Janitza E-Learning Portal

Manual

Device configuration - basic settings

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These instructions explain how to configure the basic settings of a Janitza meter using GridVis software.

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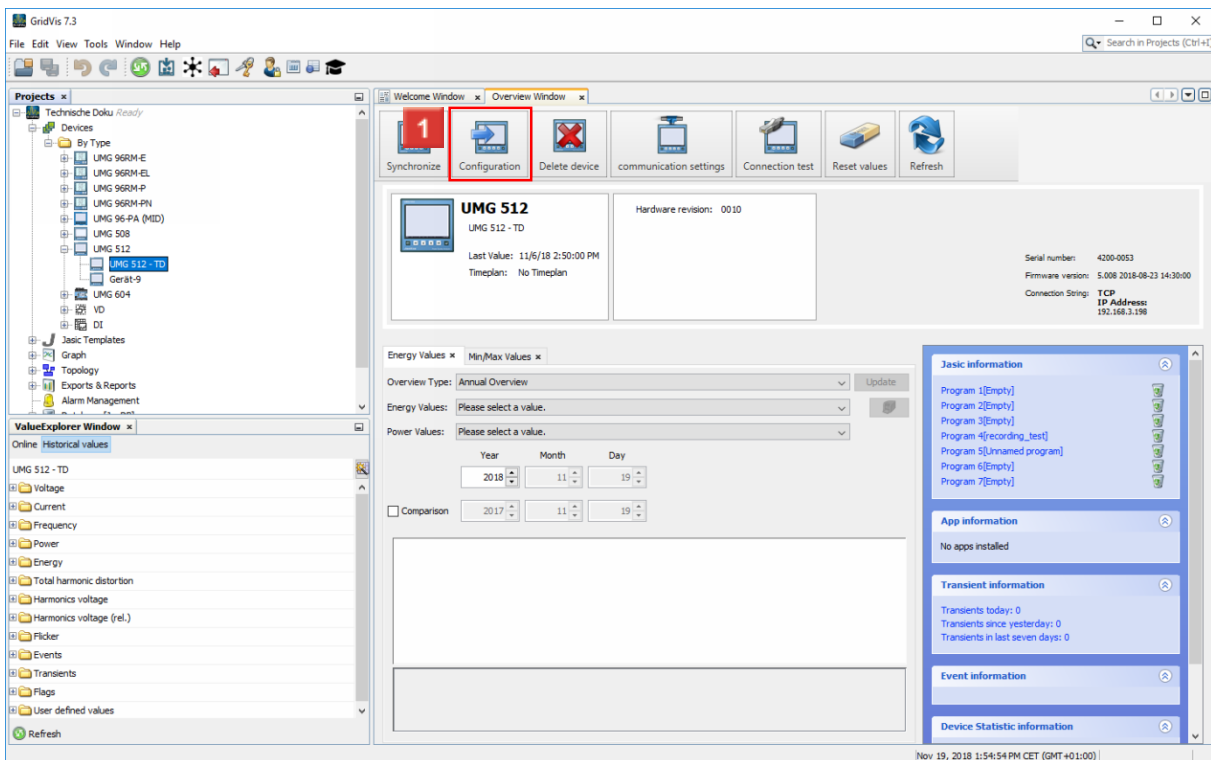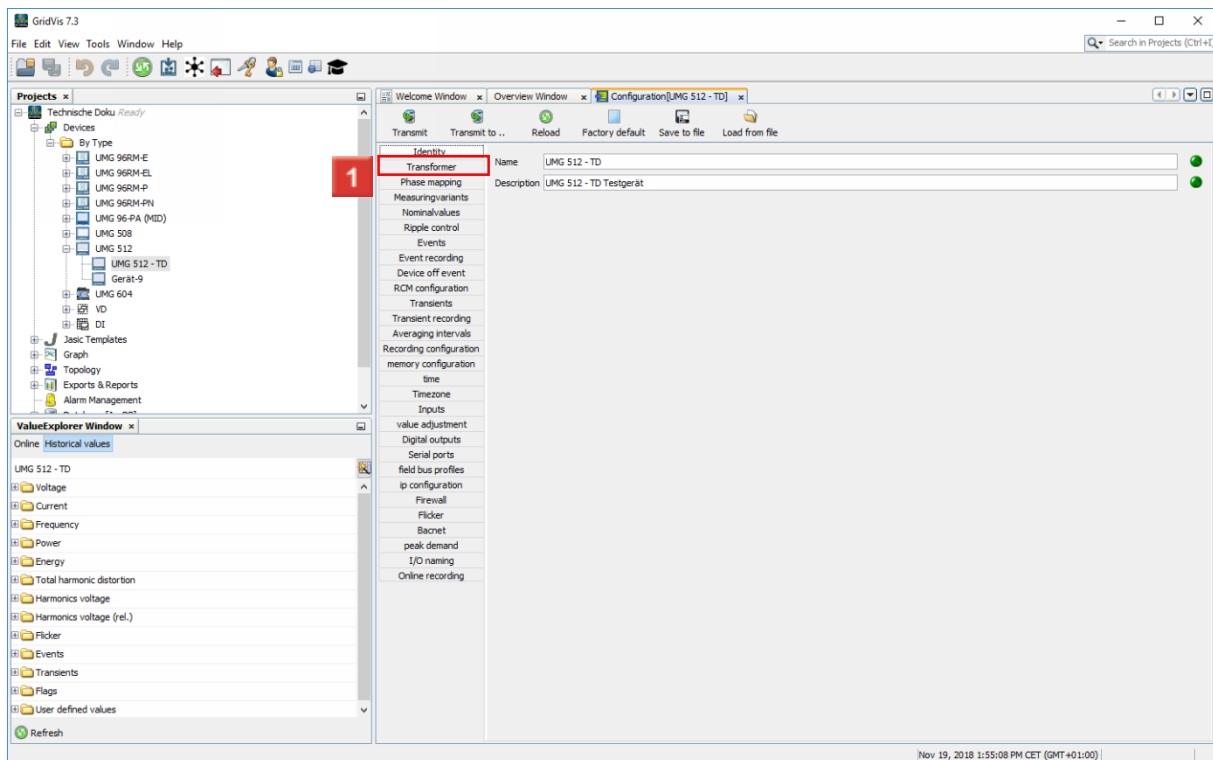# 1 GridVis 7.3
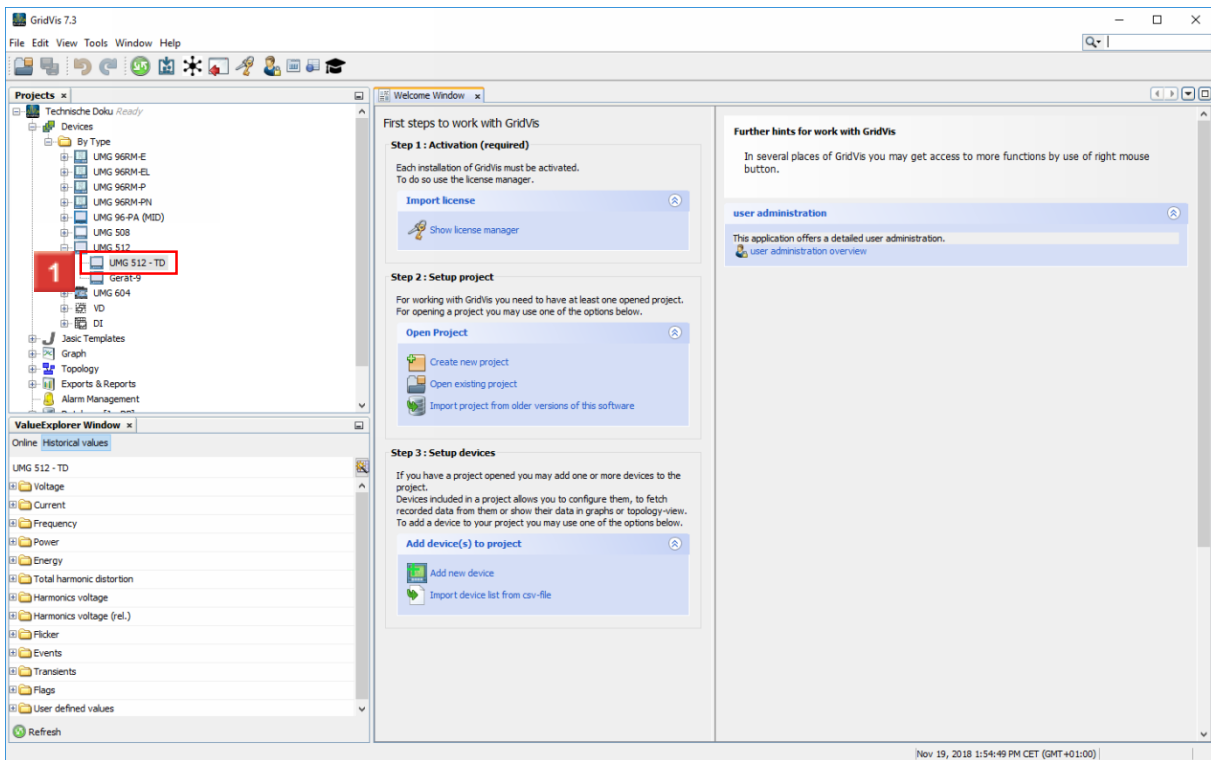
1 Double-click the corresponding tree entry for **the device to be configured**.
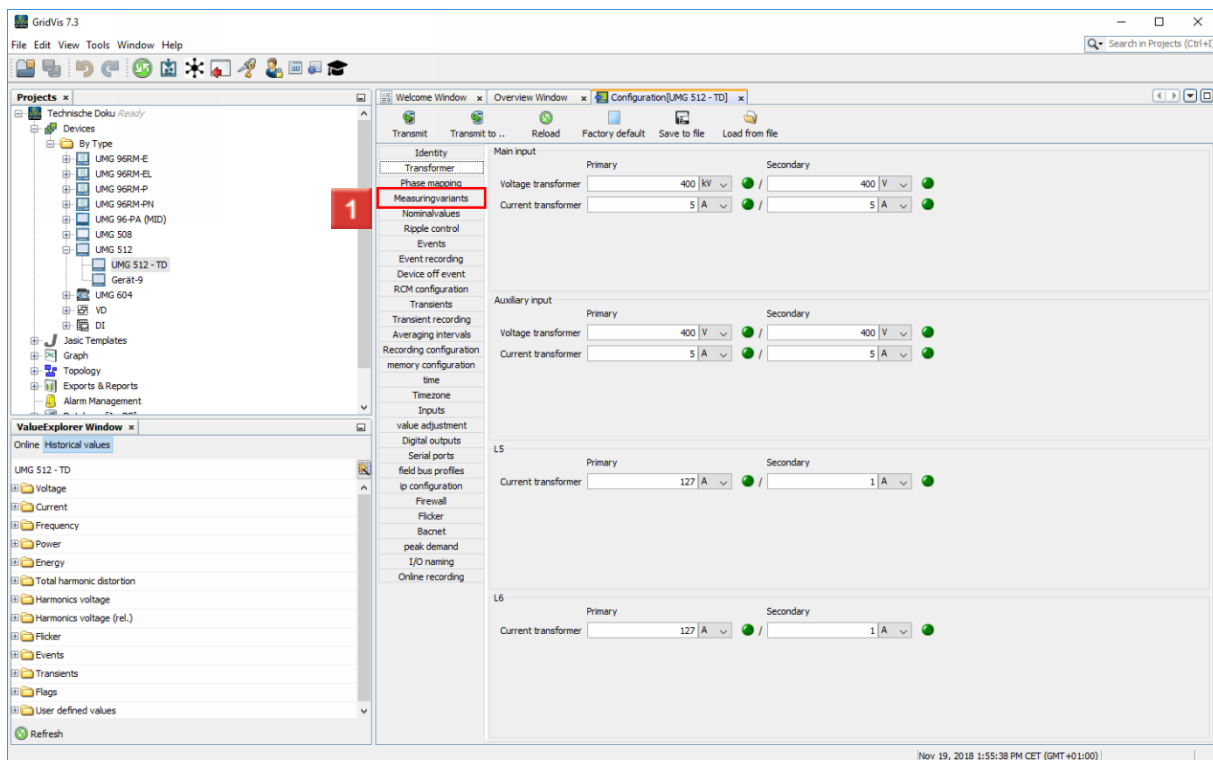

1 Click the **Configuration** button.

1 In this step, you configure the device name and its description.

Click the **Transformer** menu entry to continue with the transformer settings.

> **i** When naming your measurement devices, we recommend maintaining a uniform naming convention for all projects.

1 Click the **Measuringvariants** menu item.
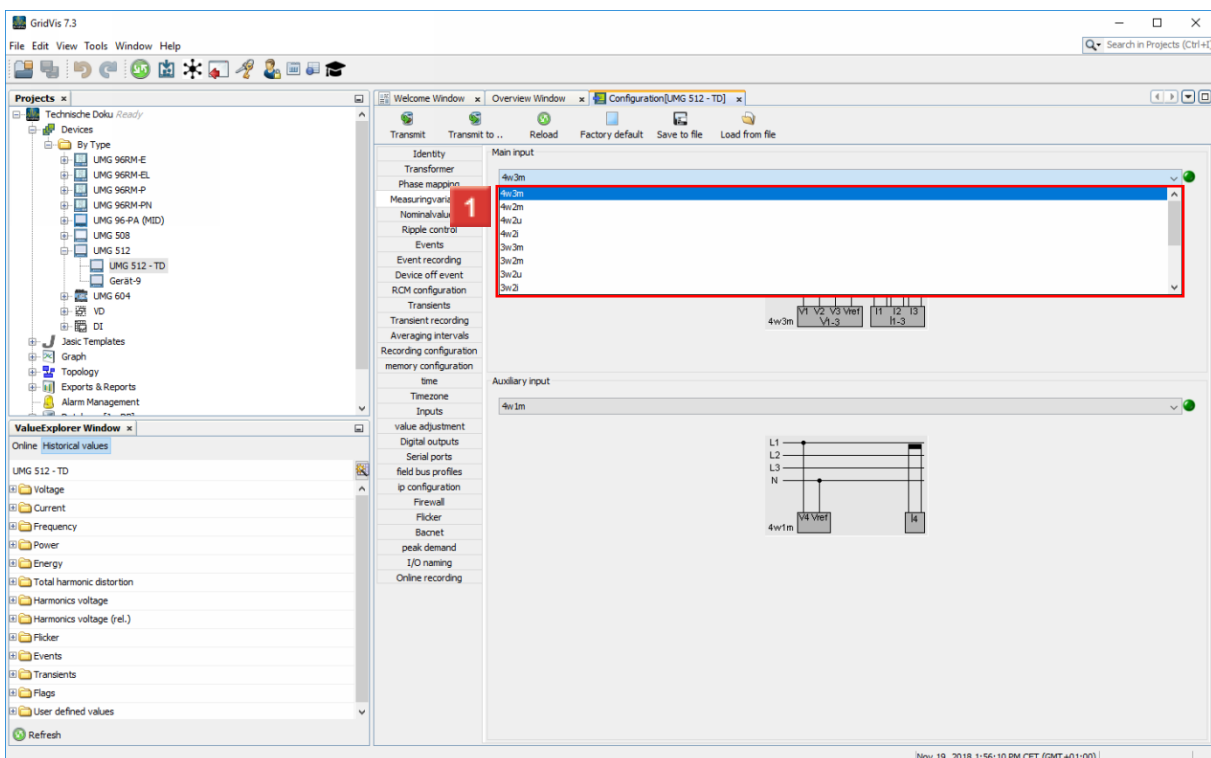
On some devices, the measuring inputs 1-3 are called the main input and input 4 is called the secondary or auxiliary input.

If you are using the measurement device to measure residual current, also configure the ratio of the residual current transformers here. (Here L5 and L6)
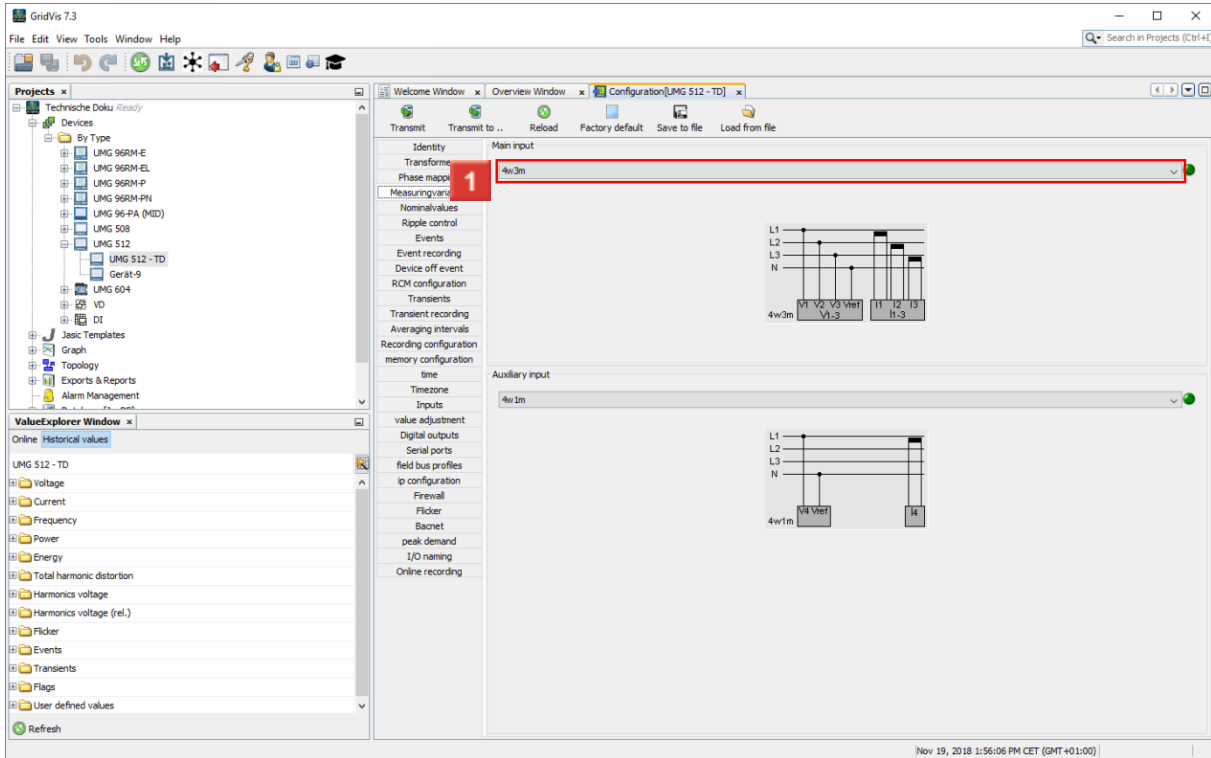
1 Click the dropdown button.

1 Select the appropriate measurement variant from the list.

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> **i** If you have connected the auxiliary measurement, also configure the connection diagram for this measurement here.
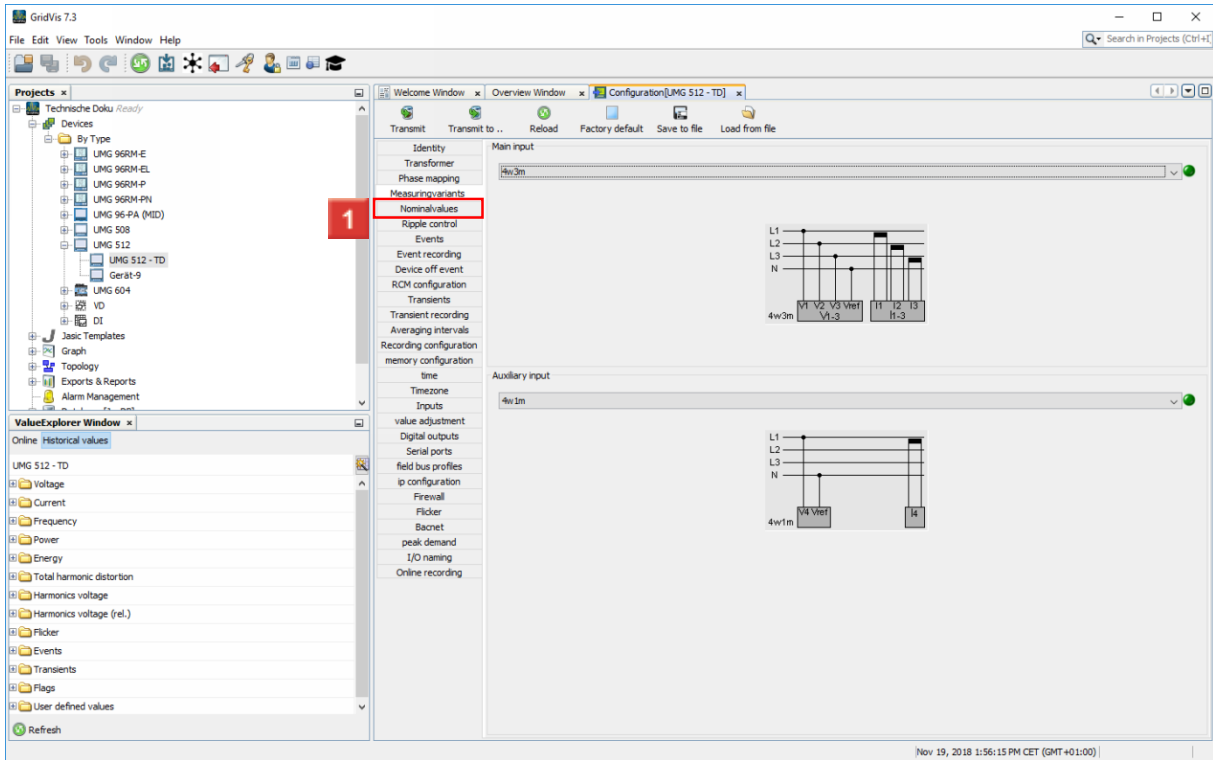
1 Click the **Nominalvalues** menu item.

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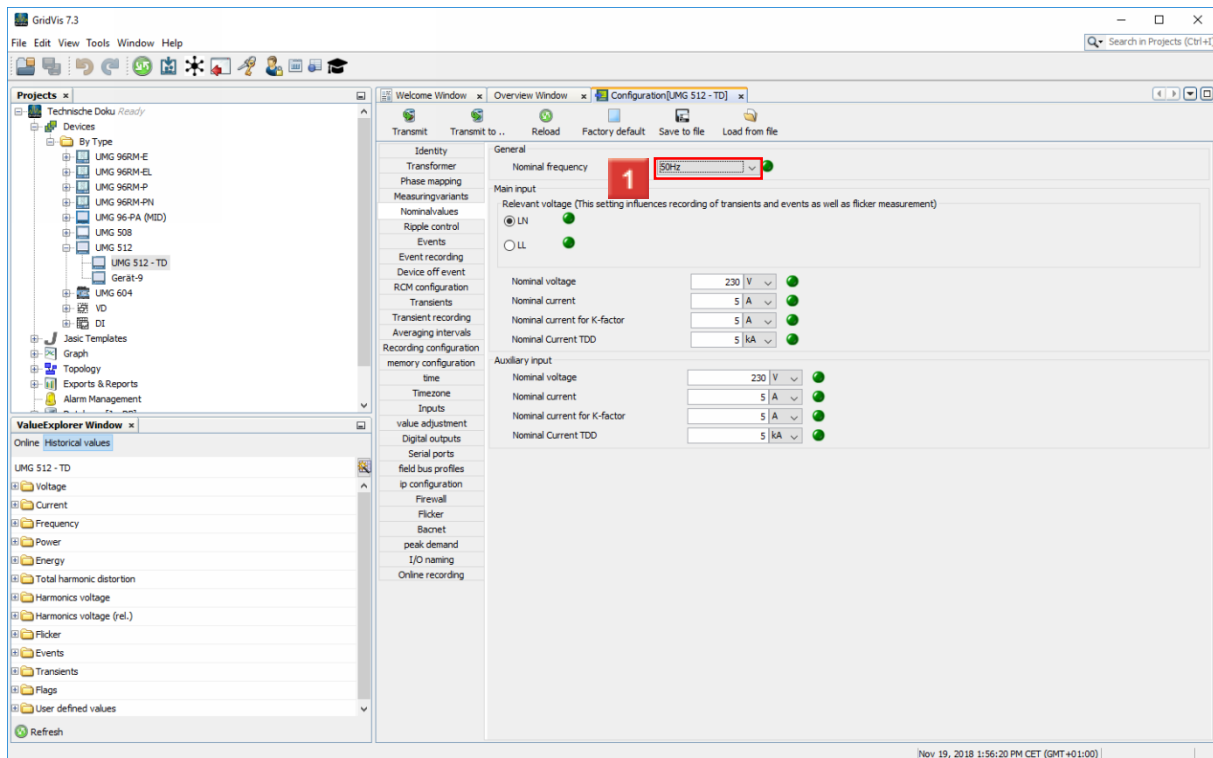
2 Nominal values

[1] Click the **Nominal frequency** dropdown button.

> ℹ The nominal values form the basis for the further calculations of the measurement device and must be entered according to the measuring environment.

[1] Select an option for the nominal frequency from the list.

You can either enter a fixed grid frequency or have the measurement device determine it automatically.
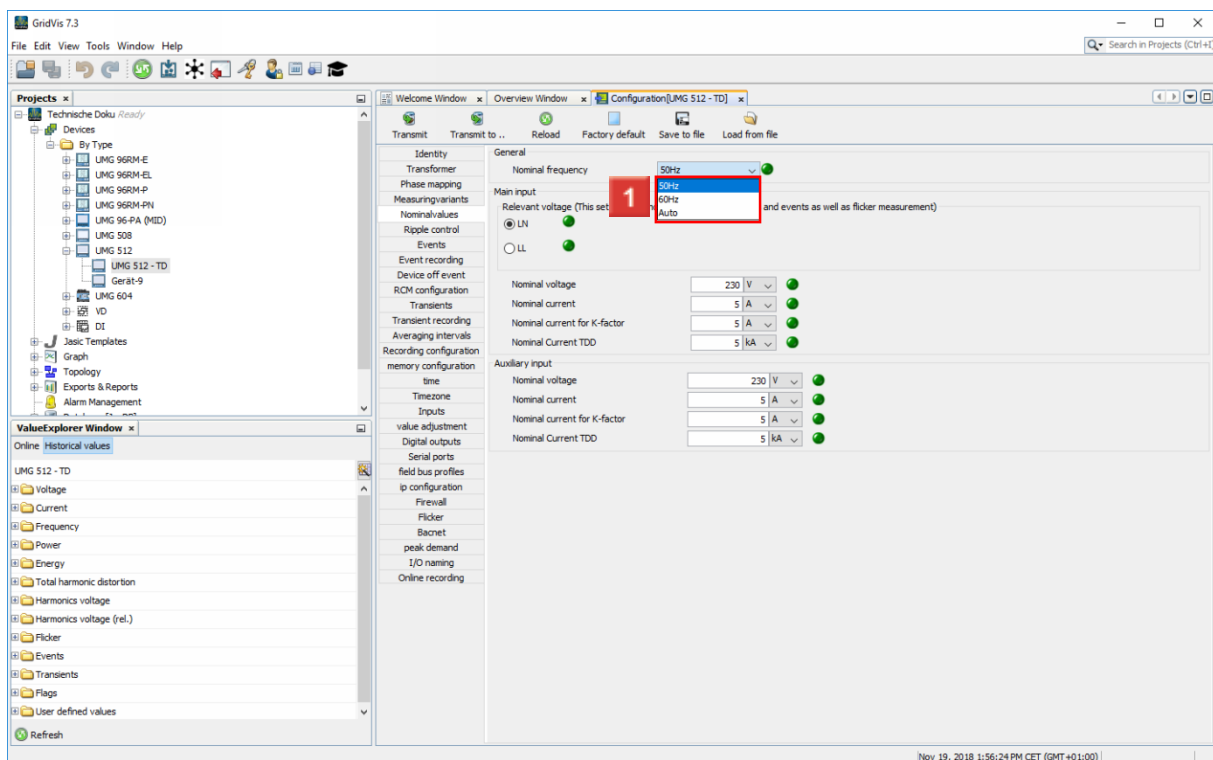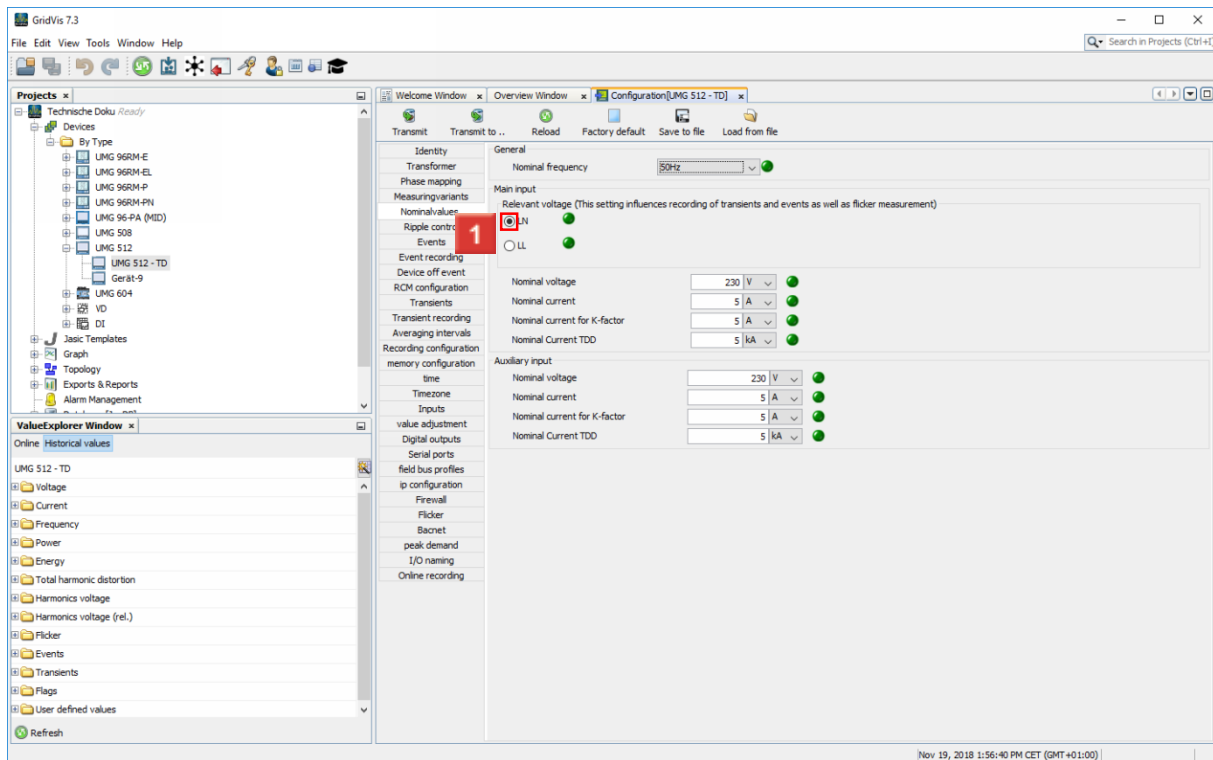

1 Use the selection field to select whether the **LN** or **LL** voltage is to be measured.

> **i** We recommend using the "LN" setting for measuring the power quality in low-voltage grids. "LL" should be used in medium-voltage power grids.

2 Click the **Nennspannung** input field.

3 Click the **Nennstrom** input field.

4 Click the **Nennstrom für K-Faktor** input field.

The K-factor describes the increase in eddy current losses when loaded with harmonics.

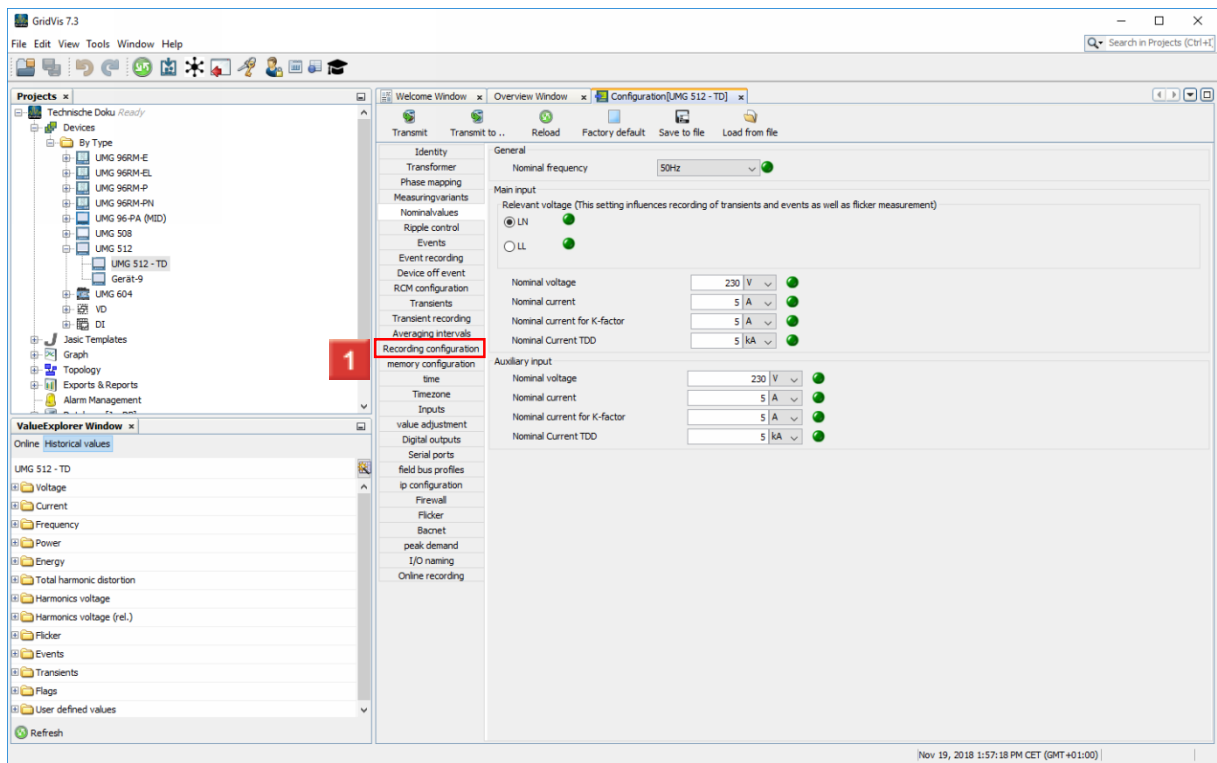With a sinusoidal load on the transformer, the K factor = 1.

The larger the K-factor is, the stronger a transformer can be loaded with harmonics without overheating.
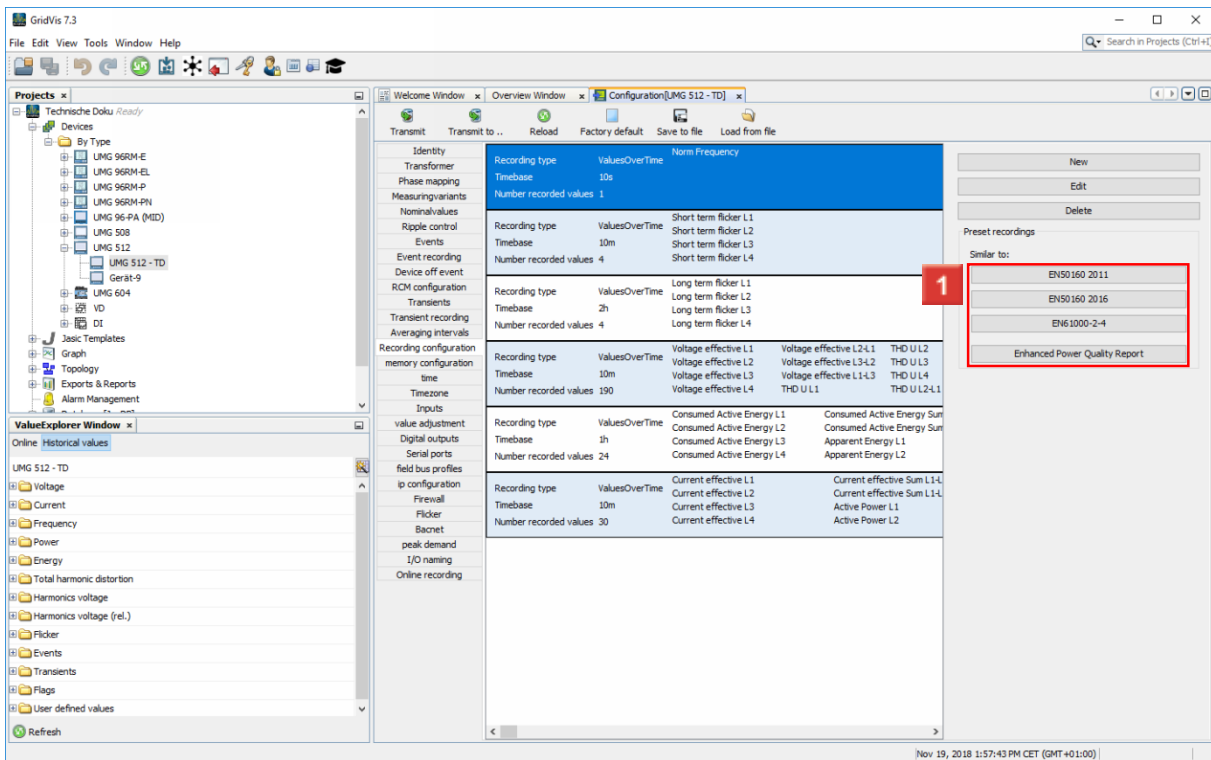
> **i**

5 Click the **Nennstrom TDD** input field.

TDD (Total Demand Distortion) indicates the ratio between the current harmonics (THDi) and the effective current value at full load.

1 Click the **Recording configuration** menu item.

3   Recording a configuration

1 In order to automatically load recording profiles from a corresponding preset recording, click the corresponding button in the **Preset recordings** area.

> **i**   You can choose from various presets to automatically create recording profiles that you can use to record the relevant standards.
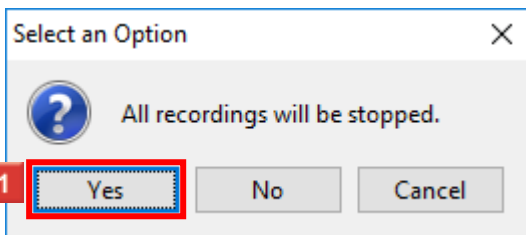
1 Click the **Yes** button.

1 Click the **Edit** button to edit the marked recording profile.

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Form ✕

1 of 1000 values

Norm Frequency

Values types

○ Average (arithmetic)   ●

○ Average (RMS)   ●

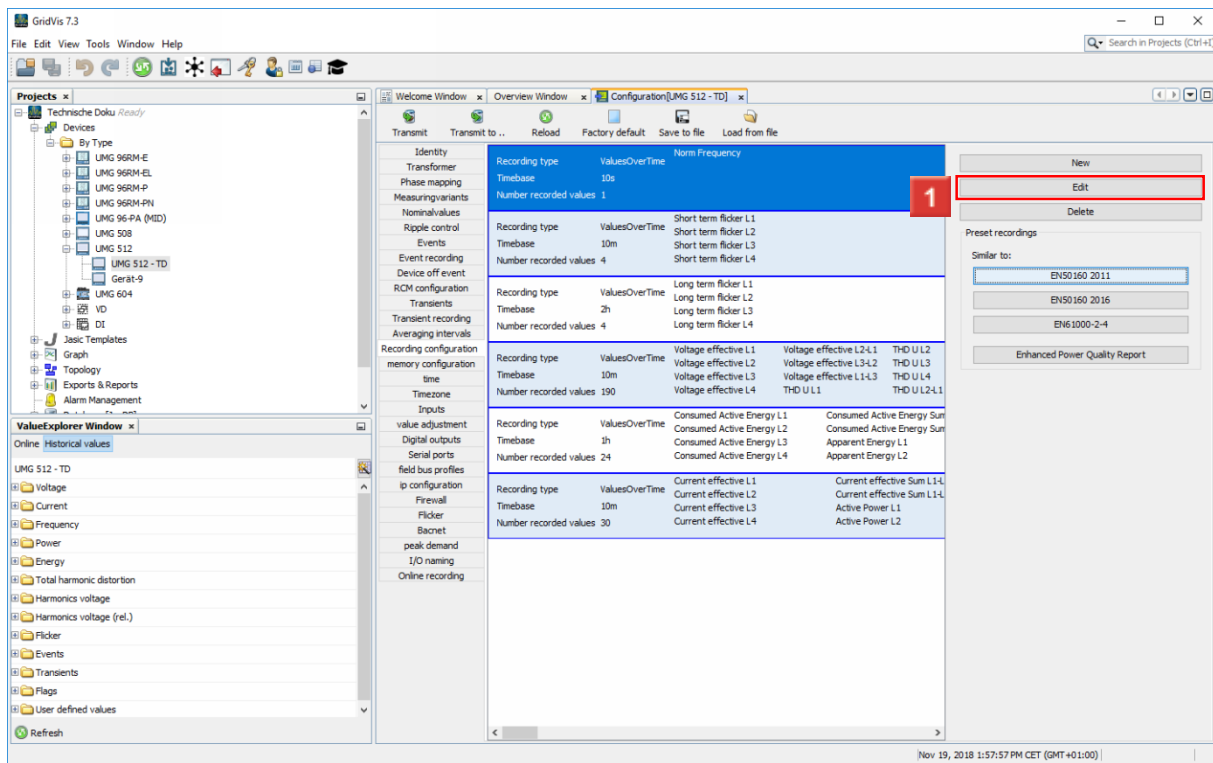☐ Minimum   ●

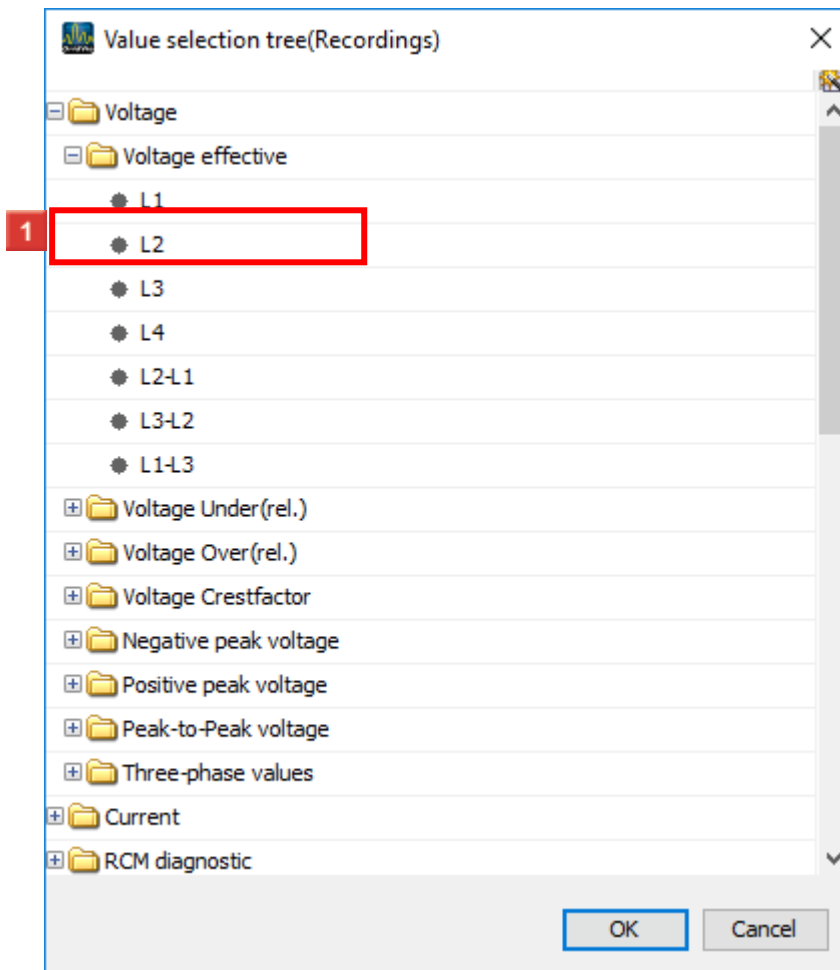☐ Maximum   ●

◉ Samples   ●

Timebase

Norm 10 seconds ⌄   ●

10   seconds ⌄   ●

○ On value change   ●

Add values

Remove values

1 To add more values to the recording profile, click the **Add Values** button.

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Value selection tree(Recordings)

- Voltage
  - Voltage effective
    - L1
    - **L2** [1]
    - L3
    - L4
    - L2-L1
    - L3-L2
    - L1-L3
  - Voltage Under(rel.)
  - Voltage Over(rel.)
  - Voltage Crestfactor
  - Negative peak voltage
  - Positive peak voltage
  - Peak-to-Peak voltage
  - Three-phase values
- Current
- RCM diagnostic

OK   Cancel

[1] Select the desired value in the tree structure and drag it into the value window while holding down the left mouse button.

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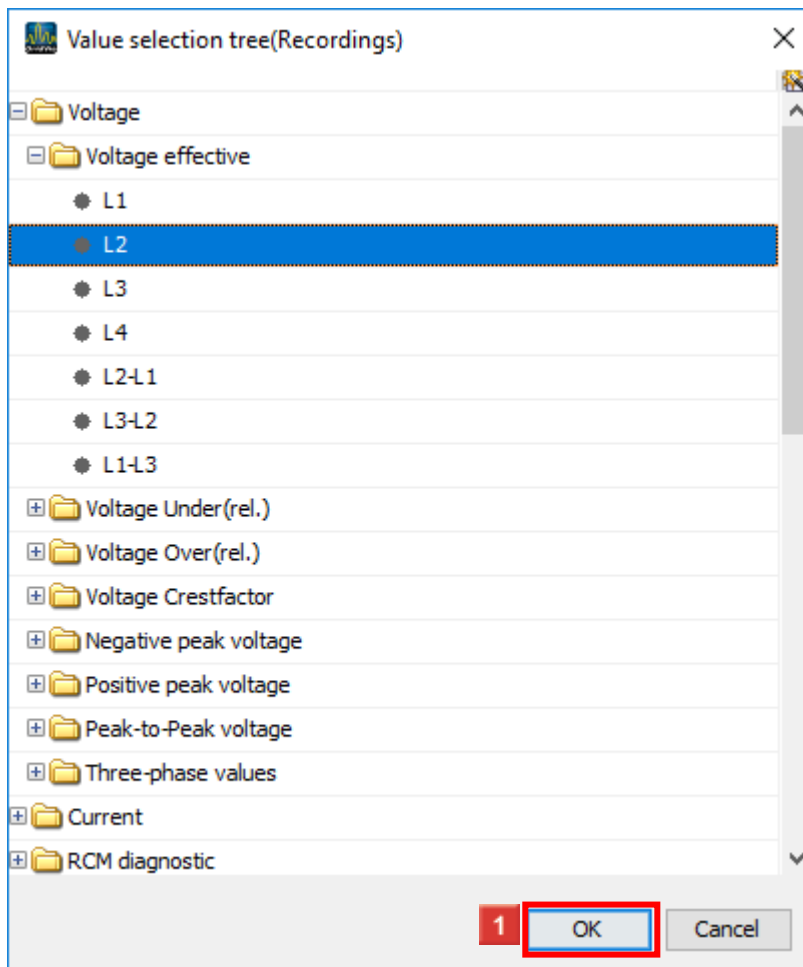
1 After you have dragged all the desired values into the values window, click the **OK** button.

2 Click the   radiobutton.

The measured values can be recorded (depending on the device) in different ways (mode):

▪ Mean value (arithmetic/effective value)

▪ Sample (for flow meters, gas, water, etc.)

▪ For value changes (recording option for digital inputs)

For the mean value, you can also record minimum and maximum values. Note the increased memory requirement here.

3 Click **Min/Max**.

4 Click the **Timebase** dropdown button.

> **i** The time base is only relevant for recording the mean, minimum, maximum values and sample.
>
> **i** A permanent recording of measured values with a time base <10 seconds can quickly exhaust the memory capacity.

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Form ✕

2 of 1000 values

Voltage effective L2
Norm Frequency

Values types

○ Average (arithmetic) 🟢

○ Average (RMS) 🟢

☐ Minimum 🟢

☐ Maximum 🟢

◉ Samples 🟢

Timebase

Norm 10 seconds ⌄ 🟢

10   seconds ⌄ 🟢
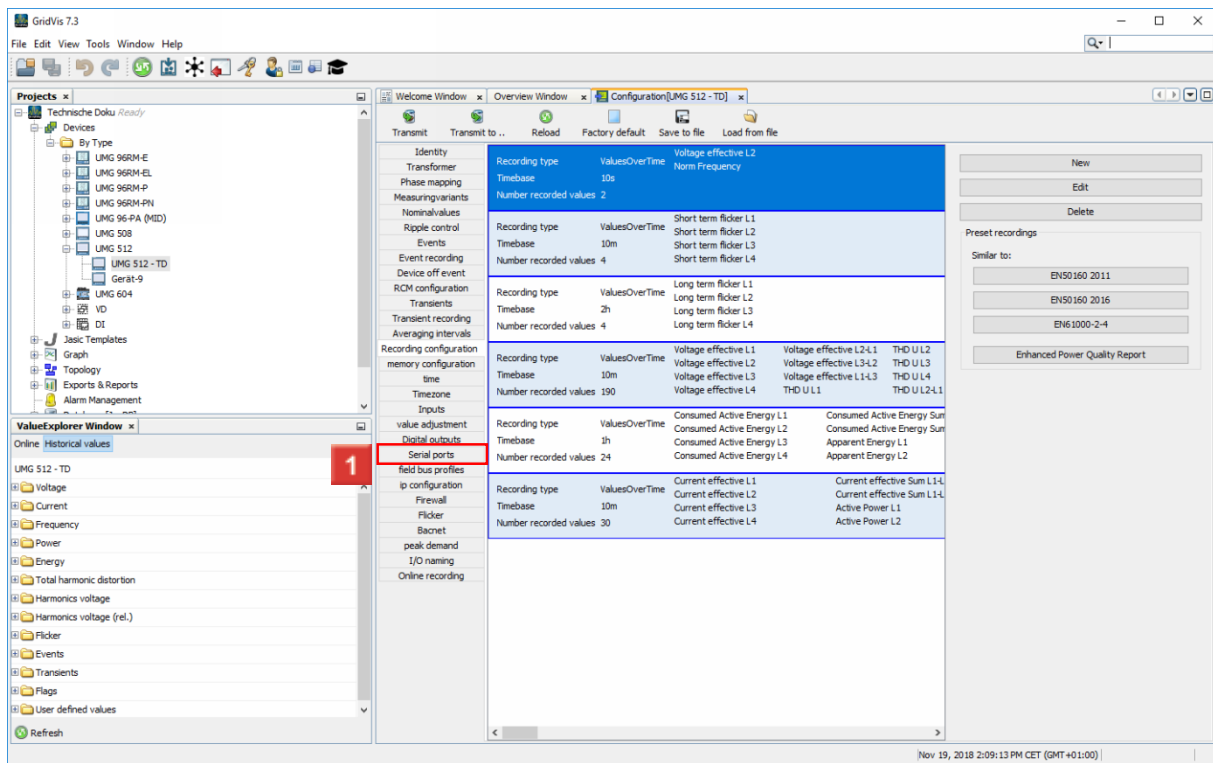
○ On value change 🟢

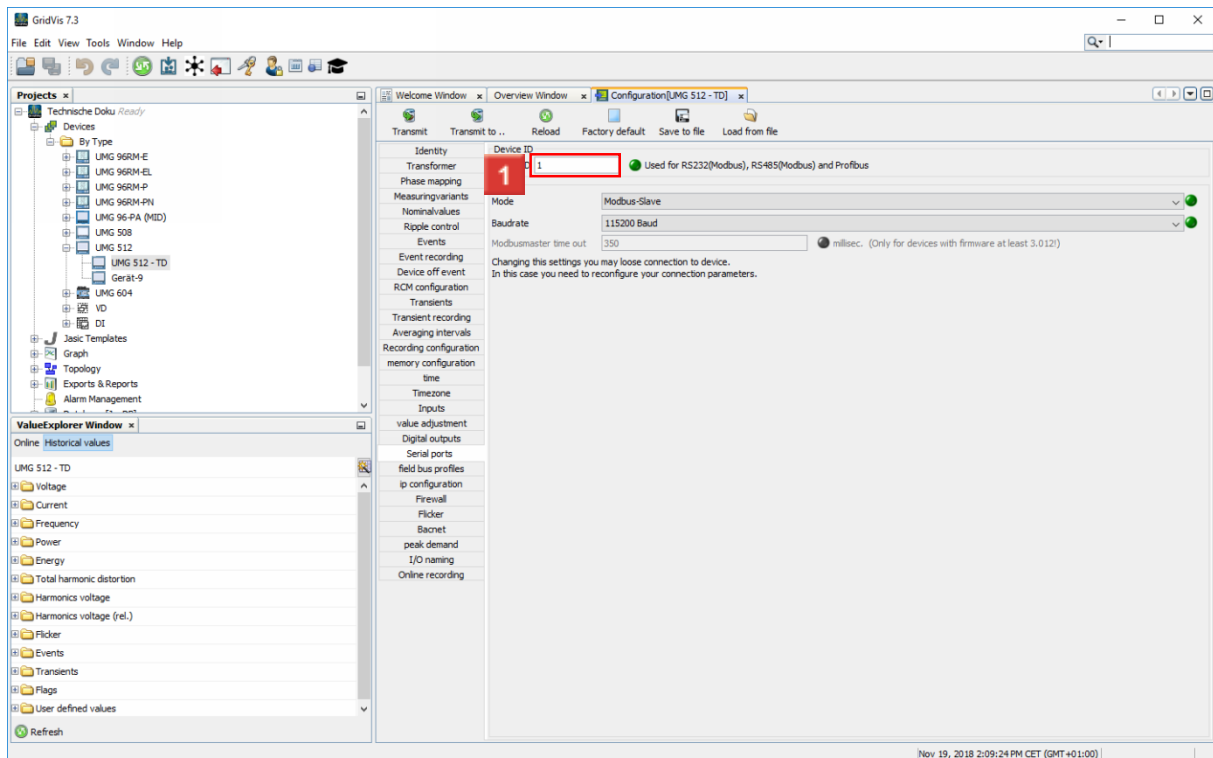Add values

Remove values

1 OK   Cancel   Help

---

1 After you have configured the mode and time base for all values, click the **OK** button.

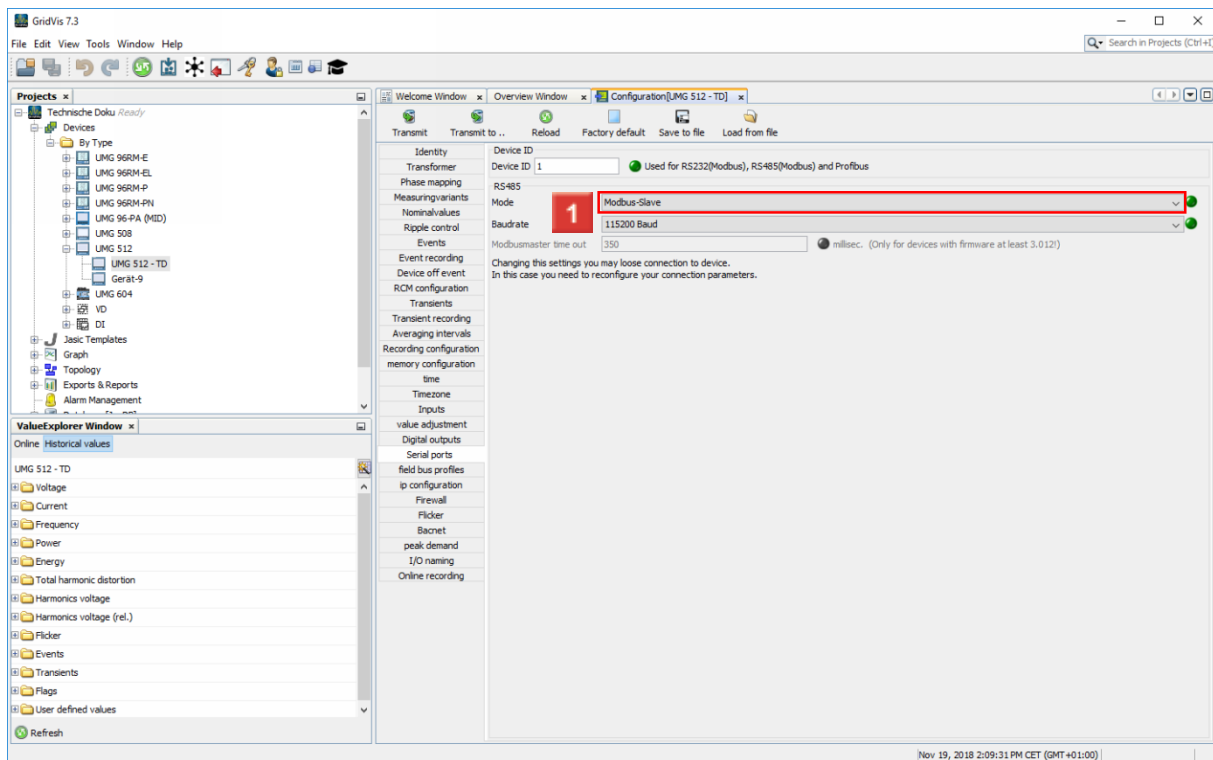**1** Click the **Serial ports** menu item.

4   Serial interface

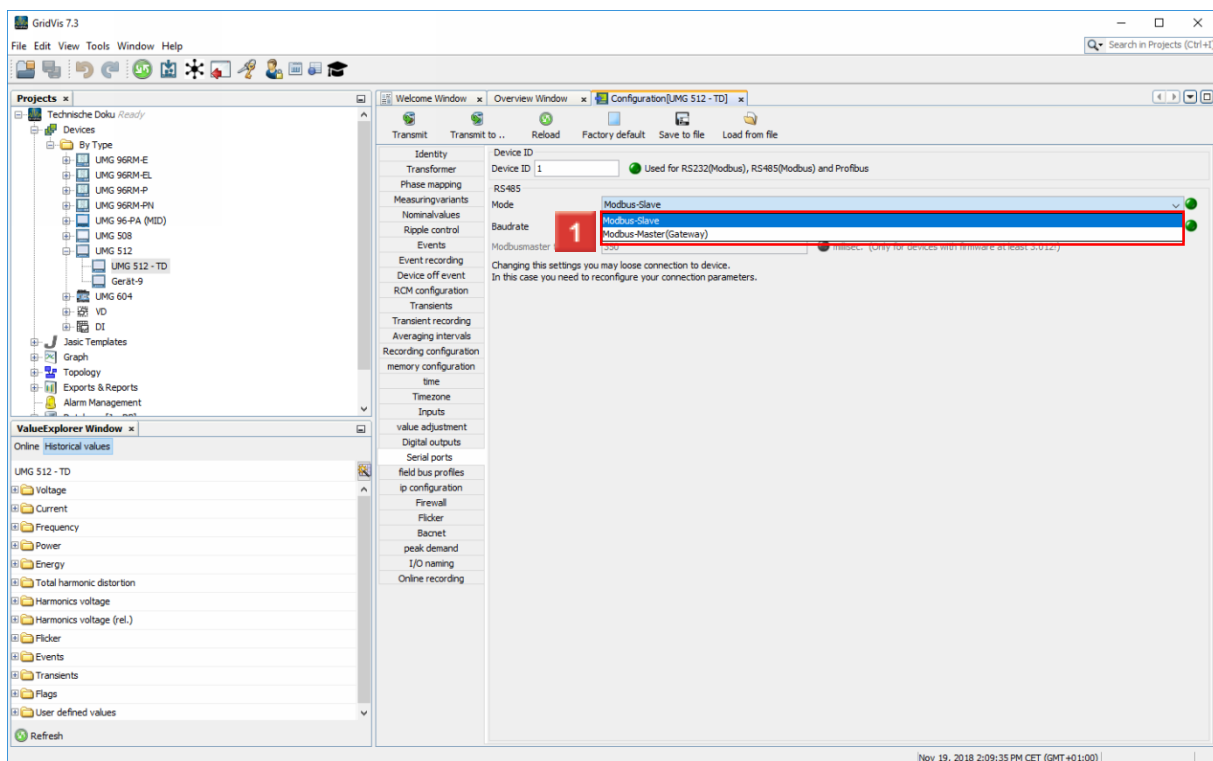**1**   Click the **Device ID** input field to configure the Modbus address of the device.

> **i**   The device ID must be unique within a bus segment.
>
> **i**
>
> **i**   For devices that communicate as Modbus masters in the system, the ID 250 is often assigned in practice.
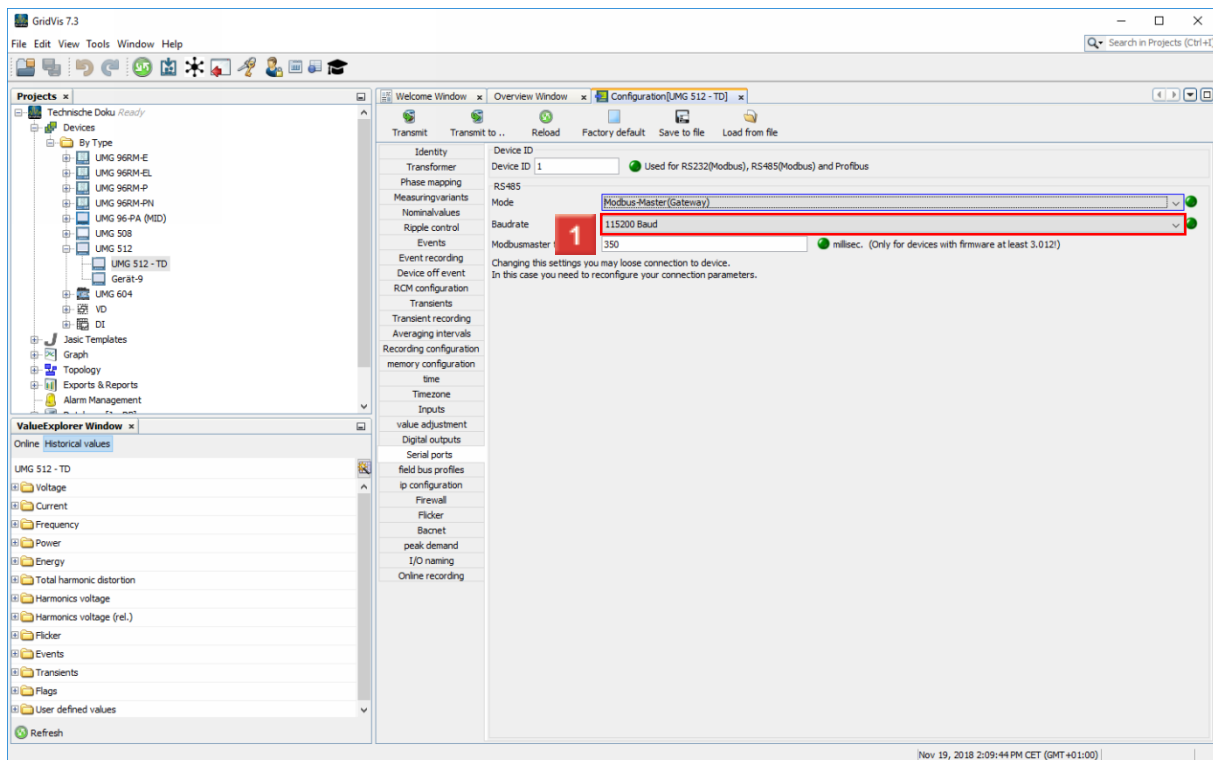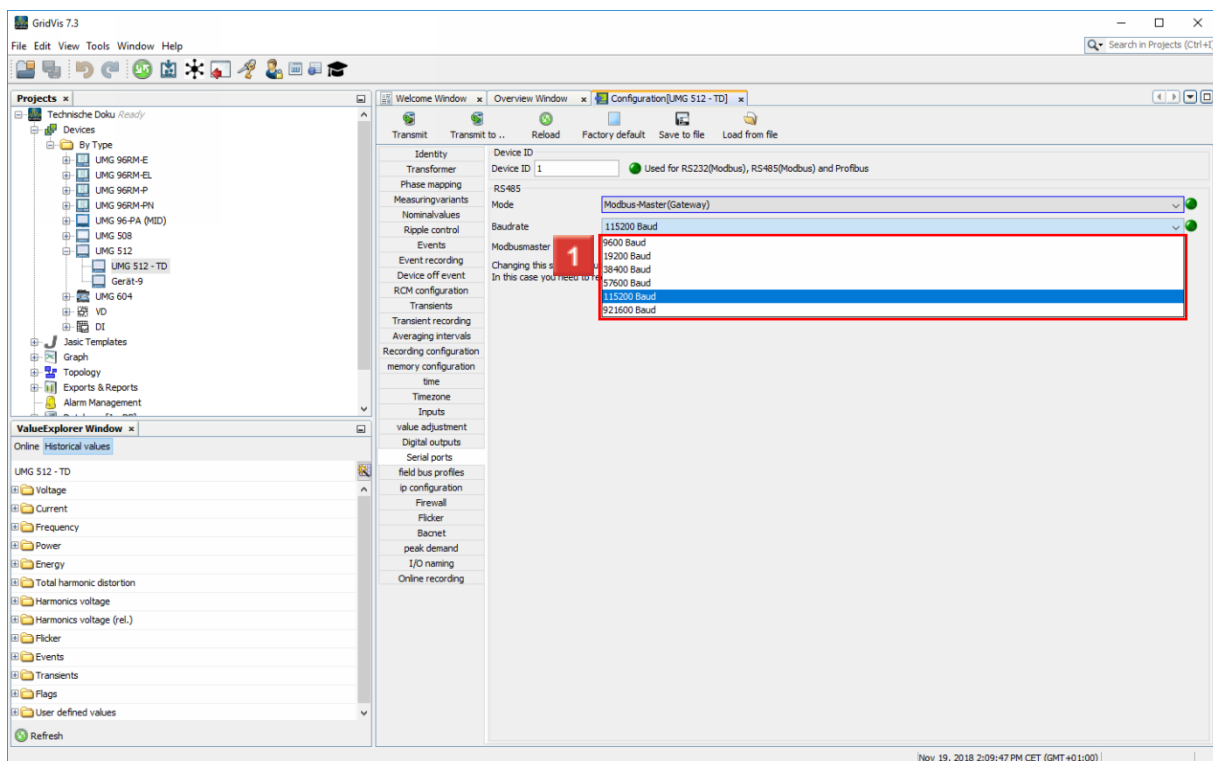
1 Click the **Mode** dropdown button.

1 Select the desired mode from the list.

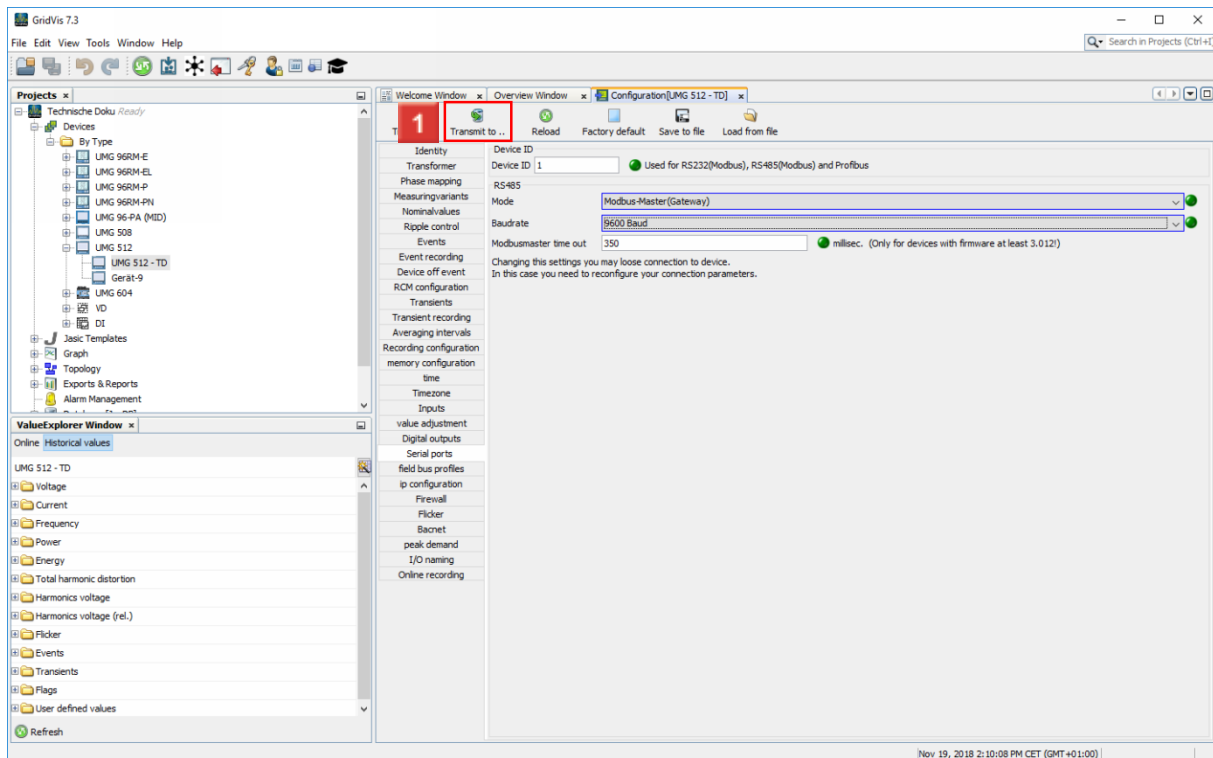> **i** Depending on the model, the device can communicate via the bus in different ways.

 Click the **Baudrate** dropdown button.
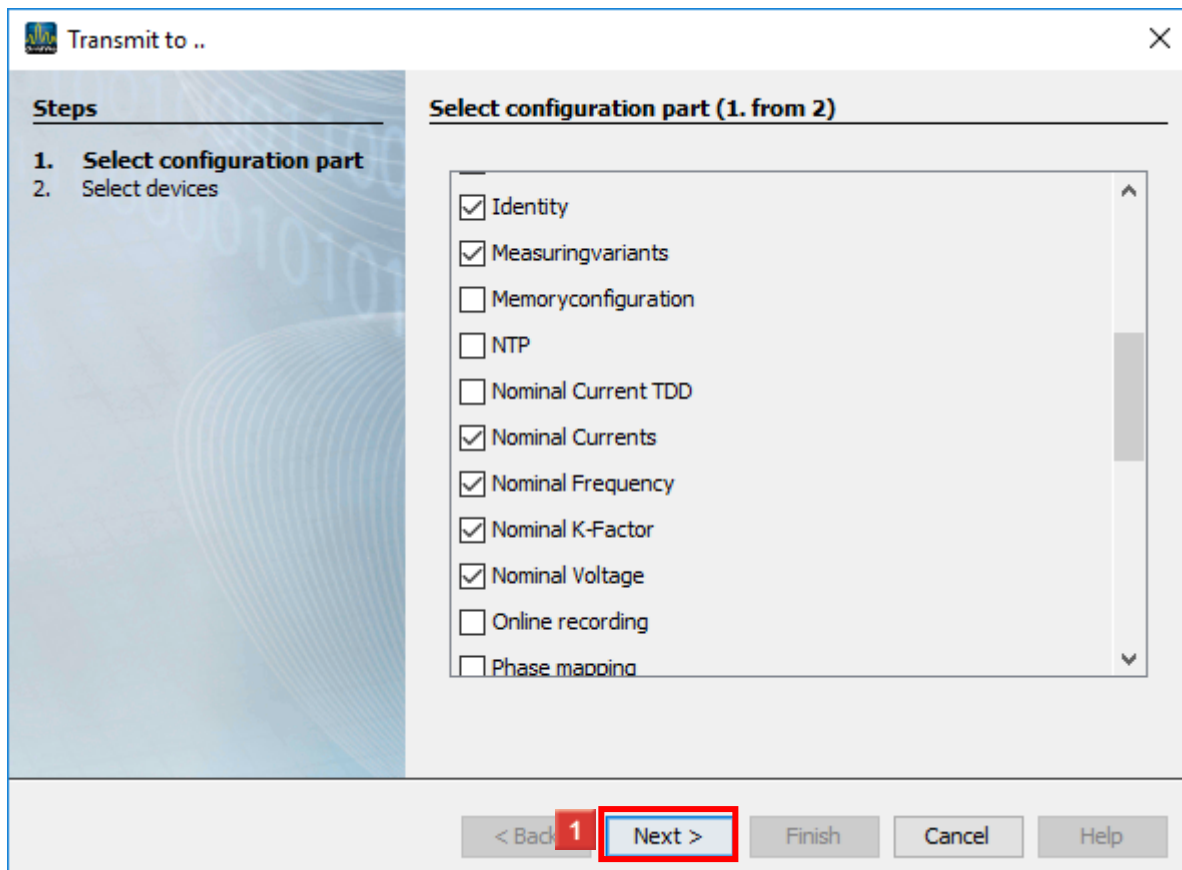

 Select a baud rate from the list.

Select the baud rate for all devices in a bus structure uniformly.

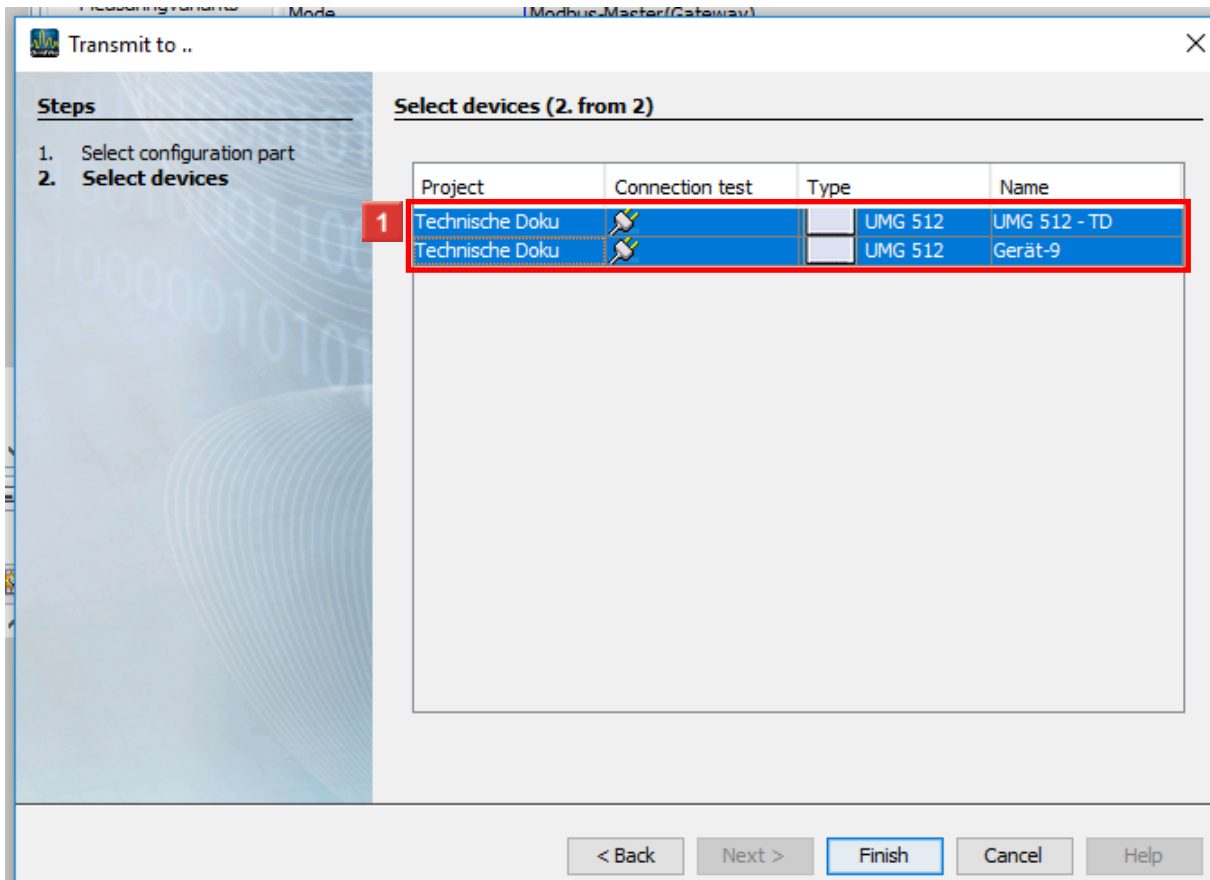*Janitza*®

5 Transferring the configuration

1 Click the **Transmit to ...** button.

1 Click the **Next** button.
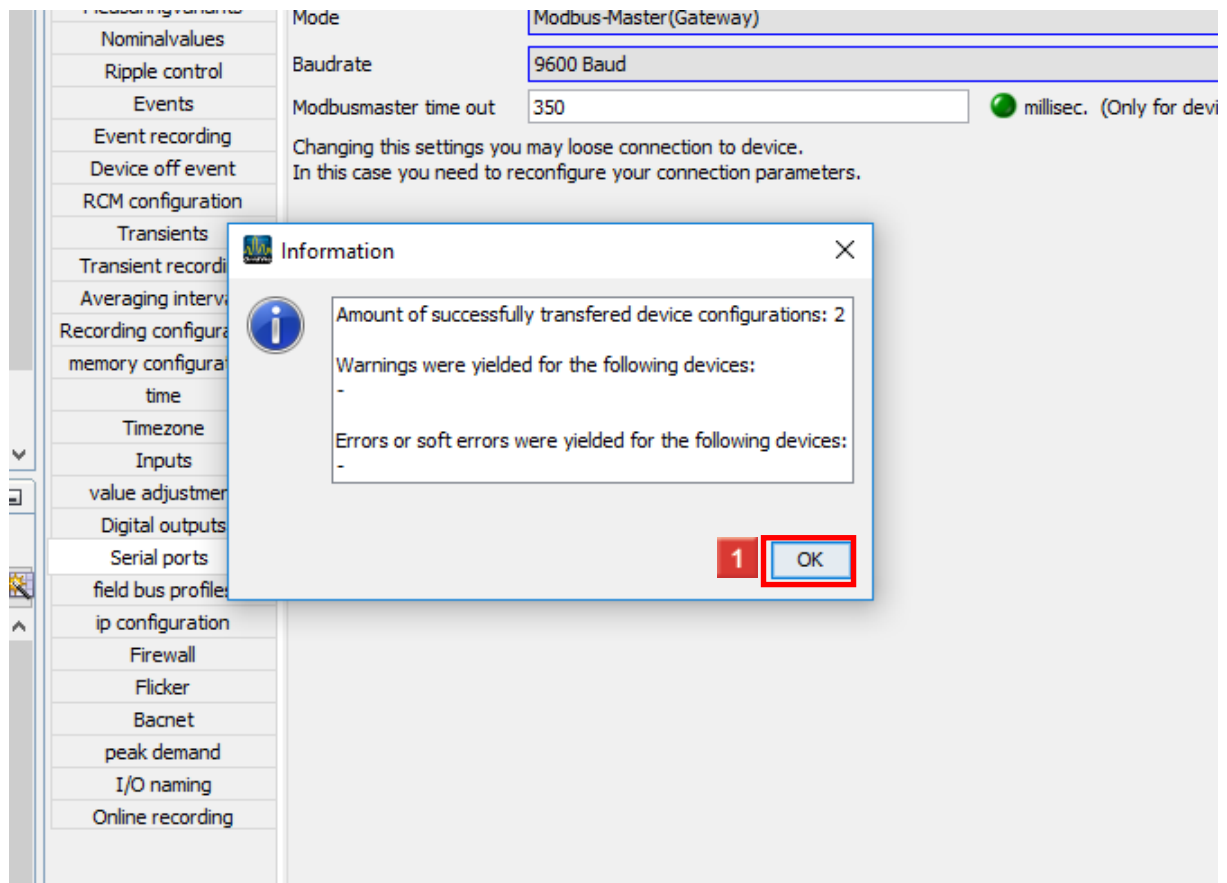
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> **i** Use the checkboxes to select which part of the configuration is to be transferred.

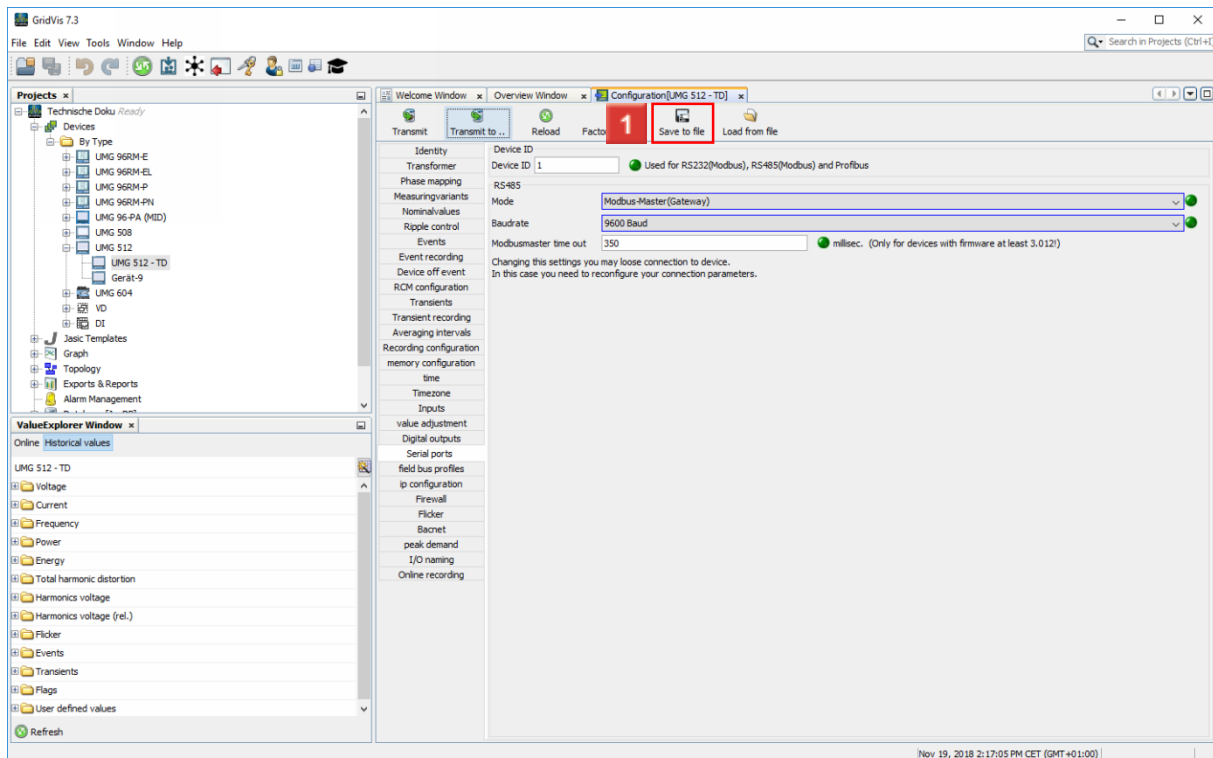

1 Select the desired device from the list.

> **i** Here, you can select several devices of the same type to simultaneously transfer the configuration to several devices.

2 Click the **Finish** button.

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Mode   Modbus-Master(Gateway)

Baudrate   9600 Baud

Modbusmaster time out   350   ● millisec. (Only for devi

Changing this settings you may loose connection to device.
In this case you need to reconfigure your connection parameters.

Information   ✕

Amount of successfully transfered device configurations: 2

Warnings were yielded for the following devices:
-

Errors or soft errors were yielded for the following devices:
-

1 [OK]
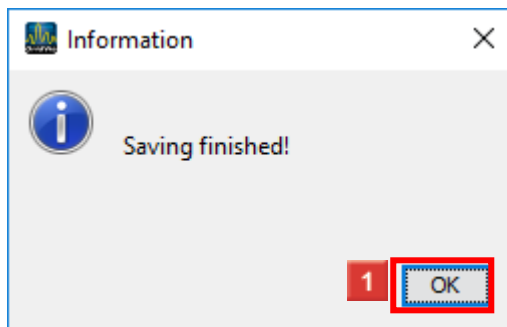
1 Click the **OK** button.

6 Saving a configuration file

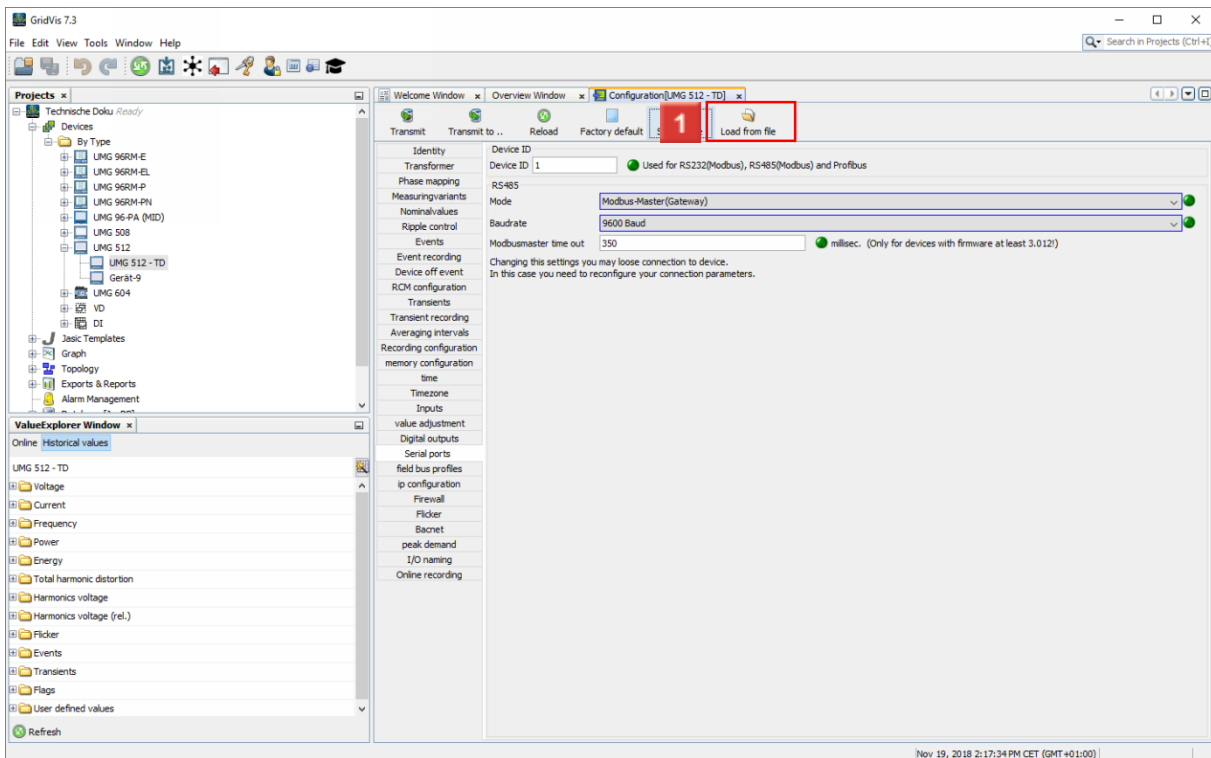**1** Click the **Save to file** button to export the configuration.
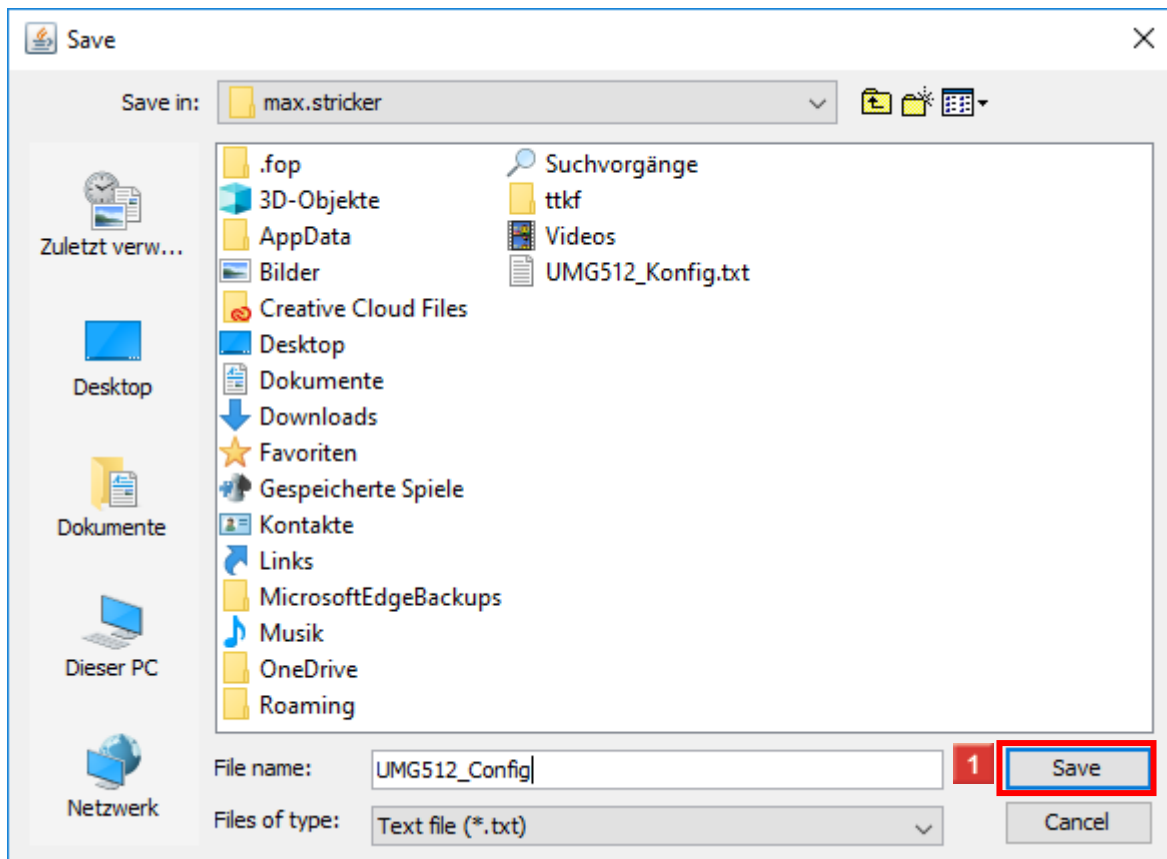
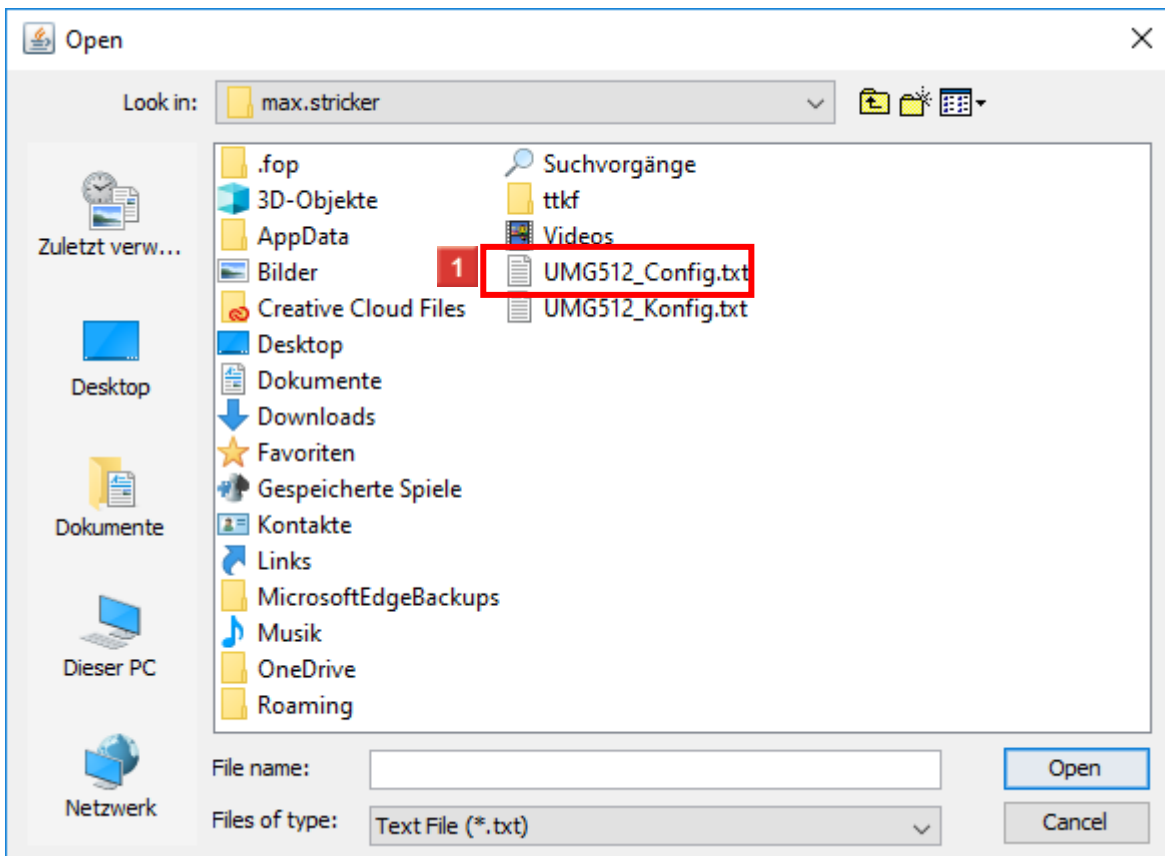**1** Click the **Save** button.
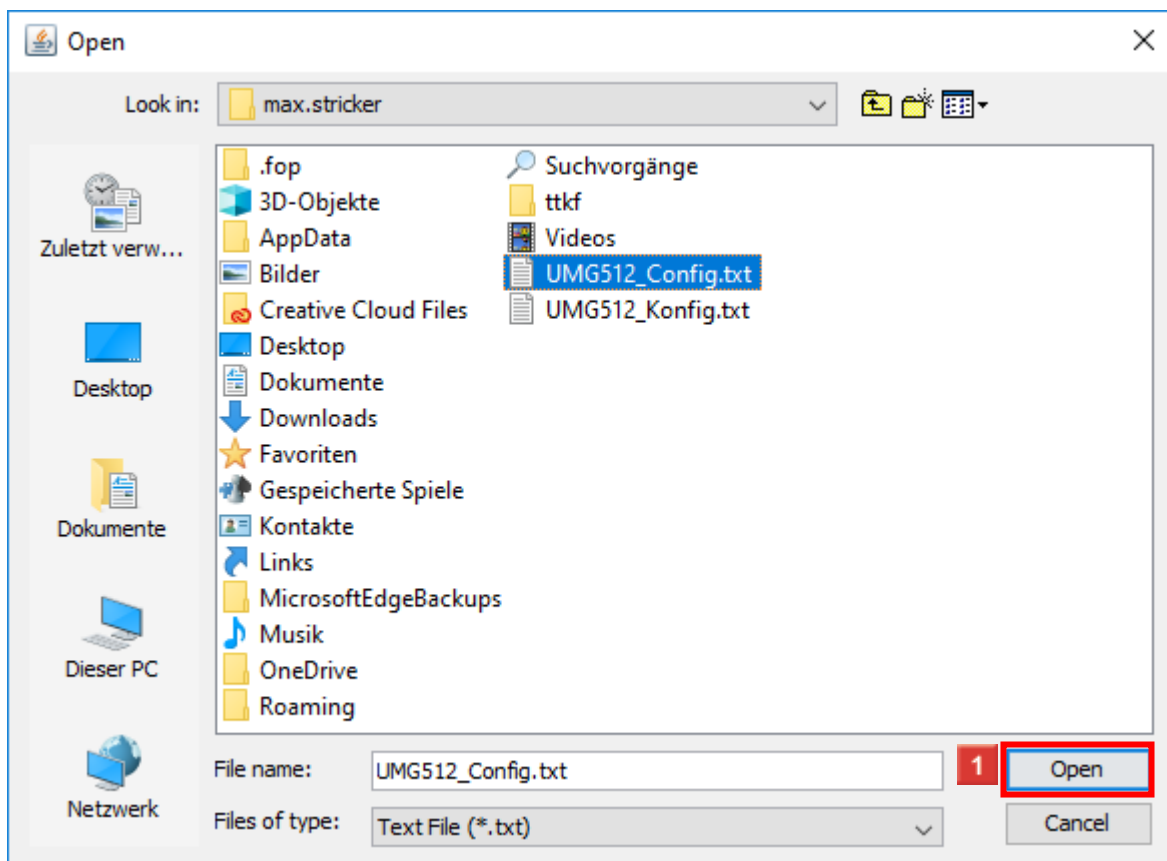
1 Click the **OK** button.
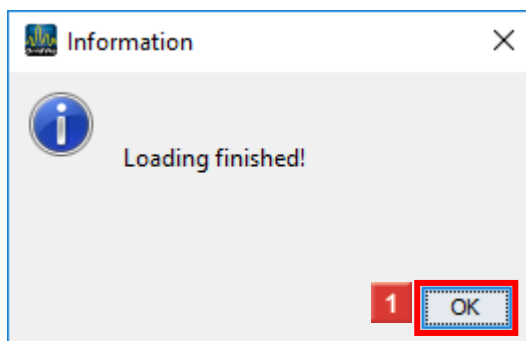
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7 Load configuration file

1 Click the **Load from file** button to load the configuration from a configuration file.

1 Select a valid GridVis configuration file.
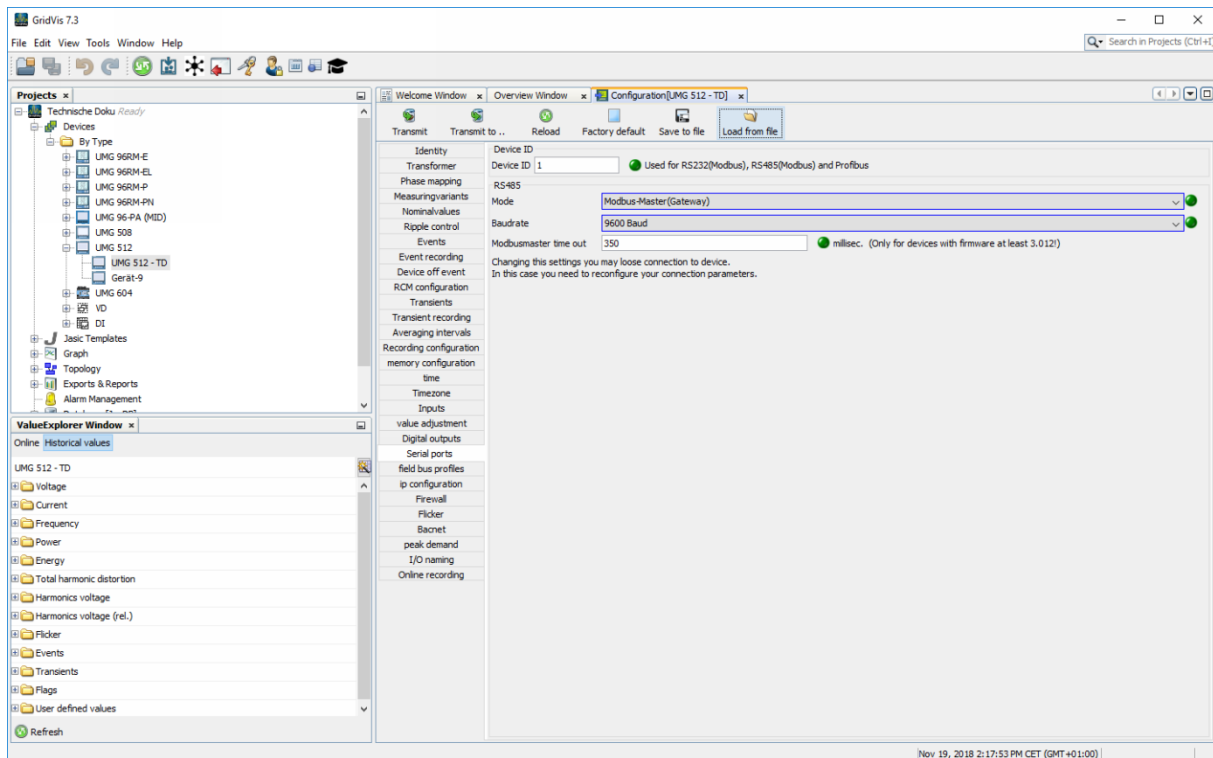
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1 Click the **Open** button.

1 Click the **OK** button.

8   GridVis 7.3

Please enter your text here.

Identity

The identity consists of the device name and a description.

If several measurement devices are used, we recommend establishing a uniform designation.

Transformer

The voltage and current transformer ratio can be found in the transformer used or in the corresponding documentation.

In some devices, the configuration of L1-L3 is combined as the main measurement.

Serial interface

Under this item, you configure the modbus communication settings. The same baud rate must be selected for devices in a bus.

Transferring the configuration

You can transfer the entire configuration to the measurement device by clicking Transmit. You can use the Transmit to button to transfer individual configurations, such as the recording configuration, to several devices at once.

Exporting/importing a configuration

You can export and import the configurations to create configuration templates for devices of the same type.

Recording configuration

Depending on the device, you can create multiple recording profiles.

You can record several measured values for each recording.

If your device supports this, you can load preconfigured recording profiles that record values according to a certain standard. For example DIN EN 20160.

Nominal values

The further calculations of the measurement device are based on the nominal values. Depending on the device, you enter the nominal frequency and nominal current for various measurements here.