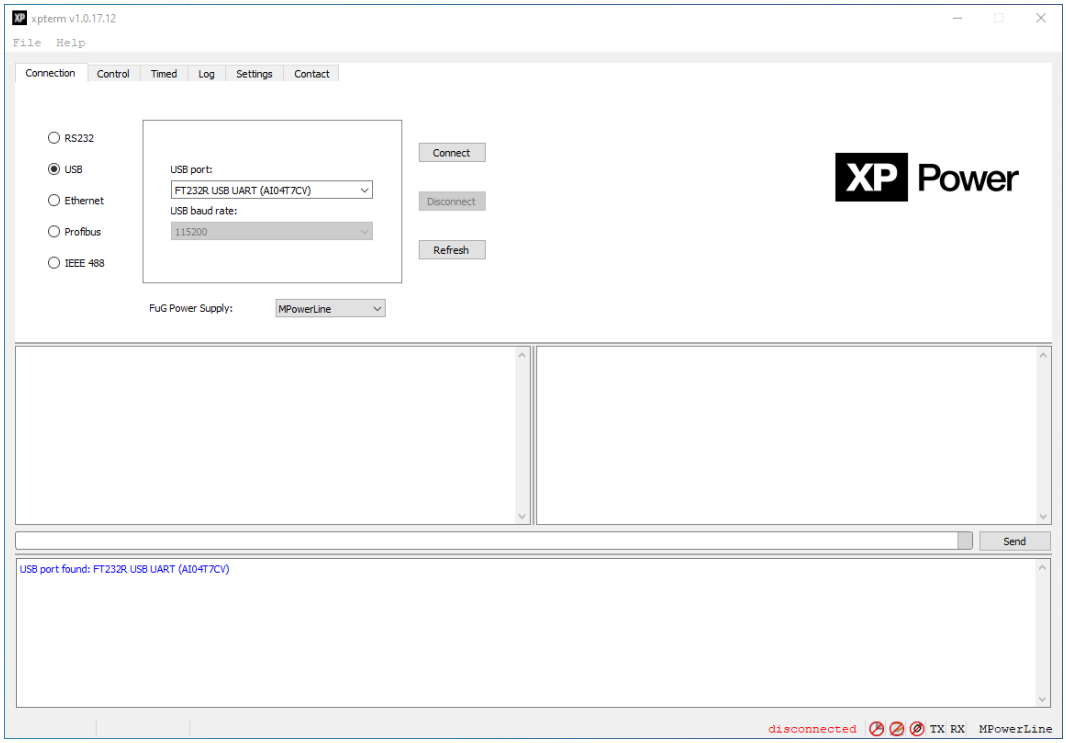

Figure 4 USB

USB connection options:

- USB device.
- Baud rate (default value: 115200). To change this value the advanced connection settings option in the settings tab, has to be enabled.

5.3 Ethernet

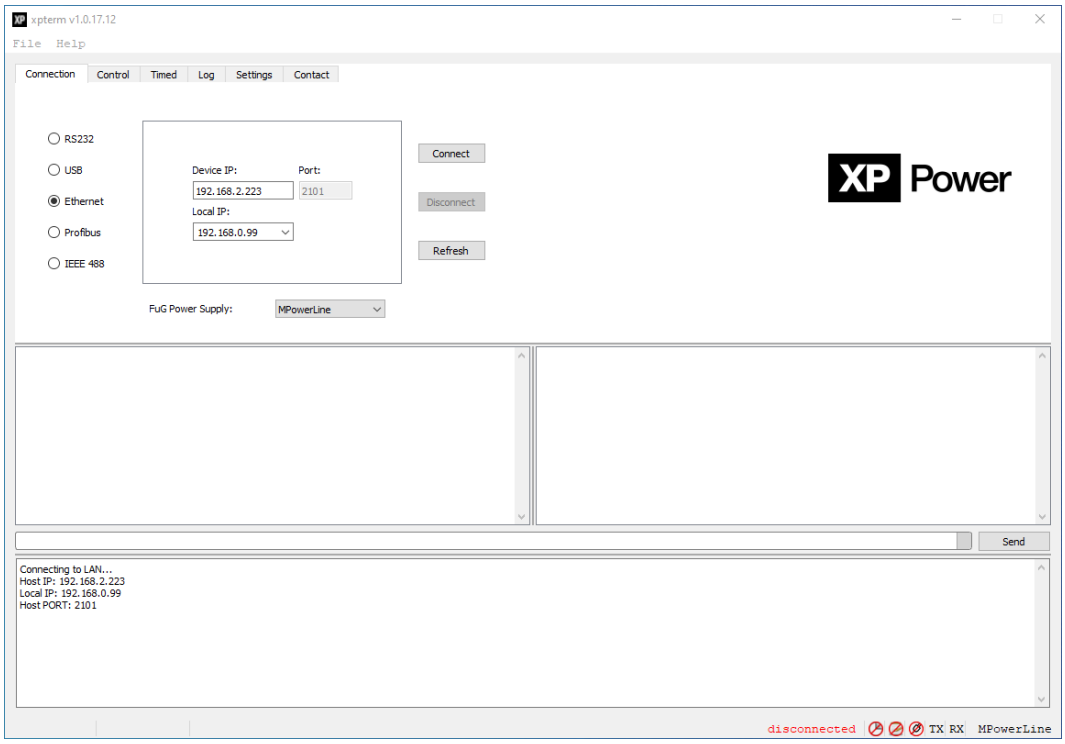

Figure 5 Ethernet

Ethernet connection options:

- IP address of the device.
- Local IP address (the list will show all recognized IPs).
- Port of the device (default value: 2101). To change this value the advanced connection settings option in the settings tab, has to be enabled.

5.4 Profibus

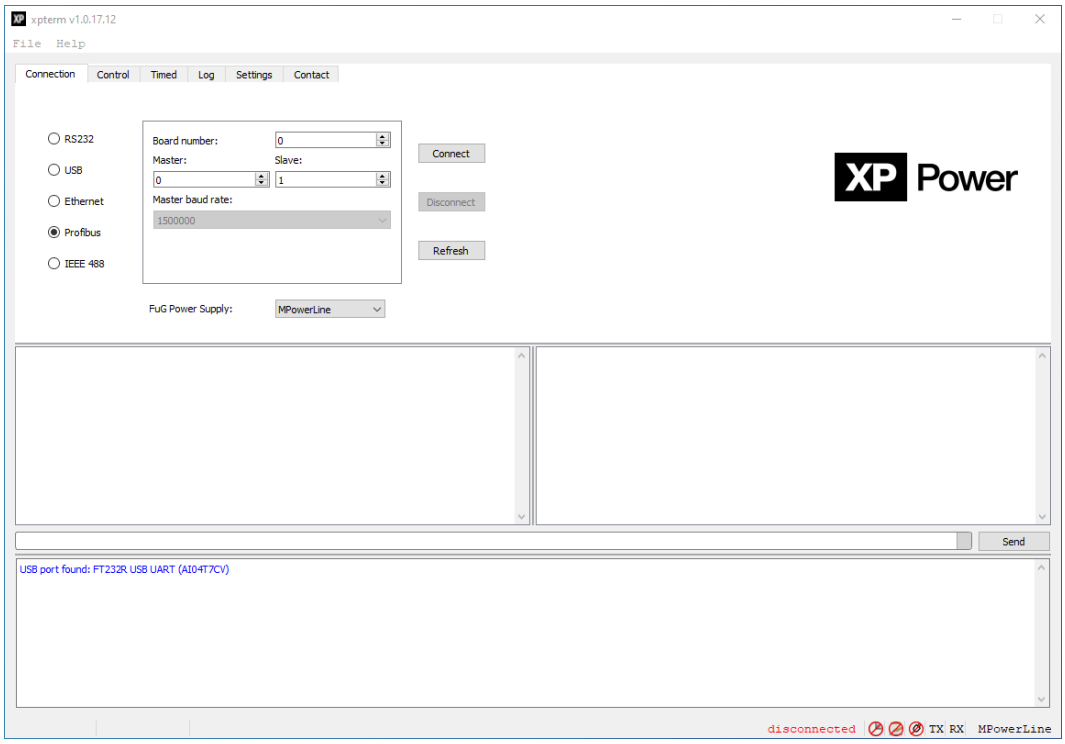

Figure 6 Profibus

Profibus connection options:

- Board number: Depends on your connecting adapter settings
- Master address: Depends on your connecting adapter settings
- Slave address: Has to be the same as the Profibus interface of the power supply (1 to 126)
- Master baud rate: Refers to the connection PC <-> Profibus adapter. This is not the baud rate of the ADDAT.

5.5 IEEE488

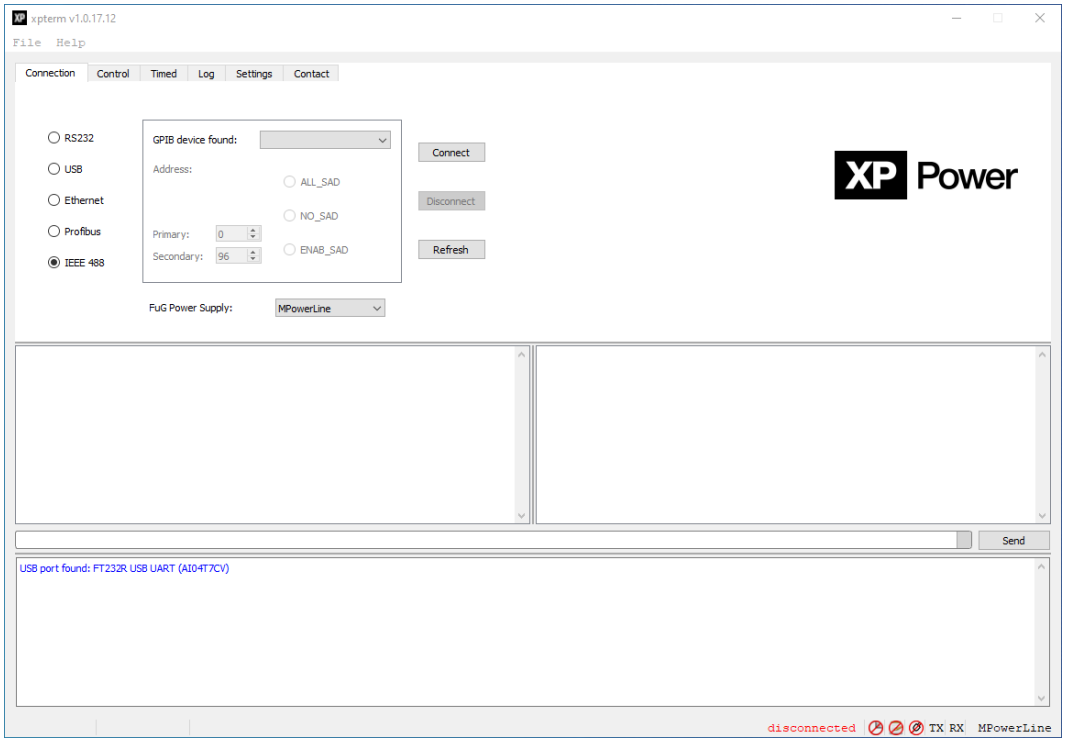

Figure 7 IEEE488

IEEE 488 connection options:

- This interface only works with the National Instruments (NI) GPIB-USB converter.
- The connected device will be found automatically, the setting "manual address input" has no meaning for XP Power FuG standard devices.
- Remark: If no GPIB device appears in the list, it is possible to search again for GPIB devices connected to PC by clicking the "Refresh" button.

6. Control

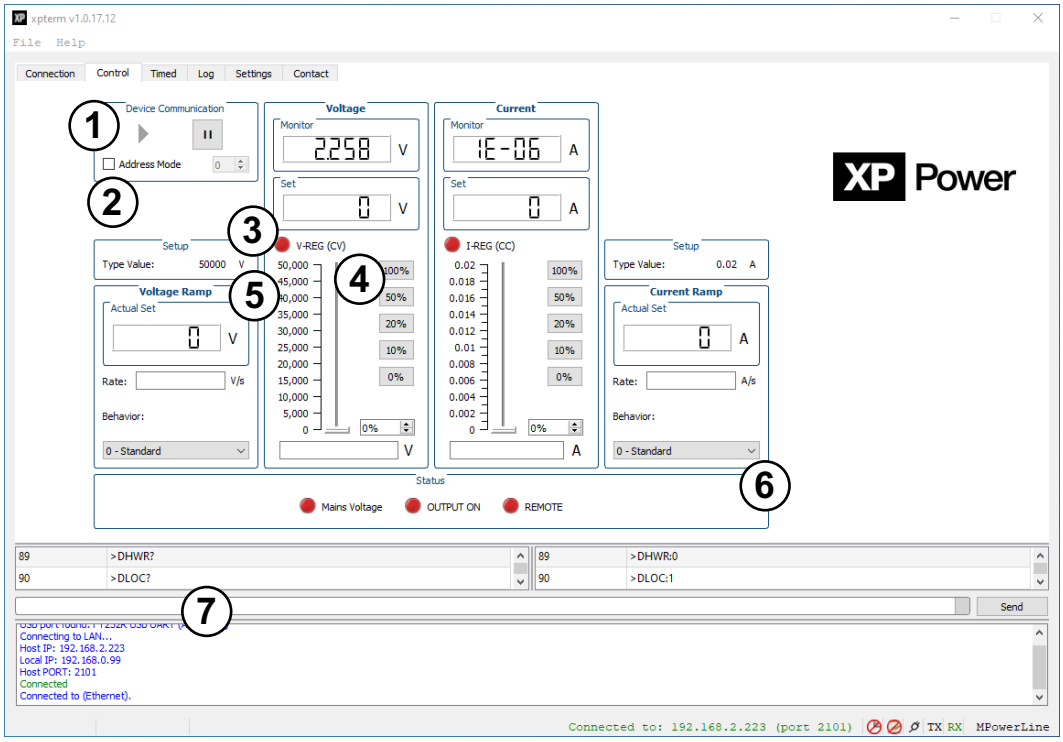

Figure 8 Control

1. Start and pause automatic communication

2. Optional address mode.

3. Type value of the connected device. This value will be queried automatically from the software.

4. Set value that can be changed via slider, percentage buttons or custom value.

5. Settings for ramp control. Note that this is not supported by every device.

6. Display status information of the connected device.

7. Command line

NOTE

The XP Terminal is a demo program. For this reason, HV ON/OFF cannot be activated in the GUI. In the command line (7), corresponding commands can be entered and activated by the Send button.

The command reference in the appendix lists all the necessary information and the commands.

7. Timed functions

7.1 Periodic commands

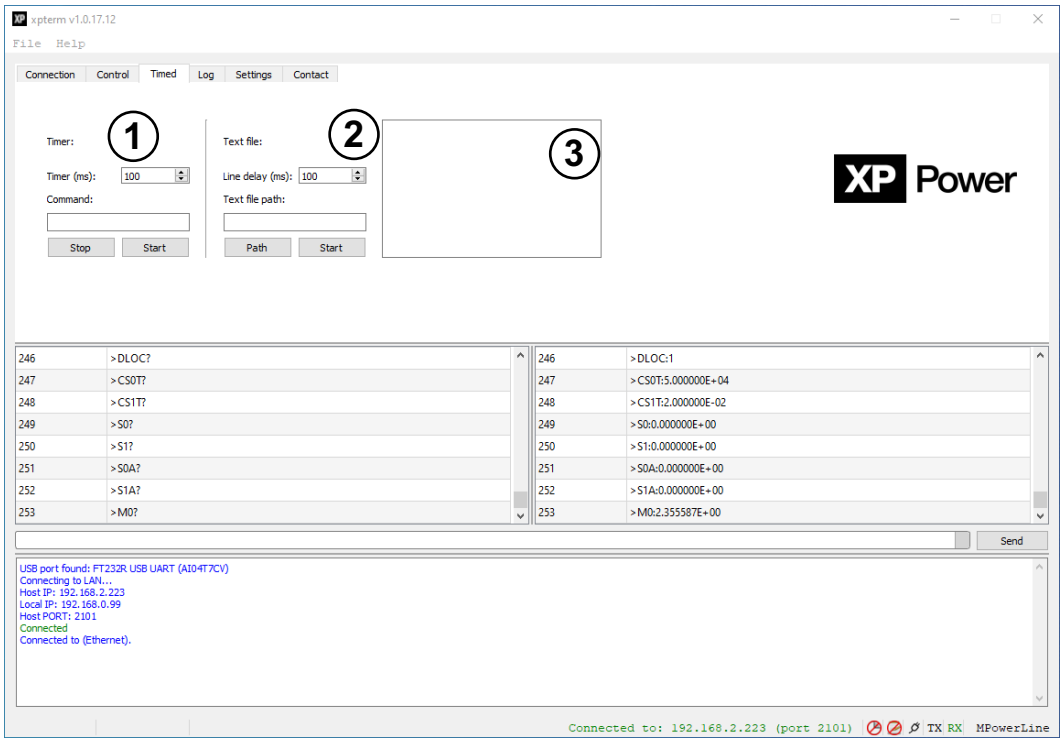

Figure 9 Periodic sending

1. Periodic sending of single commands.
Start: The given command will be sent periodically, timings are set by the timer value in ms, to the connected interface. This timer will run until it is stopped.
2. Send commands from a given .txt file line by line.
Start: The content of the text panel on the right will be sent line by line. Between every sent line is a time delay defined in the Line delay panel. The contents of the text panel can be typed in manually or loaded from a text file. The Path button opens up a file selection dialog. The timer can be stopped at any time by clicking on the Stop button (Start will change to it after the timer is started). If the timer is started again its current line position will be reset. Example text files can be found in the installations subfolder /examples.
3. Editable text panel showing content from given .txt file.

7.2 Data logging

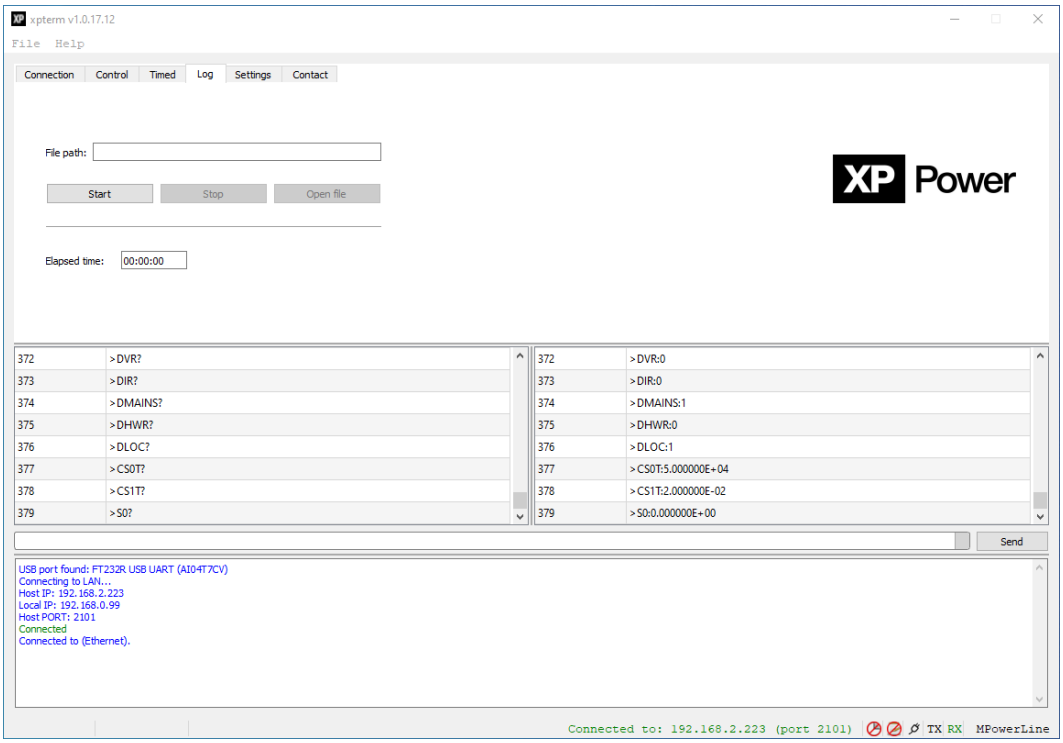

Figure 10 Data logging

The XP Terminal allows the user to log all responses received from a device. After pressing the Start button the user is asked to select or create a *.log file to store the data. To show the user how long the log function is already running, a timer is started at the same time. At the start of every data collection the user will be asked to select a file to prevent accidental loss of data.

8. Program settings

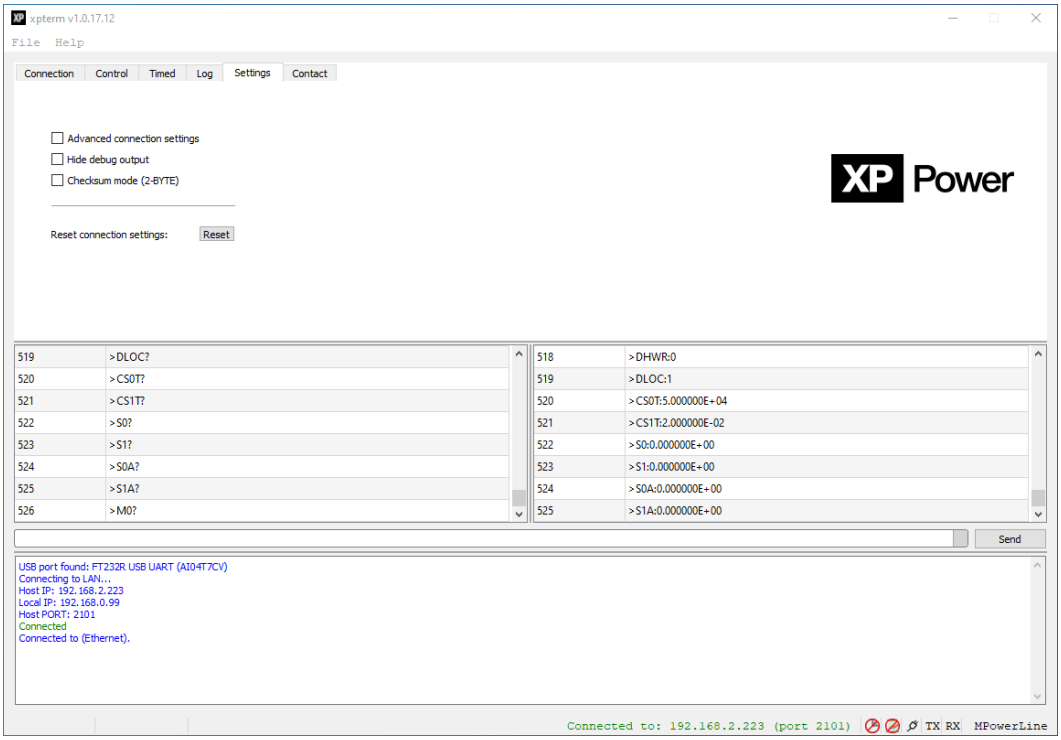

Figure 11 Connection settings

- Advanced connection settings: Enables the advanced connection settings in the connections tab.
- Hide debug output: Show or hide the debug output window.
- Checksum mode: Appends a 2-Byte checksum to every sent command.
- Reset connection settings: Reset all connection settings to their default values.