

LCC-S

Configuration software for transmitters



Table of Contents

1. INTRODUCTION.....	5
2. SOFTWARE INSTALLATION.....	5
2.1 Minimum system requirement.....	5
2.2 Software installation.....	5
3. START WITH THE SOFTWARE.....	6
3.1 Meaning and function of the menu bar.....	6
3.2 Meaning and function of the "Read" and "Load" buttons.....	6
4. READ THE TRANSMITTER.....	7
4.1 Class 110 and monostat transmitters.....	7
4.2 Classes 210-R and 310 transmitters.....	8
5. CONFIGURE THE DISPLAY AND THE KEYPAD (CLASSES 210-R AND 310 TRANSMITTERS).....	10
5.1 Configure the display.....	10
5.2 Activate or deactivate the keypad (class 210-R).....	10
5.3 Configure the keypad (class 310).....	10
5.3.1 Activate or deactivate the keypad.....	10
5.3.2 Change the password.....	10
5.3.3 Activate or deactivate the key beep.....	10
5.4 Modify the date and hour format (class 310).....	10
6. CONFIGURE THE MODBUS AND ETHERNET COMMUNICATIONS (CLASS 310 TRANSMITTERS).....	11
6.1 Configure the ModBus communication.....	11
6.2 Configure the Ethernet communication.....	11
7. SET THE CHANNELS AND THE UNITS OF MEASUREMENT.....	12
8. SET THE ALARMS (MONOSTATS AND CLASS 310 TRANSMITTERS).....	13
8.1 Monostats.....	13
8.2 Class 310 transmitters.....	14
8.3 Details of the alarm modes.....	15
9. SET THE INPUTS AND OUTPUTS (CLASSES 110, 210-R AND 310 TRANSMITTERS).....	16
9.1 Set the inputs and outputs for the classes 110 and 210-R transmitters.....	16
9.2 Set the inputs and outputs for the class 310 transmitters.....	17
9.3 Test the analogue outputs (classes 210-R and 310 transmitters).....	18
10. SET THE MEASUREMENT IN AIR VELOCITY AND AIRFLOW.....	19
10.1 Select the measuring means (CP210-R with SQR3 option, C310 and CA310 with pressure module and SQR3 option).....	19
10.2 Set the temperature compensation (CP210-R, C310 and CA310).....	20
10.3 Set the type of section (CP210-R, CTV210-R, C310 and CA310).....	20
11. CONFIGURE THE RELAYS.....	21
11.1 Class 210-R transmitters.....	21
11.2 C310 and CA310 transmitters.....	22
12. OTHERS SETTINGS.....	23
12.1 Class 210-R transmitters.....	23
12.1.1 Set the time-delay between self-calibrations (CP211-R and CP212-R).....	23
12.1.2 Pressure measurement integration (CP210-R and CTV210-R).....	23
12.2 Class 310 transmitters.....	24
12.2.1 Adjust the purge time.....	24
12.2.2 Select a normative value.....	24
12.2.3 Enter an integration.....	25
12.2.4 Adjust the delay-time between 2 auto-zeros.....	25
12.2.5 Enter a compensation.....	25
13. READ THE MEASUREMENTS IN REAL-TIME.....	26
14. ACTIVATE AN OPTION (CLASS 310 TRANSMITTERS).....	27
15. UPDATE THE SOFTWARE.....	27
16. SAVE AND LOAD A CONFIGURATION.....	28
16.1 Save the configuration.....	28
16.2 Load a configuration.....	28

1. INTRODUCTION

The LCC-S software, available as option with the classes 110, 210-R, 310 and monostats transmitters, allows to configure the transmitter, to view data in real time and to apply an offset.

2. SOFTWARE INSTALLATION

2.1 *Minimum system requirement*

For the proper operating of the software, the following configuration is strongly required:

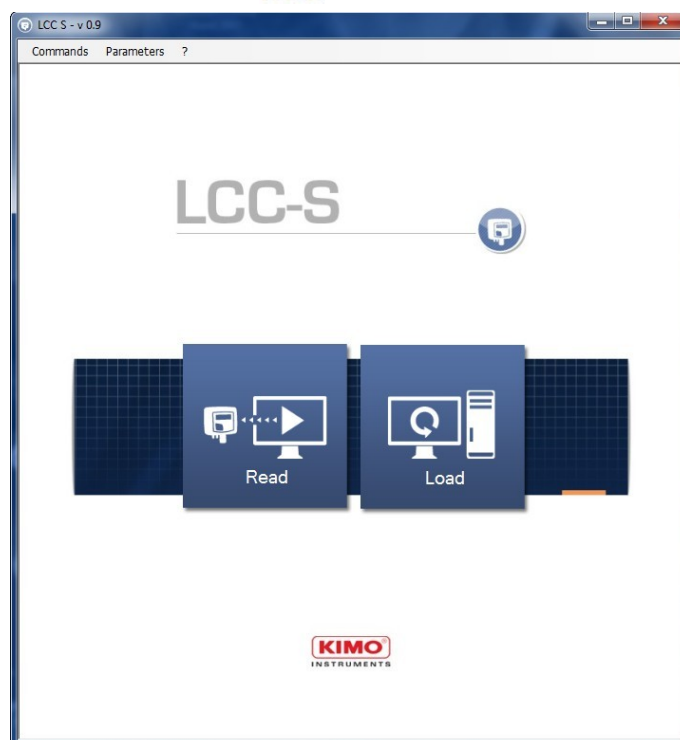
- **Minimum configuration:** Windows, XP, VISTA, 7
- **Communication port:** USB 2.0
- **DVD driver**
- **RAM memory:** 1 GB
- **Available free disk:** 1 GB

2.2 *Software installation*

- Put the DVD into the computer driver.
The installation starts automatically. If not, go to "Computer", double-click the DVD driver then on the "Setup LCC-S" icon.
- Follow the indications on the screen.

3. START WITH THE SOFTWARE

After double-clicking on the software launching icon  on the desktop, the homepage of the software opens:



3.1 Meaning and function of the menu bar

➤ Commands

- **Read configuration:** allows to read the configuration of the transmitter connected to the computer.
- **Write configuration:** allows to send the configuration to the transmitter.
- **Load configuration:** allows to recover a configuration previously saved on the computer.
- **Save configuration:** allows to save the configuration of the transmitter on the computer.
- **Correction:** allows to apply a correction (or offset) to the transmitter.
- **Bootloader:** allows to change the firmware version of the transmitter.
- **Exit:** allows to quit the LCC-S software.

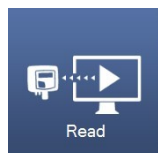
➤ Parameters

- **Communication:** allows to select the communication port.
- **Language:** allows to select the software language: French or English

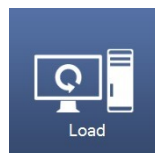
➤ ?

- **User manual:** allows to open the user manual
- **About:** shows the software version and the database version.

3.2 Meaning and function of the “Read” and “Load” buttons



This button allows to read the transmitter connected to the computer.



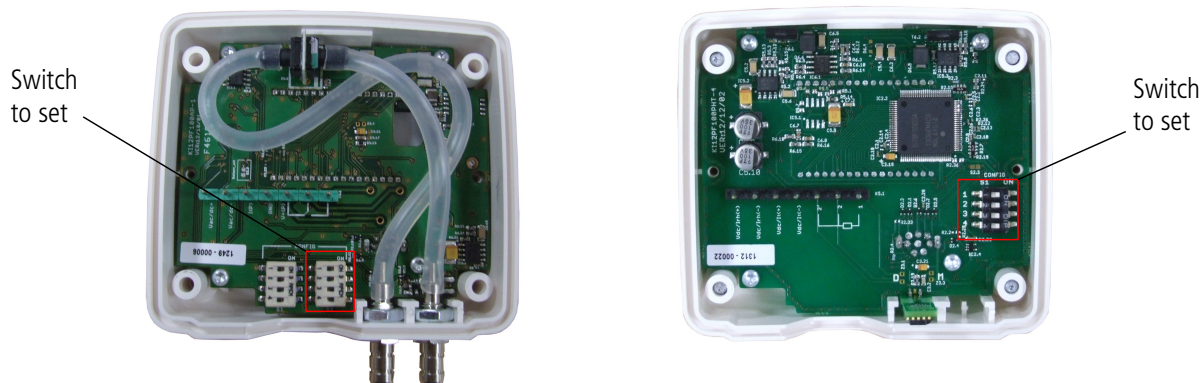
This buttons allows to load a configuration previously loaded on the computer.

4. READ THE TRANSMITTER

4.1 Class 110 and monostat transmitters

In order to the LCC-S software can correctly read a class 110 or a monostat transmitter, DIP switches of the transmitter must be positioned as follows:

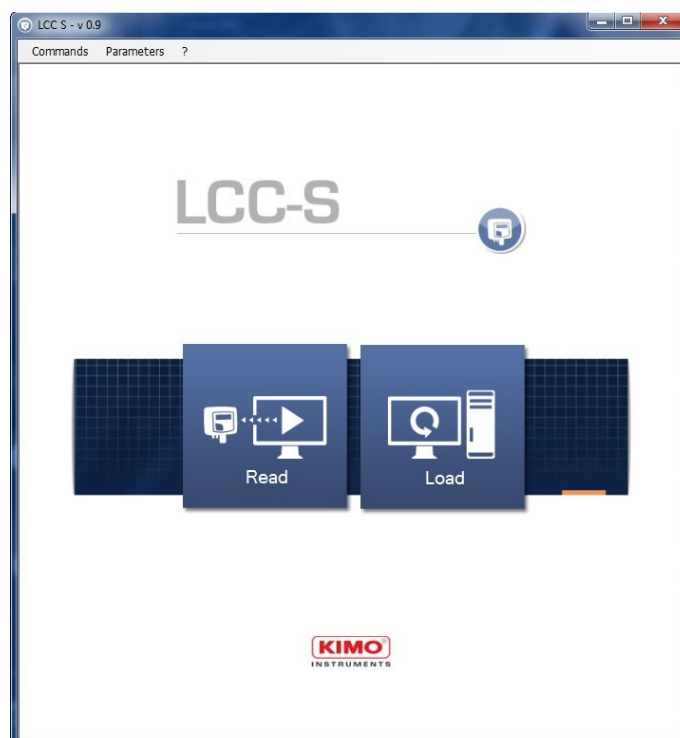
- If only one switch is on the electronic board, set the 4 DIP-switches on **"ON"** position, i.e. on the right.
- If two switches are on the electronic board, set the 4 DIP-switches of the **right switch** on **"ON"** position i.e. on the right.



The transmitter must be powered on.

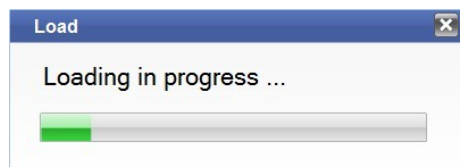
- Connect the mini-DIN connection of the cable on the front face of the transmitter.
- Connect the other end of the cable on the USB connection of the computer.
- Double-click the software icon on the desktop to launch the LCC-S.

The following window opens:

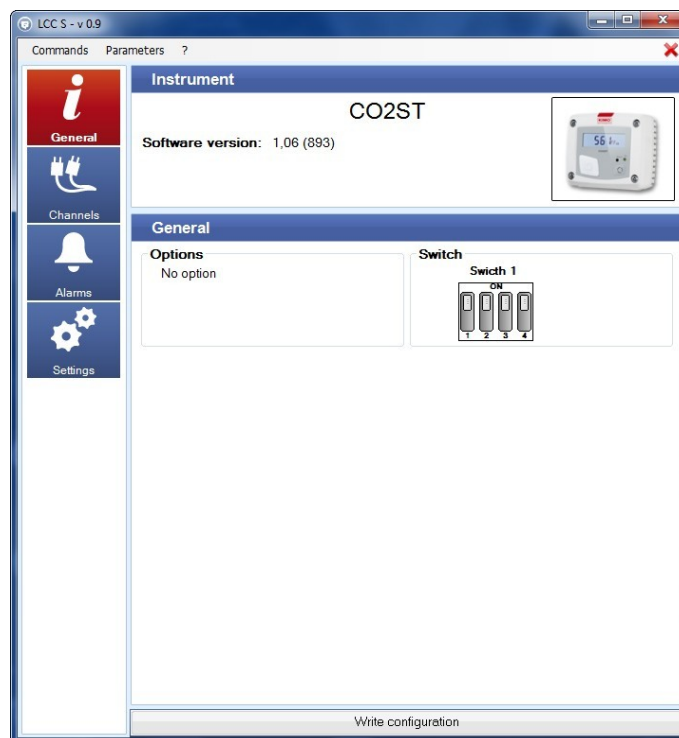


- Click **"Read"**.

The loading window opens:



At the end of the loading, the software opens the **"General"** panel:



This window presents the type of connected transmitter, the transmitter version, its possible options and the switches configuration.

4.2 Classes 210-R and 310 transmitters



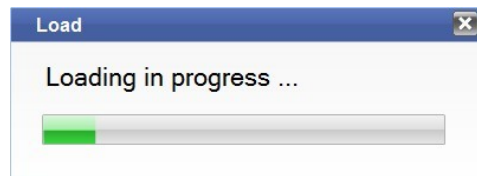
For the class 210-R transmitters, there is no switch configuration needed.
For the class 310 transmitters, there is no switch.

- Open the transmitter and connect the mini-DIN connection on the transmitter (see technical datasheet).
- Connect the other end of the cable on the USB connection of the computer.
- Double-click the software icon on the desktop to launch the LCC-S.

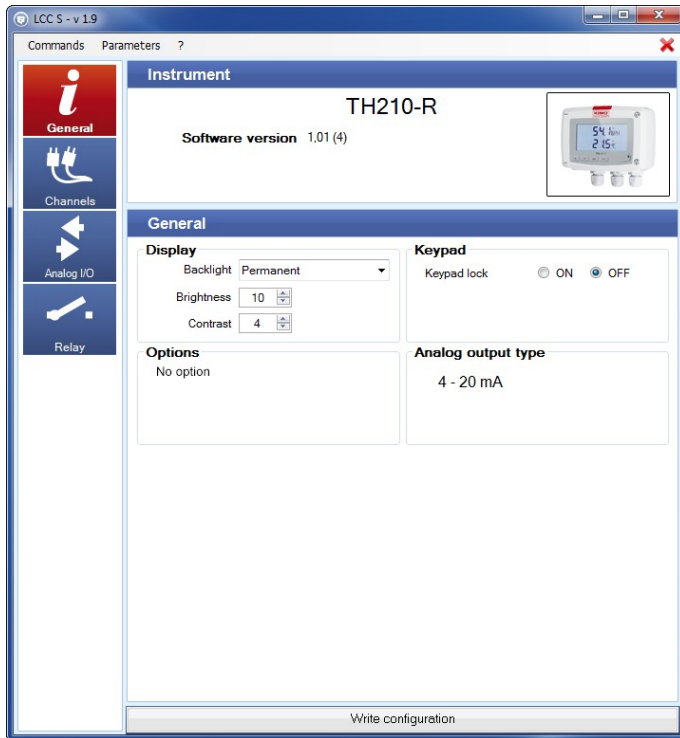
The following window opens:



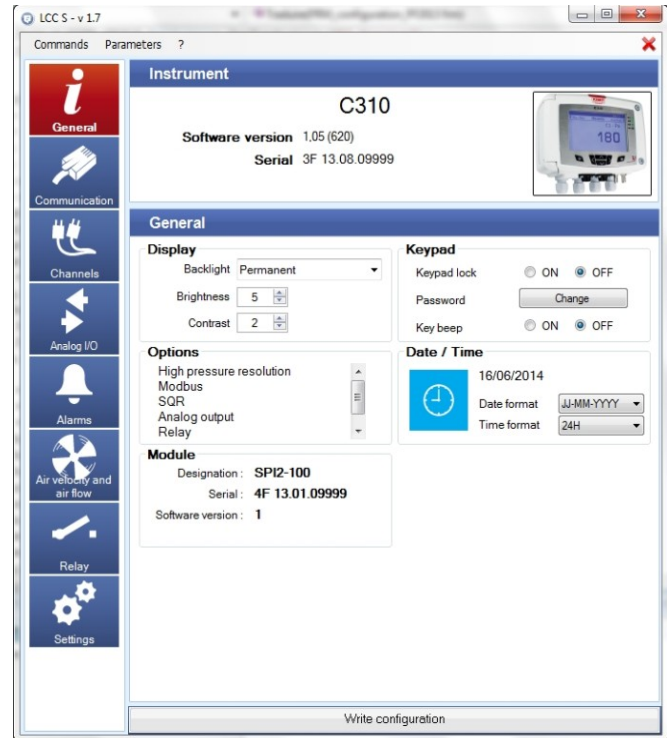
- Click **"Read"**.
The loading window opens:



At the end of the loading, the software opens the **"General"** panel:



"General" panel for a class 210-R transmitter



"General" panel for a class 310 transmitter

For a class 210-R transmitter, this window presents:

- the type of connected transmitter
- the transmitter version
- its possible options
- its display (if there is one)
- the **"On"** or **"Off"** mode of the keypad
- the type of output of the transmitter

For a class 310 transmitter, this window presents:

- the type of connected transmitter
- the transmitter version
- its possible options
- its display (if there is one)
- the settings of the keypad
- the date and hour

5. CONFIGURE THE DISPLAY AND THE KEYPAD (CLASSES 210-R AND 310 TRANSMITTERS)

5.1 Configure the display

On **"General"** panel, for classes 210-R and 310 transmitters with display, it is possible to set the backlight duration, the brightness and the contrast of the screen.

- Set the backlight: select the required duration between Off, 10 s, 30 s, 60 s, and Permanent.
- Set the brightness between 0 and 10.
- Set the contrast between 0 and 3.
- Click **"Write configuration"** on the bottom of the window to send the modifications to the transmitter.



5.2 Activate or deactivate the keypad (class 210-R)

For more safety and to avoid any operating error, it is possible to hold the keys of the transmitter.

- Select **"ON"** to deactivate the keys or **"OFF"** to activate them.
- Click **"Write configuration"** on the bottom of the window to send the modifications to the transmitter.



5.3 Configure the keypad (class 310)

5.3.1 Activate or deactivate the keypad

For more safety and to avoid any operating error, it is possible to hold the transmitter keys.

- Select **"ON"** to deactivate the keys or **"OFF"** to activate them.
- Click **"Write configuration"** at the bottom of the window to send the modifications to the transmitter.



5.3.2 Change the password

For more safety, the keypad of the class 310 transmitters is protected by a password.

- Click **"Modify"**.
- Enter a new password then click **"Validate"**.
- Click **"Write configuration"** at the bottom of the window to send the modifications to the transmitter.

5.3.3 Activate or deactivate the key beep

Tick **"ON"**: the key beep is activated.

- Tick **"OFF"**: the key beep is deactivated.
- Click **"Write configuration"** at the bottom of the window to send the modifications to the transmitter.



The key beep is unavailable on the CPE310-S transmitters.

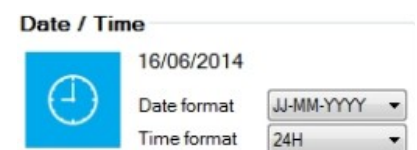
5.4 Modify the date and hour format (class 310)

Select the date format and the hour format.

Click **"Write configuration"** at the bottom of the window.



The date and the hour automatically synchronises with the computer.

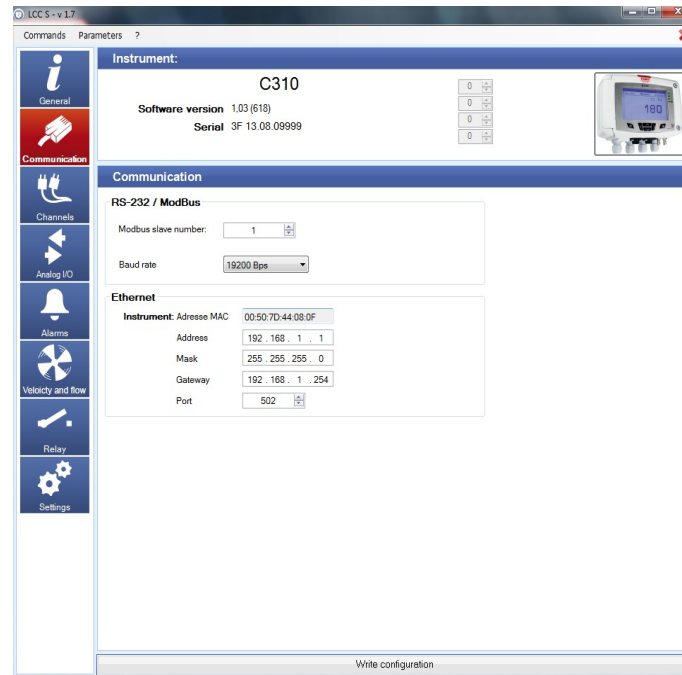


6. CONFIGURE THE MODBUS AND ETHERNET COMMUNICATIONS (CLASS 310 TRANSMITTERS)

6.1 Configure the ModBus communication

The ModBus is a RTU digital protocol with a configurable communication speed from 2 400 to 115 20 Bauds.

- Click "**Communication**".
The following window opens:



In the "**RS485 / ModBus**" part:

- Select the ModBus slave number.
- Adjust the communication speed from 19 200 to 115 200 bauds.
- Click "**Write configuration**" at the bottom of the window to send the modifications to the transmitter.

6.2 Configure the Ethernet communication

The Ethernet communication module allows the transmission, the supervision and the maintenance of the transmitters through an Ethernet network in 10 BASE-T and 100 BASE-TX LAN/WAN supporting the TCP/IP protocol.

In the "**Ethernet**" part:

- Enter the address, the mask, the gateway and the port.
This information is contained in the network characteristics to which will be connected the transmitter.
- Click "**Write configuration**" at the bottom of the window to send the modifications to the transmitter.



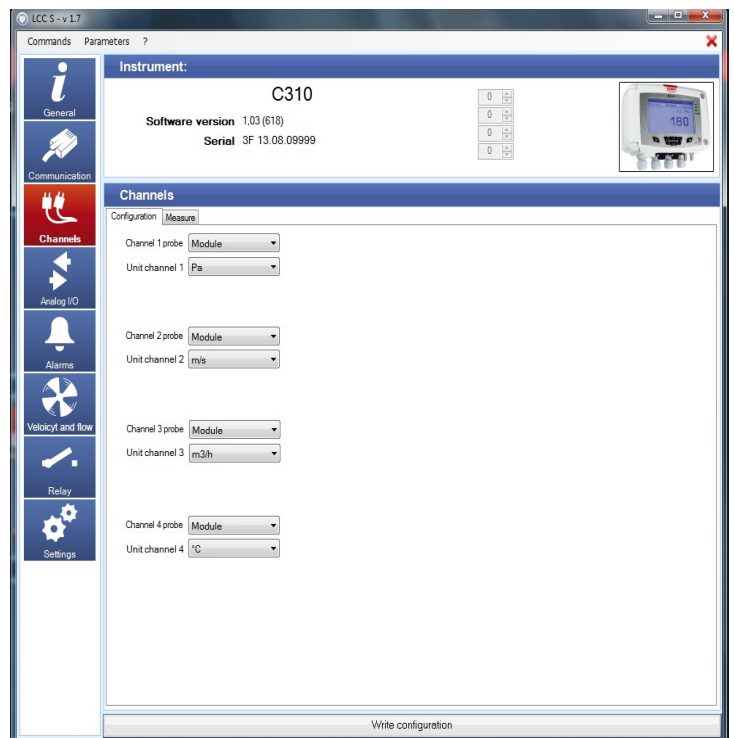
The Ethernet communication is not available on the CPE310-S.

7. SET THE CHANNELS AND THE UNITS OF MEASUREMENT

- Click **"Channel"**.
The following window opens.



Channels configuration classes 110, 210-R transmitters and monostats



Channels configuration class 310 transmitter

This part has two tabs:

- **"Configuration"** tab
- **"Measure"** tab (see page 26)

Classes 110, 210-R and Monostats:

- Click **"Configuration"** tab.
- Select in the drop-down list the measurement unit for the channel 1.
If the transmitter has several measurement channels, the others channels will be displayed with the available units for these channels.
- Click **"Write configuration"** on the bottom of the window to send the modifications to the transmitter.

Class 310: (unit)

- Click **"Configuration"** tab.
- Attribute **"Module"**, **"Probe 1"** or **"Probe 2"** for each available channel.
- Select **"None"** to attribute nothing to the channel.
- Then attribute a unit for each available channel.
- Click **"Write configuration"** at the bottom of the window to send the modifications to the transmitter.

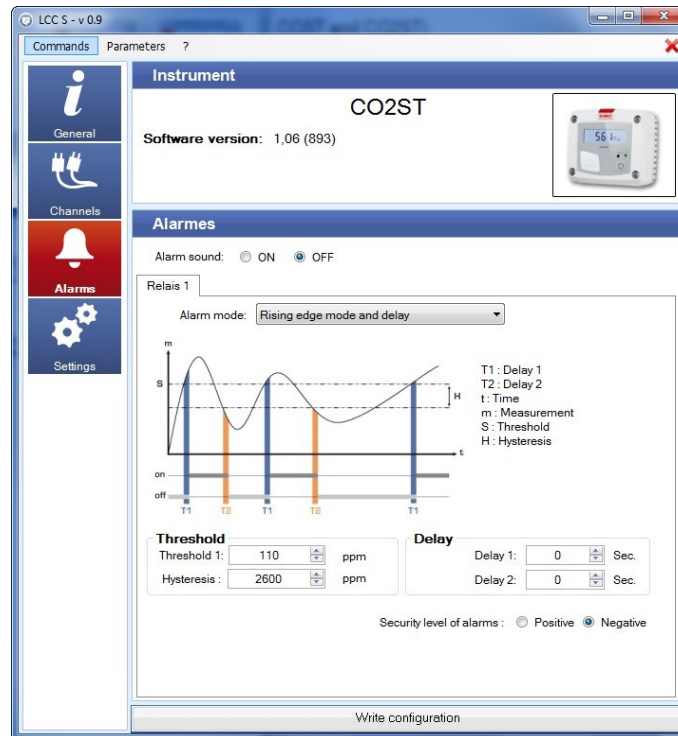
8. SET THE ALARMS (MONOSTATS AND CLASS 310 TRANSMITTERS)

This part is for the monostats (PST, HST, TST, COST and CO2ST), the classes 210-R (COT212-R, CP210-R, CTV210-R, TH210-R and TM210-R) and 310 (C310, CPE310-S and CA310) transmitters only.

8.1 Monostats

- Click **"Alarm"**.

The following window opens:



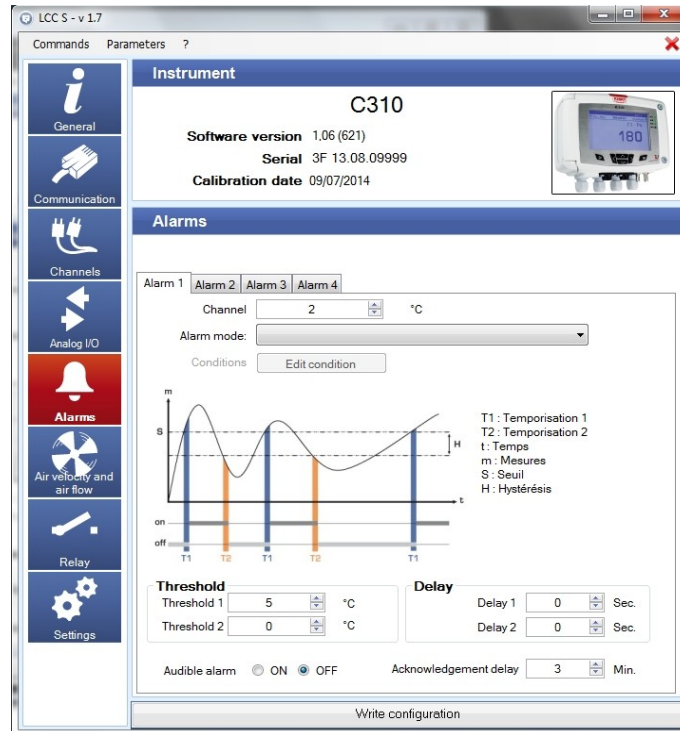
It is possible to activate or deactivate an alarm sound during an alarm condition:

- Select **"ON"** to activate the alarm sound or **"OFF"** to deactivate it in front of **"Alarm sound"**.
- Select in the drop-down list the alarm mode between:
 - **No alarm**
 - **"Rising edge mode and delay"**
 - **"Falling edge mode and delay"**
 - **"Control (threshold 1, threshold 2 and delay)"**
- Set the values for the threshold 1, the hysteresis and delays 1 and 2 for the **"Rising edge and delay"** and **"Falling edge and delay"** modes.
- OR
- Set the thresholds 1 and 2 and the delays 1 and 2 for the **"Control (threshold 1, threshold 2 and delay)"** mode.
- Click **"Write configuration"** on the bottom of the window to send the modifications to the transmitter.

8.2 Class 310 transmitters

- Click **"Alarms"**.

The following window opens:



- Click the tab of the required alarm.
- Select in the drop-down list the alarm mode between:
 - **No alarm**
 - **Rising edge mode and delay**
 - **Falling edge mode and delay**
 - **Control (Threshold 1, Threshold 2 and delay)**
 - **Sensor state**

If the **"Rising edge mode and delay"**, **"Falling edge mode and delay"** or **"Control (Threshold 1, Threshold 2 and delay)"** mode is selected:

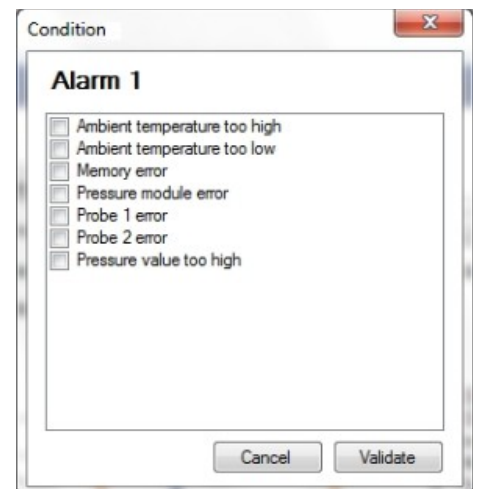
- Select the channel on which the alarm will be active.
- Adjust the values of the threshold 1, the hysteresis and the delays 1 and 2 for the modes **"Rising edge mode and delay"** and **"Falling edge mode and delay"**.
- OR
- Adjust the values of the thresholds 1 and 2 and the delays 1 and 2 for the mode **"Control (Threshold 1, Threshold 2 and delay)"**.
- Click **"Write configuration"** to send the modifications to the transmitter.

If the **"Sensor state"** is selected:

- Select the channel on which the alarm will be active.
- Click **"Edit conditions"**.
- The window of alarm conditions opens.*
- Tick the required conditions then click **"Validate"**.



It is possible to tick several alarm conditions.

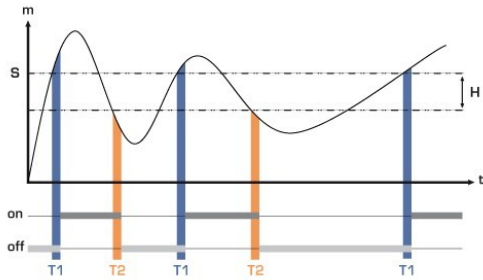


- Click **"Write configuration"** to send the modifications to the transmitter.

For all modes:

- Select **"ON"** or **"OFF"** to activate or not the audible alarm: if **"ON"** is selected, a sound will be heard as soon as the transmitter is in alarm state.
- Select the alarm acknowledgement duration between 0 and 60 minutes: the audible alarm, if it is activated, turns off and the displayed value blinks during the acknowledgement duration (from 0 to 60 minutes). At the end of the acknowledgement duration, if the transmitter is still in alarm state, the audible alarm is reactivated.

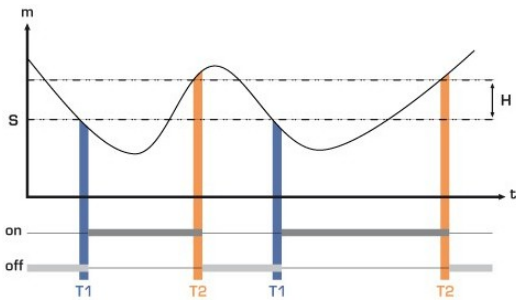
8.3 Details of the alarm modes



Rising edge

Measurement (m) > Threshold (S) during the time-delay $T1$ → alarm activation.

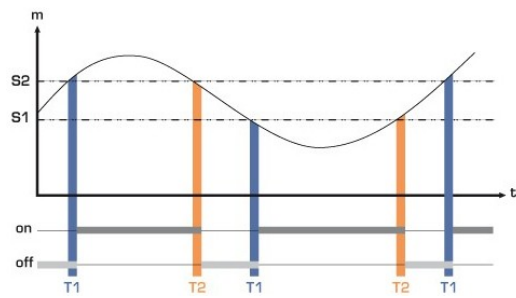
Measurement (m) < Threshold (S) - Hysteresis (H) during the time-delay $T2$ → Alarm deactivation



Falling edge

Measurement (m) < Threshold (S) during time-delay $T1$ → Alarm activation

Measurement (m) > Threshold (S) + Hysteresis (H) during time-delay $T2$ → Alarm deactivation



Monitoring

The alarm goes off when the measurement is outside the low and high thresholds.

9. SET THE INPUTS AND OUTPUTS (CLASSES 110, 210-R AND 310 TRANSMITTERS)

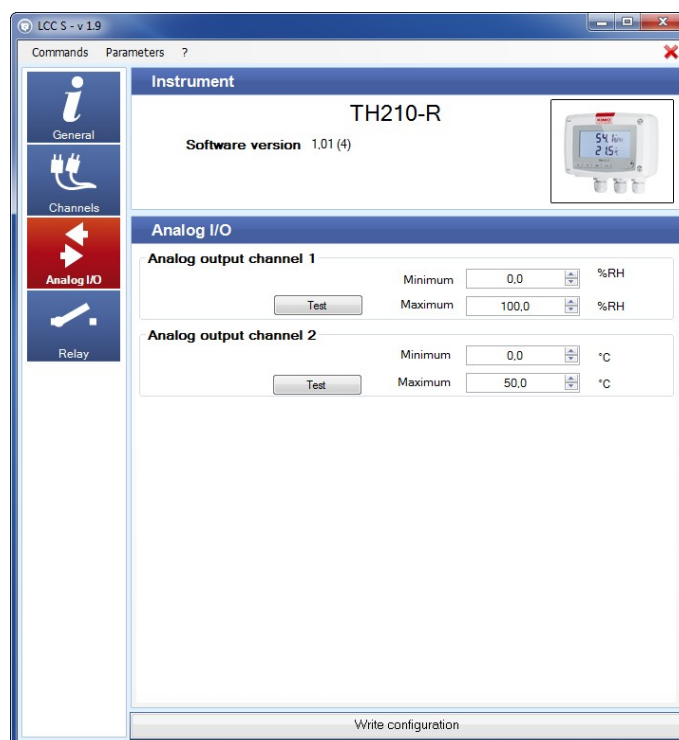
With this function, it is possible to modify the outputs ranges of the transmitter, **you can configure your own intermediary ranges**.



The configuration of the inputs and outputs is for classes 110, 210-R and 310 transmitters only.

9.1 Set the inputs and outputs for the classes 110 and 210-R transmitters

- Click **"Analogue I/O"**.
The following window opens.

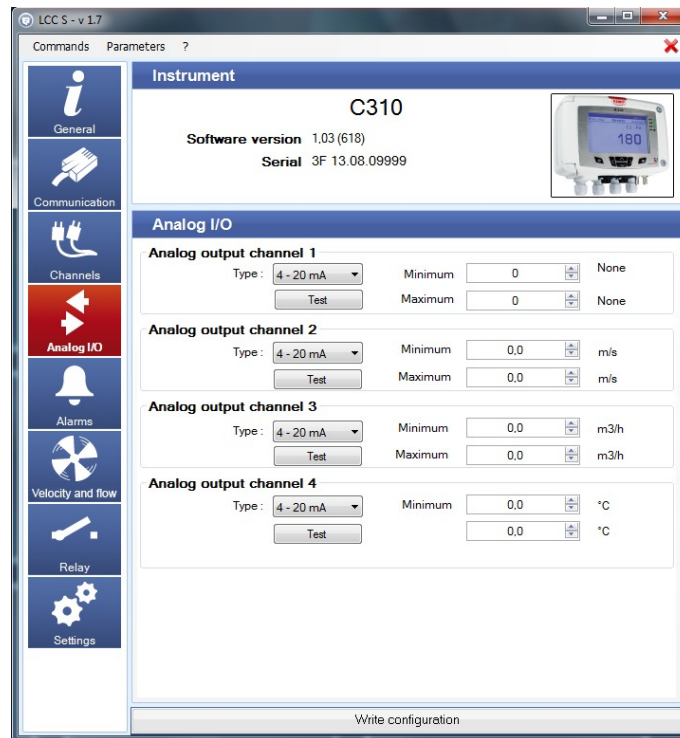


- Enter the minimum and the maximum for each analogue output.
- Click **"Write configuration"** on the bottom of the window to send the modifications to the transmitter.

9.2 Set the inputs and outputs for the class 310 transmitters

- Click "Analogue I/O".

The following window opens:



- Select the type of output: 4-20 mA, 0-20 mA, 0-10 V, 0-5 V.
- Adjust the minimum and the maximum for each analogue output.
- Click "**Write configuration**" at the bottom of the window to send the modifications to the transmitter.



The inputs are available only on the CA310 with the MVA module.

9.3 Test the analogue outputs (classes 210-R and 310 transmitters)

Once the configuration of outputs and inputs has been performed, it is possible to test them with an external measurement device.

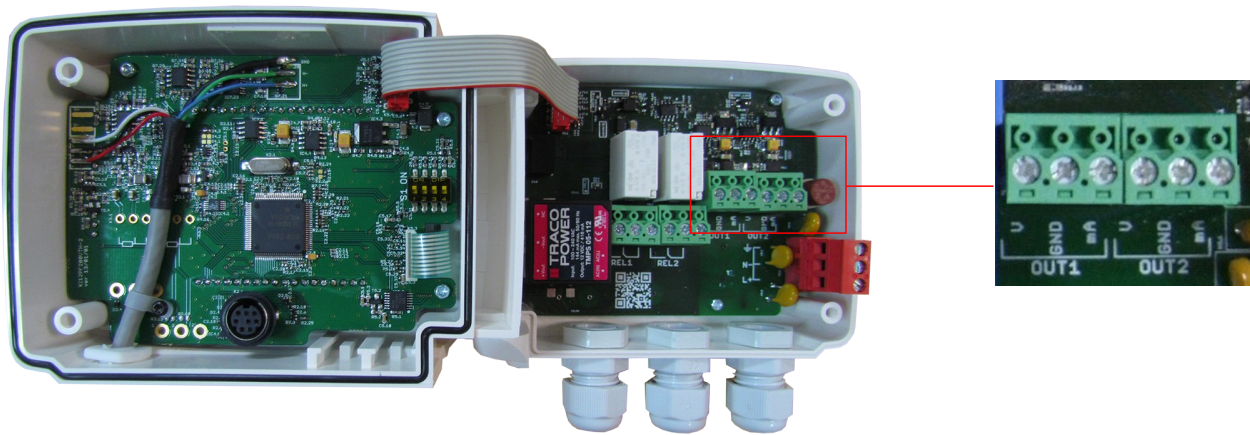
i This test is available for the class 210-R transmitters only.

This test allows to check on a multimeter, a regulator or an automate, the proper functioning of the outputs. The transmitter will generate a voltage (between 0 and 10 V) or a current (between 0 and 20 mA) according the setting of the electronic board switch.

- For a 0-10 V output signal, the transmitter will generate 0 – 5 or 10 V.
- For a 0-5 V output signal, the transmitter will generate 0 – 2.5 or 5 V.
- For a 4-20 mA output signal, the transmitter will generate 4 – 12 or 20 mA.
- For a 0-20 mA output signal, the transmitter will generate 0 – 10 or 20 mA.

i Before trying to perform an outputs diagnostic, check that connections and configurations of the transmitter are operational to avoid any damage on the transmitter and on the external device.

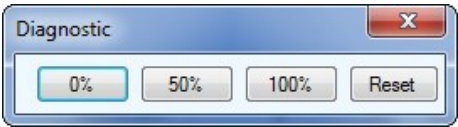
- Select a channel for the outputs diagnostic.
- *OUT1 or OUT2, indicated on the electronic board above the terminal blocks (see photos above).*



- Connect a measurement device on the channel 1 or 2.

Once the connection is done, it is possible to diagnose the analogue outputs on several checkpoints:

- Click **"Test"** on the **"Analogue I/O"** window.
The following window opens:



- Click **0%, 50%, 100%** or **Reset**.

Diagnostic button	Generation according to the output signal			
	0-10 V	0-5 V	0-20 mA	4-20 mA
Reset	Back to measurement mode			
0%	0 V	0 V	0 mA	4 mA
50%	5 V	2.5 V	10 mA	12 mA
100%	10 V	5 V	20 mA	20 mA

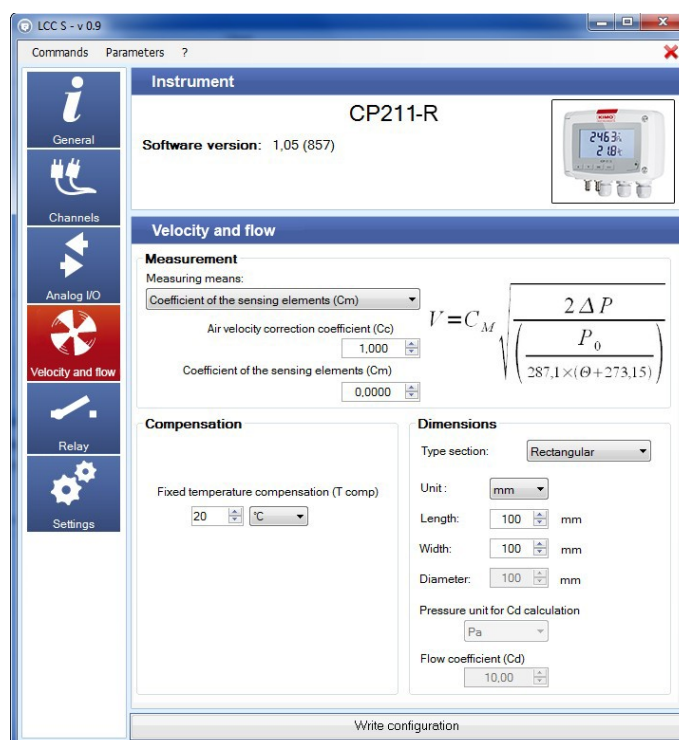
10. SET THE MEASUREMENT IN AIR VELOCITY AND AIRFLOW

This setting only concerns the CP210-R and CTV210-R transmitters and the class 310 transmitters with a pressure module or a velocity probe available in option.

10.1 Select the measuring means (CP210-R with SQR3 option, C310 and CA310 with pressure module and SQR3 option)

The calculation of air velocity being calculated from the pressure (for a CP 210-R transmitter and a class 310 transmitter) and from a differential pressure element, the used differential pressure element must be selected to perform the measurements. The coefficient of this element and the air velocity correction coefficient must be then entered.

- Click **"Velocity and flow"**.
The following window opens:



In **"Measurement"** part:

- Select the measuring means between:
 - Pitot L
 - Pitot S
 - Debimo
 - Coefficient of the sensing element (Cm)
- Enter the air velocity correction coefficient (Cc) if needed.
This coefficient must be between 0.0000 and 9.9999.
- If **"Coefficient of the sensing element (Cm)"** has been selected as measuring means, enter its coefficient.

 According to the selected type of section, the air velocity calculation formula is indicated in **"Measurement"** part. Scroll your mouse over it to have more information about the formula.

10.2 Set the temperature compensation (CP210-R, C310 and CA310)

It is possible to modify the temperature compensation value. Indeed, the air velocity and the airflow measured with a Pitot tube and/or Debimo blades (or with any other differential probe) depends on the operating temperature. Therefore, it is necessary to enter the operating temperature in order to get more coherent results.

In **"Compensation"** part:

- Select the unit (°C or °F)
- Enter the temperature compensation value.

10.3 Set the type of section (CP210-R, CTV210-R, C310 and CA310)

In **"Dimensions"** part of the **"Velocity and flow"** panel:

- Select the type of section: circular, rectangular or flow coefficient.
 - Select the unit for a rectangular section: mm or inch
 - Enter the dimensions:
 - Length and width for a rectangular section.
 - Diameter for a circular section.
- OR
- Enter the Cd value for a flow coefficient.
 - Click **"Write configuration"** on the bottom of the window to send the modifications to the transmitter.

11. CONFIGURE THE RELAYS

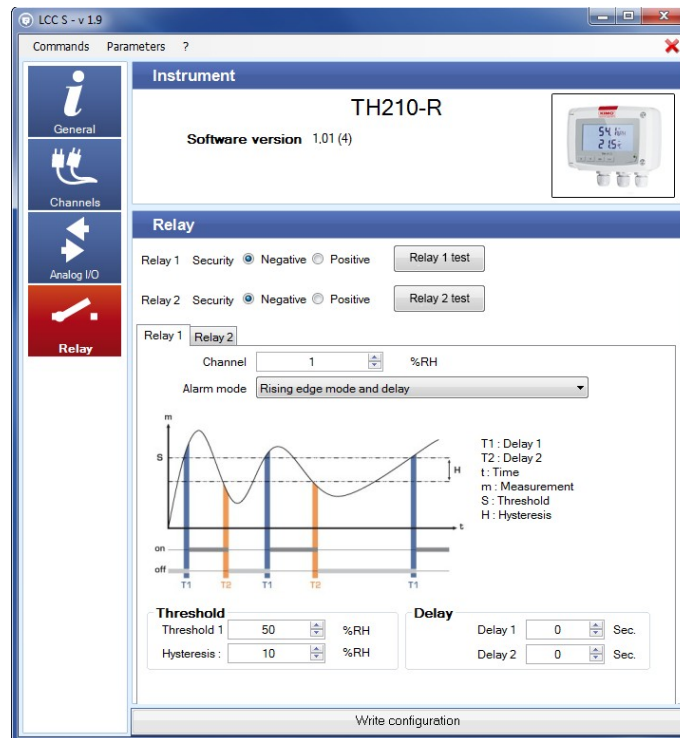
The relay outputs are, by default, in **negative security**: the relay is **energised** during an alarm condition. Via the software, it is possible to configure the relays in **positive security**: the relay is **de-energised** during an alarm condition or a power cut.

11.1 Class 210-R transmitters

- Click **"Relay"**.
- Select **"Positive"** or **"Negative"**.

To perform a relay test:

- Click **"Relay test 1 or 2"**: the relay switch then returns to its normal state after 1 second.
- Click the tab of the required relay.
- Select in the drop-down list the alarm mode between:
 - **No alarm**
 - **Rising edge mode and delay**
 - **Falling edge mode and delay**
 - **Control (Threshold 1, Threshold 2 and delay)**



If the **"Rising edge mode and delay"**, **"Falling edge mode and delay"** or **"Control (Threshold 1, Threshold 2 and delay)"** mode is selected:

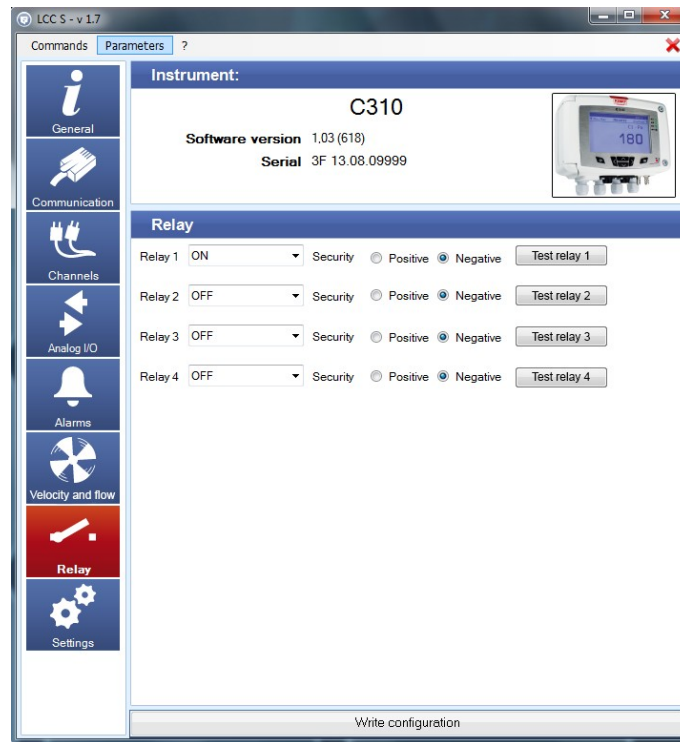
- Select the channel on which the alarm will be active.
 - Adjust the values of the threshold 1, the hysteresis and the delays 1 and 2 for the modes **"Rising edge mode and delay"** and **"Falling edge mode and delay"**.
- OR
- Adjust the values of the thresholds 1 and 2 and the delays 1 and 2 for the mode **"Control (Threshold 1, Threshold 2 and delay)"**.
 - Click **"Write configuration"** to send the modifications to the transmitter.

See details about alarm modes page 15.

11.2 C310 and CA310 transmitters

- Click **"Relay"**.

The following window opens:



- Select **"ON"**, **"OFF"** or **"Alarm 1, 2, 3, 4"** in the list of the required relay.
 - **"ON"** is selected: the relay is permanently activated.
 - **"OFF"** is selected: the relay is deactivated.
 - **"Alarm 1, 2, 3 or 4"** is selected: the relay triggering is assigned to an alarm previously configured.
- Select **"Positive"** or **"Negative"**.



To activate the relay in function of alarms, these latter must be fully configured.

To perform a relay test:

- Click **"Relay test 1, 2, 3 or 4"**: the relay switch then returns to its normal state after 1 second.

12. OTHERS SETTINGS

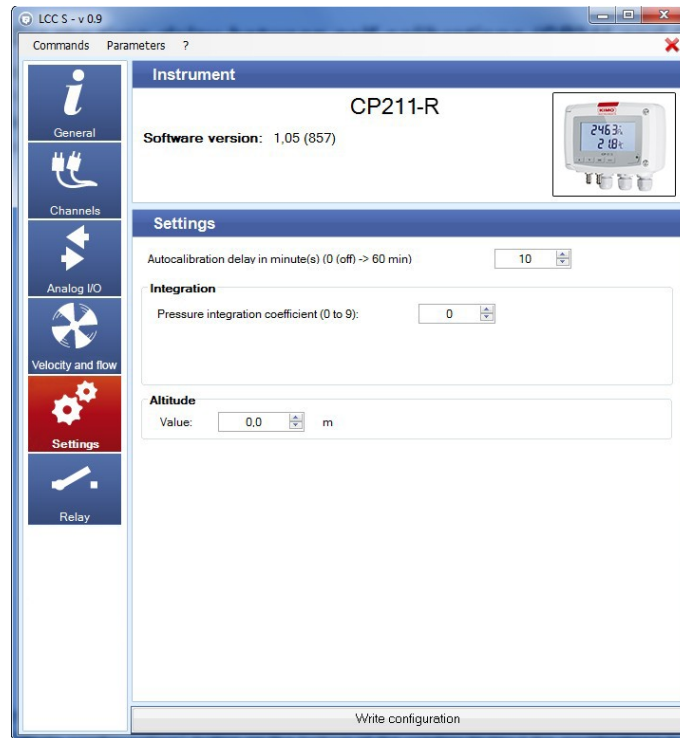
12.1 Class 210-R transmitters

12.1.1 Set the time-delay between self-calibrations (CP211-R and CP212-R)

For pressure transmitters having a self-calibration solenoid valve (CP211-R and CP212-R), it is possible to set an interval between two self-calibrations.

- Press **"Settings"**.

The following window opens:



- Set the time-delay in minute from 0 (Off, no time-delay) to 60 minutes.
- Click **"Write configuration"** on the bottom of the window to send the modifications to the transmitter.

12.1.2 Pressure measurement integration (CP210-R and CTV210-R)

The pressure measurement element is very sensitive and reacts to pressure changes. When making measurements in unstable air movement conditions, the pressure measurement may fluctuate. The integration coefficient (from 0 to 9) makes an average of the measurements; this helps to avoid any excessive variations and guarantees a stable measurement.

New displayed value = $(((10 - \text{Coef.}) \times \text{New value}) + (\text{Coef.} \times \text{Old value})) / 10$

Example: CP212 (0-1000 Pa) – First measurement: 120 Pa – New measurement: 125 Pa

The pressure source is stable, the user applies a low integration. Integration: 1, maximum variation allowed ± 10 Pa. The variation is less than 10 Pa, we apply the integration calculation formula.

Next measurement displayed: $((9 \times 125) + (1 \times 120)) / 10 = 124.5$ i.e 124 Pa. If the new value had been 131 Pa, the next displayed value would have been 100% of the new value, i.e 131 Pa.

Still in the **"Settings"** panel:

- Set the integration value between 0 and 9 with:
 - **Coefficient 0:** no integration, important fluctuation of the displayed measurement, fast response time.
 - **Coefficient 9:** maximum integration, more stable reading, slowest response time.
- Click **"Write configuration"** on the bottom of the window to send the modifications to the transmitter.

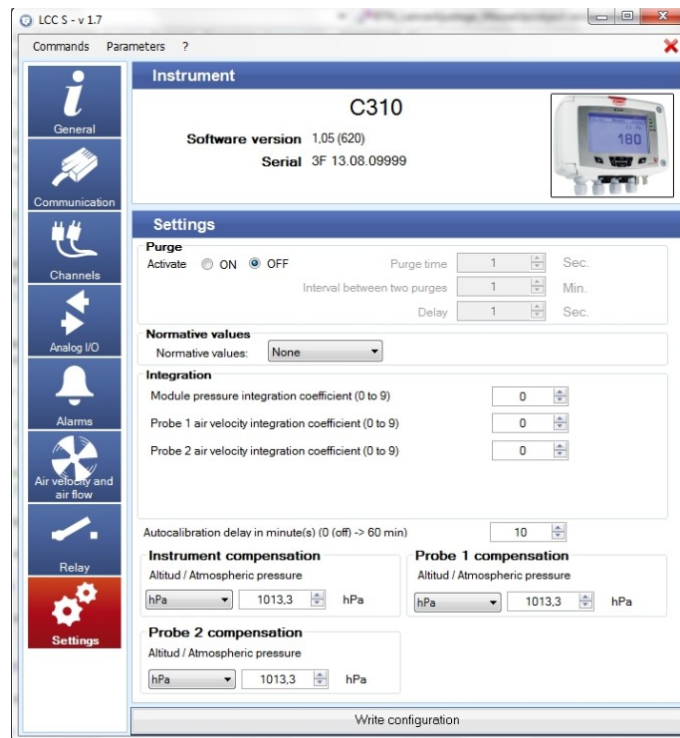
12.2 Class 310 transmitters

12.2.1 Adjust the purge time

The purge mode allows to freeze the measurement in the display, block the analogue outputs and activate the relay 1 in order to command a collecting system of an aeraulic network and activate the relay 2 in order to isolate the transmitter.

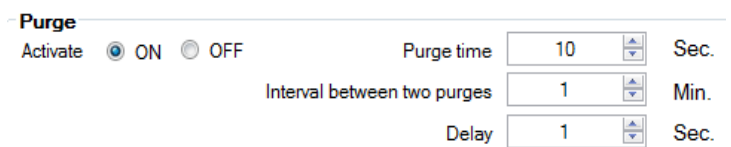
- Click **"Settings"**.

The following window opens:



In the **"Purge"** part:

- Select **"ON"** to activate the purge mode.
- Adjust the purge time between 0 and 100 seconds.
- Adjust the interval between two purges between 0 and 100 minutes.
- Adjust the delay between 0 and 100 seconds.
- Click **"Write configuration"** at the bottom of the window to send the modifications to the transmitter.

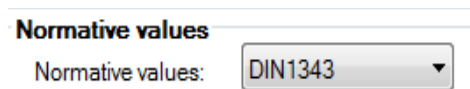


12.2.2 Select a normative value

It is possible to select a standard, which allows to bring back the measured values to the measured values in normal environmental conditions.

In the **"Normative values"** part:

- Select in the drop-down list:
 - DIN1343
 - ISO2533
- Click **"Write configuration"** at the bottom of the window to send the modifications to the transmitter.



12.2.3 Enter an integration

It is possible to enter an integration coefficient allowing to smooth the measurement and thus to avoid the untimely variations. The concerned settings are the pressure and the velocity.

Integration	
Module pressure integration coefficient (0 to 9)	0
Probe 1 speed integration coefficient (0 to 9)	0
Probe 2 speed integration coefficient (0 to 9)	0

In the **"Integration"** part:

- Select the integration coefficient in pressure between 0 and 9. A pressure module must be connected to the transmitter.
- Select the integration coefficient in velocity between 0 and 9. A velocity probe must be connected to the location 1 or 2 of the transmitter.
- Click **"Write configuration"** at the bottom of the window to send the modification to the transmitter.



Coefficient 0: no integration

Coefficient 9: maximum integration, reading more stable.

12.2.4 Adjust the delay-time between 2 auto-zeros

- Enter a value between 0 and 60 minutes on the line **"Delay-time between 2 auto-zeros in minute(s) (from 0 to 60 min)"**.
- Click **"Write configuration"** at the bottom of the window to send the modifications to the transmitter.



Delay-time 0: no auto-calibration.

Delay-time 60: maximum deviation between 2 auto-calibrations (60 minutes).

12.2.5 Enter a compensation

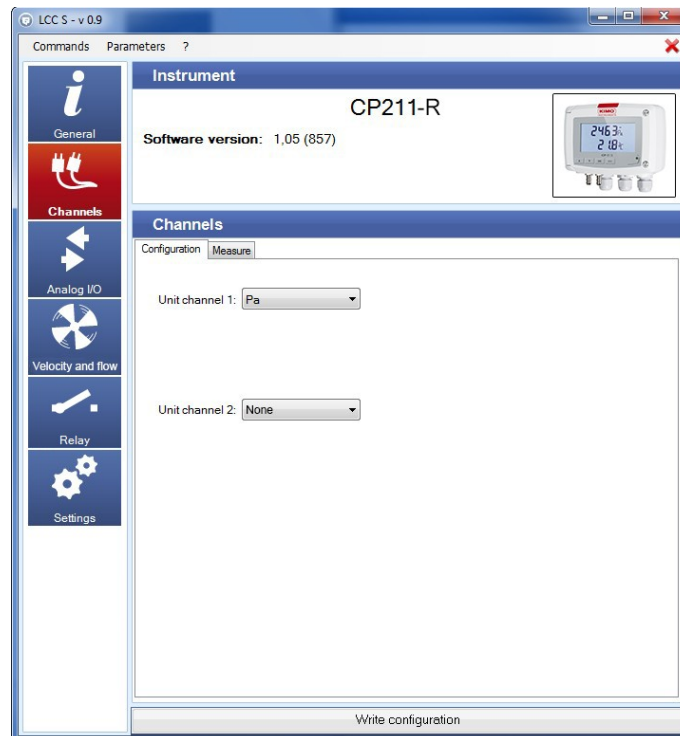
It is possible to enter a compensation in altitude or in atmospheric pressure on the device with the connected probes.

In the **"Compensation device"** part and/or **"Compensation probe 1"** and/or **"Compensation probe 2"**:

- Select the unit in pressure (hPa, mbar or mmHg), or in altitude (m).
- Enter a value of atmospheric pressure or altitude.
- Click **"Write configuration"** at the bottom of the window to send the modification to the transmitter.

13. READ THE MEASUREMENTS IN REAL-TIME

- Click **"Channels"**.
The following window opens:



This part has two tabs:

- **"Configuration"** tab.
- **"Measure"** tab.

- Click **"Measure"** tab.
The following window opens:

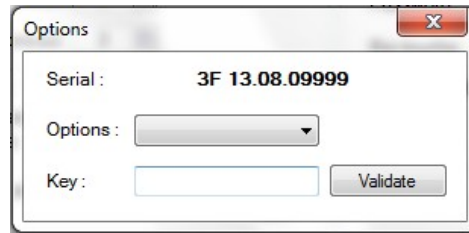


- Click **"Play"** 
Measured values are displayed in front of the channel number.
- Tick **"Graph"** or **"Table"** box in **"History"** part to select the visualisation mode of the values.

14. ACTIVATE AN OPTION (CLASS 310 TRANSMITTERS)

The class 310 transmitters have options that are activated with the software. Beforehand, it is imperative to obtain from Kimo a key allowing to activate the required option.

- Click "**Commands**" menu then "**Options**".



- Enter the key provided by the company.
- Click "**Validate**".

The available options are as follows:

- **C 310:** Velocity/airflow (from the pressure measurement) – High resolution in pressure – ModBus – Two additional analogue outputs – Relay – Ethernet
- **CPE 310-S:** High resolution in pressure – Modbus
- **CA 310:** Velocity/airflow (from the pressure measurement) – High resolution in pressure – ModBus – Ethernet

15. UPDATE THE SOFTWARE

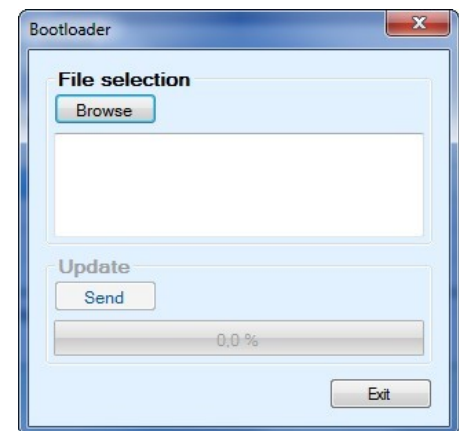
It is possible to update the firmware of the transmitter, it means the internal software that allows to the transmitter to work properly.

The transmitter is connected to the computer.

- Click "**Commands**".
- Click "**Bootloader**".
- The "**Bootloader**" window opens.*
- Click "**Browse**".
- Go to the location where the update file is.



This file is supplied by the Kimo After-sales service.



16. SAVE AND LOAD A CONFIGURATION

When a transmitter has been configured according to the desired criterion, it is possible to save this configuration and then apply it to another transmitter.

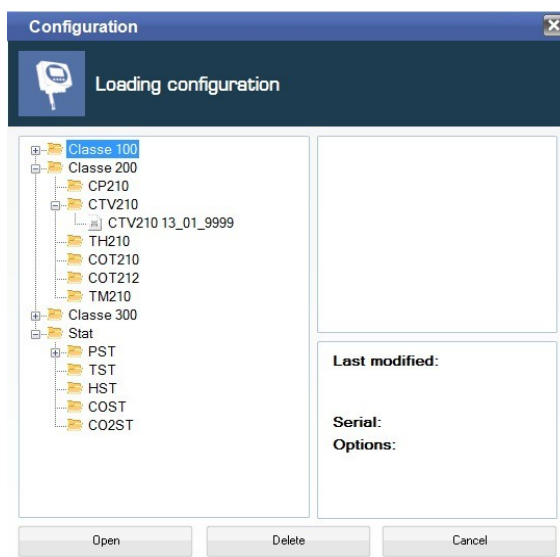
16.1 Save the configuration

- Click **"Commands"** menu.
- Click **"Save configuration"**.

16.2 Load a configuration

- Click **"Commands"** menu.
- Click **"Load configuration"**.

The following window opens:



- Click **"+"** sign of the directory where the desired configuration is saved.
- Click the configuration to load on the transmitter.
- Click **"Open"**.

A loading window opens with a progress bar opens and disappears when the configuration has been completely loaded on the transmitter.



Configuration files are saved in the computer in the following location:
C:\Users\Public\Documents\KIMO Instruments\LCC S\Device configuration



Export Department

Tel.: +33 (0)1 60 06 69 25

Fax: +33 (0)1 60 06 69 29

Email: export@kimo.fr

www.kimo.fr

Distributed by: