Lindab **UltraLink®**

# Configuration Tool

Manual

# Contents

# 1. General Information

UltraLink® Configuration Tool is a program to configure and test UltraLink® Monitor FTMU and UltraLink® Controller FTCU.

The UltraLink® Configuration Tool works on Windows operating system.

# 2. Installation

The installation file can be found on Lindab's website. After the installation, a shortcut will be created on the desktop.

# 3. Connecting UltraLink® to personal computer

UltraLink® Monitor FTMU and UltraLink® Controller FTCU should be connected to a personal computer by using an RS485-to-USB converter. On UltraLink®'s side, the converter should be connected to bus terminals (i.e., B+, A- and GND). Before using the RS485-to-USB converter, the driver for it needs to be installed and a COM port is then generated.

# 4. Starting the UltraLink® Configuration Tool

When the UltraLink® Configuration Tool is started for the first time after installation, user has to accept the End-user license agreement (EULA) in order to proceed with the program. The license to use the program is free.

We reserve the right to make changes without prior notice

# 5.  Connect to device



**①** The <u>Connection settings</u> should be chosen properly in order to connect the UltraLink® device to the UltraLink® Configuration Tool.

The *COM port* is a setting of the personal computer (determined e.g. at the installation of the RS485-to-USB converter), while *Modbus address, Baud rate, Parity and Stop-bit* are settings of the UltraLink®. The communication settings can be read (and changed as well) from the Configuration Menu in UltraLink®'s display. Please refer to *Lindab UltraLink® Monitor FTMU Technical information* and *Lindab UltraLink® Controller FTCU Technical information* for factory default settings.

**②** Settings related to flow rate can be done either in l/s or in m³/h, depending on selection of the *Flow rate unit* in section <u>Units</u>.

**③** In section <u>General settings</u>, *Displaying Modbus addresses* of all parameters and *Logging the settings of the device* can be enabled. The device settings are logged in a text file, named after UltraLink®'s serial number, in a selected folder. The default folder is C:\Users\*user*\Documents\Lindab, which is created at the installation of the UltraLink Configuration Tool.

**④** By pressing *Connect*, the program will establish a connection with UltraLink®.

# 6.  Device

(5) In the <u>Main bar</u>, user can switch between main sections of the program.

(6) <u>Device information</u> section contains information about the *Connected device* and its *Serial number, Nominal size, Software ID, Software version, Software revision, Production year and week,* and *Parameter version*.

(7) In case of <u>On-site flow & temperature calibration</u>, the flow rate measurement characteristic can be scaled by *Flow factor*, and the temperature measurement characteristic can be shifted by *Temperature offset*. Both controls are password-protected (password is *Lindab*).

(8) <u>Angle recalibration</u> of the UltraLink® Controller FTCU can be initiated by pressing the button *Execute*.

(9) Buttons in section <u>Device reboot & reset</u> provide the following actions:
– By pressing *Reboot*, the device restarts.
– By pressing *Reset device*, the factory default settings of parameters are restored.



(10) In section <u>Device communication settings</u>, the following parameters could be read and changed: *Protocol, Baud rate, Parity, Stop-bit, Modbuss address,* and *PLA* and *ELA addresses*.

(11) With *Designation*, the UltraLink can be given a name (in the form of a number).

(12) **Note** that if a value is changed, the new value in a particular field becomes red-colored and a blue frame appears around buttons *Store* and *Cancel*. (Please keep in mind that some of the values are stored by pressing the *Set* or *Execute* button next to them.)

**To store the changes into the UltraLink®**, button *Store* should be pressed. After this, the font color will become black again, and the frame around *Store* and *Cancel* buttons will become grey.

**To cancel the changes and not to store them in the UltraLink®**, button *Cancel* should be pressed. The parameters' values that has been changed (but not stored!), will be restored to original values.

(13) In <u>Information bar</u> the type of the connected UltraLink®, its nominal size, serial number and designation are presented.

(14) Device status (including alarms) is displayed in <u>Status bar</u>. The <u>Status bar</u> can be expanded in order to see more information.

(15) The UltraLink® can be disconnected by pressing the *Disconnect* button.

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# 7. Configuration



(16) In section Control, user can choose if *Controlled variable* is flow rate, damper position or none. The *Control* can be performed *by* bus (Modbus or Pascal communication protocol) or analog input. In section Control, user can choose if *Controlled variable* is flow rate, damper position or none. *Control* can be performed by bus (Modbus or Pascal communication protocol) or analog input. Depending on selections of *Controlled variable* and *Control* by, the *Flow rate setpoint* or the *Damper position setpoint* could be set.

(17) In Settings of control by bus, *Max.* and *Min. flow rate setpoints* and *Max.* and *Min. damper position setpoints* can be set. *Override function* can be selected as well (move damper to fully open position, move damper to fully closed position, regulate to max. flow rate, regulate to min. flow rate, none). The *Override function* is activated by pressing the button *Execute*. It can be stopped manually, or automatically after the time period defined by *Damper override timeout*.

(18) In Settings of control by analog input (AIn), *Max.* and *Min. flow rate setpoints (AIn)* and *Max.* and *Min. damper position setpoints (AIn)* can be set. Possible choices for *Voltage range (AIn)* are: 0–10 V, 2–10 V, 10–0 V and 10–2 V.

If the *Controlled variable* is flow rate, the *Control* is performed *by* analog input and the *Voltage range (AIn)* is either 2–10 V or 10–2 V, an analog override function to move the damper in fully closed position can be activated. The voltage level to activate the analog override function is set by *Analog override trigger level*, which can be any voltage larger than 0 V and smaller than 2 V. If the Analog override trigger level is equal to 0 V, the analog override function is disabled.

(19)(20) In sections Settings of analog output 1 (AO1) and Settings of analog output 2 (AO2), a variable (flow rate, temperature or damper position) can be chosen on each output, together with its corresponding *Maximum* and *Minimum value*, and the *Voltage range* (0–10 V, 2–10 V, 10–0 V or 10–2 V).

Note that sections Control, Settings of control by bus and Settings of control by analog input (AIn) are relevant only for UltraLink® Controller FTCU.

# 8. Measurement & simulation



**(21)** For the purpose of testing the UltraLink® Controller FTCU with changing the setpoints, the FTCU has to be controlled by bus – therefore it is required to enable *Manual control*. Otherwise, only measured values can be presented. It is important to keep in mind that **for practical use the device might be configured to be controlled by analog input**. Therefore, by **disabling the Manual control, Disconnecting or closing the program**, the control settings are restored to those set in main section <u>Configuration</u>!

*Controlled variable* can be chosen from flow rate and damper position.

**(22)** The damper position setpoint or flow rate setpoint (depending on the selection of *Controlled variable* above) can be set in the first line under <u>Setpoint & measured values</u>. Values of *Flow rate, Velocity, Temperature, Damper position, Analog input voltage* and *Analog output 1 voltage* and *Analog output 2 voltage* can be read as well. For *Flow rate, Temperature* and *Damper position* different units can be selected.

**(23)** User can select variables to be presented in the two graphs (named A and B), and logged in a text file.

**(24)** *Graph* time *interval* can be chosen (larger or equal to 1 s). Plotting is activated by *Start plotting* and stopped by *Stop plotting* (appears on the same button), and reset by pressing the button *Reset graph*.

**(25)** *Log* time *interval* (larger or equal to 1 s) and *File* can be selected. Logging is started by pressing the button *Start logging*, and stopped by *Stop logging*.

# 9. Support



The main section <u>Support</u> contains:

**(26)** <u>Application details</u>.

**(27)** <u>License agreement</u> that is opened in new window.

**(28)** Link to <u>technical documentation</u> that is opened in a web browser.

**(29)** Links to Lindab's <u>website and social media</u> pages.

**(30)** <u>Contact form</u> to send a question to Lindab directly from the UltraLink® Configuration Tool.

# Good Thinking

**At Lindab**, good thinking is a philosophy that guides us in everything we do. We have made it our mission to create a healthy indoor climate – and to simplify the construction of sustainable buildings. We do that by designing innovative products and solutions that are easy to use, as well as offering efficient availability and logistics. We are also working on ways to reduce our impact on our environment and climate. We do that by developing methods to produce our solutions using a minimum of energy and natural resources, and by reducing negative effects on the environment. We use steel in our products. It's one of few materials that can be recycled an infinite number of times without losing any of its properties. That means less carbon emissions in nature and less energy wasted.

**We simplify construction**

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