Configuration HART module

Included in the scope of delivery DIQ/S 28X-HART

This document provides an overview of the configuration of the Fint T310 HART module, used as a Modbus-HART converter in the DIQ/S 28X-HART.

The most important settings required to operate the HART module are covered. Some of the settings are already preconfigured in the scope of delivery and enable the query of sensor values.

Special adjustments are to be made with the FINTHRT SW02 software.

On the next pages the changes of the following settings are described:

- Changing the transmited sensor information

- Selecting the unit

- Changing the measuring range of the sensor

- Scaling of the mA output

Prerequisites for changing the configuration

- Modbus HART Converter Fint T310

- Laptop or PC

- PC software FINTHRT SW02 (specific HART master), available at this link

under Downloads → Software → Configuration Software

- HART module for connecting converter and PC

Xylem factory configuration

- Available at this link under Downloads → Software → Standard Configuration

- The main factory settings are:

  - Device Variable 0:
    Main measured value of the connected IQ sensor

  - Device Variable 1:
    Secondary measured value of the connected IQ sensor

  - Device Variable 2:
    Sensor status of the connected IQ sensor

  - Device Variable 3:
    Measured value status of the main measured value

  - No unit maintained

  - Measuring range of the connected sensor 0...100,000

  - Scaling of the current output: 0...200 corresponds to 4...20 mA

Starting FNTHRT SW02 software

- Install and open FNTHRT SW 02

- Switch to "Settings" tab

- Select COM port of the HART modem ("Selected Comport")

- Establish connection to the HART device with "Connect"

Changing the transmitted sensor information

The transmitted settings can be adjusted in the "Device Variables" tab. For this purpose, the values to be transmitted can be selected for the variables 0 to 3.
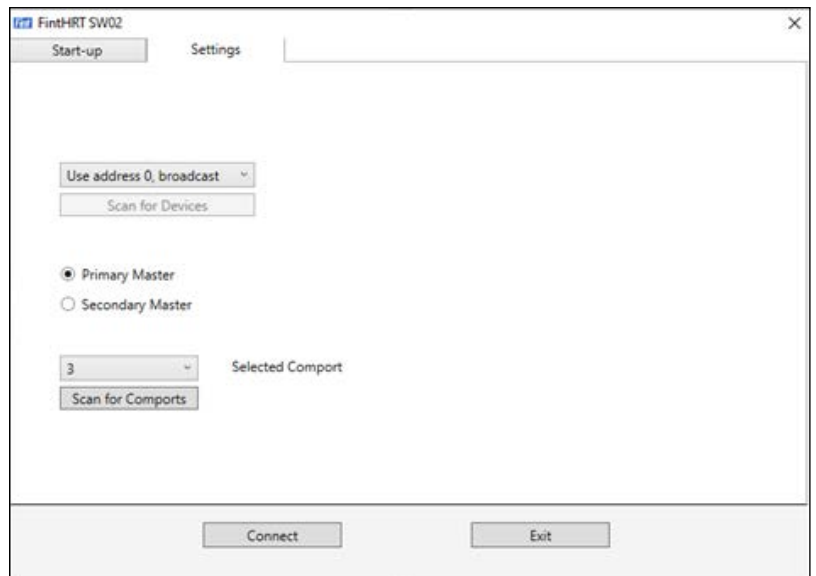
Factory setting:

- Device Variable 0:
  Main measured value S01 (Register 4)

- Device Variable 1:
  Secondary measured value S01 (Register 6)

- Device Variable 2:
  Sensor status S01 (Register 240)

- Device Variable 3:
  Measured value status of the main measured value S01 (Register 243)

Other values (Datatype: U SHORT 1 0):

- Register 241: Status info S01

- Register 242: Measuring mode S01

- Register 244: Measured value status of the secondary measured value S01
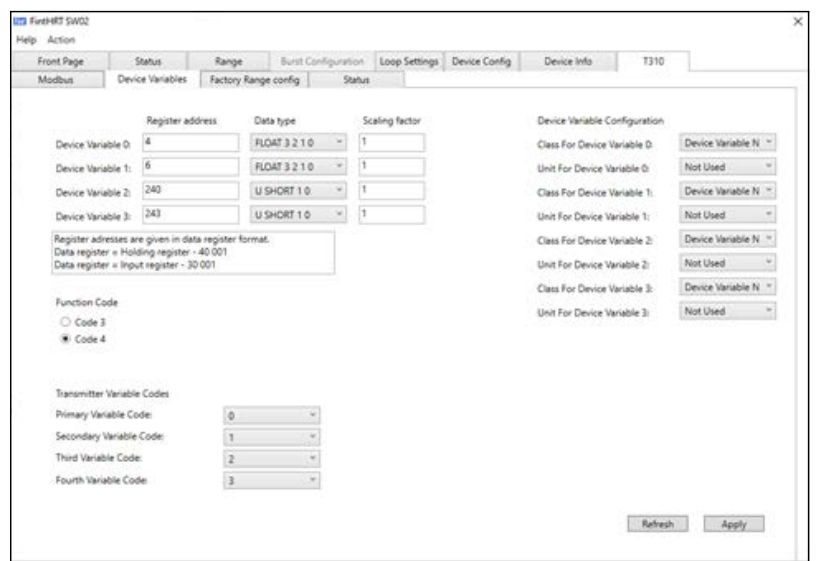
Send settings to HART converter via "Apply".

Other values for multi parameter sensors

- Register 12: Main measured value S02 (Datatype: FLOAT 3 2 1 0)
- Register 14: Secondary measured value S02 (Datatype: FLOAT 3 2 1 0)
- Register 250: Sensor Status S02 (Datatype: U SHORT 1 0)
- Register 251: Status info S02 (Datatype: U SHORT 1 0)
- Register 252: Measuring mode S02 (Datatype: U SHORT 1 0)
- Register 253: Measured value status of main measured value S02 (Datatype: U SHORT 1 0)
- Register 254: Measured value status of secondary measured value S02 (Datatype: U SHORT 1 0)

Send settings to HART converter via "Apply".

Selecting the unit

For main and secondary measured values, units can also be selected in the "Device Variables" tab.
These can be found in the following selection menus:

For main measurement value

- Class For Device Variable 0
- Unit For Device Variable 0

For secondary measured value

- Class For Device Variable 1
- Unit For Device Variable 1

Send settings to HART converter via "Apply".

Changing the measuring range of the sensor

The measuring range of the sensor can be set in the "Factory Range config" tab.

Factory settings:

- „Upper Sensor Limit": 100.000
- „Lower Sensor Limit": 0

The values can be adjusted as required. It is recommended to set the upper and lower limit of the measuring range of the sensor.

Send settings to HART converter via "Apply".

Skaling of the mA output

The scaling of the mA output can be set in the "Range" tab.

To adjust the current output, the sensor limits must be adjusted.

- Factory setting "Upper Range Value": 200
- Factory setting "Lower Range Value": 0
- "Upper Range Value" corresponds to 20mA
- "Lower Range Value" corresponds to 4mA
- Adjust as needed.

Send settings to HART converter via "Apply".

Loading the factory settings/saving your own configuration

The factory settings are loaded via the menu "Action", sub-item "Load Saved Configuration To Device".
Saving your own configurations via the sub-item "Saved Configuration To File".

Available under this link at Downloads → Software → Factory settings

Do you have further questions?
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