

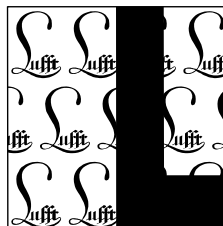
UMB-Config-Tool
Operating Instructions
UMB Configuration Software



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Version history:

Document version	Date	Edited by	Description of amendment
1.0	24.01.2007	EES	Taken from Short Instructions V02 and completed
1.1	12.02.2007	EES	System requirements supplemented
1.2	23.02.2007	EES	New screenshots added

Installing UMB-Config-Tool

Start 'Setup_UMB_Config_XXXXXX.EXE' and follow the instructions of the installation programme.

The software is installed under 'C:\Programme\Lufft\UMB-Config' as standard.
Start the application with 'Start' → 'Programme' → 'Lufft UMB Config' → 'Config Tool'.

Installation paths:

Path	Content
...\Programme\Lufft\UMB-Config\	Application and INI files
...\Programme\Lufft\UMB-Config\Firmware	Device firmware (not files)
...\Programme\Lufft\UMB-Config\Hexload	Bootloader programme
...\Programme\Lufft\UMB-Config\Konfig	Stored device configurations

Copy the current device firmware into the firmware directory prior to installing updates.

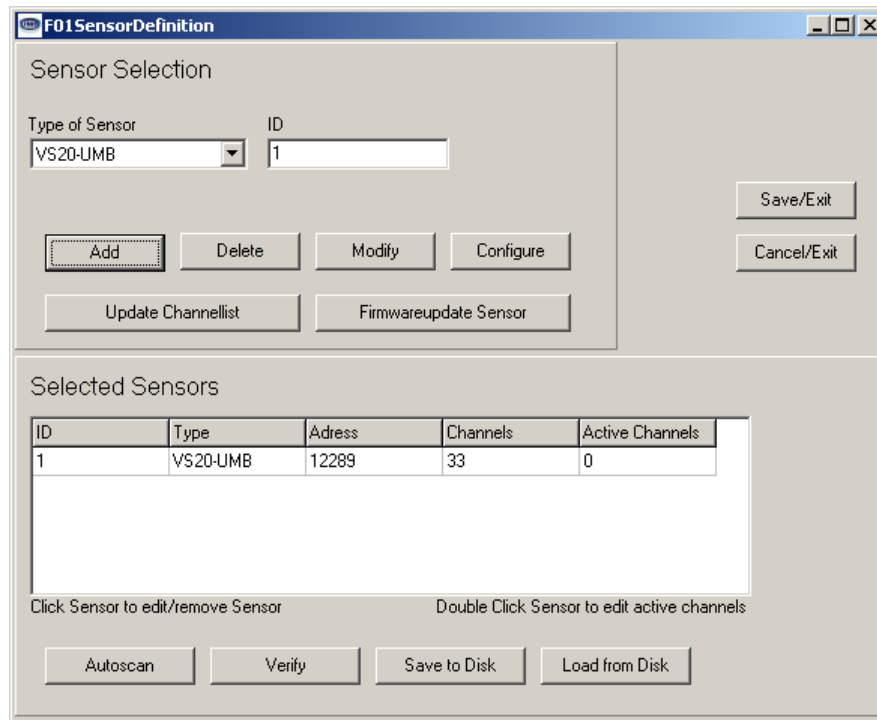
The UMB-Config software can be uninstalled with '...\Programme\Lufft\UMB-Config\UNWISE.EXE'.

System requirements

Windows 2000 / XP
5 MB free hard disk capacity
a free serial interface (COM)

Creating a sensor list

Menu: Edit → Sensors:



Choose 'Type of Sensor'; enter an ID and add it with 'Add' to the list. With 'Delete' sensors can be deleted, with 'Modify' a sensor in the list can be modified. The sensor shown in 'Sensor Selection' will be deleted or modified.

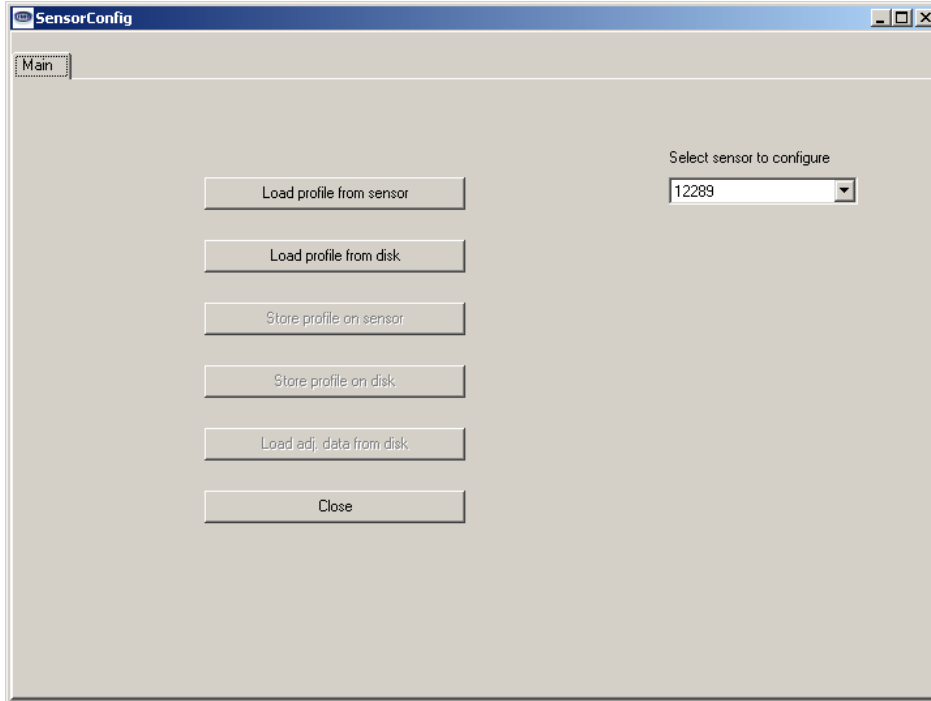
'Configure' starts the configuration of the sensors in the list. 'Firmwareupdate Sensor' starts the module for updating the firmware of the selected sensor. 'Update Channelliste' reads the channel list from the connected UMB-module / sensor and inserts new channels into the existing channel list for this device.

Running 'Autoscan' queries the network for existing UMB devices. 'Verify' checks, if the devices in the list are responding to communication from the master.

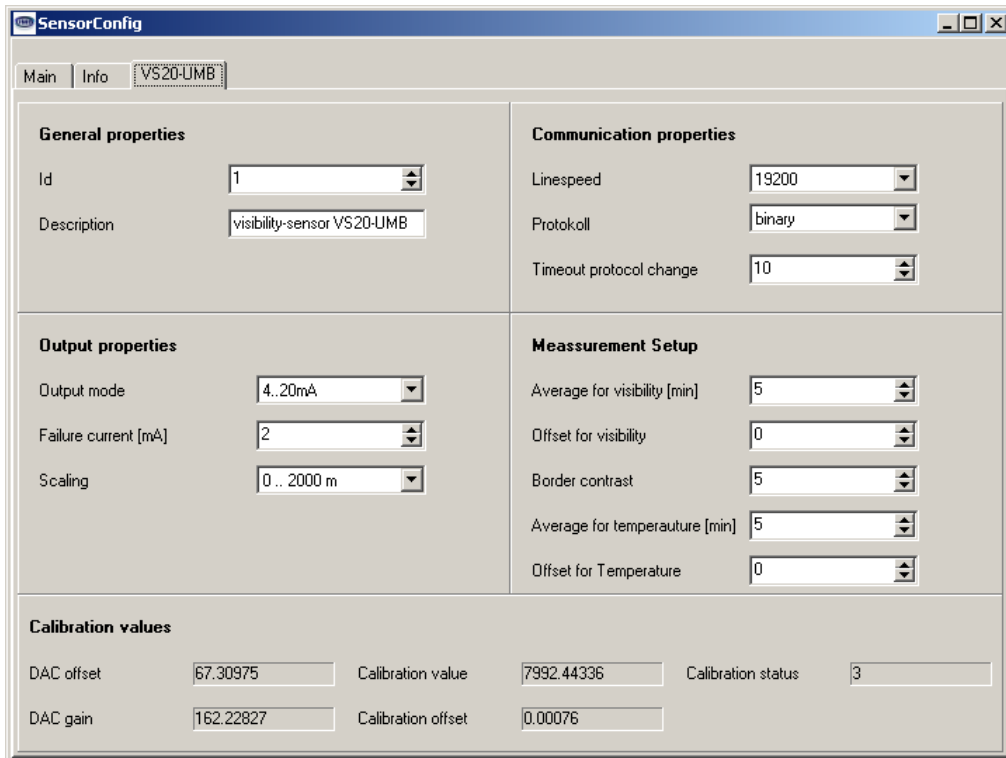
With 'Save to Disk' the sensor list (including selected channels) can be stored for later reuse ('Load to Disk').

Configuring sensors

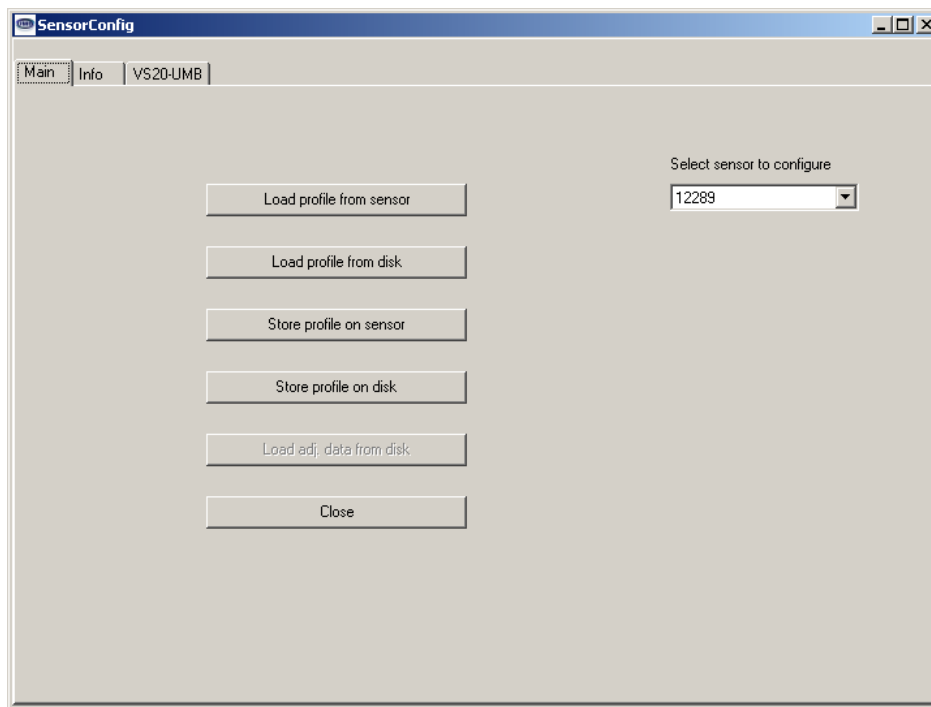
Select a sensor from the list by clicking it, then click ‚Configure’. You will get the following dialogue:



Load the configuration of the sensor with ‚Load profile from sensor’. Adjust the values in the mask to suit your needs.



After the values have been set, store them on the device with ‚Store profile from sensor‘.



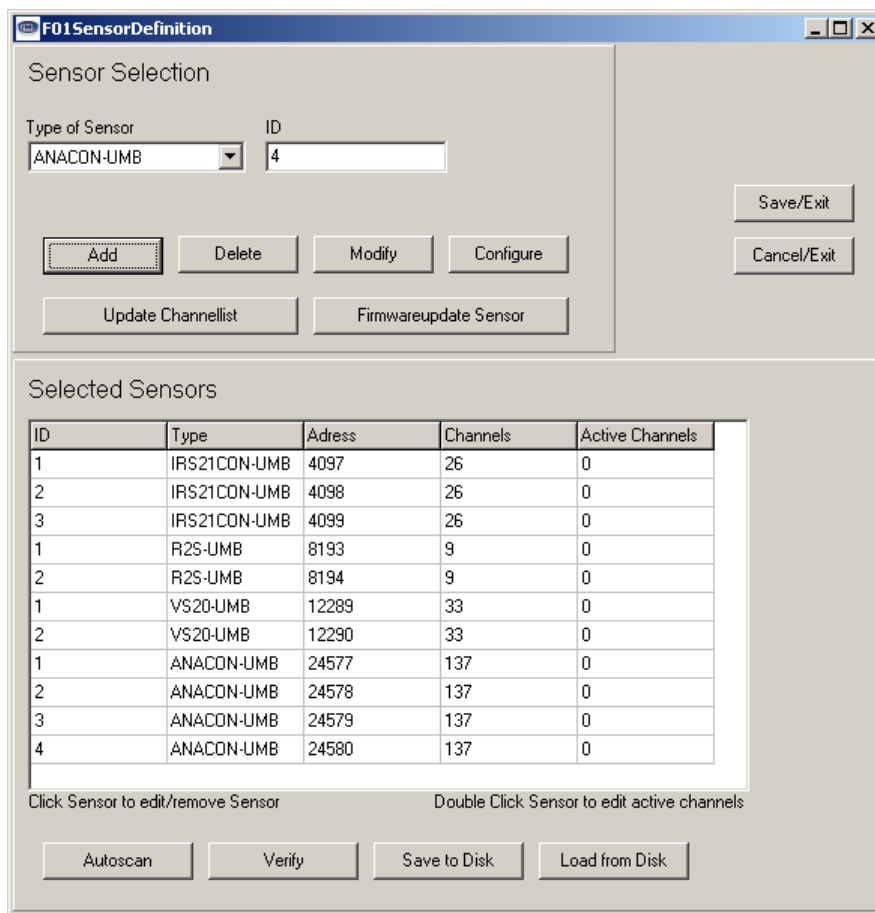
With ‚Store profile on disk‘ a sensor configuration might be stored on a hard drive. Stored configurations of sensors might be loaded with ‚Load profile from disk‘.

Assigning Device ID's

Each device in a UMB network requires a unique address.

Addressing takes place via a 16 bit address. This is divided into a sensor class ID and a device ID.

To avoid address duplication, the device ID's are assigned in ascending order per sensor class (i.e. sensor type):



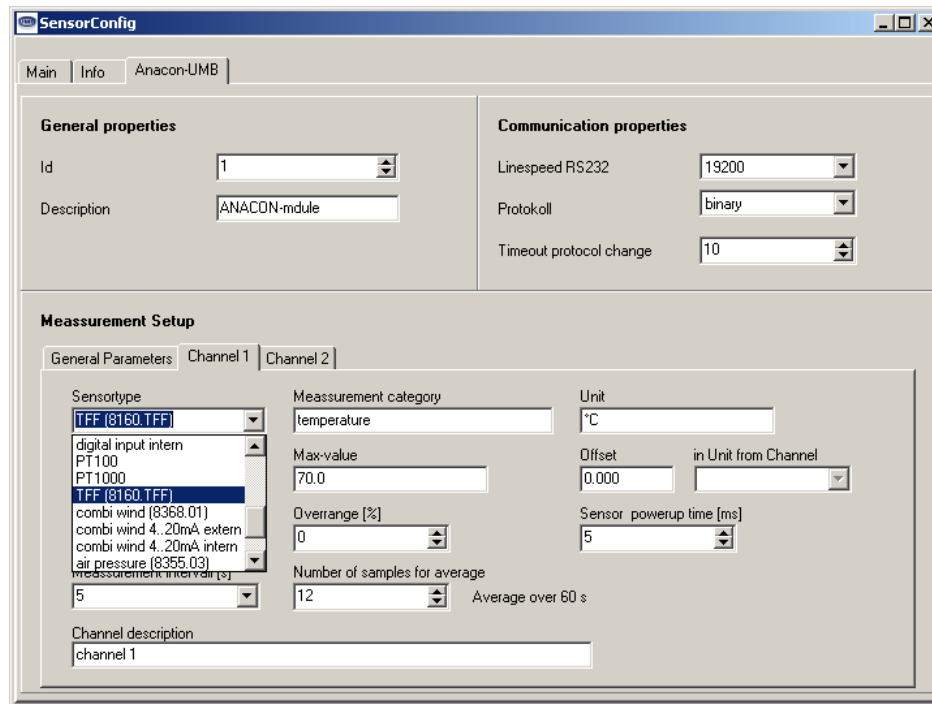
ATTENTION: When configuring new equipment please note that **new devices always have the ID 1!** If there are several sensors of the same type in a network it makes sense to configure the sensors individually with their corresponding ID's **before** commissioning the network.

Configuring ANACON-UMB

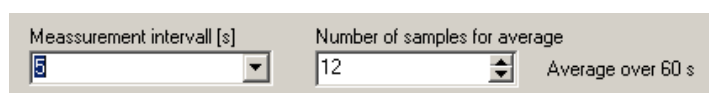
As the ANACON-UMB is a universal measurement transmitter which can be operated with various analogue sensors, this module must always be configured to the connected sensor **before** commissioning.

To do this, connect the module to the power supply (with no additional participants on the bus) and connect to the PC via an RS232 cable (1:1). Load the current configuration via 'Load profile from Sensor' as in the section 'Configure Sensor':

Select the connected sensor type in 'Measurement Setup' under 'Channel 1' and 'Channel 2':



If necessary, set the ID, measurement interval and number of measurements for the min-, max- and average values:



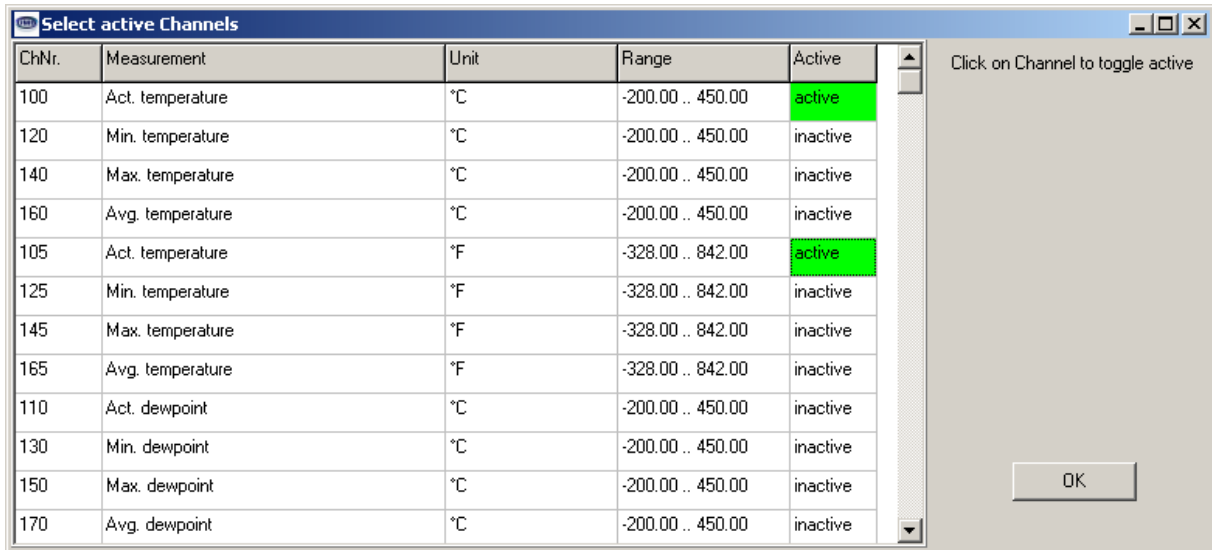
Then save the amended configuration in the module with 'Store profile on sensor' under 'Main'.

ATTENTION!! In the case of the temperature/humidity sensor (TFF 8160.TFF), the values for C12 and C76, which are marked on the sensor head, must be recorded under 'General Parameters'!!!



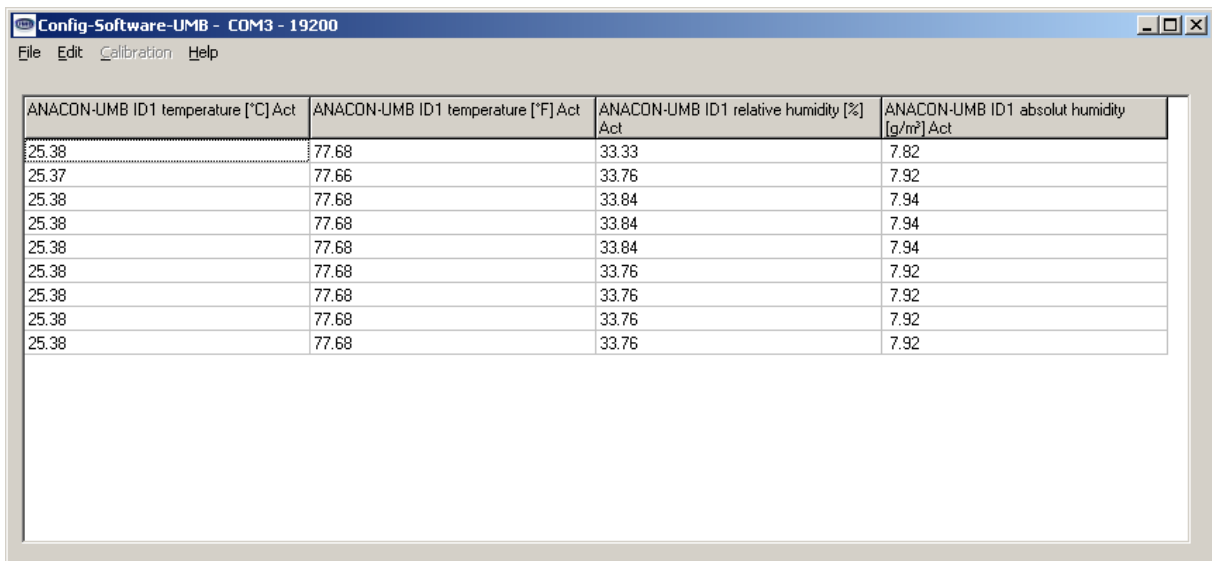
Query measurement values

The channel list of a sensor is opened by double clicking a sensor in the sensor list.



Here you are able to select the channels for query.

The measurement is started in menu ,File' → ,Start measurement'.



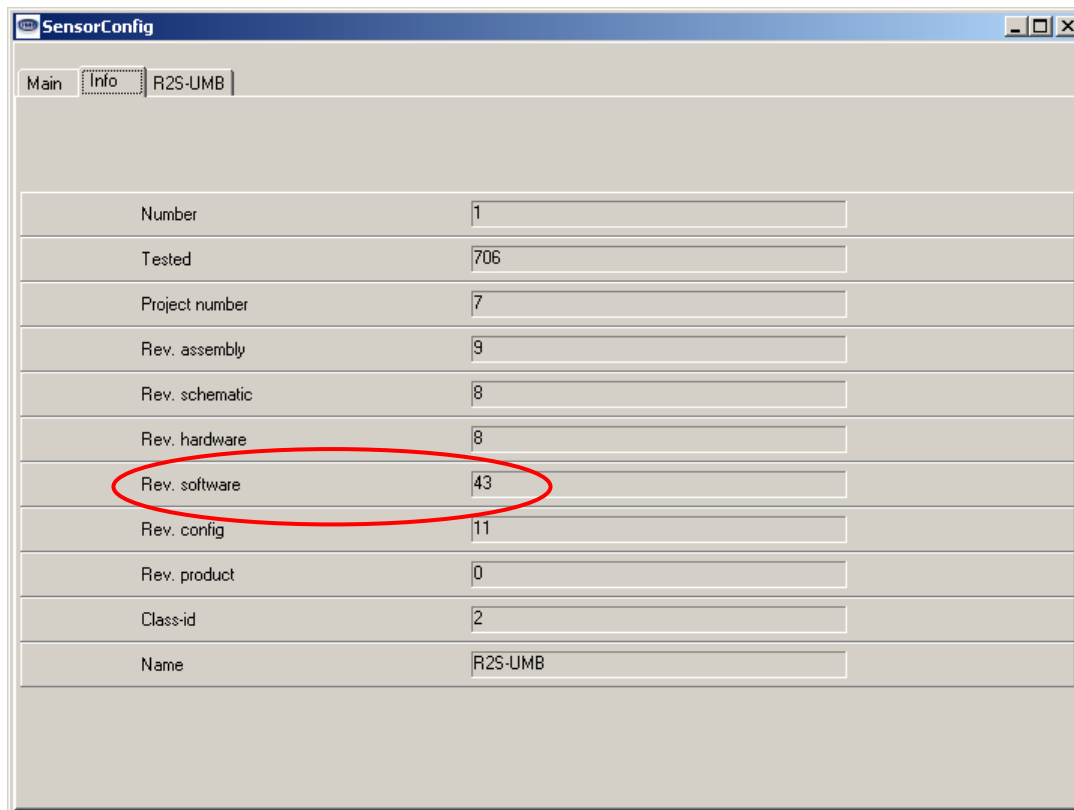
To change the sampling rate of the software click ,Edit' à ,Sampling Rate'.

Firmware Update

Before implementing any update, please check with Lufft concerning the current firmware status of the UMB products.

Check current firmware status

The current status of the firmware should be checked before updating the firmware. To do so, read the configuration under 'SensorConfig'. The current version of the software is shown under 'Rev. software' on the 'Info' page.



Field	Value
Number	1
Tested	706
Project number	7
Rev. assembly	9
Rev. schematic	8
Rev. hardware	8
Rev. software	43
Rev. config	11
Rev. product	0
Class-id	2
Name	R2S-UMB

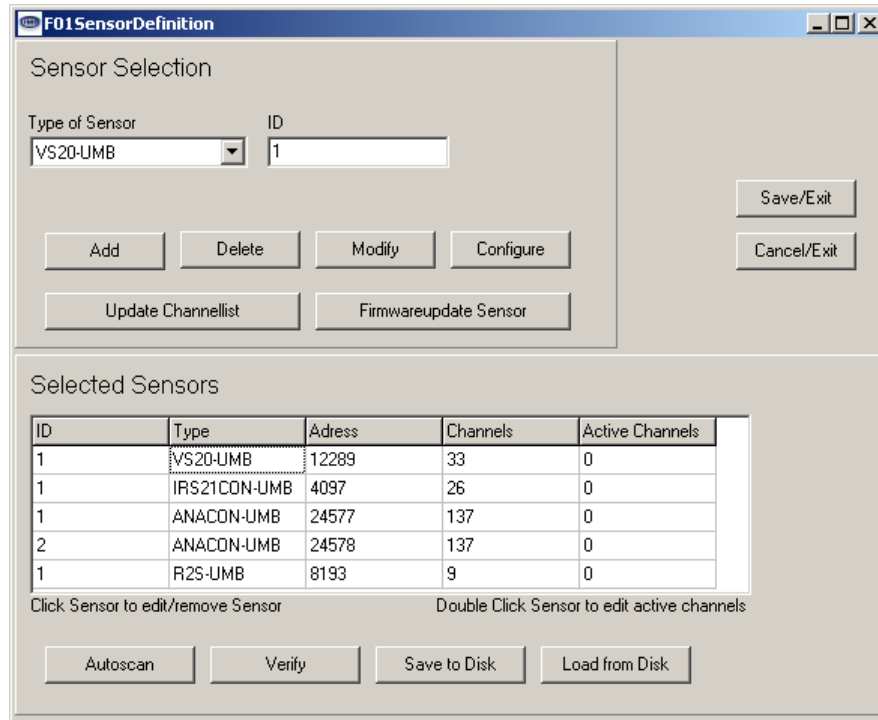
43 corresponds to Version V4.3

Programme Sensor Update

Before the update, save the current device firmware (mot file) in the installation directory under 'Firmware' (e.g. C:\Programme\Lufft\UMB-Config\Firmware).

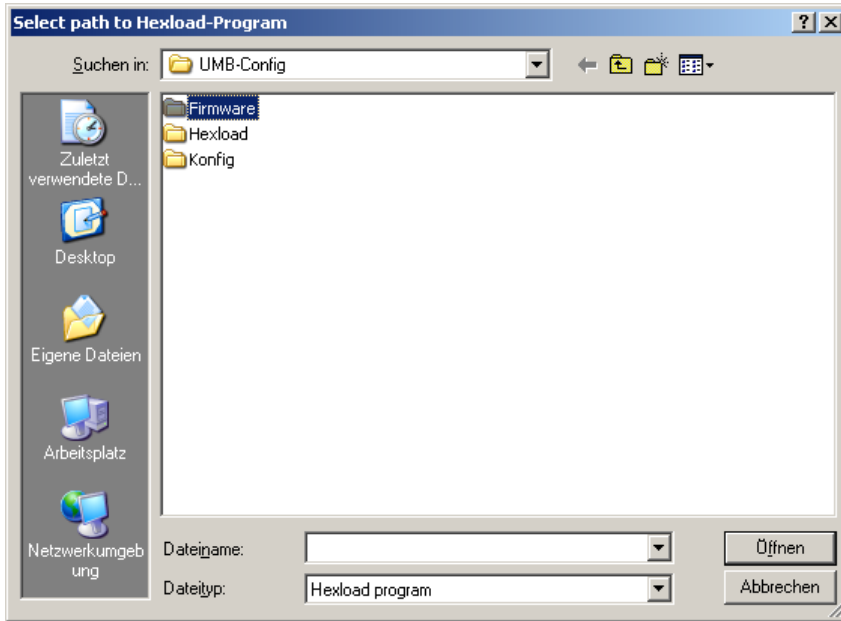
ATTENTION: When updating ANACON-UMB or IRS21CON-UMB, the RS232 connection must be plugged **directly** into the module to be updated.

Open the sensor list under 'Edit' → 'Sensors'; if necessary, regenerate the list with 'Autoscan' or load a stored list with 'Load from Disk'. With 'Verify', check whether the sensors available in the sensor list are also reachable on the network.



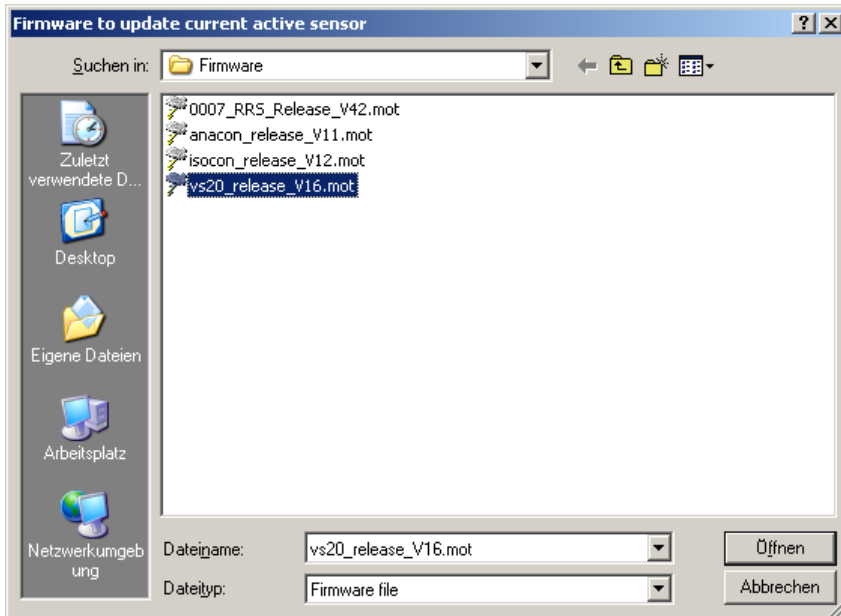
Select the appropriate sensor from the sensor list; the selected sensor is displayed in the 'Selected Sensors' section (VS20-UMB in the example).

The update process is started with 'Firmwareupdate Sensor'. The following window opens when this function of the Config-Tool is used for the first time:

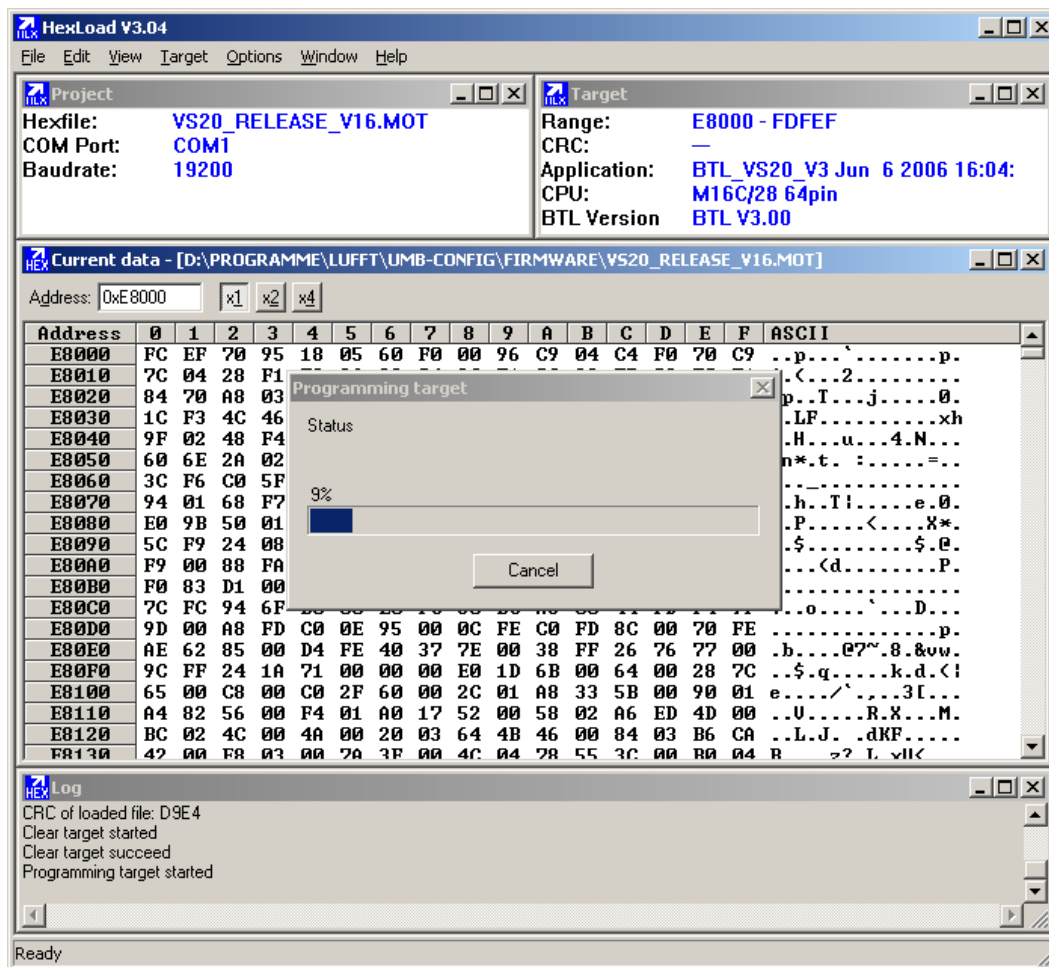


Under 'Hexload', select the 'HexLoad.exe' file.

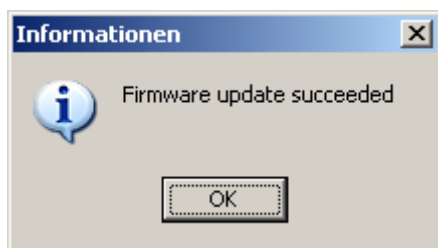
After this (and on all future updates) a window opens in which you select the relevant mot file for the update:



The device is then programmed:



After successful programming the Config-Tool reports as follows:



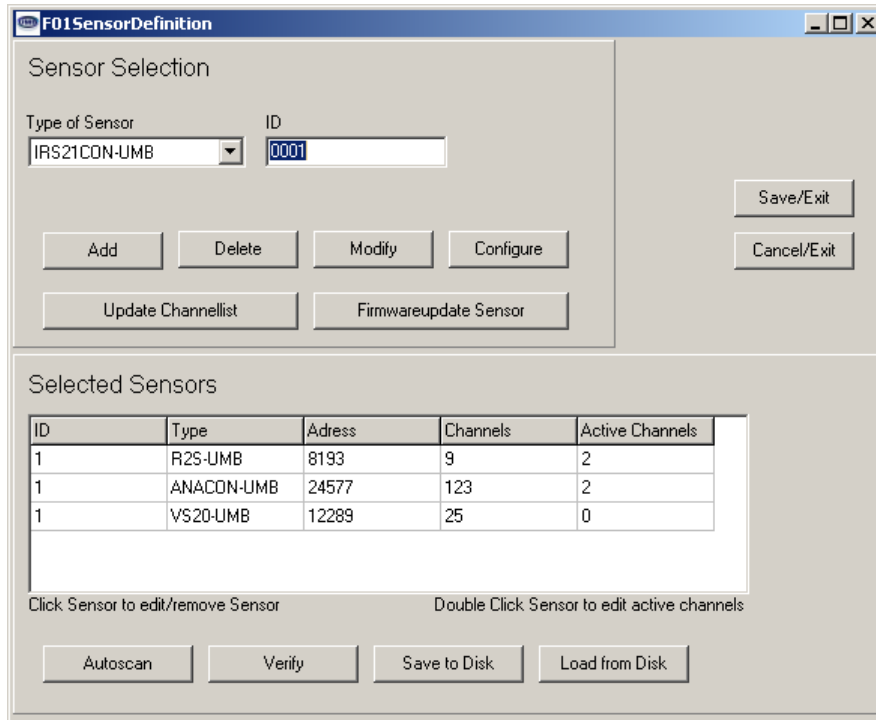
The device then operates with the new firmware.

Possible sources of error

- If firmware is selected which does not correspond to the sensor, the error message 'Invalid Firmware-Filename for this module' is displayed.
- When updating ANACON-UMB or IRS21CON-UMB, the RS232 connection must be plugged **directly** into the module to be updated.
- An ISOCON-UMB cannot be updated using this procedure (see page 17, Manual Update with HexLoad).

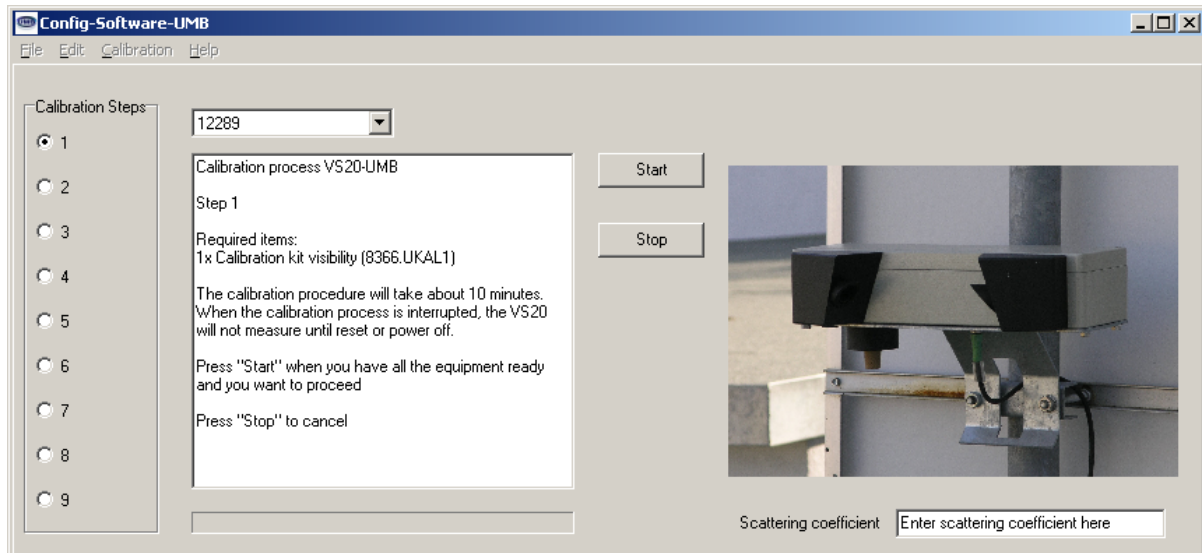
Calibration of a VS20-UMB visibility sensor

Start by creating a sensor list, containing the VS20-UMB to adjust. Example:



Then chose ,Save/Exit' ,Calibration à ,VS20-UMB.

Run the calibration according to the description in the text field and like described in the manual from the calibration kit. See picture below.



Miscellaneous

,Edit' à ,Password entry' allows the user to change in a different user group with advanced possibilities.

Parameters only adjustable by modifying the file ULSPS.INI:

[Settings]

LogToFile=1

Writes the measurement values into a log file, file name see ,LogFileName'. The column headers are formatted GroupID:ID:Channel (see table of measurement values).

LogFileName=Values.Txt

Basic file name for the log file. Will be expanded by the current date. The software creates a new file for every new date.

MaxRetriesForProtocolWhenFailure=2

Number of retries per command, before a failure is reported.

AdditionalTimeoutInMSForSlowConnectionsToHost=0

Time in ms, which is waited additionally to the period of reply specified in the UMB protocol, before for this instruction Timeout is produced. The times specified in the protocol applies to direct 1:1 communication. If the query is made e.g. by GPRS consider using 10000 (ms, corresponds with 10s) here. Note: With 2 repetitions for each instruction (see MaxRetriesForProtocolWhenFailure) it takes $3 \times 10s = 30s$, before this instruction is rated as „Failed. Absolutely consider if an ,Autoscan' is to be accomplished, and/or a measured value query is run with a short interval.

AutoScanDeltaForFail=3

With ,Autoscan' for each possible group by address 1 beginning ,a ,Verify' command is sent. If the device does not respond the next AutoScanDeltaForFail-1 addresses in ascending order are queried with ,Verify'. The queried groups are 1 to 14 (group 0 is used for equipment spreading broadcasts, group 15 are masters, here the software itself.

Example: Messurement setup with 1 device of group 2 Id 1 and 1 device of group 3 Id 2.

AutoScanDeltaForFail is set to 3.

List of queries (addresses, in Groupid:Id notation):

1:1 – Failed
 1:2 – Failed
 1:3 – Failed
 2:1 – OK
 2:2 – Failed
 2:3 – Failed
 2:4 – Failed
 3:1 – Failed
 3:2 – OK
 3:3 – Failed
 3:4 – Failed
 3:5 – Failed
 4:1 – Failed
 4:2 – Failed
 4:3 – Failed
 5:1 – Failed
 5:2 – Failed
 5:3 – Failed

6:1 – Failed
6:2 – Failed
6:3 – Failed
7:1 – Failed
7:2 – Failed
7:3 – Failed
8:1 – Failed
8:2 – Failed
8:3 – Failed
9:1 – Failed
9:2 – Failed
9:3 – Failed
10:1 – Failed
10:2 – Failed
10:3 – Failed
11:1 – Failed
11:2 – Failed
11:3 – Failed
12:1 – Failed
12:2 – Failed
12:3 – Failed
13:1 – Failed
13:2 – Failed
13:3 – Failed
14:1 – Failed
14:2 – Failed
14:3 – Failed

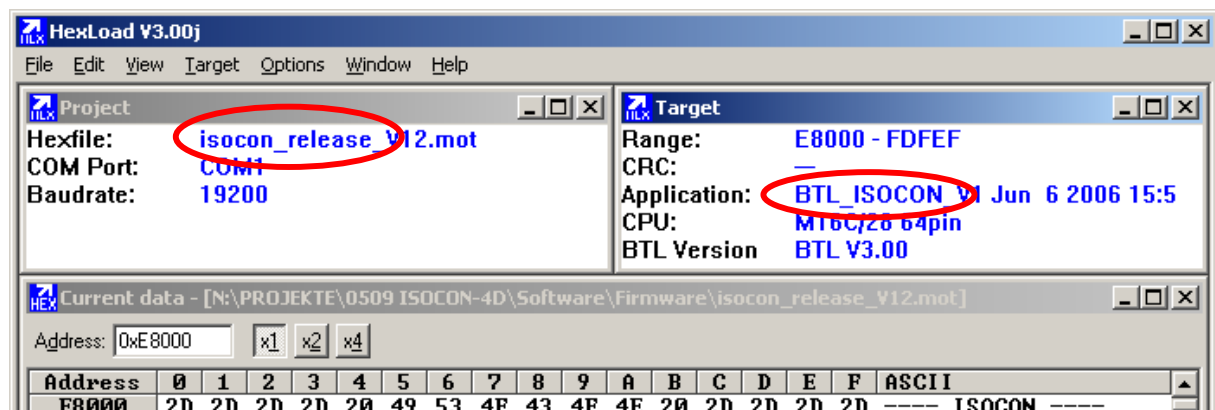
Thus 45 telegrams, in order to find the 2 devices (with this ID). Since every ‚Failed’ is repeated 2 times (default setting), that is altogether 131 queries. If now `AdditionalTimeoutInMSForSlowConnectionsToHost` is set to 10s ‚Autoscan’ takes about 25 minutes - so choose the parameters carefully if the ‚Autoscan’ function is to be used.

Manual Update with HexLoad

The following procedure must be applied if a sensor update using the Config-Tool was interrupted or in the case of an ISOCON-UMB.

Update ISOCON-UMB

1. Disconnect the power supply and the connected sensor from the ISOCON-UMB module
2. Connect the RS232 interface of the ISOCON-UMB module to the PC
3. Start HexLoad (...\\Programme\\Lufft\\UMB-Config\\Hexload\\HexLoad.exe)
4. Load the current mot file with 'File' → 'Open'. This **must (!!!)** have the file designation 'isocon_release_Vxx.mot', where 'xx' specifies the version number.
5. Switch on the power supply of the ISOCON-UMB module.
6. 'BTL_ISOCON_Vx....' must now be displayed in HexLoad in the 'Target' window next to 'Application'.



7. Start the programming with F9.
8. If programming is successful the message 'Job succeed' is displayed; then exit HexLoad.
9. The module is now ready for operation with the new firmware.

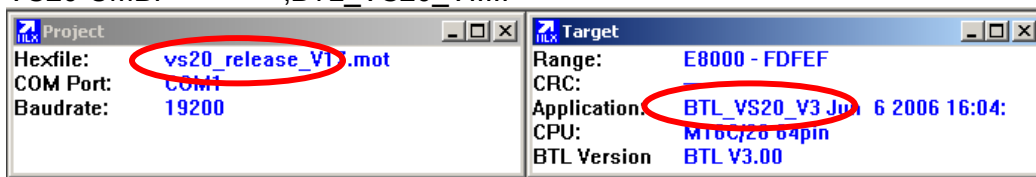
Manual Update of IRS21CON-UMB

If it is necessary to update an IRS21CON-UMB module manually, proceed as in the case of 'Update ISOCON-UMB', where the name of the mot file must correspond to 'IRS21con_Vx_x.mot'.

Manual Update of VS20-UMB, R2S-UMB

1. Disconnect the power supply **of the sensor** from the ISOCON-UMB
2. Switch on the power supply of the ISOCON-UMB module
3. Connect the RS232 interface of the ISOCON-UMB module to the PC
4. Start HexLoad (...)\Programme\Lufft\UMB-Config\Hexload\HexLoad.exe)
5. Load the current mot file with 'File' → 'Open'. The file **must (!!!)** have the following designation, where 'xx' specifies the version number.
 - VS20-UMB: 'vs20_release_Vxx.mot'
 - R2S-UMB: 'R2S_Release_Vxx.mot'
6. Connect the power supply **of the sensor** to the ISOCON-UMB module.
7. The following test must now be displayed in HexLoad in the 'Target' window next to 'Application':

- VS20-UMB: ,BTL_VS20_V.....'



- R2S-UMB: ,BTL_R2S_V.....'



8. Start the programming with F9.
9. If programming is successful the message 'Job succeed' is displayed; then exit HexLoad.
10. The module is now ready for operation with the new firmware.