UMB-Config-Tool

Operating Instructions UMB Configuration Software



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POSTFACH 4252

70719 FELLBACH TEL. 49 (711) - 51822-0

FAX 49 (711) - 51822-41



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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
1.3	10.02.2009	BR	Adjustments for Software V1.0 (English)
1.4	27.10.2009	BR	Adjustments for Software V1.1 (English)
1.5	08.10.2010	BR	Adjustments for Software V1.3 (English)
1.6	18.02.2011	BR	Integration of new sensors, bugfix heater capacity Ventus-UMB
1.7	08.08.2011	BR	Integration of ARS31PRO Smoothing operator for ft ARS31 adjustable Protocol switching functionality for sensors running in different protocols Coupling of IRS31 and ARS31 integrated Anacon: New sensor CMPx integrated TCP/IP support Centralized settings for WSx energy management
1.8	02.02.2012	BR	Manual for UMB Config Tool V1.6 Updates for ARS31(Pro) for actual state of development Updates for DPI-awareness Units are shown for all adjustments when available Analogue outputs: When the source channel is changed, the range for the output is automatically adjusted Support for write protected sensor configuration files implemented Option to chose name/path for sensor configuration files
1.9	08.03.2012	BR	Extended NIRS31-UMB service functions Warning when trying to downgrade a firmware of a module



Preface, designated use

The UMB Config Tool has been created for configuring, commissioning, maintaining, calibrating and checking Lufft UMB sensors, modules and systems.

It is not designed for reading out and storing data permanently. For the permanent data evaluation Lufft offers the software SmartView3.

When in the UMB Config Tool values or ranges of values are shown, and these are different from those in the device description of the sensor, always the details in the operating manual for this sensor version counts (see also "channel list update a sensor").

The UMB Config Tool is single seat software. It is not intended that multiple users use this software from the same directory at the same time.

The UMB Config Tool is able to create logfiles. When these files are opened by other programs during the operation of the UMB Config Tool, there might occur writing errors (i/o Errors) when the UMB Config Tool tries to update them, and the file will not update correctly. Details to special functions for sensors can be found in the operating instructions of the sensor.

Installation UMB Config Tool

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

The software is installed under 'C:\Lufft\UMB-Config' as standard. In MS-Windows Vista and MS-Windows 7 you must not install the software in the directories C:\Program Files or C:\Program Files (x86) because these directories are specially protected system directories, and the protection does not work well with the normal program function of this tool. Start the application with 'Start' \rightarrow 'Programme' \rightarrow 'Lufft UMB Config' \rightarrow 'Config Tool'.

Installation paths:

Path	Content
\Lufft\UMB-Config\	Application and INI files
\Lufft\UMB-Config\Firmware	Device firmware (mot files)
\Lufft\UMB-Config\Hexload	Bootloader programme
\Lufft\UMB-Config\Konfig	Stored device configurations

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

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

System requirements

Windows 2000 / XP / Vista / 7 (32 or 64 Bit) 10 MB free hard disk capacity A free serial interface (COM) for configuration, diagnosis and firmware update Alternative: TCP/IP connection to the measurement setup for configuration and diagnosis



Communication settings / communication

The UMB Configtool works in principle with connections to the measurement setup with connection settings 19200 baud, 8 data bits, 1 stop bit, no parity. A different baud rate is only possible by editing the file ULSPS.INI.

From UMB Configtool version 1.5 in addition to the direct serial connection to the measurement setup a connection using TCP / IP is supported. The TCP / IP communication is enabled in the UMB Configtool by setting 'Edit' ->' Use TCP / IP '. The measurement setup is connected to an RS-232/RS-485 to LAN / WLAN adapter (or similar device). The UMB Configtool supports the connection to a host name or IPv4 address. Because TCP / IP connections as opposed to direct RS232 connections are affected by latency, an additional timeout has to be specified to wait for the responses of the devices in the UMB-setup. The times given in the configuration dialog are ms. For direct LAN connections to IP addresses, values of 100 (ms) are sufficient. For example, targets with name resolution and GPRS connections require values up to 10000 (ms).

Note: Only the communication connection type 'raw' is currently supported (not Telnet emulation).

Note: The set times are also considered for RS232 connections.

Configure TCP/IP settings	
Hostadress or hostname 192.168.0.13	TCP-Port 8000
Additional Timeout for slow c	onnections to host (TCP/IP)
ОК	Cancel

Creating a sensor list

Menu: Edit \rightarrow Sensors:



Station Senso	rs				
Sensor Sele	ction				
Type of Sensor VS20-UMB	ID • 1]		
Add	Delete	Modify	Configure		Save/Exit Cancel/Exit
Update	Channellist	Firmwareup	idate Sensor		
Selected Se	nsors				
ID	Туре	Address	Channels	Active Channels	
1	VS20-UMB	0x3001=12289	40	0	
Click Sensor to edit/remove Sensor Double Click Sensor to edit active channels Autoscan Verify Save to Disk Load from Disk					

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 Channellist' 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:

Sensor Configuration			_ 🗆 🗵
Main			
		Select sensor to configure	
	Load profile from sensor	0x3001=12289	
	Load profile from disk	1	
		1	
	Store profile on sensor	1	
		I	
	Store profile on disk	1	
		I	
	Load adj. data from disk	1	
		1	
	Close		

The check box "select sensor to configure" allows to switch to another sensor of the measurement setup.

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

Sensor Configuration		<u>_ ×</u>
Main Info VS20-UMB		
General properties	Communication properties	
ID 1	Linespeed 19200	
Description visibility-sensor VS20-UMB	Protocol binary 💌	
	Timeout protocol change 5	[min]
Output properties	Measurement Setup	
Output mode 420mA	Average for visibility [min] 5	
Failure current [mA]	Offset for visibility [m]	
Scaling 0 2000 m	Border contrast	
	Average for temperature [min] 5	
	Offset for temperature [°C]	
Calibration values		
DAC offset 63.85248 Calibration value	6201.97754 Calibration status 3	
DAC gain 163.11475 Calibration offset	0.00033	



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

Sensor Configuration			_ 🗆 🗙
·····	1		
Main Info VS20-UMB			
		Select sensor to configure	
	Load profile from sensor	0x3001=12289	
	Load profile from disk		
	Store profile on sensor		
	Store profile on disk		
	Load adj. data from disk.		
	Close		

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'.

Note: In case of a service call, a saved sensor configuration helps a lot more than one or more screenshots of the sensor configuration.



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):

	Modify Firmwareup ddress x1001=4097	Configure odate Sensor	Active Channels	Save/Exit Cancel/Exit
4	Firmwareup	date Sensor		
ist	Firmwareup	date Sensor		Cancel/Exit
A	ddress			
		Channels	Activo Channele	
		ondranoio		
		26	0	
ON-UMB 0	x1002=4098	26	0	
ON-UMB 0:	x1003=4099	26	0	
4B 0:	x2001=8193	15	0	
4B 0:	x2002=8194	15	0	
MB 0:	x3001=12289	40	0	
MB 0:	x3002=12290	40	0	
N-UMB 0:	x6001=24577	135	0	
N-UMB 0:	x6002=24578	135	0	
N-UMB 0:	x6003=24579	135	0	
N-UMB 0:	x6004=24580	135	0	
Sensor		Double Click Senso	or to edit active char	nnels
	N-UMB 0	N-UMB 0x6003=24579 N-UMB 0x6004=24580	N-UMB 0x6003=24579 135 N-UMB 0x6004=24580 135	V-UMB 0x6003=24579 135 0 V-UMB 0x6004=24580 135 0

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.

Interface Settings

The interface settings made by the UMB Config Tool relate to the specified sensor. Attention: Only change the interface settings if you are sure you have to, and if you are aware of all the consequences of this change. This change may not be reversed in a simple manner.



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':

Sensor Configuration					<u>_ D ×</u>
Main Info Anacon-UMB					
General properties		Communic	ation properties		
ID 1	\$	Linespeed F	RS 232	19200 💌	
Description measure-mod	Jule-ANACON-U	Protocol		binary 💌	
		Timeout pro	tocol change	10 🔹	
TFF (8160.TFF) ▼ digital input intern ▲ PT100 ▲ PT1000 ▲ TFF (8160.TFF) ▲ combi wind (8368.01) ↓ combi wind 4.20mA extern ↓ combi wind 4.20mA intern ↓ air pressure (8355.03) ▼	Aeassurement category temperature Aax value 70.0 Jverrange [%] D T	e vverage over 60	0.000 Sensor powerup 5	in Unit from Channel	

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

Meassurement intervall [s]	Number of s	amples for aver	rage
3	12	\$	Average over 60 s

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'!!!

General Parameters	Channel 1 Channel 2			
Altitude [m]	100	÷		
TFF C12	1625	TFF C76	1956	€



Configuration of sensors operating in different protocols (e.g. MODBUS, SDI12)

If sensors are permanently set to protocols other than UMB (Binary or ASCII) they must be changed first to the UMB protocol if you want to change the configuration with the UMB Configtool.

The procedure for doing this is as follows:

- 1. Separate measurement setup from the supply voltage
- In the UMB Configtool select 'Options' -> 'Switch all sensors temporarily to UMB protocol'
- 3. Connect the Measurement setup again to the supply voltage.
- 4. After about 5 seconds (or longer) click ,Exit' in the UMB Configtool

The sensors can now be configured for the time in minutes set under, timeout for protocol change 'in the sensor settings by UMB Configtool. UMB telegrams e.g. Measurement acquisition, configuration read / write reset the timeout to the time set. After a reset, the sensor is running again in the configured protoco.

Note: After a 'Store profile on Sensor' the sensor is reset automatically by the UMB-Configtool and then runs again in the configured protocol.

This functionality is available on the following p	products::
Sensor	Firmware version or
	Not evellele

Sensor	Firmware version or higher
ANACON-UMB	Not available
ARS31-UMB	Not available
ARS31pro-UMB	Not available
DACON8-UMB	Not specified
IRS31-UMB	Not available
NIRS31-UMB	Version 1.2
R2S-UMB	Not available
VENTUS-UMB	Version 1.6
VS20-UMB	Not available
V200A-UMB	Version 1.6
WSx-UMB	Version 2.2

Query measurement values

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

💷 Sele	ct active Channels					
ChNr.	Measurement	Unit	Range	active	-	Click on Channel to toggle active
100	Act. temperature CH1	°C	-200.00 450.00	active		Add channel from #
120	Min. temperature CH1	°C	-200.00 450.00	inactive		1
140	Max. temperature CH1	°C	-200.00 450.00	inactive		Add channel to #
160	Avg. temperature CH1	°C	-200.00 450.00	inactive		Delta for channel #
105	Act. temperature CH1	۴F	-328.00 842.00	active		1
125	Min. temperature CH1	۴F	-328.00 842.00	inactive		Multiple channel action
145	Max. temperature CH1	۴F	-328.00 842.00	inactive		 Select channels Deselect channels
165	Avg. temperature CH1	۴F	-328.00 842.00	inactive		Deselect all channels
101	Act. temperature CH2	°C	-200.00 450.00	inactive		Go
121	Min. temperature CH2	°C	-200.00 450.00	inactive		
141	Max. temperature CH2	°C	-200.00 450.00	inactive	Ŧ	ОК
•						•



Here you are able to select the channels for query, either through clicking the corresponding channel in the list, or by using the "Multiple channel action" function with the channel numbers. Example: If channels 100, 120, 140 and 160 of the list above should be selected for query with the UMB Config Tool, this could be done with the following settings: Add channel from #: 100 Add channel to #: 160 Delta for channel #: 20 Multiple channel action: Select channels and then click on "Go".

Note: If a channel mentioned in the operating instructions of a sensor is not shown in the sensor list, the channel list of the UMB-Config-Tool for this sensor needs to be updated. It is advised, that you update the Firmware of the sensor before updating the channel list (see chapter Firmware Updates).

ANACON-UMB ID1 temperature [°C] Act	ANACON-UMB ID1 temperature [°F] Act	ANACON-UMB ID1 relative humidity [%] Act	ANACON-UMB ID1 absolut humidity [g/m ³] Act
21.27	70.29	36.40	7.70
21.27	70.29	36.45	7.71
21.27	70.29	36.49	7.72
21.27	70.29	36.56	7.73
21.28	70.31	36.56	7.74
21.26	70.27	36.59	7.73
21.28	70.30	36.55	7.73
21.27	70.28	36.59	7.74
21.27	70.29	36.45	7.71
21.27	70.29	36.50	7.72

The measurement is started in menu ,File' \rightarrow ,Start measurement'.

To change the sampling rate of the software click ,Edit' \rightarrow ,Sampling Rate'. A sample rate of 1s does not correspond to the UMB-protocol. In the case of missing answers of the sensor it can lead to erroneous presentation of the received values.

Attention: The selected channels only affect the data query in the UMB-Config-Tool. They do not influence the query of channels in any other software.

Updating the channel list for a sensor

Add the desired sensor to the measurement setup and make it to the selected sensor (by clicking the list entry).



Station Sense	ns				<u>_ ×</u>
Sensor Sele	ection				
Type of Sensor DACON8-UMB	ID T				1
					Save/Exit
Add	Delete	Modify	Configure		Cancel/Exit
Update	Channellist	Firmwareup	odate Sensor		
Selected Se	nsors				
ID	Туре	Address	Channels	Active Channels	
1	DACON8-UMB	0xF001=61441	0	0	
Click Sensor to ec	lit/remove Sensor		Double Click Sensor	to edit active cha	nnels
Autoscan	Verif	y Save	e to Disk Lo	ad from Disk	

Then choose "Update Channellist". The UMB-Config-Tool now reads the channels from the desired sensor and sorts the new ones into the channellist. During this operation no channels are deleted, but descriptions and other information of the old channels are replaced by the newly read ones. Also the Type of Sensor might be changed during this operation. This process also works for up to now unused sensortypes. However, such sensors cannot (jet) be configured with the UMB-Config-Tool but querying measurement values works.



Firmware Update

Before implementing any update, please check with Lufft concerning the current firmware status of the UMB products. You must not program an older firmware into a module, than the one which is currently installed without consulting Lufft over this issue.

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. firmware' on the 'Info' page.

Sensor Cor	nfiguration		
Main Info	R2S-UMB		
	Name	R2S-UMB	
	Serialnumber	001.0706.0007.000	
	Number	001	
	Tested	0706	
	Project number	0007	
	Rev. bom	9	
	Rev. schematic	8	
	Rev. hardware	8	
	Rev. firmware	40	
	Rev. config	10	
	Rev. device	000	
	Class-id	2	

40 corresponds to Version V4.0



Programme a Sensor Update

Before updating, 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. Anacon-UMB and IRS21CON-UMB with production date from February 2009 on can also be updated over the bus. ANACON-UMB without frontside RS232 can only be updated over the bus. This requires at least one ISOCON-UMB in the measurement setup.

ISOCON-UMB have to be updated manually. The corresponding instructions can be found the section "Updating manually with HexLoad"

Open the sensor list under 'Edit' \rightarrow '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.

Station Senso	rs				
Sensor Sele	ction				
Type of Sensor VS20-UMB	ID		1		
Add	Delete	Modify	Configure		Save/Exit Cancel/Exit
Update	Channellist	Firmwareup	odate Sensor		
Selected Ser	nsors Type	Address	Channels	Active Channels	-
1	VS20-UMB	0x3001=12289	40	O Clive Channels	1
1	IRS21CON-UMB	0x1001=4097	26	0	-
1	ANACON-UMB	0x6001=24577	135	0	-
2	ANACON-UMB	0x6002=24578	135	0	-
1	R2S-UMB	0x2001=8193	15	0	
Click Sensor to edi	t/remove Sensor		Double Click Senso	r to edit active char	nnels

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:

Firmware to upd	ate current active sensor			<u>? ×</u>
<u>S</u> uchen in:	🔁 Firmware	•	🖛 🗈 💣 🎟	-
Zuletzt verwendete D Desktop Eigene Dateien Arbeitsplatz	<pre>P0007_RRS_Release_V42.mot Panacon_release_V11.mot Pisocon_release_V12.mot Vs20_release_V16.mot</pre>			
Netzwerkumgeb	Dateiname: vs20_release_V16.mot		•	0 <u>í</u> fnen
ung	Dateityp: Firmware file			Abbrechen

The device is then programmed:

<mark>7.</mark> HexLoad V	3.04																	_ 🗆 X
<u>File E</u> dit <u>V</u> iev	v <u>T</u> arge	et <u>O</u> pl	ions :	<u>W</u> inde	ow į	<u>H</u> elp												
🕂 Project								_ [×		Targ	jet						- 🗆 🗵
Hexfile: COM Port: Baudrate:	CC	20_R)M1 200	ELE	ASE_	V16	.M0'				Ra CR Ap CP	nge: C: plica	tion		L BTI M1	vs	- FDFEF 20_V3 Jun 8 64pin .00		
HEX Current da	ata - [D	:\PROC	RAM	IME\L	UFFT	\UMI	B-CC	NFIC	i/FIF	RMW)	ARE\	V5 20	_REI	EAS	E_V1	6.MOT]		
Address: 0xE8	3000	x <u>1</u>	<u>×2</u>	× <u>4</u>														
Address	0 1		3	4	5	6	7	8	9	A	B	С	D	E	F	ASCII		
E8000	FC E		95	18	05	60	FØ	00	96	C9	04	C4	FØ	70	C9	p`		
E8010 E8020	7C Ø		F1 Ø3	Progr	amm	ning t	targ	et							>	i.<2 p⊺j		
E8020	10 F		03 46		_			_								- p 1 j		
E8040	9F Ø		F4	Stati	us											.Hu		
E8050	60 6	E 2A	02													n*.t. :.		
E8060	3C F		5F	9%														
E8070		1 68	F7	3%												.hTl		
E8080	EØ 91		01													.P		
E8090 E80A0	5C F F9 Ø		08 FA						_		- 1					(d	\$.@.	
E80B0	FØ 8		п						Ľa	ncel							r.	
E80C0	70 F		6F-														D	
E80D0	9D Ø		FD		ØE	9 5	00	ØČ	FE	CØ	FD	8Ĉ	õõ	70	FE			
E80E0	AE 63	2 85	00	D4	FE	40	37	7E	00	38	FF	26	76	77	00	.b07~	.8.&vw.	
E80F0	90 F		1A				00	EØ	1D	6B	00	64		28	7C	\$.q	.k.d.(
E8100	65 Ø		00				00	2C	01	A8	33	5B	00	90	01	e/`.,		
E8110	A4 8		00				17	52	00	58	02	A6	ED	4D	00	UR		
E8120 F8130	BC 03	24C	00 02	4А 00			03 00	64	4B	46 78	00 E E	84 20		В6 ВØ	CA	L.Jdl B = 2? L		-
RC of loaded f CRC of loaded f Clear target star Clear target suc Programming tar	ile: D9E4 ted ceed	ļ		ии	24	414	ии	41:	И4	78		41:	ии	КИ	И4	<u>R 271</u> .		
•								_										
Ready																		1

After successful programming the Config-Tool reports as follows:



The device then operates with the new firmware.

Possible sources of error

- If a firmware is selected which does not correspond to the sensor, the error message 'Invalid Firmware-Filename for this module' is displayed.
- When updating older ANACON-UMB or older 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 22, Manual Update with HexLoad).
- There is a plausibility check with the version number of the installed firmware, and the version number of the firmware file. A replacement of a newer firmware on a sensor with an older version is only allowed by a direct order from the manufacturer of the



module. If you don't have the order, and the module is damaged by the action, the warranty is void.



Calibration of a VS20-UMB visibility sensor

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

Type of Ser R2S-UMB					
Ad	d Delete	Modify	Configure		Save/Exit
l	Jpdate Channellist	Firmwareu	pdate Sensor		
Selecte	d Sensors				
Selecte	d Sensors	Address	Channels		els
	d Sensors Type R2S-UMB	Address 0x2001=8193	Channels	Active Chann	els
ID	Туре				els
ID 1	Type R2S-UMB	0x2001=8193	15	0	

Then chose ,Save/Exit', ,Calibration \rightarrow ,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.

Config-Software	2-UMB - COM1 - 19200			_ _ _ _ _ _ _ _ _ _ _
Eile Edit Options	Help			
Calibration Steps	0x3001=12289 Calibration process VS20-UMB Step 1 Required items: 1x Calibration kit visibility (8366.UKAL1) The calibration procedure will take about 10 minutes. When the calibration procedure will take about 10 minutes. When the calibration process is interrupted, the VS20 will not measure until reset or power off. Press "Start" when you have all the equipment ready and you want to proceed Press "Stop" to cancel	Start Stop		
			Scattering coefficient	Enter scattering coefficient here

Resetting the rain quantities of WSx-UMB

With the menu point 'Extras -> reset WSx-UMB rain sums' the absolute values of the rain quantities in all connected WSx-UMB are set back to 0. It is not necessary to establish a measurement setup with the WSx-UMB. It is however recommended to check if the command has been carried out successfully by reading out the respective values on the corresponding WSx-UMB.

Resetting the service level of NIRS31-UMB

After carrying out maintenance and replacing the reflector unit, the sensor must be informed about this procedure using the UMB-Config-Tool.

In the menu under 'Options', select the entry 'NIRS31-UMB' - 'NIRS31-UMB Service':

回 UMB Co	nfig 1	Fool									
File Edit	File Edit Options Help										
		Switch all sensors temporarily to UMB Protocol RS232 special functions VS20-UMB Callibration WSx-UMB reset rain									
		NIRS31-UMB		NIRS31-UMB Service							
		Close Communication Port ARS31(Pro)-UMB Reset Factory Default		NIRS31-UMB check adaption NIRS31-UMB generate statusfile							

Confirm the performance of maintenance with 'OK'.

NIRS31-UMB Service	×
The following works were carried out according to the manual:	
🔽 reflector unit has been replaced	
sensor was cleaned	
0K Cancel	

Important note: Only use this function if maintenance was actually carried out and the reflector unit was actually replaced.

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.



CreateDayFiles=1

The registered values are stored in daily files. If the value is 0, they are all stored in one single file.

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 time 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 3x10s = 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. This setting will be adjustable in the TCP/IP configuration dialogue.

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 ld 1 and 1 device of group 3 ld 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'.

RexLoad V3.00j Eile Edit View Target Options Window Help	
Project Hexfile: isocon_release 12.mot COM Port: COM1 Baudrate: 19200	Image: E8000 - FDFEF CRC:
Address: Ø 1 2 3 4 5 6 7 8 Address: Ø 1 2 3 4 5 6 7 8 F8000 2D 2D 2D 2D 49 53 4F 43	are\Firmware\isocon_release_V12.mot] 9 A B C D E F ASCII 4F 4E 20 2D 2D ISOCON

- 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 ISR21CON-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 and other UMB-Sensors

- 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' \rightarrow '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'
 - WSx-UMB: 'WSx_Release_Vxx.mot'
 - IRS31-UMB: 'IRS31_Vxxx.mot'
 - ARS31-UMB: 'ARS31_Vxx.mot'
 - VENTUS-UMB: 'Ventus_Vxx.mot'
 - V200A-UMB 'Ventus_Vxx.mot' (!)
 - NIRS-UMB: 'NIRS_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 LIMP: PTL VS20 V '

•	VS20-UMB	: ,BT	L_VS20	_V'			
	Roject			- D ×	💦 Target		
	Hexfile: 🤇	vs20_release_V	/D.mot		Range:	E8000 - FDFEF	
	COM Port:	COMI			CRC:		
	Baudrate:	19200			Application	BTL_VS20_V3 JD	6 2006 16:04:
					CPU:	MTOG/20 04pin	
					BTL Version	BTL V3.00	

• R2S-UMB[·] BTL R2S V [·]

	,DIL_RZ3			
Rroject		<u>_ ×</u>	🔼 Target	
Hexfile: 🤇	R2S_Release_V@3.mot		Range:	E8000 - FDFEF
COM Port:	COM4		CRC:	
Baudrate:	19200		Application:	BTL_R2S_V2 Jup 3 2006 09:44:5
			CPU:	M100/28-04pth
			BTL Version	BTL V3.00

- 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.

