New

LCC-100 software

User manual

Configuration software
for Monostats - Class 50 and 100

units - ranges - relays - set points
time-delay - outputs - channels

Summary

I - Minimum system requirements

I 1 - Minimum system requirements:
- Pentium II 300 MHz - 32 MB RAM
- CD-Rom drive
- Windows 98-NT4-XP
- 20 MB free on hard disk
- Minimum resolution 800x600 (1024x 768 recommended)
- Serial communication port (RS232)
- Internet Explorer 6.0 or better

I 2 - Installing the software :
Insert the CD into the CD-ROM driver. The Kimo welcome window appears automatically.

If the installation does not automatically begin, click Start and click Run. In the Run dialog box, type : d:\detup (d is the letter of your CD-Rom drive) then click OK.

I 3 - Uninstalling the software:
To uninstall the *"LCC100"*, it is required to have the rights (under NT) and to use the Windows tool:
- Go to the menu "Run", "Parameters", "Control panel", then "Install/Uninstall programms ".
- In the field « Installation/Uninstallation », click on "KIMO LCC100" and follow the instructions.

I 4 - Launching the software:
To run the LCC application:

- Click on the icon from your desktop

OR
- Click on Start / Programs and LCC 100.

II - Connecting the transmitter

II 1 - Warnings:

Position of the DIP switches to access the configuration via software

for the vertical DIP switch

Configurations	Software
Combinations	1 ▉▢ 2 ▉▢ 3 ▉▢ 4 ▉▢

for the horizontal DIP switch

Configurations	Software
Combinations	▉▉▉▉ 1 2 3 4

⚠ On the pressure transmitters type CP 50 and CP 100, the first on-off switch of the DIP switch 1 (vertical) enables to select the type of signal of the analog output (between 0-10 V and 4-20 mA).

To access the configuration via software, the on-off switch can be in any position.

- **By positioning the DIP switches as shown beside:**
  You may access the configuration via software.

- **If the DIP switches are wrongly positioned:**
  The following message will appear when starting the LCC-100 programm:

In that case, you will not be able to configure the measuring ranges, the units and the offset of the transmitter.

However, you will be able to access to the initial configuration (set with the DIP switch), and to modify the information relative to the alarms (for the PST, HST and TST).

To position correctly the DIP switches:
- unplug the cable transmitter to the PC
- power off the transmitter, set the proper switches as shown beside and re-power the transmitter.
- connect to the computer.

⚠ *Caution*

- Before connecting the transmitter to the PC, you must power up the transmitter and any devices connected to it.
- When the transmitter is configured via software, please unplug the PC connection cable, before powering off the transmitter.
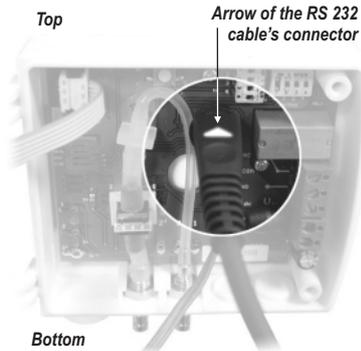
II 2 - Connections:

To read and modify the configuration of a transmitter, please follow the instructions as below:

- **Step 1 :** power up the transmitter (see drawing)
- **Step 2 :** please wait a few seconds (time required for the transmitter to initialize).
- **Step 3 :** connect the transmitter to the PC with the RS 232 cable.

Power supply

power supply terminal block

Rs232 cable

USB cord for convertor connection

connection to PC

connection to transmitter
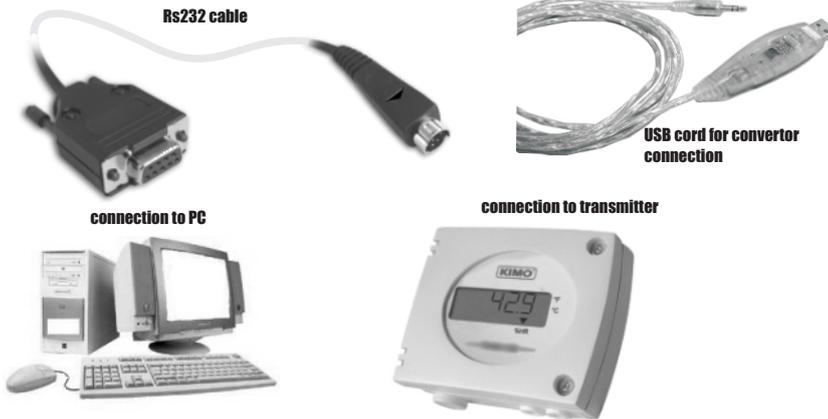
⚠ Caution

Before connecting the RS 232cable to the transmitter, please check that the arrow (see below) is positioned upward of the transmitter. If not, you will damage the connections (foolproofing system).

Top

Arrow of the RS 232 cable's connector

Bottom

You can connect the transmitter to the PC before or after the launch of the software.
- If you make the connection BEFORE launching the software, the message shown beside will appear when you start the LCC-100.

Please click on "YES" and you will directly access the configuration parameters of the transmitter (see page 4).
- If you first launch the software (before the connection of the transmitter), you access to the 2 main menus of the LCC-100:

- Read configuration.
- Open configuration from database

LCC 100

? Read configuration from transmitter ?
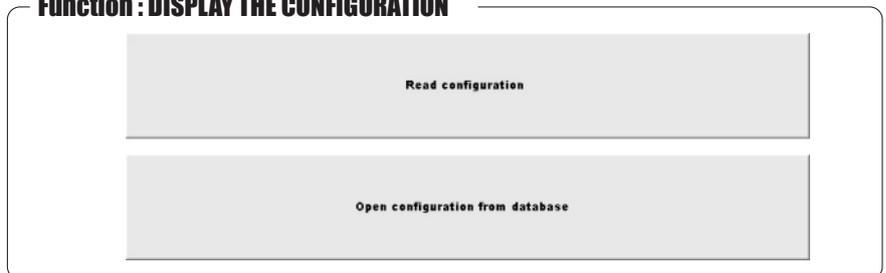
Oui   Non
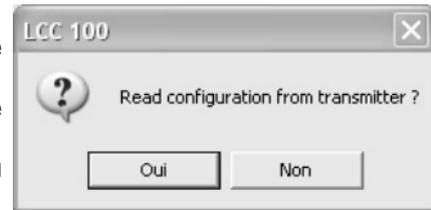
⚠ Caution

CO-P and CORD-P converters must be recognized so install USB driver present on the CD.

III - Displaying and modifying the configuration

Function : DISPLAY THE CONFIGURATION

When you open the software LCC-100, 2 buttons appear:

- Read configuration.
- Open configuration from database

Read configuration

Open configuration from database

III 1 - Principle :

Using the function "Read configuration" you may access the configuration of the transmitter.
Then, you can read, modify and save the configuration of the transmitter.
A new configuration can be transferred to the transmitter and/or saved in a database (for a later use).
Some parameters can be modified from the software, others can only be read.

Display
  Modification

GENERAL DATA
☑☐ Description of the transmitter.
☑☐ Version of the software
☑☐ Type of analog output .
   (4-20 mA or 0-10 V)

Display
  Modification

CHANNELS
☑☐ Position of the DIP switches.
☑☑ Measuring ranges
☑☑ Units of measurement
☑☑ Offset setting.

Reading
  Modification

ALARMS
☑☑ Activate the relay
☑☑ Delay
☑☑ Set point setting
☑☑ Alarm type
     (rising/ falling edge)

To access to the configuration parameters, you can
- click on "Read configuration"

or

- go in the menu "Commands" and then, click on "Display the configuration" (see page 11).
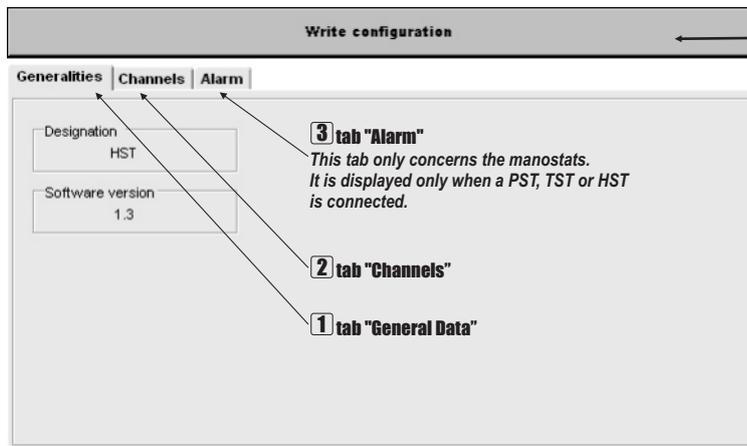
Click on next
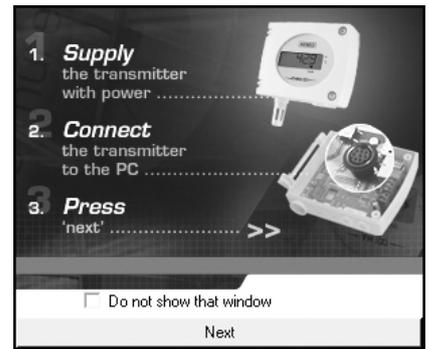
⚠ **Caution**

If the message shown beside is displayed, it means that there is a problem of connection between the transmitter and the PC. Then, you must:
- Check that the transmitter is correctly powered
- Check the connections of the RS 232 cable
- Check the communication port, and if required, select another port (see page 11).

1. **Supply** the transmitter with power ....
2. **Connect** the transmitter to the PC ....
3. **Press** 'next' .... >>

☐ Do not show that window

Next

The window shown beside appears:

This window has 2 or 3 tabs (according to the transmitter connected) and a function button..

- The tabs "Generalities", "Channels" and "Alarm" shows all relative info regarding the configuration of the transmitter. Click on the tab required to display the information.

- Via the function button, you can transfer the configuration to the transmitter.

Write configuration

Generalities | Channels | Alarm

Designation
HST

Software version
1.3

③ tab "Alarm"
This tab only concerns the manostats.
It is displayed only when a PST, TST or HST is connected.

② tab "Channels"

① tab "General Data"

III 2 - Tab "Generalities":

The tab "Generalities" shows all relative info of the transmitter, regardless of the configuration.
- *The description of the transmitter:*
It's the part number of the transmitter which is connected (ex : TST-B, CP101, CTV100, etc).
- *The version of the software.*
- **The analog output:**
It depends on the transmitter: 4-20 mA or 0-10 V.

Généralités

Designation
CP101

Software version
1.3

Analog output
4-20 mA
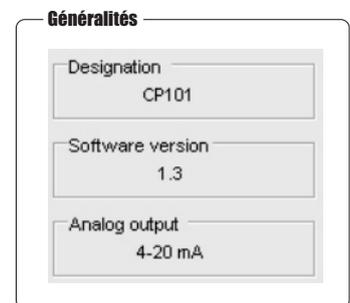
⚠ **Caution**

For the CP50 and CP100, the type of analog output depends on the DIP switch setting of the outputs (see. p2).

III 3 - Tab "Channels":

This tab gives you access to the information of the measurement: DIP switches, the measuring ranges, the units of measurement, the offset.

III3a - Drawing of the DIP switches

You can see the position of the DIP switches on the electronic board of the transmitter.
For the transmitters with 2 DIP switches, the software will display both.

Channels

Switch1
1 2 3 4
On

Measure

Humidity channel

Lower range	Upper range	Units	Offset
0,0 %HR	100,0 %HR	%HR	0,0

Temperature channel

Lower range	Upper range	Units	Offset
-50,0 °C	100,0 °C	°C	0,0
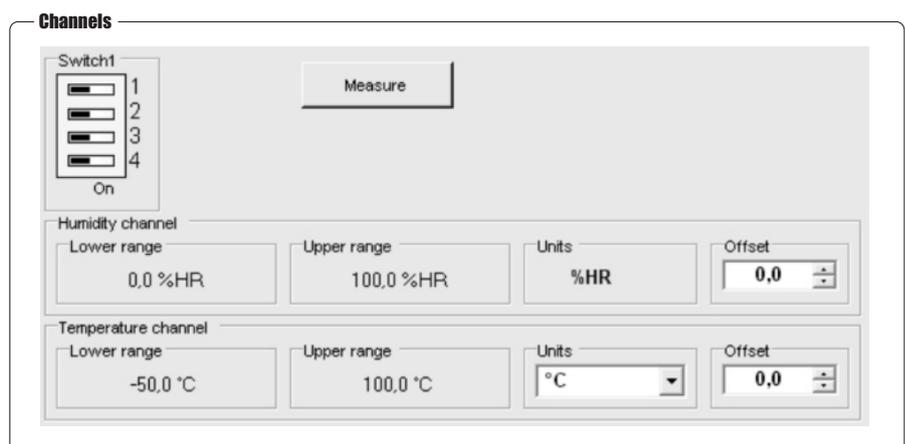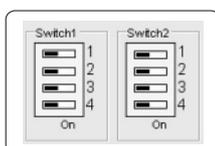
⚠ **Caution**

if the DIP switches are wrongly positionned, the drawing will display the correct positionning of the DIP switches (with the switch(es) highlighted positioned)
The zones "measuring ranges, units and offset" are displayed in grey and cannot be modified
You can only set the alarms (for the manostats)
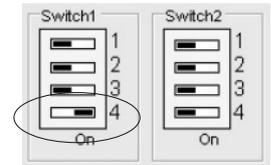
III3b - Measurement

Click on the "measure" button to display in real-time the measurements made by the transmitter (see window shown beside). According to the transmitter used, the window displays one or two values, and also displays the status of the relay (for the monostats).
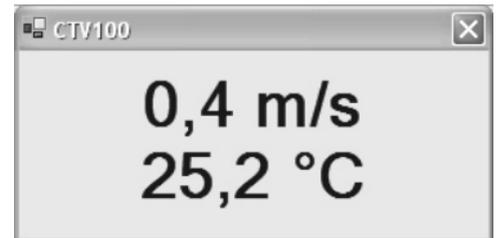
CTV100

0,4 m/s
25,2 °C

Number of values displayed	Part number of the tranmsitter
1 value	*PST, CP50, CP100, TST, HM50, TM100, TG100, SG100*
2 values	*CTV100, HST, TH100*

III3c - Channels

The channels are relative to the type of   measurements. You may access to the parameters of measuring ranges (lower and upper ranges), the units of measurements and the offset (only for the models HM50, TH100 and the humidistats HST).
The description of the channels depends on the transmitter connected.

Part number of the transmitter	Type of channel displayed			
	channel 'pressure'	*channel 'air velocity'*	*channel 'temperature'*	*channel 'humidity'*
PST	✓			
CP50	✓			
CP100	✓			
TST			✓	
TM100			✓	
TG100			✓	
SG100			✓	
HST			✓	✓
HM50				✓
TH100			✓	✓
CTV100		✓	✓	
CO-P/CORD-P			✓	

⚠ **Caution**

• *Some transmitters have measuring ranges that are not configurable (PST, TST, HST, HM50 and TH100 for humidity).*
  For these models, the software will not enable you to enter any value in the zone "upper and lower range" ; these zones are displayed in grey and cannot be modified (not active). Nevertheless, if the units of measurement are modified, then the measuring ranges will be converted accordingly.

• *For configurable measuring ranges, you can set the range in full scale or with central zero, just by entering the values of low and upper range.*
  ex : lower range = -50, upper range = 50 : central zero   lower range = 0, upper range = 100 : full scale

---

With an air velocity and temperature transmitter type CTV 100 : the software displays both air velocity and temperature channels. The measuring ranges displayed are relative to the initial configuration of the transmitter.
They are configurable using the lower and upper ranges input boxes (displayed in white). Via the arrows located on the right of the zone, you can modify the ranges, or you can enter the value via the keypad.

Air velocity channel
Lower range: 0,0 Upper range: 30,0 Units: m/s
Temperature channel
Lower range: -15,0 Upper range: 40,0 Units: °C

When a value is modified, the writing bar becomes red. It means that the configuration displayed is not the same as the one of the transmitter. When all the modifications required are done (measuring ranges units,offset and/or alarms) click on the writing bar to transfer the new data to the transmitter.

Write configuration

	Measuring range	**Minimum delta**	**Maximum delta**
CP50	0 to +10 000 Pa	1000 Pa	10000 Pa
CP101	0 to +1000 Pa	50 Pa	1000 Pa
CP102	0 to +1000 mmH$_2$O	100 mmH$_2$O	1000 mmH$_2$O
CP103	0 to +500 mbar	50 mbar	500 mbar
CP104	0 to +2000 mbar	200 mbar	2000 mbar
TH100	-50 to +400 °C	20 °C	400 °C
TM100	-50 to +400 °C	20 °C	400 °C
TG100	-100 to +400 °C	20 °C	400 °C
SG100	-50 to +400 °C	20 °C	400 °C
CTV100	0 to 30 m/s	2 m/s	30 m/s
	-50 to +400 °C	20 °C	400 °C
CO-P / CORD-P	-200 to +850 °C	25 °C	+850 °C

To define the measuring ranges, please follow the chart below. If not (for example: going beyond the max. measuring range), then 2 exclamation points will appear on the screen. Then, you will have to enter new and correct values.

'over' range   *exclamation points*

⚠ **Reminder**

ex : CP50 = 0 (lower range) to +10 000 Pa (upper range).
For an analog output 0-10 V, the signal sent for 0 Pa will be 0 V, and the signal sent for +10 000 Pa will be 10 V.
For an analog output 4-20 mA, the signal sent for 0 Pa will be 4 mA and the signal sent for +10 000 Pa will be 20 mA.

The units of measurement (on the right of the zone "measuring range")"are pre-set according to the transmitter which is connected. The unit displayed corresponds to the initial configuration of the transmitter.
To modifiy the unit of measurement, click on the arrow located on the right of the zone "units", in order to display all the available units.
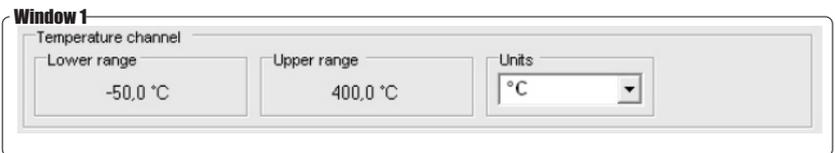
When the unit is modified, the writing bar becomes red. It means that the configuration displayed is not the same as the one of the transmitter.

When all the modifications required are done (measuring ranges, units, offset and/or alarms) click on the writing bar to transfer the new data to the transmitter.


The transmitters with configurable units and measuring ranges (CP50, CP100, CTV100, TG100, SG100 and TH100), work as below:
The zone "measuring ranges" and "units" are activated (window 1). Click on the arrow located on the right of the zone "units", in order to display the list of all units available. Please select the unit required (click on it). The values of low and upper ranges are changed into "0" and are displayed in red (window 2).

Then, you can enter the new values of the measuring ranges (with low and high values).
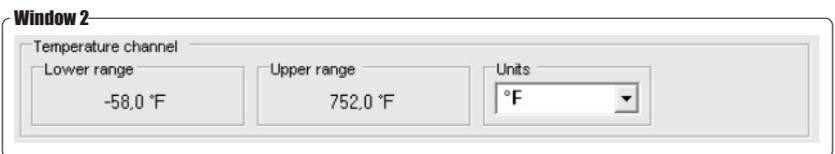
Click on the writing bar (red), when all the modifications required are done.

Conversion chart

Units	mbar	Pa	mmH$_2$O	mmHG	inWG	PSI	KPa
1 mbar	1	100	10,197	0,75	0,401	0,0145	0,1
1 Pa	0,01	1	0,10197	0,0075	0,004	0,000145	0,001
1 mmH$_2$O	0,098	9,80665	1	0,07	0,039	0,00142	0,0098
1 mmHG	1,333	133,4	13,595	1	0,535	0,0193	0,133
1 inWG	2,491	249,1	25,4	1,869	1	0,0361	0,2491
1 PSI	68,94	6894	703,07	51,71	27,68	1	6,894
1 KPa	10	1000	101,97	7,501	4,014	0,145	1

Units	°C	°F
1°C	1	33,8
1°F	-17,22	1

Units	m/s	fpm
1m/s	1	196,85
1fpm	0,00508	1

⚠ **Caution**

If you configure the measuring range (ex: from -50 to +20°C) and if the temperature measured is out of range (either lower than the minimum range or higher than the maximum range), then the value displayed on the transmitter (ex : 26 °C) will blink.

⚠️ **Caution**

Some transmitters do not have configurable units of measurements (models HM50, HST and TH100 for humidity). The zones shown beside are then displayed in grey (not active).

Other transmitters which only have configurable units of measurement, automatically convert the measuring ranges (PST, TST, HST).
ex : existing configuration : -500 to +1000 Pa.
To change the units into mbar, the measuring range will be converted accordingly => -5,00 to +10,00 mbar.

Humidity channel

Lower range	Upper range	Units	Offset
0,0 %HR	100,0 %HR	%HR	10,0

non configurable measuring range   non configurable unit of measurement

Temperature channel

Lower range	Upper range	Units	Offset
-50,0 °C	100,0 °C	°C	0,0

non configurable measuring range   configurable measuring units

⚠️ **Important**

For the monostats PST, HST and TST, when the unit of measurement is modified in the tab "Channels", then the value of the set point (in the tab "Alarm") is displayed in the new unit.

unit and value converted

Pressure channel
☑ Relay activated

Mode	Setpoint 1
Control mode	400 Pa
Delay (Sec.)	Setpoint 2
5	100 Pa

	PST	CP50	CP100	TST	TM100	TG100	SG100	HST	HM50	TH100	CTV100	CO-P	CORD-P
configurable range	X	✓	✓	X	✓	✓	✓	X	X	✓	✓	✓	✓
configurable units	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	✓

X *non configurable ranges and/or units*   ✓ *configurable ranges and/or units*

Nota : the humidity is a parameter which cannot be configured, neither for the measuring ranges, nor for the units.

The offset located on the right of the window "channel" enables you to modify the measurement made by the transmitter.

Offset
Offset
10,0

- Enter the positive or negative value in the field "Offset".
- The writing bar becomes red. Click on it to transfer the configuration to the transmitter.
- Then the value of the offset is added (or deducted) from the measurement made by the transmitter.

ex : a humidity transmitter displays 45 %RH. If you enter '10' in the field "Offset", and then click on the writing bar, the value measured by the transmitter will be displayed as 55 %RH.

⚠️ **Caution**

Only the measurements in humidity and temperature of some transmitters can be modified with the offset.
(see chart shown beside)

Transmitter part number	OFFSET in humidity	OFFSET in temperature
HST	✓	✓
HM50	✓	
TH100	✓	✓
TM100		✓
TG100		✓
SG100		✓
TST		✓

III 4 - Tab "Alarm" :

On the manostats, you need to configure the relaty output.
With the tab "alarm", you can configure the RCR relays with:
- Activation of relays
- Time-delay of relay
- Setpoint setting
- Setting of the type of the alarm (rising/falling edge or regulation mode)

Part number of the transmitter	Number of alarms		
	'pressure' channel	'temperature' channel	"humidity" channel
PST	✓		
TST		✓	
HST		✓	✓

III₄ₐ - Activation of relays

To activate the relay, please tick off the box as shown beside.
To deactivate the relay, please untick the box as shown beside.

Activation of relays

Humidity channel
☑ Relay activated

active relay

III4b - Explanations of available alarm modes :

Description :

Set point
The set point is a limit that, once exceeded, will activate an alarm or a relay .

Time-delay
Once the set point is exceeded, the time-delay will postpone the activation of the alarm/relays. Once the delay (secondes) is over, and in case the set point is still exceeded, the alarm/relay will be activated (in negative security).
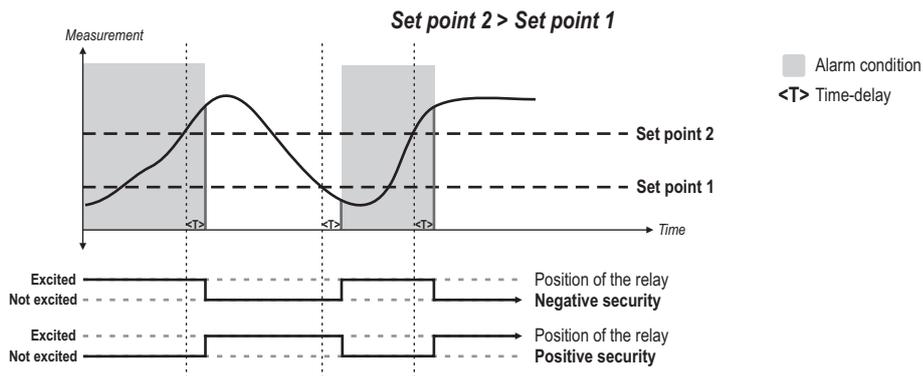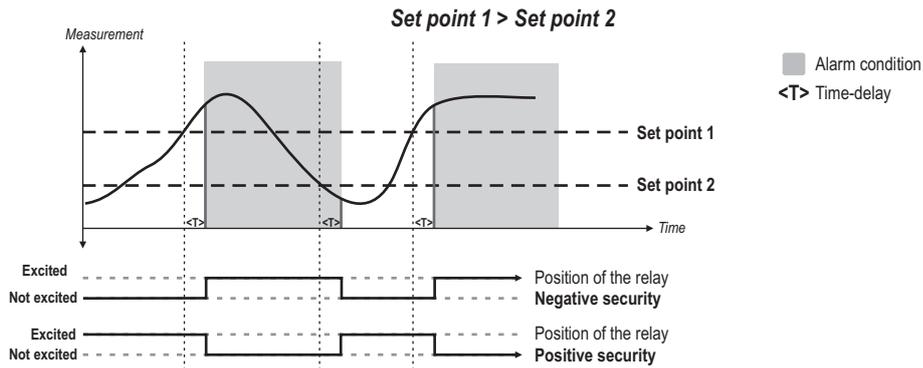
Edge

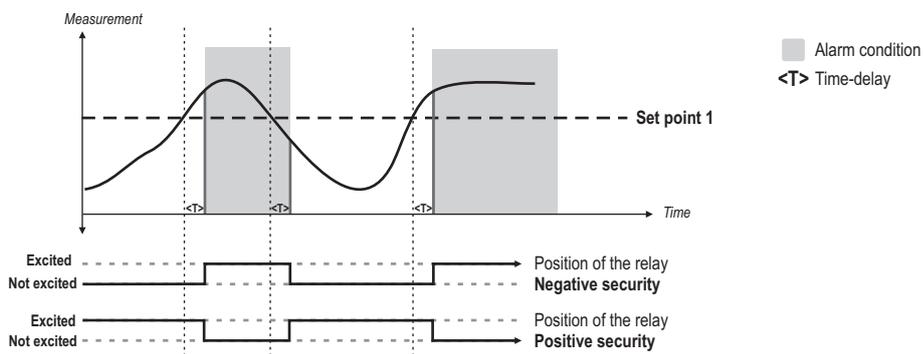The edge allows to decide of the alarm action (rising or falling) or the excitation of the relay.

- **Rising edge** : the alarm is activated when the measurement **goes over** the set point
- **Falling edge** : the alarm is activated when the measurement **goes under** the set point.
- **Regulation mode** : the set points values will determine the action type.
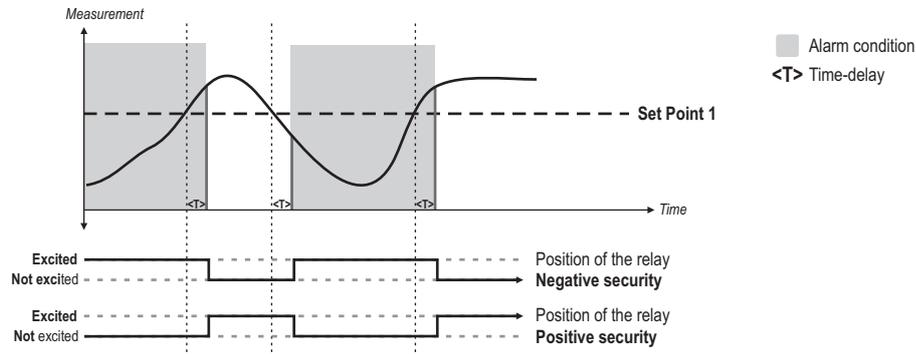
Available configurations :

Configuration N°1 : 2 set points and time-delay

Set point 1 > Set point 2

Set point 2 > Set point 1

Configuration N°2 : 1 set point, time-delay and rising edge

Configuration N°3 : 1 set point, time-delay and falling edge

Measurement

Set Point 1

Time

Alarm condition
<T> Time-delay

Excited
Not excited

Position of the relay
Negative security

Excited
Not excited

Position of the relay
Positive security

III4c - Alarm selection :

To select the alarm mode, click on the arrow on the right side of the zone "Alarm selection" to display the list of the pre-set functions :
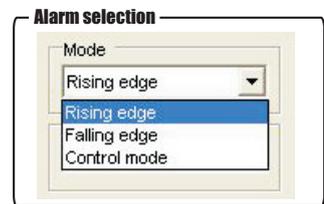
- Rising edge mode and delay (N°2 see page 8).
- Falling edge mode and delay (N° 3 see figure above).
- Control mode (Set point 1, Set point 2 and delay) (N° 1 see page 8).

Alarm selection

Mode
Rising edge ▼
Rising edge
Falling edge
Control mode

Nota

When an alarm is activated, the LED becomes red.

The HST humidistats can have 2 setpoints for one relay (one setpoint in temperature and one setpoint in humidity.

When on of the 2 alarms is activated, and the LED is red, then on the transmitter display, the arrow corresponding to the parameter in alert, blinks.

III4d - Setting the set points and time-delay :

Set points :

To set the alarms set points, use the arrows on the right side of the zone "Setpoint 1 of the alarm" and "Setpoint 2 of the alarm", or directly enter the value.

⚠ *The values to enter depend on the measurement unit selected and not on the measuring range of the transmitter.*

Set points

Setpoint 1
400 Pa
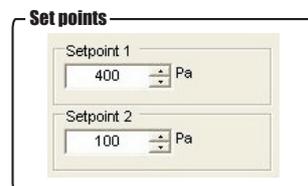
Setpoint 2
100 Pa

*Ex. For a pressure transmitter type CP101 (0 to ±1000 Pa) with reading in mmH$_2$O, the set points must be configurated on a measuring range between 0 and ±102 mmH2O. **See conversion chart page 6.***

NOTE • If, after setting the set points, the measurement unit has changed (see page 6), then you must re-configurate the set points according to the new measurement unit.

Delay :

To adjust the time-delay, use the arrows on the right side of the zone "Delay", ou directly enter the value (from 0 to 60 sec.).

Delay

Delay (Sec.)
5

IV - Saving a configuration

....

IV 1 - Principle :

Using the function "Read configuration", you can record the different configurations into a database.
Using the function "Save configuration", you can save the configurations of the transmitter, and also the the modifications.

IV 2 - Saving a configuration :

Please follow carefully the different steps as below:
- Using the "read configuration" function, read the parameters of the transmitters
- Make some modifications if required
- Write the new configuration after having modified
- In the menu "Commands" click on "Save configuration".

Write configuration
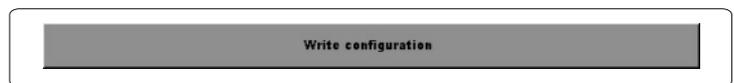
⚠ **Important**

The first step is to transfer the new configuration to the transmitter (by clicking on the writing bar).
*Then, you can save it in the database.*

Save a configuration

The window shown beside appears.
On the bottom of the window, the field enables you to name each saved configuration.
If you do not fill it in, and by default, the date and time of the save will be displayed.
Nota : the names of the configuration are preceded by the name of the transmitter which is connected.
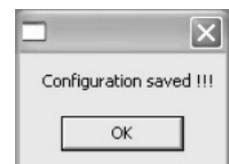

Confirm

Save configuration ?

22/06/2004 12:02:03   Ok   Cancel
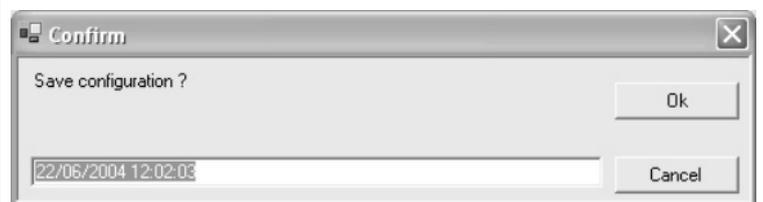
data field:
enables to give a name any configuration saved.

Save correctly done

Configuration saved !!!
OK

Click on "Cancel" to cancel the save or click on "OK" to continue.
By clicking on "OK", the window shown beside is displayed. Click on "OK" to return to the main menu.
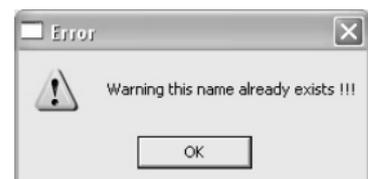
⚠ **Caution**

If you save a configuration with a name that already exists for the same transmitter, the message shown beside will be displayed.
Click on "OK" to come back to the initial save window, enter a new name and then, click on "OK".

Error

⚠ Warning this name already exists !!!
OK

V - Opening a configuration

When launching the LCC-100 software, two buttons are displayed:

- **Read configuration**
- **Open configuration from databae**

Function : OPENING A CONFIGURATION

Read configuration

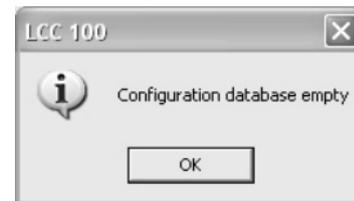Open configuration from database

V1 - Principle :

Using the function "Open configuration from database", you may access to the database of all the different configurations saved.
Then, it is possible to match one configuration with one (or several) transmitter(s). You do not need to make the configuration each time.
Via this function, you can:

- Open a configuration.
- Transfer a configuration to one or several transmitter(s)
- Delete a configuration.

⚠ **Caution**

If you click on "Open a configuration" without having previously saved any configuration, the message shown beside will appear.
(see Chapter IV "Save a configuration").

LCC 100
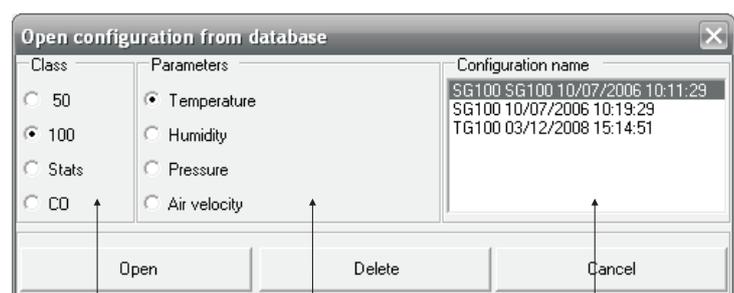ⓘ Configuration database empty
OK

V2 - Opening a configuration :

To open a configuration, click on "Open configuration from database" or go in "Commands" and then, click on "Open configuration from database" (see p11). The window shown beside will be displayed.

To choose a configuration :

- First, select the type of transmitter (Class) that you want to configure (see beside) Then, the parameters relative to the Class chosen are displayed in a second box.
- Select the parameter required. Then, the configurations saved are displayed in the last box.
- Then, you can choose the configuration required.

  ex : to choose a configuration for a transmitter TG 100, select "100" in the box "Class" . Then, select "Temperature" in the box "Parameters".Then, the list of configurations saved for the TG 100 are displayed in the last box.

Opening a configuration

Open configuration from database

Class	Parameters	Configuration name
○ 50	● Temperature	SG100 SG100 10/07/2006 10:11:29
● 100	○ Humidity	SG100 10/07/2006 10:19:29
○ Stats	○ Pressure	TG100 03/12/2008 15:14:51
○ CO	○ Air velocity	

Open   Delete   Cancel

first box
CLASS

second box
PARAMETERS

third box
CONFIGURATIONS

⚠ **Caution**

If you choose a Class and a Parameter for which no configuration was done, the message "No configuration" will be displayed in the third box.
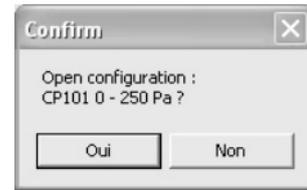
Configuration name

No configuration

To open a configuration, click on the name of the configuration required (as explained p10). The name chosen is then displayed.
Click on "Open". The windown shown beside asks you to confirm the opening. Then, click on "Yes".
To transfer the configuration to a transmitter which is connected, click on the writing bar or go in "Commands" and click on "Writing of the configuration" (see p11).
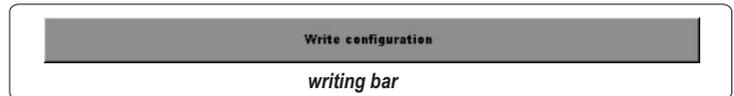
Open a configuration

Confirm ✕
Open configuration :
CP101 0 - 250 Pa ?
Oui   Non

V 3 - Transfering a configuration:

To transfer the configuration parameters to a transmitter, please open the configuration required as explained above.
Then, click on the writing bar or go in "Commands" and then, in "Write configuration" (see p11).

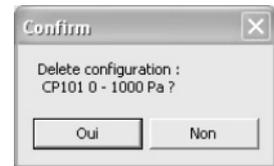Write configuration
writing bar

⚠ **Caution**

If you transfer a configuration that do not match with the transmitter connected, (class and/or parameter), the message shown beside will be displayed.

KIMO.Capteur_50-100 ✕
Incompatible transmitter
OK
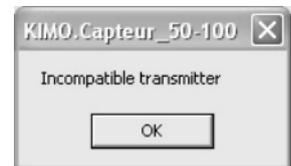
V 4 - Deleting a configuration:

To cancel a configuration, click on the name of the configuration required (as explained p10). The name is then displayed on a blue background. Click on "Cancel". The window shown beside appears to ask you to confirm: then, click on "Yes".

Deleting a configuration

Confirm ✕
Delete configuration :
CP101 0 - 1000 Pa ?
Oui   Non

VI - Main menu

Menu "Commands"

"Display of the configuration" to access to the configuration of the transmitter, to modify the parameters if required (see chapter III - Display of the configuration).
"Save the configuration" to save on a PC the configurations required (see paragraph IV2 - Save a configuration).
"Open an existing configuration" to choose, in a list of several configurations, the one matching with the transmitter which is connected (see paragraph IV3 - Choose a configuration).
"Writing a configuration" to transfer the configuration to the transmitter connected.
"Quit" to quit the LCC 100 software.

Menu "Parameters"

"Select COM port" to modify the communication port used.
"Select language" to choose the language.
"Tips" to allow the display of helping windows
"Options" is exclusively used by KIMO's After-Sales Service.

Menu "Help"

"Info" to access to the details of information relative to the software (name and version).

About ✕
LCC 100
Ver. : 1.9.0.0
http://www.kimo.fr

"Help F1" to open the user manual of the software.

www.kimo.fr