



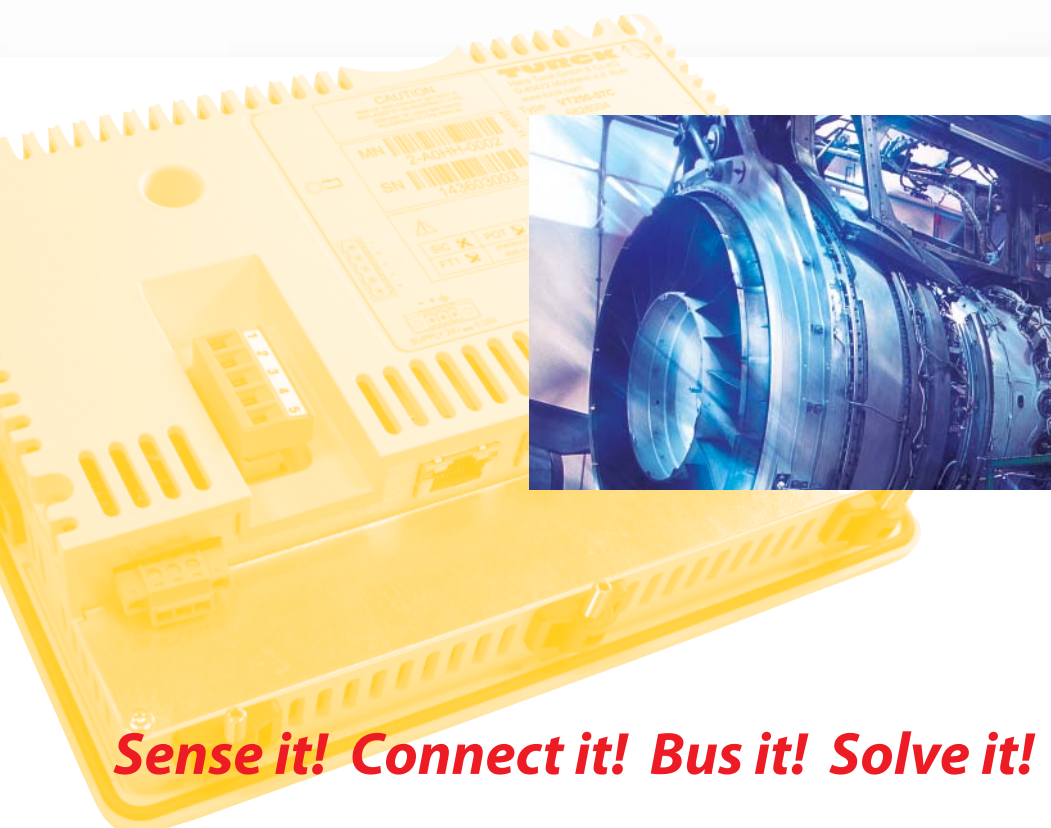
TURCK

**Industrial
Automation**



**GETTING
STARTED**

**VT250-57x -
Visualization of
Step7®-projects**



Sense it! Connect it! Bus it! Solve it!

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Subject to alterations without notice

Warning!

Before commencing the installation

- Disconnect the power supply of the device.
- Ensure that devices cannot be accidentally restarted.
- Verify isolation from the supply.
- Earth and short circuit.
- Cover or enclose neighboring units that are live.
- Follow the engineering instructions of the device concerned.
- Only suitably qualified personnel in accordance with EN 50 110-1/-2 (VDE 0 105 Part 100) may work on this device/system.
- Before installation and before touching the device ensure that you are free of electrostatic charge.
- The functional earth (FE) must be connected to the protective earth (PE) or to the potential equalization. The system installer is responsible for implementing this connection.
- Connecting cables and signal lines should be installed so that inductive or capacitive interference do not impair the automation functions.
- Install automation devices and related operating elements in such a way that they are well protected against unintentional operation.
- Suitable safety hardware and software measures should be implemented for the I/O interface so that a line or wire breakage on the signal side does not result in undefined states in the automation devices.
- Ensure a reliable electrical isolation of the low voltage for the 24 volt supply. Only use power supply units complying with IEC 60 364-4-41 (VDE 0 100 Part 410) or HD 384.4.41 S2.
- Deviations of the mains voltage from the rated value must not exceed the tolerance limits given in the specifications, otherwise this may cause malfunction and dangerous operation.
- Emergency stop devices complying with IEC/EN 60 204-1 must be effective in all operating modes of the automation devices. Unlatching the emergency-stop devices must not cause restart.
- Devices that are designed for mounting in housings or control cabinets must only be operated and controlled after they have been installed with the housing closed. Desktop or portable units must only be operated and controlled in enclosed housings.
- Measures should be taken to ensure the proper restart of programs interrupted after a voltage dip or failure. This should not cause dangerous operating states even for a short time. If necessary, emergency-stop devices should be implemented.
- Wherever faults in the automation system may cause damage to persons or property, external measures must be implemented to ensure a safe operating state in the event of a fault or malfunction (for example, by means of separate limit switches, mechanical interlocks etc.).
- The electrical installation must be carried out in accordance with the relevant regulations (e. g. with regard to cable cross sections, fuses, PE).
- All work relating to transport, installation, commissioning and maintenance must only be carried out by qualified personnel. (IEC 60 364 and HD 384 and national work safety regulations).
- All shrouds and doors must be kept closed during operation.

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About this manual

General

This getting started describes the visualization of a Step7®-project with the TURCK-HMI using the serial interface via MPI or using Ethernet via RFC1006.

The visualization-surface is designed with QViS.

Additional documentation

- [D301191](#) „VT250 - Hardware-description“
- [D301189](#) "Getting Started - VT250-57P HMI PLC with PROFIBUS-DP"
- [D301195](#) "Getting Started - VT250-57C HMI PLC with CANopen"

Description of symbols used



Warning

This sign can be found next to all notes that indicate a source of hazards. This can refer to danger to personnel or damage to the system (hardware and software) and to the facility.

This sign means for the operator: work with extreme caution.



Attention

This sign can be found next to all notes that indicate a potential source of hazards.

This can refer to possible danger to personnel and damages to the system (hardware and software) and to the facility.



Note

This sign can be found next to all general notes that supply important information about one or more operating steps.

These specific notes are intended to make operation easier and avoid unnecessary work due to incorrect operation.

Overview



Attention

Please read this section carefully. Safety aspects cannot be left to chance when dealing with electrical equipment.

This manual includes all information necessary for the prescribed use of TURCK HMIs. It has been specially conceived for personnel with the necessary qualifications.

Prescribed use

Appropriate transport, storage, deployment and mounting as well as careful operating and thorough maintenance guarantee the trouble-free and safe operation of these devices.



Warning

The devices described in this manual must be used only in applications prescribed in this manual or in the respective technical descriptions, and only with certified components and devices from third party manufacturers.

Notes concerning planning /installation of this product



Warning

All respective safety measures and accident protection guidelines must be considered carefully and without exception.

1 Visualization of a Step7®-project via MPI/RFC 1006 (Ethernet)

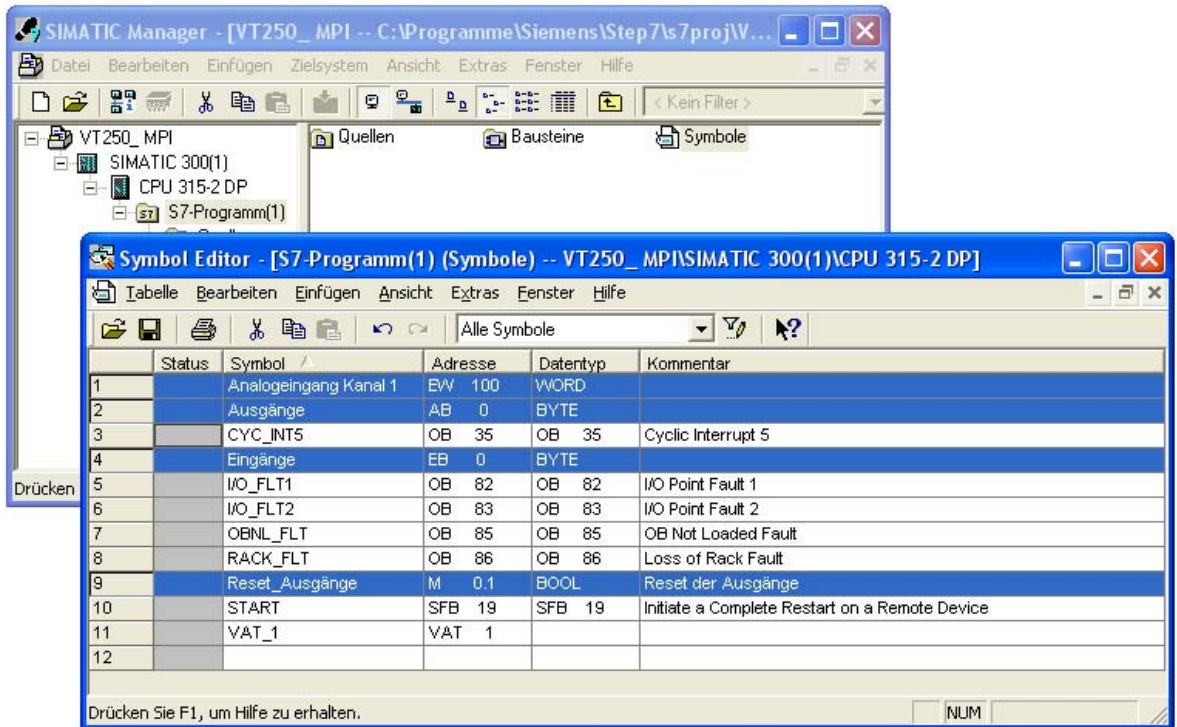
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Step7®-project

Symbol table

For the visualization of a S7-project with the VT250, the symbols and data blocks defined within the project (symbol table) are imported into QVIS using the respective S7-project file (*.s7p) (see also [Import of the Siemens project file](#)).

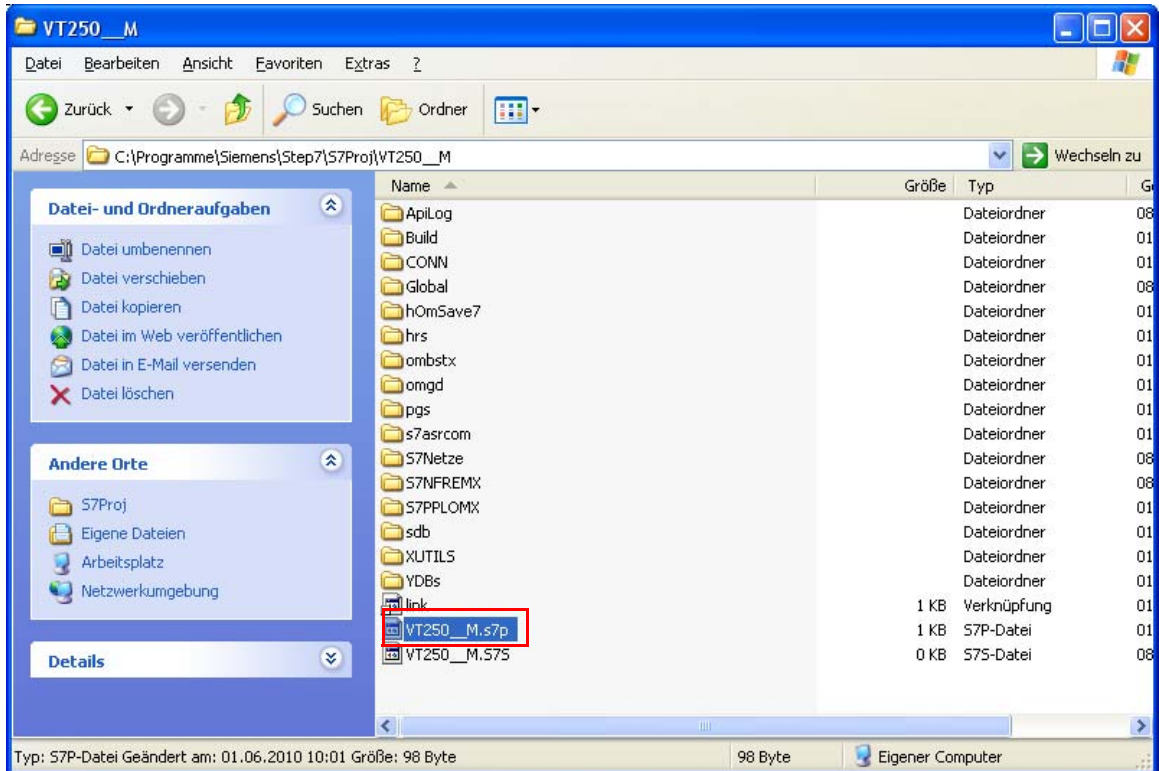
Figure 1:
Example of a
Step7®-
symbol table



Step7®-project file

This file is automatically created by Step7® and is normally stored to the respective file directory "x:\program files\Siemens\Step7\S7Proj\project name" when the project is saved.

Figure 2:
Step7®-
project file

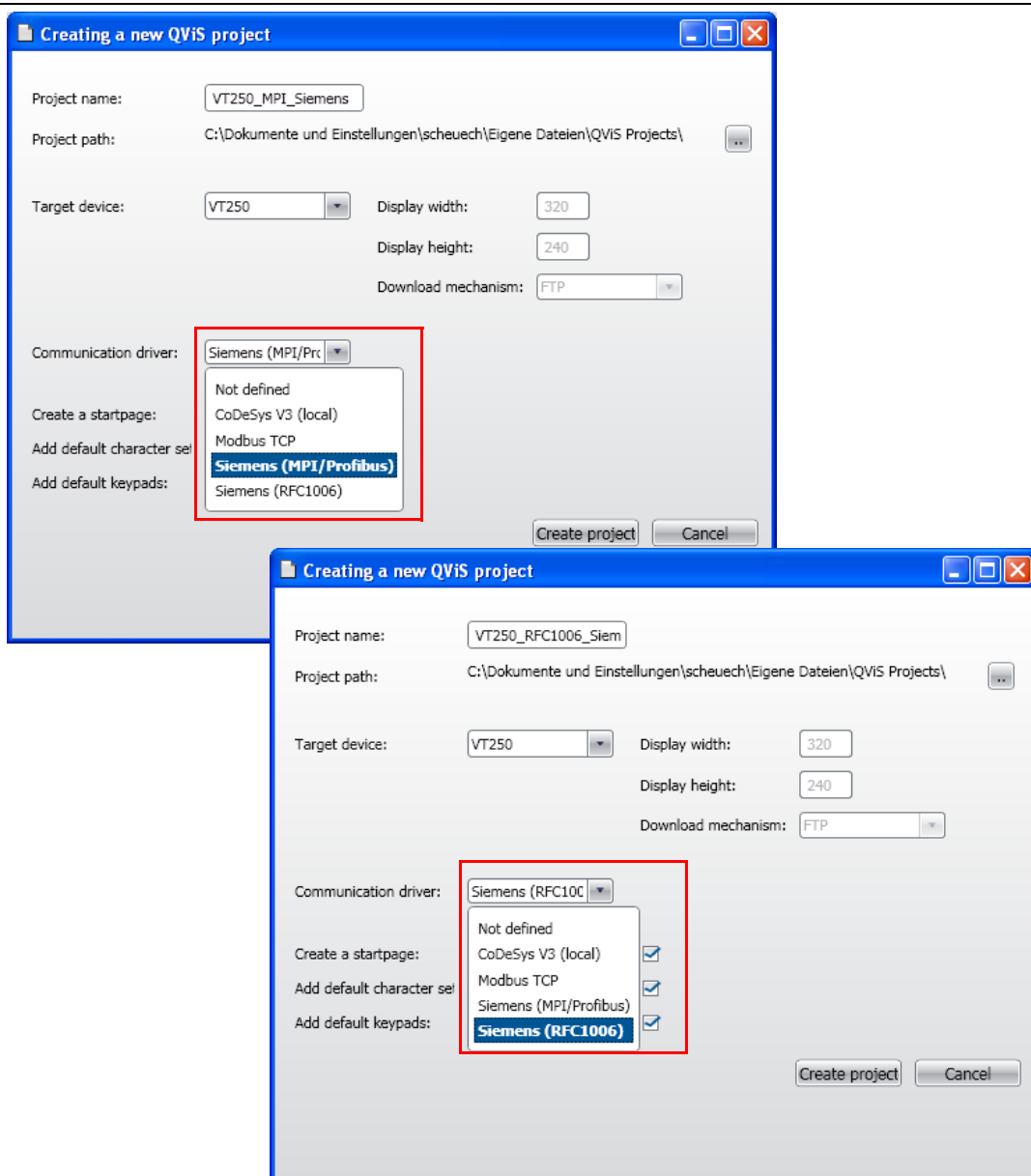


QViS-project

Create a new project

- 1 Create a new project via "File →New". In the new dialog box, assign a project name and define the storage location of the project.
- 2 The following settings have to be done:
 - As "Target device" please select the VT250-57x. The display size is automatically set to 320×240.
 - The visualization-download to the HMI is done via FTP-access. This is also automatically set under „Download mechanism“.
 - Under "Communication driver" select the respective driver
 - **MPI:** "Siemens MPI".
 - **RFC (Ethernet):** „RFC1006“

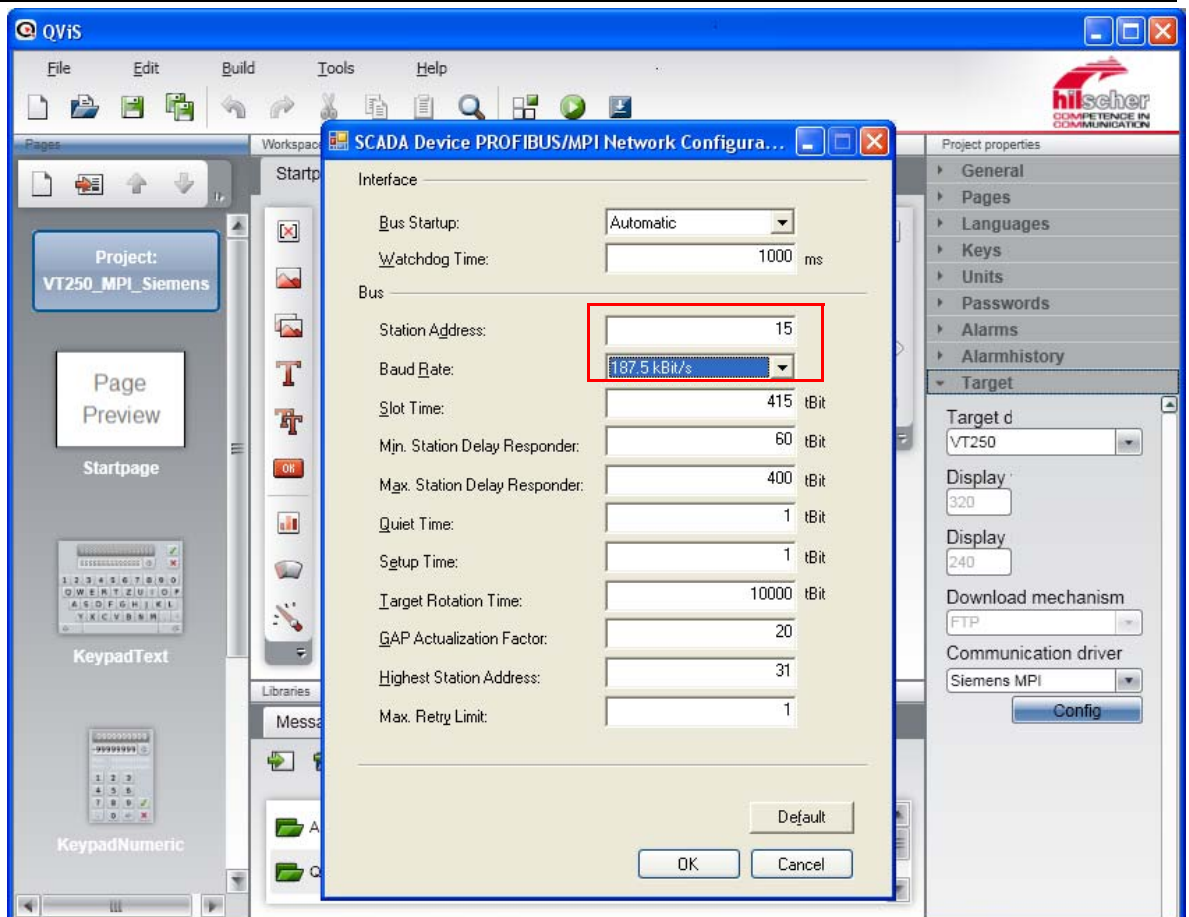
Figure 3:
New
QViS-project



Configuration of the communication driver

- 1 A double-click onto the project opens the project file properties. Under "Target" you can find amongst others the settings done before
 - 2 The interface (MPI or RFC) has now to be configured. Use the "Config"-button.
- **MPI:**
In Station-Address, define the MPI-address for the MPI-communication of the device and select the MPI-baud rate (187,5 kbit/s) under "Baudrate".

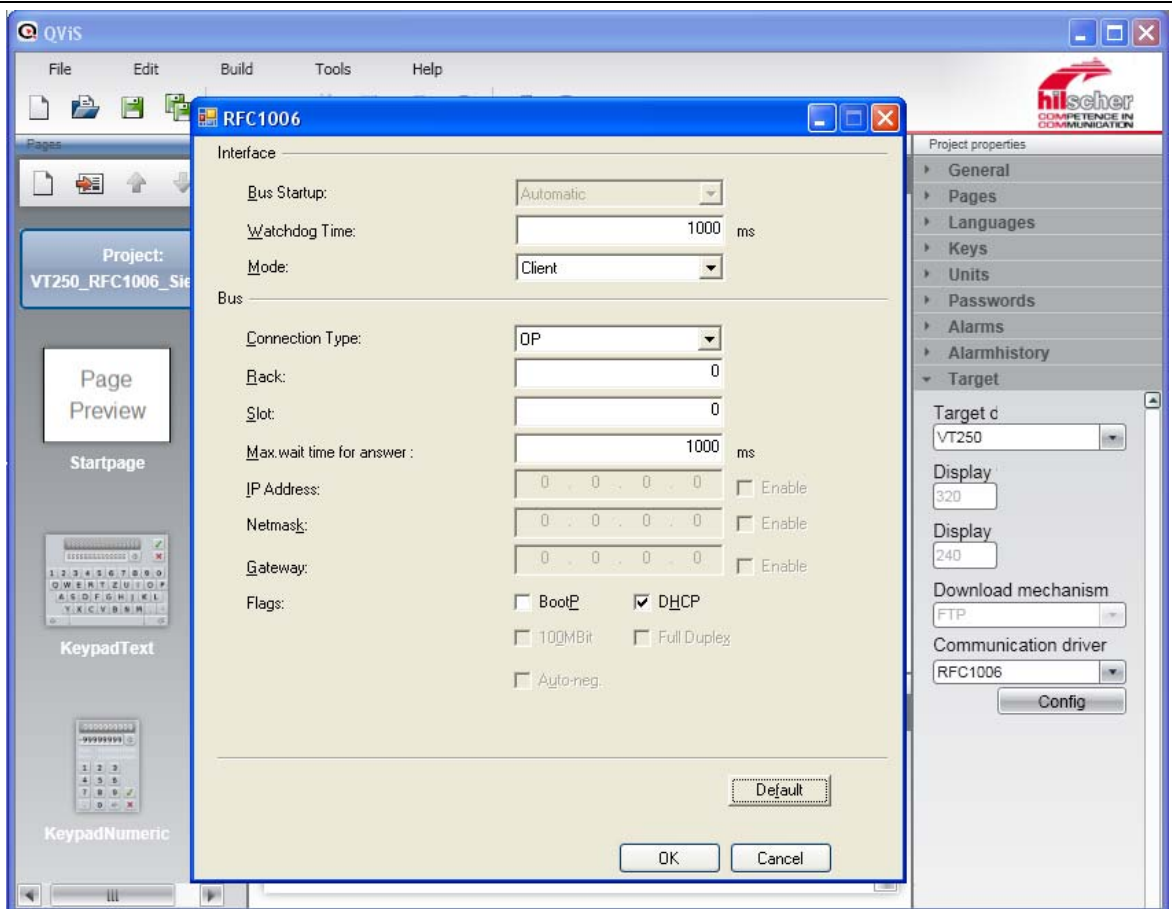
Figure 4:
Target-Config
MPI



Visualization of a Step7®-project via MPI/RFC 1006 (Ethernet)

- **RFC:**
Please keep the following default-settings::

Figure 5:
Target-Config
RFC



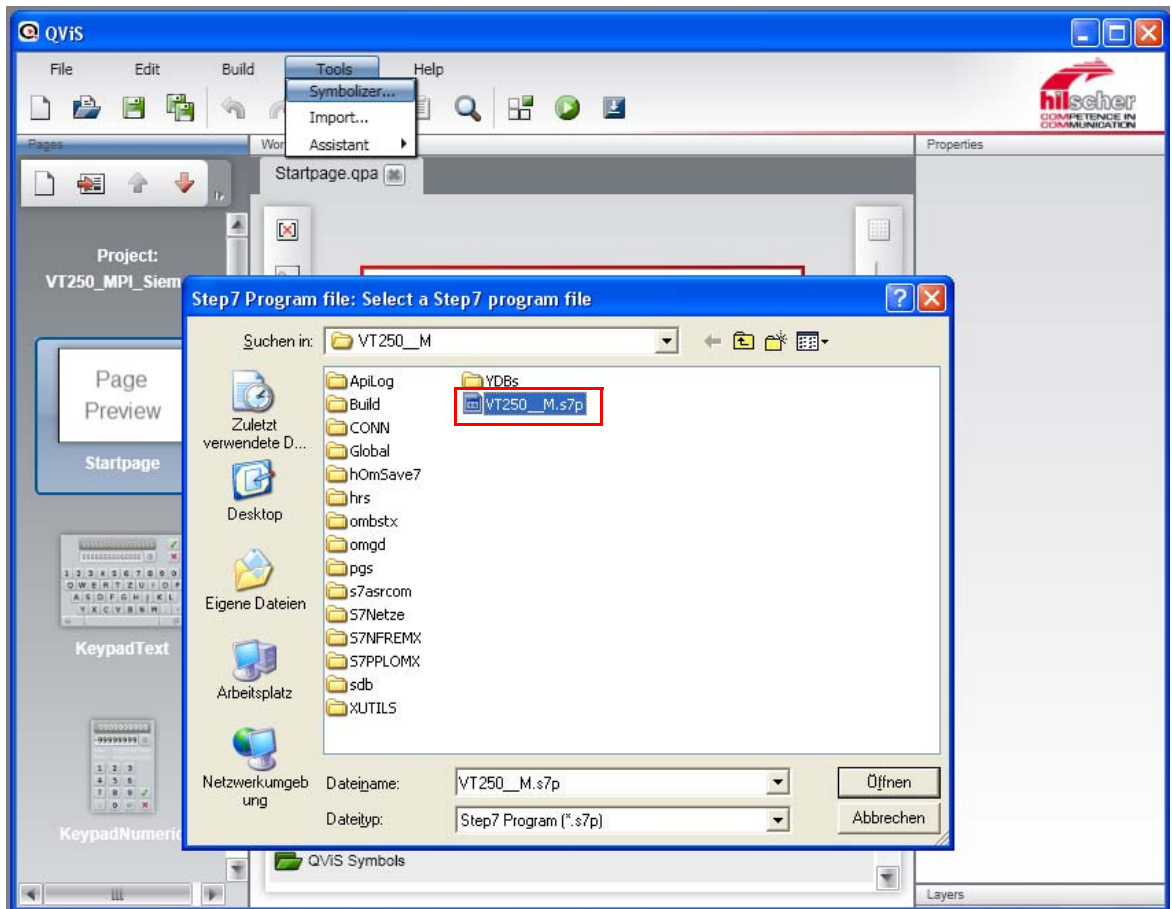
Import of the Siemens project file

In order to be able to access the symbols and data blocks in the Siemens project created before, first of all the Siemens project file has to be imported (see also [Step7®-project](#)).

- 1 The import is done via the QVis-Symbolizer. Open it using "Tools → Symbolizer".

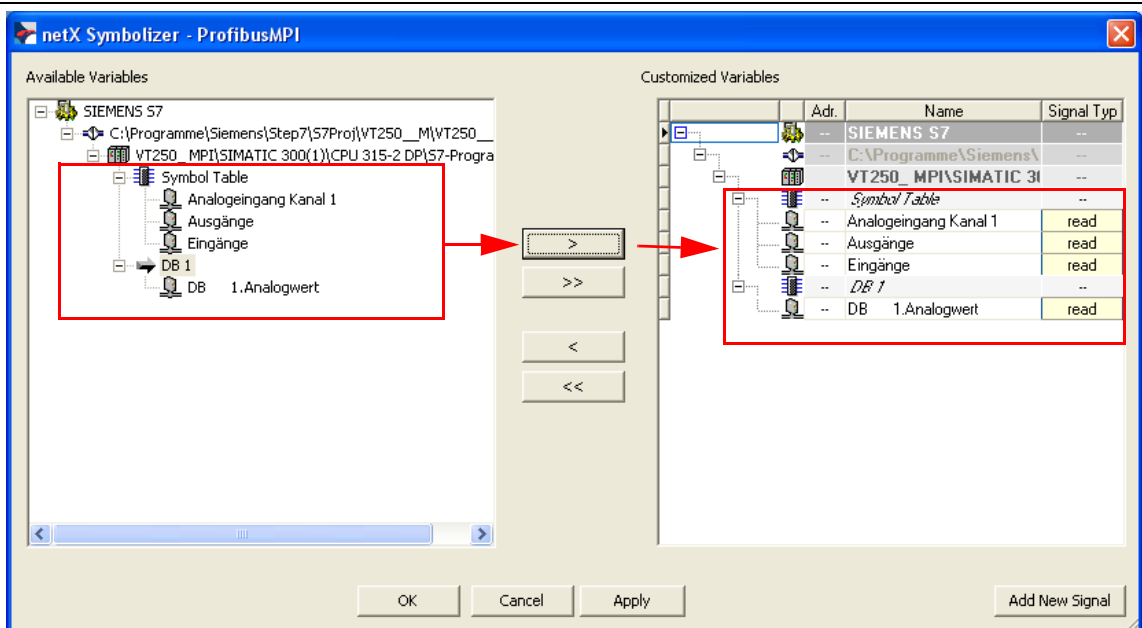
- 2 Select the project file to be imported from the Siemens project directory and open it.

Figure 6:
Selection of
the Siemens
project file



- 3 Under "Available Variables", chose all variables which you want to import and add them to the project ("Customized Variables") using the arrow keys.

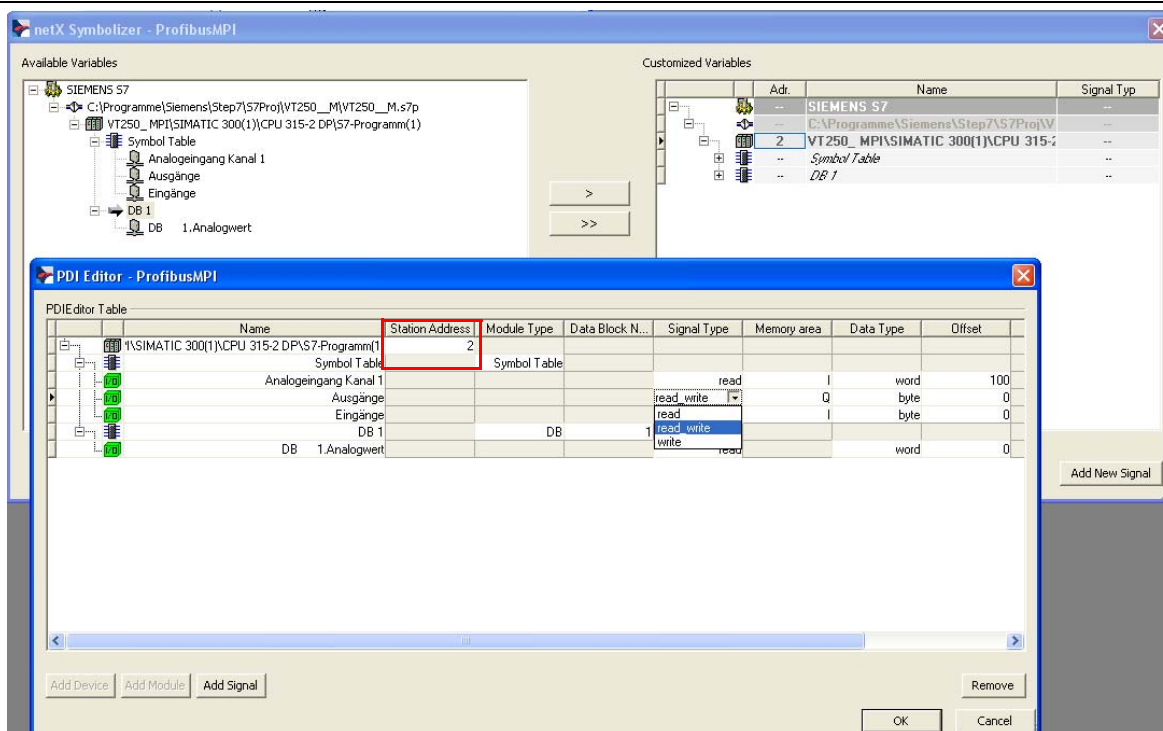
Figure 7:
Selection of the
variables to be
imported



Visualization of a Step7®-project via MPI/RFC 1006 (Ethernet)

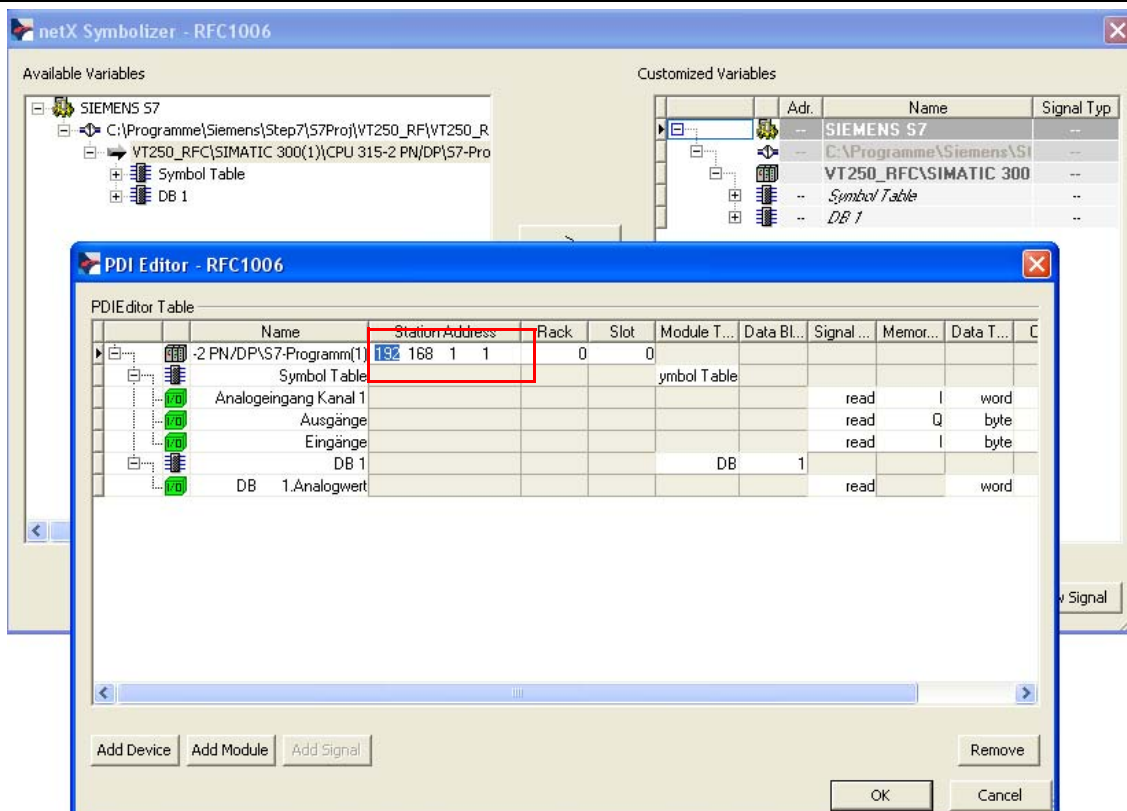
- 4 Open the "PDI Editor" using the "Add New Signal"-button and define the PLC's address.
 - **MPI:** MPI-address of your S7 (here MPI-addr.: 2).

Figure 8:
The PLC's MPI-address



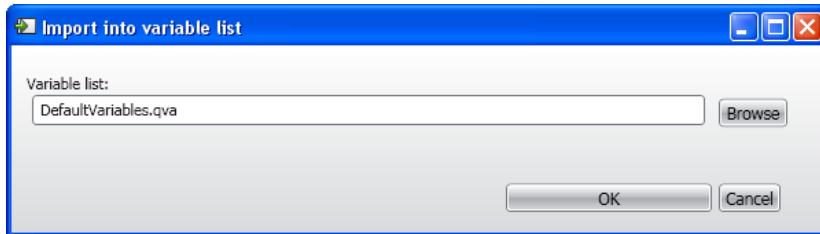
- **RF:** IP-address of your S7 (here 192.168.1.1)

Figure 9:
The PLC's IP-address



- 5 Confirm your entries with "OK". In the dialog box which opens, select the variable table (here "DefaultVariables.qva") into which the Siemens variables have to be imported under "Import to Variablelist".

Figure 10:
Variable list

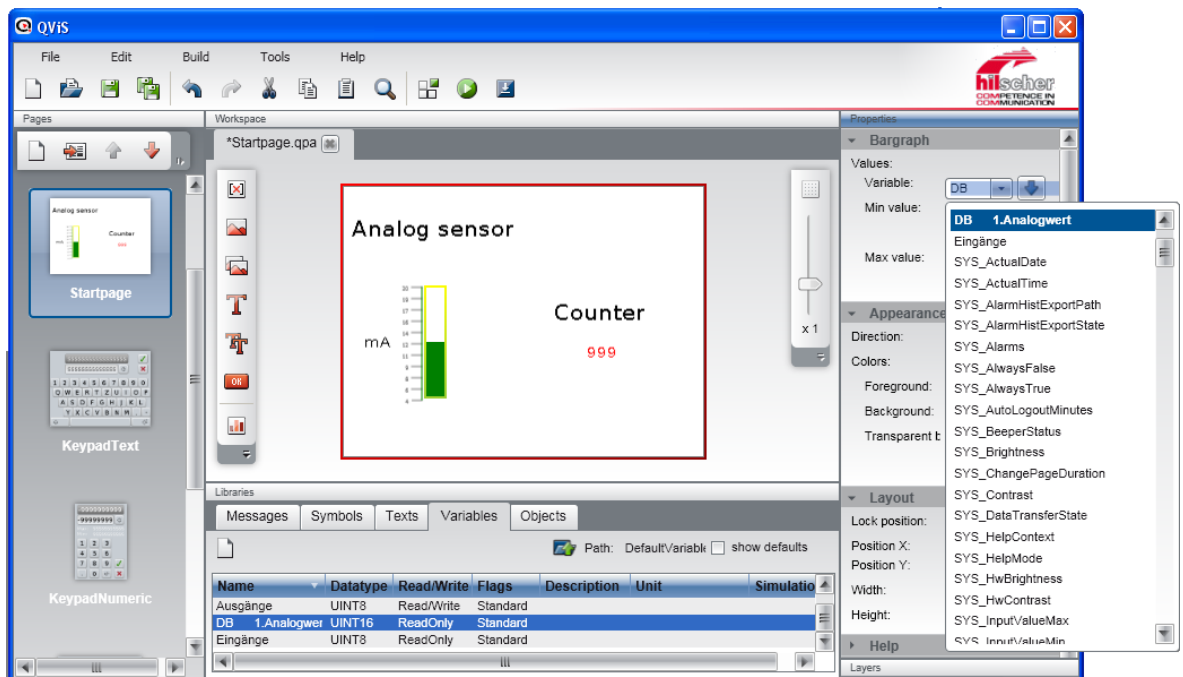


- 6 After the import of the variables, they can be found under "Variables".

Completion of the project

After designing the visualization surface and the assignment of the variables, buttons etc. with the imported Siemens-variables, the QViS-project is compiled and downloaded to the VT250.

Figure 11:
QViS-project



Compiling the project

Save the project and compile it using the "Build"-button.

Downloading the project

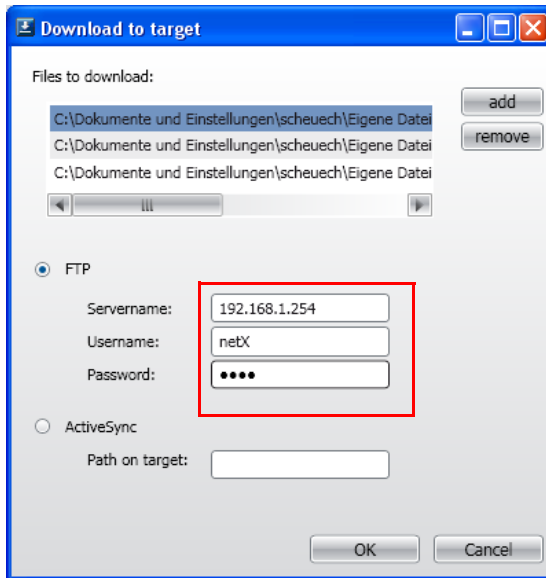
In the following, the project is downloaded to the VT250-57x using the "Download"-button.



Note

Please observe, that the listed files are the project files.

Figure 12:
Downloading
the QViS-project
files to the
VT250



- 1 Select the download via FTP and enter the following settings
Servername: P address VT250-57x (default: 192.168.1.254)
Username: netX
Password: netX
- 2 Confirm the settings with OK.
- 3 The download is started.
- 4 Confirm the successful project-download with OK in order to execute a reboot at the device.
- 5 The visualization is now running on the VT250-57x.

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