

OPERATING INSTRUCTIONS

u[sonic] Commander

Configuration Software



General


The u[sonic] Commander is compatible with the entire u[sonic] sensor series.

SYSTEM REQUIREMENTS

- Operating system: Windows 10 or higher

REQUIRED EQUIPMENT

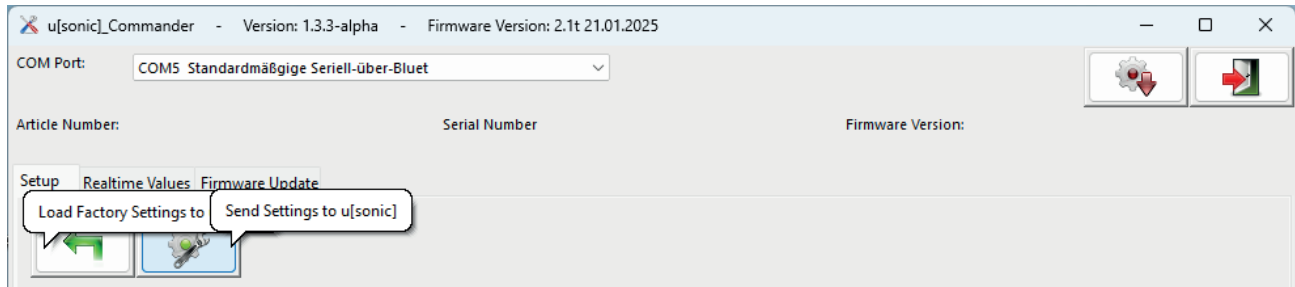
- Suitable RS485 interface converter (e.g. USB to RS485)
- Sensor cable
- Power supply unit with 12 VDC or 24 VDC terminal connection
- PC




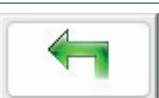
 The available configuration options depend on the specific sensor variant (u[sonic], u[sonic]WS, or u[sonic]W7). Unsupported options are either hidden or displayed as inactive.

Once the sensor is connected to a PC via an interface converter and powered on, the u[sonic] Commander can be opened.

 It is recommended to use a power supply unit that can be easily switched on and off.

GENERAL CONTROLS



	Exit App
	Retrieve Configuration
	Send Settings to u[sonic]
	Load Factory Settings to u[sonic]

The u[sonic] Commander has the following tabs:

Setup	Configuration of the sensor, such as protocol, output, and heating.
Realtime Values	Display of the current wind measurement values.*
Firmware Update	Performing firmware updates. The respective firmware version is part of the u[sonic] Commander.

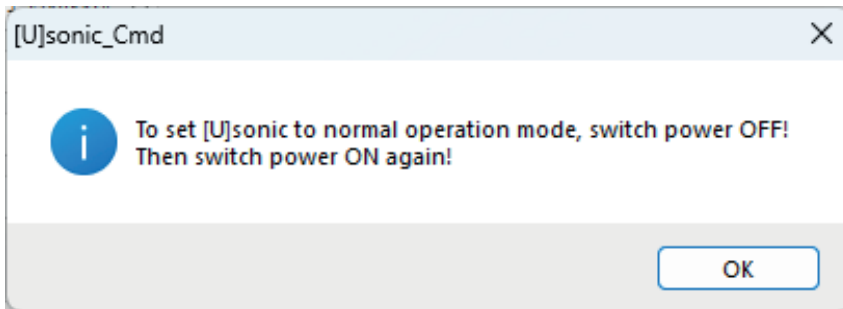
*) For all sensor versions, only the wind parameters are displayed.

Retrieving the configuration and sensor data



Do not interrupt the retrieval process while the progress bar is running, and do not press any other buttons during this time! This is crucial for a successful retrieval.

1. Select the COM port to which the sensor is connected.
2. Press the **“Retrieve Configuration”** button.
3. Follow the program’s instructions. Turn the sensor off and on again, and confirm the message **within 3 seconds**.



4. Upon a successful connection, the Commander displays:
 - a. Article code
 - b. Serial code
 - c. Firmware Version (current firmware version)
 - d. In the “Setup” tab, the current (available) settings are displayed (see the “Setup” chapter).

Send the configuration to the sensor



Do not interrupt the configuration process while the progress bar is running, and do not press any other buttons during this time! This is crucial for a successful configuration.

1. After configuring the sensor, send the data by pressing the **“Send Settings to u[sonic]”** button.
2. Restart the sensor.
3. It is recommended to read and verify the configuration again. To do so, repeat the steps from the section “Retrieving the configuration and sensor data.”

Closing the u[sonic] Commander

After completing the configuration, you can exit the program by pressing the “**Exit App**” button.

Setup

Depending on the model, different configuration options are available. This section provides an overview of all possible settings without assigning them to specific sensor versions.

SIGNAL UPDATE

- 1 Hz
- 2 Hz
- 4 Hz
- 10 Hz

Update rate of the available measured values. In the NMEA protocol, this also determines the transmission interval of the data records.

PROTOCOL / DATA SENTENCES

NMEA \$WIMWV + \$WIMTA	Standard NMEA data record (values as floating-point numbers). For the u[sonic] wind sensor, the virtual air temperature is also provided. For WS6 or WS7, additional data strings are output for the other weather parameters. *
NMEA \$WIMWV (xxx.x,R,xx.x,M)	NMEA data record with a fixed data length (two-digit format with one decimal place for wind speed). For WS6 or WS7, additional data strings are output for the other weather parameters. *
NMEA \$WIMWV (xxx.x,R,xxx.x,M)	NMEA data record with a fixed data length (three-digit format with one decimal place for wind speed). For WS6 or WS7, additional data strings are output for the other weather parameters. *
NMEA \$WIMWV (mph)	NMEA data record (values as floating-point numbers). Wind speed unit: “mph”. For WS6 or WS7, additional data strings are output for the other weather parameters. *



NMEA \$WIMWV (mph) + \$WIMTA	NMEA data record (values as floating-point numbers). Wind speed unit: "mph". The u[sonic] wind sensor also provides the virtual air temperature. For WS6 or WS7, additional data strings are output for the other weather parameters.. *
Modbus RTU	Modbus protocol via RS485
SDI-12	SDI-12 interface + protocol enabled

*) See operating manuals for current sensor.



Please note that there may be differences in the wiring depending on the selected protocol. For more information, refer to the corresponding sensor manuals.

MODBUS BAUD

- 2400 Bd
- 4800 Bd
- 9600 Bd
- 19200 Bd (default)
- 38400 Bd

Baud rate of the Modbus configuration.

MODBUS PARITY

- None
- Even

The parity "Odd" is not supported.

MODBUS ADDRESS

Selectable from "1" to "247".

SDI-12 ADDRESS

Single-digit SDI-12 device address. Numbers, uppercase letters, and lowercase letters can be selected.

ANALOG OUTPUT

- ON
- OFF

To activate or deactivate the analog interface.

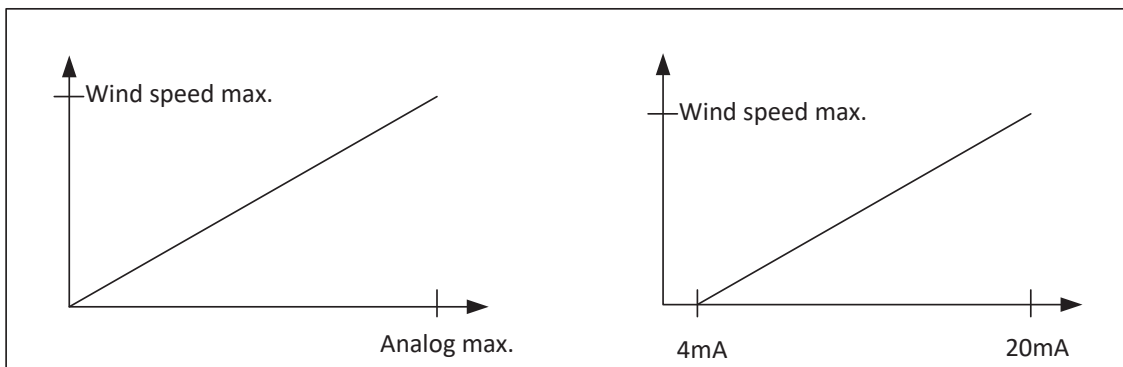
ANALOG MODE

- 0...5V
- 0...10V
- 4...20mA
- 0...20mA
- 4...20mA – Error 2mA *

*) In the case of a measurement error or a general fault, the sensor outputs 2 mA.

WINDSPEED AT MAX. SIGNAL

The scaling of the analog interface is freely selectable from 10 m/s to 75 m/s in 1 m/s steps. The signal is linearly scaled.



HEATING

- ON
- OFF

To activate or deactivate the heating.

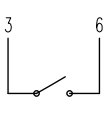
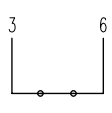
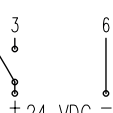
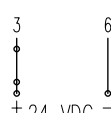
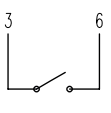
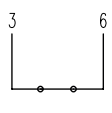
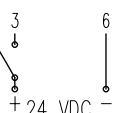
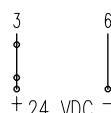
HEATING CONTROL

- Control Pin No Function (Default)
- Heating ON When active low (GND) on Control Pin
- Heating ON When active High (+24 V) on Control Pin
- Heating OFF When active low (GND) on Control Pin
- Heating OFF When active high (+24 V) on Control Pin

Different operating modes are available for controlling and monitoring the heating under moderate temperature conditions.



Connection details can be found in the operating instructions.

Heating <A> when 				
<A> \ 	Activ low		Activ high	
On	 Heating Off	 Heating On	 Heating Off	 Heating On
Off	 Heating On	 Heating Off	 Heating On	 Heating Off

HEATING POWER

- 60W
- 120W
- 240W

The set heating power of the sensor corresponds to the actual required supply power. Please take this into account when selecting the power supply unit.

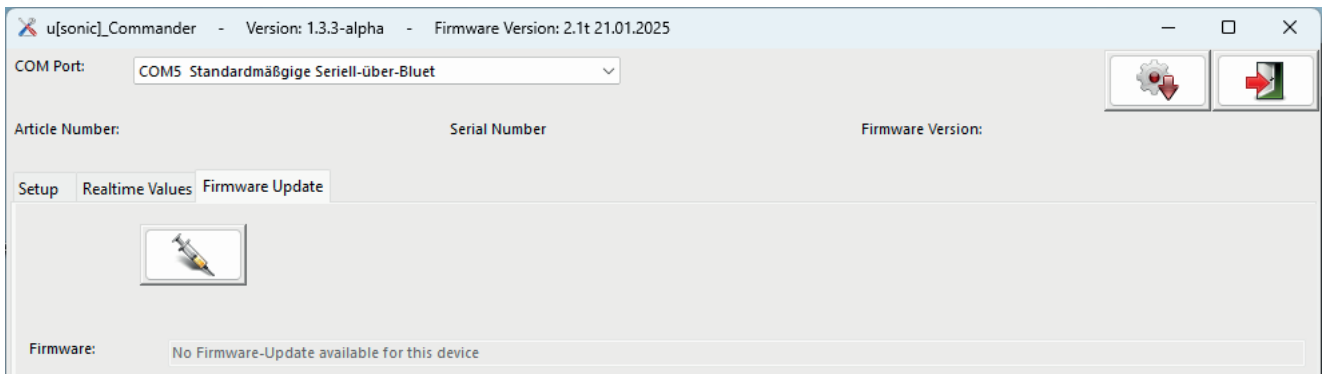
Firmware update

DOWNLOAD UPDATES

On our website (<https://www.lambrecht.net>), the **Free Software Tools & Firmware** category can be found under **Service** in the **Resources** section. There you can easily download the latest firmware and the configuration software “Commander” for your product and benefit from ongoing improvements and new features.

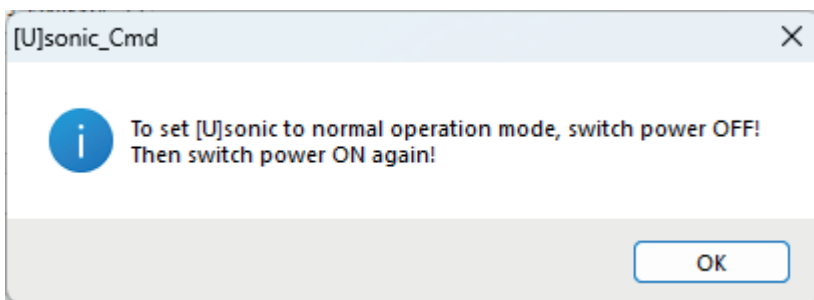
CONTROL ELEMENT FIRMWARE UPDATE

	Update u[sonic] Firmware
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! Do not interrupt the update process while the progress bar is running, and do not press any other buttons during this time! This is crucial for a successful firmware update.

1. Select the COM port to which the sensor is connected.
2. Press the „**Retrieve Configuration**“ button.
3. Follow the program’s instructions: Turn the sensor off and on again, and confirm the message **within 3 seconds**.



4. If a suitable update file is available in the Commander, it will be displayed in the field next to “Firmware:” once the connection has been established.
5. Pressing the “**Update u[sonic] Firmware**” button will load the new firmware onto the sensor.

! Never turn off the sensor during an update!

6. After a successful update, the new firmware is displayed next to the “Firmware version:” field.
7. Restart the sensor and check the configuration.