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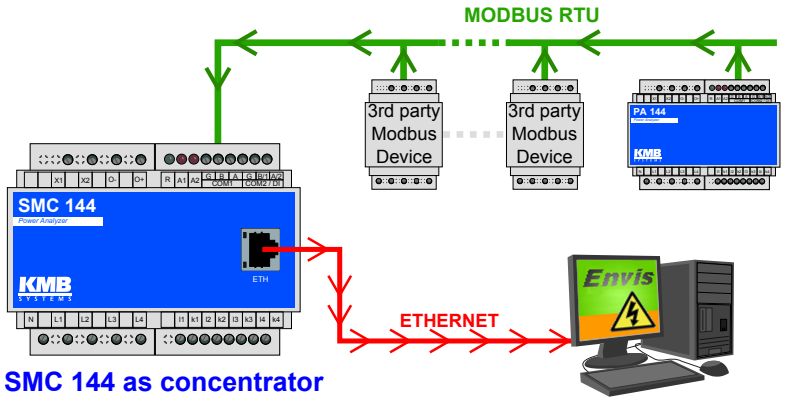
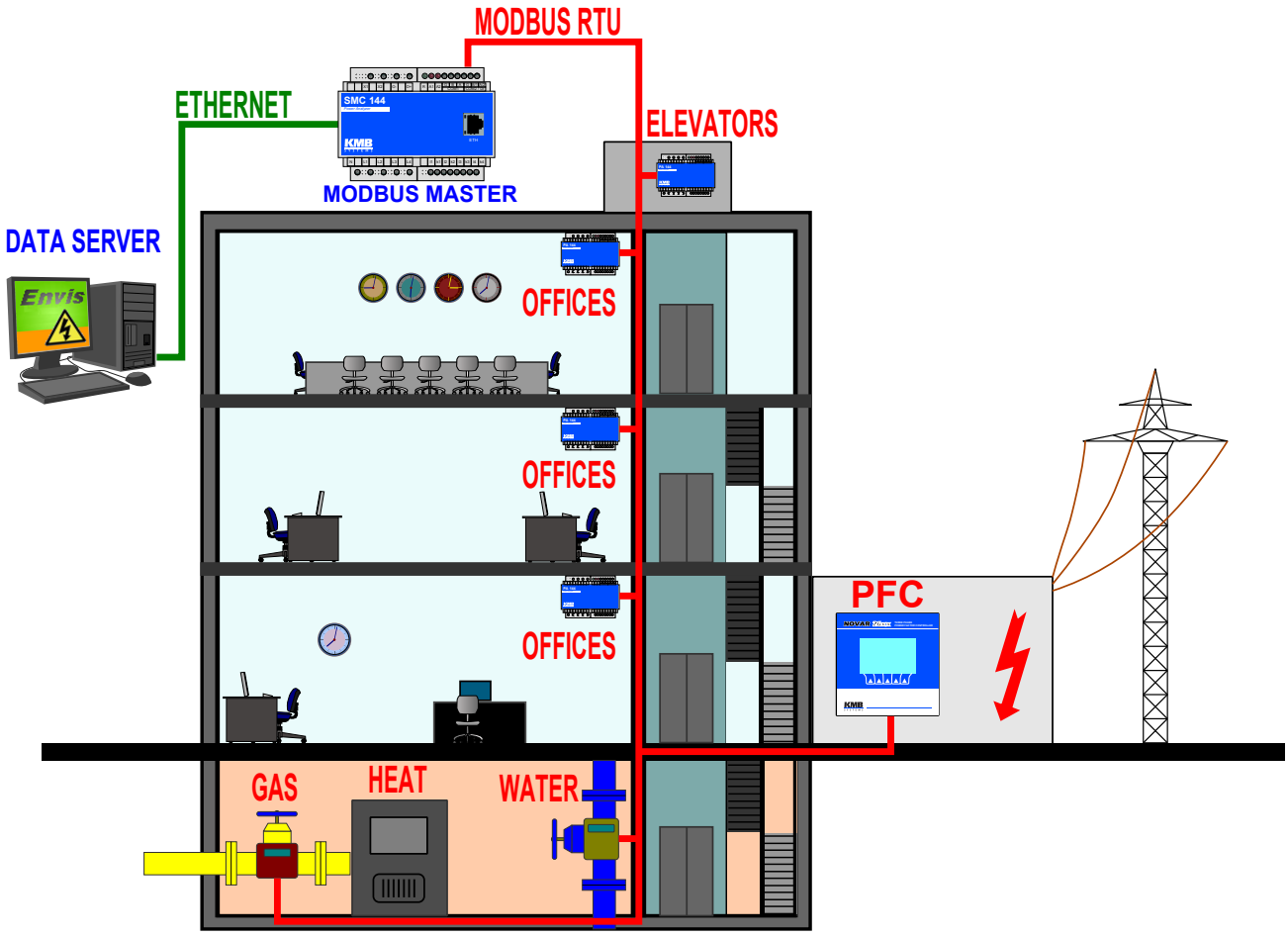
Modbus Master fw. module

User Guide



Description

Modbus Master module enhances instruments data logging abilities. By using this module you can configure the instrument to read any Modbus registers from any instruments of any manufacturer connected to it's RS-485 line. Downloaded values are stored into it's memory including a timpestamp. Modbus archive created from stored values can then be downloaded into file or SQL database using ENVIS.Daq or ENVIS.Online. ENVIS allows than to do the evaluation, create graphs, tables etc. from these values. Collected values are not limited to electrical only. It's also possible to collect data from water-meters, gas-meters, HVAC and any other devices with Modbus.

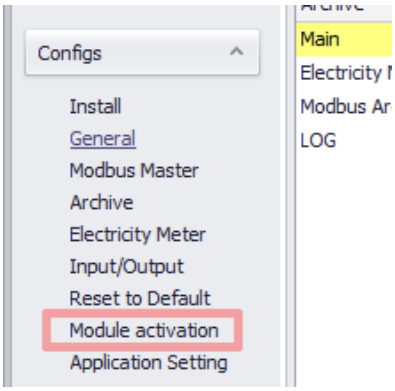


Supported Instruments

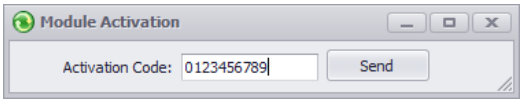
SMC 144

Activation of the module

1. If you are already owner of some of the Supported Instruments order the module at sales@kmb.cz. Otherwise you can order the module with instrument and we will activate it for you.
2. You will receive activation code by e-mail. Such as 0123456789.
3. Start ENVIS.Daq and connect to the instrument. Click on the link *Module activation* under *'Configs'* tab in left part of the window.



4. Enter your activation code into Module Activation window and press *'Send'*.



Successful activation will be confirmed and instrument will restart. Your new firmware module is now activated.

Configuration in ENVIS.Daq

Configuration is made in *'Modbus Master'* menu item under *'Configs'* tab.

1. Check *'Enabled'* in upper part of Modbus Master window to enable Modbus Master. Also you can assign portion of internal memory to Modbus Master archive by using the slider.
2. Choose tab with Set you would like to edit, or click on *'+'* tab to create new Set. It's possible to define up to 10 different sets of configuration.
3. In *'Setting'* section define *'Action'* as *'Archive'* for datalogging, set *'Reading Period'* according to your needs. Set custom *'Device Name'* which could refer to device from which data are downloaded. Last from this section is Modbus function code, which should be specified in documentation of Modbus device.
4. Modbus communication addresses of devices are defined in section *'Associated Device Addresses'*. You can add addresses one by one by writing number and clicking *'+'*, or by groups by writing several numbers separated by comma or dash. To remove present addresses, click on particular row and press delete key.
5. Last part of configuration is definition of registers which should be read from associated devices. Navigate to empty row and enter *'Address'* of required Modbus register, write or select from present *'Name'* under which value should be stored and also set *'Unit'*. Next define or select from present *'Group'* under which it should be assigned (i.e. electrical, physical etc.). You can also set multiplier which multiplies read value before storing into instrument. At last it's necessary to set *'Data Type'* which is defined for each value by Modbus device. There are several options of data-types each with option of BigEndian bit order (_be) and LittleEndian (_nbe),
6. After configuration, you can either create new set for another single/group of instruments, or press *'Send'* to store the configuration to Modbus Master device.
7. To save stored data to computer, simply download Modbus Archive via ENVIS.Daq or ENVIS.Online. Similarly to evaluate downloaded data, use ENVIS and navigate to Modbus Archive stored between other archives of Modbus Master Device.

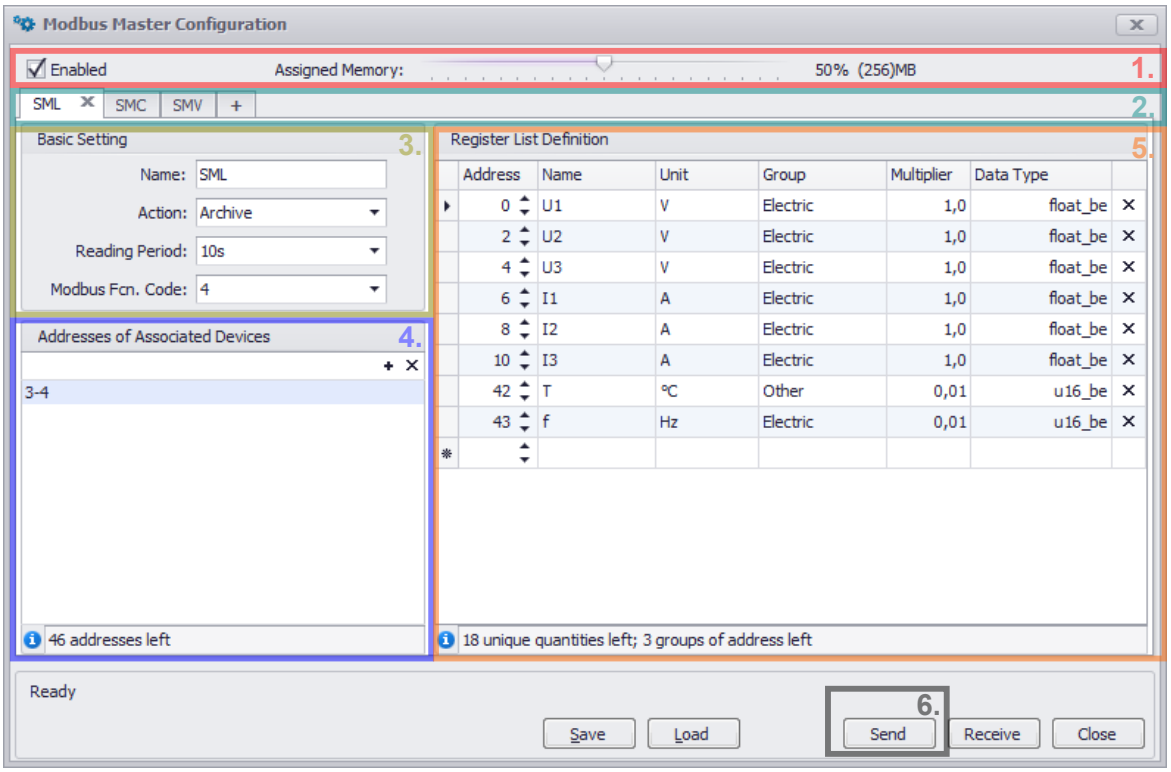


Figure 1: Modbus Master Configuration window