KIMO®

INSTRUMENTS

New

LCC-300 software

User manual

Configuration software

for Class 200/300 and displays

units - ranges - relays - set points - alarms
analogue outputs - channels - regulations

Summary

I - Minimum system requirements

I 1 - Minimum recommended configuration :

- Pentium II 300 MHz - 32 Mo RAM
- CD-Rom drive
- Windows 98-NT4-XP
- 20 Mb free on hard disk
- Minimum resolution 800 x 600 (1024 x 768 recommended)
- Serial communication port (RS 232)
- 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, enter "d:\detup" (d is the letter of your CD-Rom driver), then click OK.

I 3 - Uninstalling the software :

To uninstall the *"LCC300"*, 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 LCC 300" and follow the instructions.

I 4 - Launching the software :

To run the LCC application :

- Click on the icon [icon] from your desktop.

  OR

- Click on Start / Programms and *"LCC 300"*.

II - Connecting the transmitter

⚠
- **First power the transmitter (before connecting it to the computer).**
- **When the configuration is done, disconnect the transmitter from the PC, and then switch it off.**

To access or to modify the configuration, please follow the instructions as shown below :

- *Step 1 :* power the transmitter up (see technical datasheet).
- *Step 2 :* wait a few seconds while the transmitter initializes.
- *Step 3 :* connect the transmitter to the PC via the RS 232 cable.

You can connect the transmitter to the PC before or after the launching of the software.

- If you connect the transmitter to the PC *before* the launching of the software, the message shown beside appears. Then, click on "Yes" to access to the configuration parameters (cf. P3-15).
- If you connect the transmitter to the PC *after* the launching of the software, you directly access to the 2 main menus of the LCC-300 :
  - *- Read configuration*
  - *- Open configuration from database*

Connection to PC

Rs232 cable

connection to transmitter

LCC 300

? Read configuration from transmitter ?

Yes   No
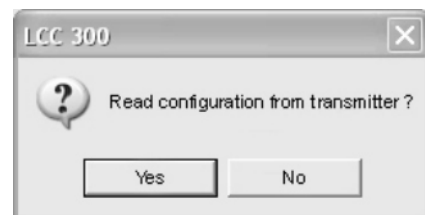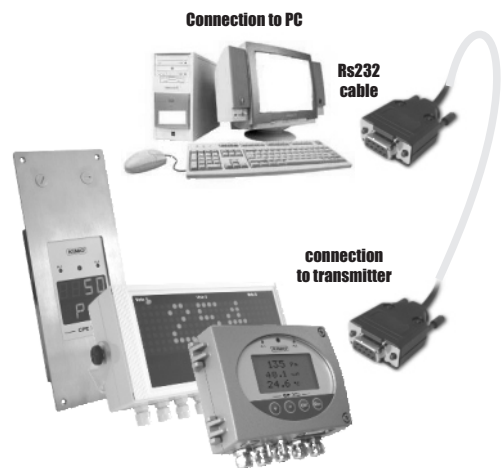
III - Configuration of the transmiter

III 1 - Principle :

When opening the LCC-300 software,
two buttons appear on the screen :

- **Read configuration**
- **Open configuration from database**

Function : READ A CONFIGURATION

> Read configuration
>
> Open configuration from database

Using the function "Read configuration", you may access to the configuration of the transmitter. You can then read or modify the configuration of the transmitter. A new configuration can be transferred to the transmitter and/or saved in a database (for a later use).

To access the configuration parameters, you can either :
- click on "Read configuration"
Or
- go in the menu "Commands" and then click on "Read configuration" (see. page 18).
Click on "next".

If the message shown beside is displayed, it means that there is a connexion problem between the transmitter and the PC. Then you may :
- Check that the transmitter is correctly powered
- Check the connection of the RS 232 cable.
- Check the communication port and, if required, select another port (see page 18).

LCC 300 ⚠ No transmitter...
OK

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

☐ Do not show that window
Next

Write configuration

| Generalities | Channels | Input/output | Alarms | Parameters | Air velocity/flow |

Type of transmitter
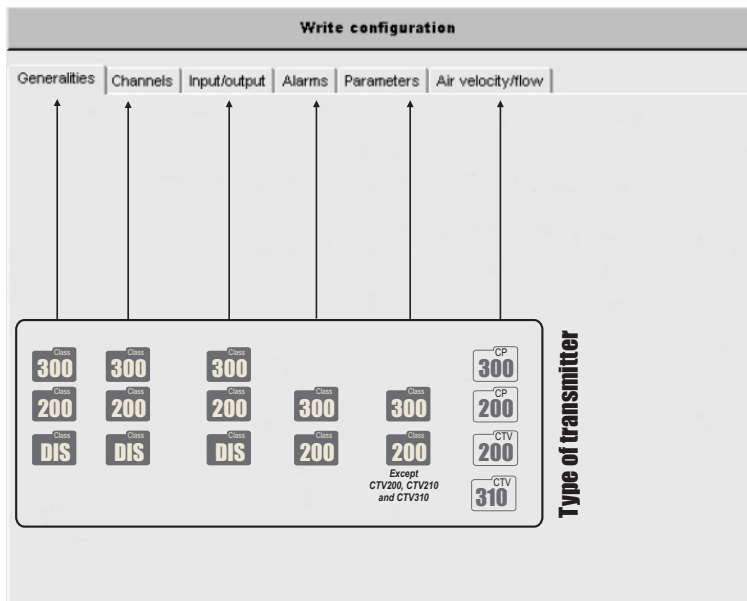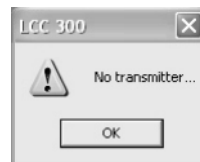
The window shown beside appears .
This window has a function button and 3 to 6 tabs (depending on the transmitter connected) :

- **300** Class .... Class 300 *(CP, CPE, TH and CTV)*.
- **200** Class .... Class 200 *(CP, TH and CTV)*.
- **DIS** Class .... Displays *(ATT and ATE)*.
- **300** CP .... CP 300 Transmitters

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

- The tabs "Generalities", "Channels", "Input/Output", "Alarms", "Parameters" and "Air velocity/flow" show all relative information regarding the configuration of the transmitter. Click on the tab required to display the information.

Except CTV200, CTV210 and CTV310

III 2 - Configuration of the display and the keypad :

The tab "Generalities" gives you access to different information relative to the communication of the transmitter, to its display and keypad :

- Transmitter channel for the infrared remote control .
- RS 232 communication.
- Slave address (Modbus).
- Keyboard locking.
- Back light.
- Display contrast setting.

| Generalities | Channels | Input/output | Alarms | Parameters | Air velocity/flow |

Designation	Serial N°	Software version
CP304	03.12.0012	1.0

Remote control code	Keyboard locking	Options
0	☐ ON ☑ OFF	Display Modbus Air velocity/flow

RS-232 communication	Backlight
☐ Transmittion mode ☑ Reception mode	☑ ON ☐ OFF

Slave N° (Modbus)	Contrast setting	SPI serial N°
1	2	04.05.0012

III2a - Channel of the transmitter for the infrared remote control :   Class 300 Class 200 Class DIS

You can change the transmitter channel number for the reception of the infrared remote control signal. **The advantage is that you can pilot several transmitters with only one remote control,** especially when the transmitters are side by side.

NOTE   The default channel number of the transmitter is **0**.

Channel
Remote control code
0

To change the channel number of the transmitter, use the arrows on the right side of the zone "Remote control code", or directly enter the value.
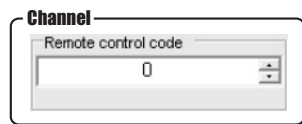
III2b - RS 232 Communication :   Class 300 Class 200

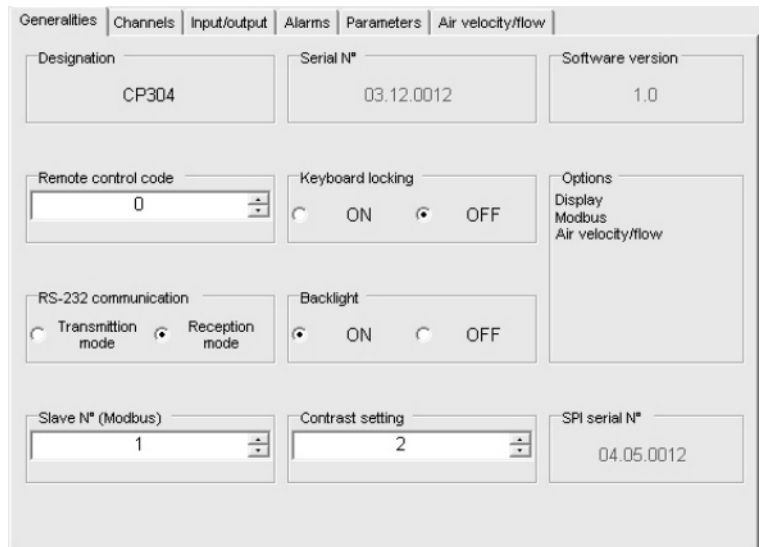Transmitters from class 300 have a RS232 output and a RS485 digital output (Modbus network system - optional). Via the RS232, you can receive the data (2 measurement channels maximum) measured by a transmitter from **class 200/300** or send the data to another transmitter from **Class 300.**

⚠ *If you wish the transmitter to send its data to another transmitter via the RS232, then you will not be able to use the RS485 digital output (Modbus - optional)*

To send data via the RS232, select "Transmission mode" in the field "RS 232 Communication".
To receive data via the RS232, select "Reception mode" in the field "RS 232 Communication".

RS 232
RS-232 communication
☐ Transmittion mode ☑ Reception mode
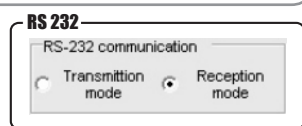
III2c - Slave address :   Class 300 Class DIS

To modify the transmitter slave address (Modbus network), use the arrows on the right side of the zone "Slave number (Modbus)" or directly enter the number.

Modbus
Slave N° (Modbus)
1
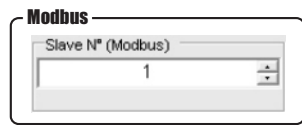
III2d - Keyboard locking :   Class 300 Class 200   * Except CPE 300

For safety reasons, you can lock the keypad. When locked, the keypad will not respond (same as on mobile phone).
To lock the keypad, select "ON" in "Keyboard locking".
To unlock the keypad, select "OFF".

Keyboard
Keyboard locking
☐ ON ☑ OFF

III2e - Backlight :   Class 300 Class 200   * Except CPE 300

The back lighting makes the reading easier when the ambient light is too faint.
To activate the back lighting, select "ON" in "Backlight".
To deactivate the back lighting, select "OFF".

Backlight
Backlight
☑ ON ☐ OFF

III2f - Display contrast setting :   *Except CPE 300*   300 / 200

Contrast setting

Contrast setting

2

To modify the contrast of the display, use the arrows on the right side of the zone "Contrast setting" or directly enter the value (from 0 to 10).
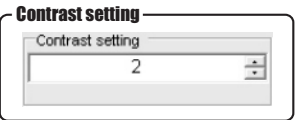
III 3 - Configuration of the channels and units of measurement :

III3a - Input configuration   DIS

Input Mode

○ Numeric   ● Analogic

ATT 300 and ATE 300 displays have both 3 analogue inputs (0-10V or 4-20mA), 1 RS 232 digital input, and one RS 485 digital input (MODBUS system). 2 different inputs are available: **analogue and digital inputs.** *The tab "General Info" gives access to the selection of input required.*

2 configuration types available

☐ 0-10V analogue input   ☐ RS 485 digital input   ▭ RS 232 digital input

1- Display of a measuring system values, via

Analogue inputs and RS 232

ATT 300 **or** ATE 300
V1 V2 V3

transmitter **1**   0-10V or 4-20mA output

0-10V or 4-20mA output   transmitter **3**

0-10V or 4-20mA output
transmitter **2**

or

ATT 300 **or** ATE 300
V3
V1 V2

transmitter **1**   0-10V or 4-20mA output

0-10V or 4-20mA output
transmitter **2**

KIMO transmitter
Class 200/300*

RS232 output

If you want to use the analogue inputs, **first of all**, you have to **position the DIP switch** according to the signal input you require (see page 2 of the display user manual).
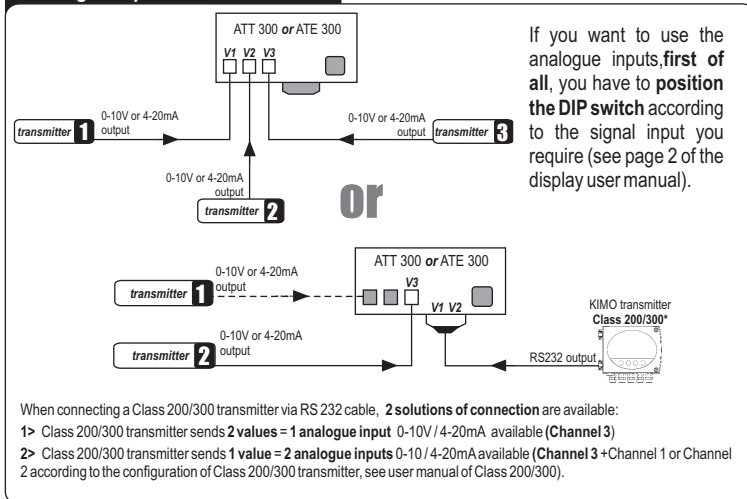
When connecting a Class 200/300 transmitter via RS 232 cable, **2 solutions of connection** are available:
1> Class 200/300 transmitter sends **2 values = 1 analogue input** 0-10V / 4-20mA available **(Channel 3)**
2> Class 200/300 transmitter sends **1 value = 2 analogue inputs** 0-10 / 4-20mA available **(Channel 3** +Channel 1 or Channel 2 according to the configuration of Class 200/300 transmitter, see user manual of Class 200/300).

2- Display of a measuring system values via

Digital input

Modbus Network

ATT 300 **or** ATE 300
V1 V2 V3

transmitter

transmitter **1**

transmitter

transmitter

transmitter **2**

transmitter **3**

transmitter

Gestion du réseau
MODBUS

Example the supervision system gets the data from transmitters 1, 2 and 3, and displays them on the display, via the RS 485 connection.
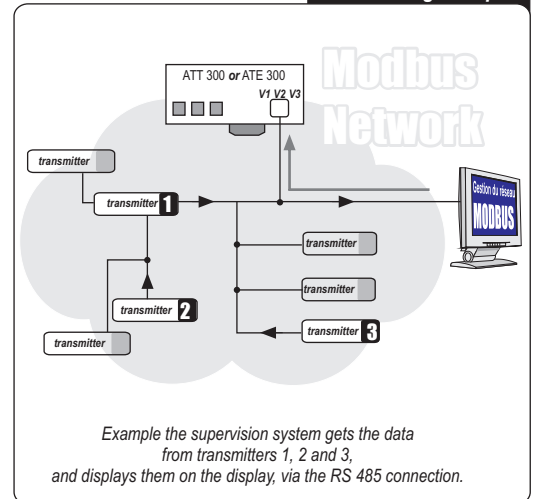
III3b - Units and channels :   300 / 200

Generalities | Channels | Input/output | Alarms | Parameters | Air velocity/flow

Units channel 1
Pa

Units channel 2
mmH2O

The tab "Channels" gives access to the measurement channels of the transmitter. *Transmitters from class 300* have 4 measurement channels. You can activate 1, 2, 3 or 4 channels and select a measurement unit for each channel.

Transmitters from class 200 have 2 measurement channels. You can activate 1 or 2 channels and select a measurement unit for each channel.

    A channel is activated when a measurement unit is displayed.. *A channel is deactivated* when the display shows "None". To modify a measurement unit or deactivate a channel, click on the arrow on the right side of the zone corresponding to the involved channel : the list of the pre-set units, including "None", is displayed.
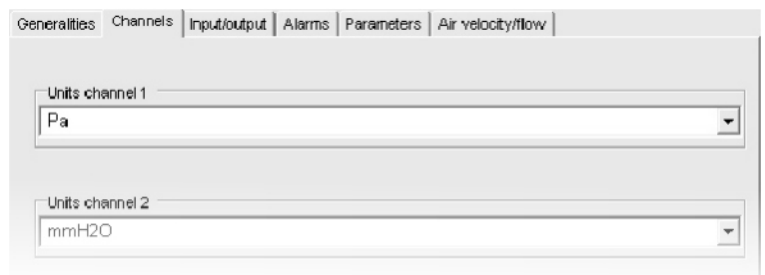
Transmitters	*Available Units*

CP300 .... Pa - mmH$_2$O - inWg - mbar - °C - °F - m/s - fpm - m³/h - L/s - cfm - m³/s
CP 201 and CP 202 .... Pa - mmH$_2$O - inWg - mbar - mmHG - m/s - fpm - m³/h - L/s - cfm - m³/s
CP 203 and CP 204 .... mbar - inWg - KPa - PSI - mmHG - m/s - fpm - m³/h - L/s - cfm - m³/s
TH300 and TH200 .... °C - °F - %HR - g/Kg (Absolute Humidity **p**) - °C (Dew Point **Td**) - °F (Dew Point **Td**) - °C (Wet Temperature **Tw**) - °F (Wet temperature **Tw**) - KJ/KG (enthalpy **i**)
TT300 .... °C - °F
CTV 200-210-310 .... m/s - fpm - °C - °F - m³/h - L/s - cfm - m³/s
ATT300 and ATE300 .... m/s - fpm - m³/h - L/s - cfm - m³/s - °C - °F - %HR - PSI - Pa - mmH$_2$O - inWg - KPa - mmHG - mbar - g/Kg - °C (Dew Point **Td**) - °F (Dew Point **Td**) - °C (Wet Temperature **Tw**) - °F (Wet Temperature **Tw**) - KJ/Kg

NOTE   For CP300 and CP200 series, the transmitter must have the **SQR option** in order to activate the velocity and flow units.

This tab also allows to display measurements : by clicking on "Measure" button, a window opens and indicates value and units for each activated channel.

To close the window, click on "Close" button.

Units

Channel number   Value

III3c - Management of configurable units : `DIS`

The ATE300 and ATT300 displays can have a specific unit : **the configurable unit.** It allows to add a new unit to the existing list of pre-set units.

- Select one channel.
- Select "Configurable Unit"". On the right of the channel, the outlines of the 4 digits appear (figure 1). Click on the segments required to activate it.
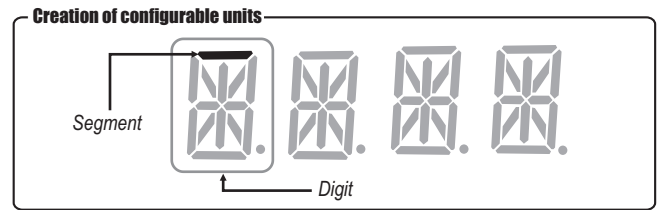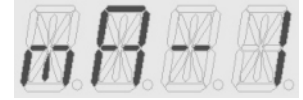- Repeat the process till the unit you need is created (see figure 2).

Creation of configurable units

Segment

Digit

Figure 1   **Figure 2**

III 4 - Management of analogue outputs :

III4a - Setting the analogue outputs : `300` `200` `DIS`
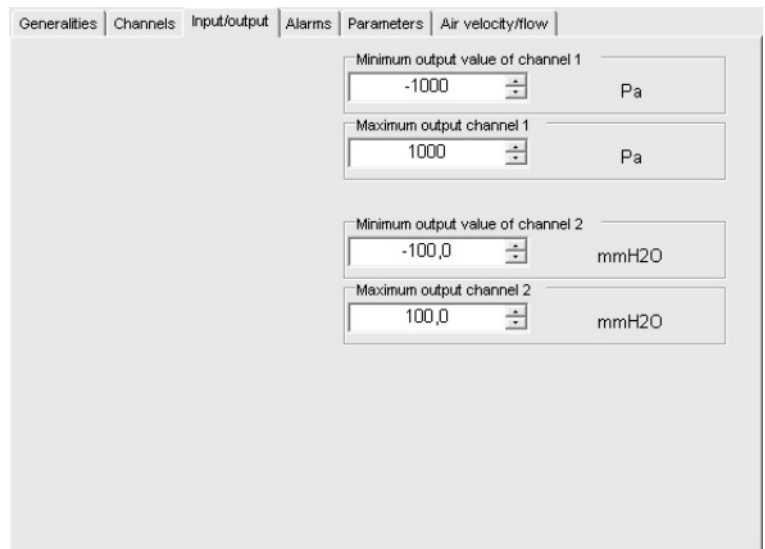
This function allows you to modify the measuring range of your transmitter and to link the limits of this new measuring range to the analogue output (0-10V or 4-20mA).
You must enter the measuring range required.

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

Example : the minimum and maximum limits on a pressure transmitter type CP303 (0 to ±1000 Pa) with reading in mmH₂O must be configurated on a measuring range from 0 to ±102 mmH2O. **See conversion chart for measurements units (page 7).**

| Generalities | Channels | Input/output | Alarms | Parameters | Air velocity/flow |

Minimum output value of channel 1
-1000   Pa

Maximum output channel 1
1000   Pa

Minimum output value of channel 2
-100,0   mmH2O

Maximum output channel 2
100,0   mmH2O

To modify the minimum and maximum value of the transmitter analogue output(s), please use the arrows located on the right side of zone "Minimum output value..." and zone "Maximum output channel...', or directly enter the new values.

⚠ *Our recommendation : delta between minimum and maximum > 5% of the measuring range.*

`NOTE` *In case the measurement unit was modified while configurating the analogue outputs (see page 5), then the outputs will have to be configurated again with the new measurement unit.*

III4b - Activating / deactivating the analogue inputs : `DIS`

You may activate or deactivate the analogue inputs of the ATE300 and ATT300 displays in order to show 1, 2 or 3 channels.
To activate an analogue input, choose the channel you need and select "ON" in the zone shown beside.
To deactivate the analogue input, select "OFF".
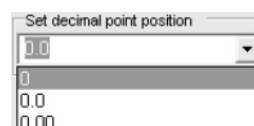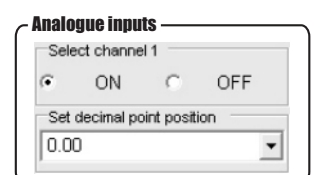
You may also modify the position of the decimal point : click on the right side of the zone "Set decimal point position" to display the list of the pre-set options (see beside).

Analogue inputs
Select channel 1
○ ON   ○ OFF
Set decimal point position
0.00

Set decimal point position
0.0
0
0.0
0.00

III4c - Conversion chart :

Pressure

Temperature

	Pa	**mmH2O**	**inWg**	**mbar**	**mmHg**
CP 301	0 à ±100	0 à ±10,2	0 à ±0,401	0 à ±1,00	-
CP 302	0 à ±500	0 à ±51,0	0 à ±2,005	0 à ±5,00	-
CP 303	0 à ±1000	0 à ±102,0	0 à ±4,015	0 à ±10,00	-
CP 304	0 à ±10000	0 à ±1020,0	0 à ±40,15	0 à ±100,00	0 à ±75,00

	°C	**°F**
TH200 / 300 - St.steel probe	-40,0 à +180,0	-40,0 à +356,0
TH 200 / 300 - PC probe	-20,0 à +80,0	-4,0 à +176,0
TT 300 - St.steel probe	-40,0 à +180,0	-40,0 à +356,0
TT 300 - PC probe	-20,0 à +80,0	-4,0 à +176,0
CTV 200 / 210 / 310	0,0 à +50,0	+32,0 à +122,0

	Pa	**mmH2O**	**inWg**	**mbar**	**mmHg**	**KPa**	**PSI**
CP201	0 à ±1000	0 à ±102,0	0 à ± 4,015	0 à ±10,00	0 à ±7,50	-	-
CP202	0 à ±10000	0 à ±1020,0	0 à ±40,15	0 à ±100,00	0 à ±75,00	-	-
CP 203	-	-	0 à ±200,0	0 à ±500	0 à ±375	0 à ±50,0	0 à ±7,50
CP 204	-	-	0 à ±800,0	0 à ±2000	0 à ±1500	0 à ±200,0	0 à ±30,00

Velocity

	m/s	**fpm**
CTV200	0,0 à 20,0	0 à 3937
CTV210	0,0 à 30,0	0 à 5905
CTV310	0,0 à 30,0	0 à 5905

III 5 - Setting of alarms / relays :

The tab "Alarms" gives access to all the information relative to the configuration of the alarms/relays :

       - Activate / deactivate the buzzer.
       - Security level of alarms.
       - Tags for alarms / relays and LED color control.
       - Select the channel for visual alarms and relays.
       - Explanations of alarms mode available.
       - Set the set points and time-delay.
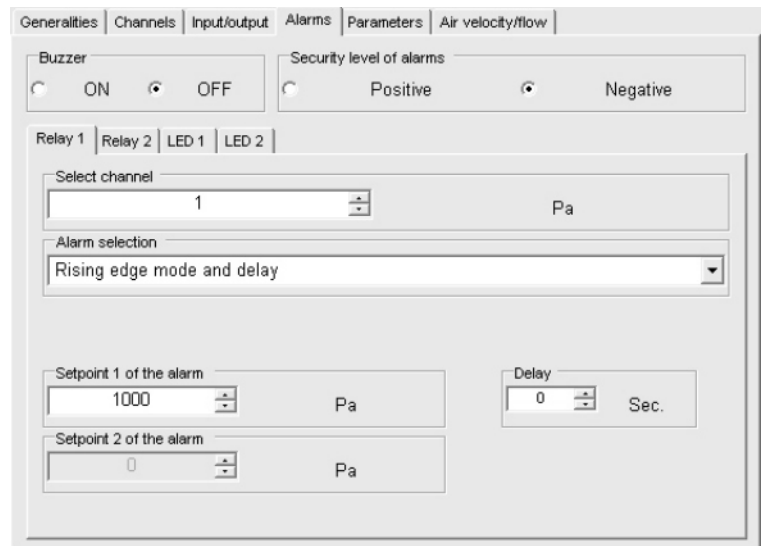
III5a - Activating / deactivating the buzzer :   Class 300 Class 200

In case of alarm, a beep is activated.
For more information on the setting of the set points, see page 10.
To activate the beep, select "ON" in the "Buzzer" zone.
To deactivate the beep, select "OFF".

III5b - Security level of alarms :   Class 300 Class 200

The relay outputs are pre-set on **negative security level** : the relay is **excited** in case of alarm . Via the software, you can configurate the relays on **positive security level** : then the relay is **deexcited** in case of alarm or power cut.
To select the negative alarm condition, click on "Negative" in "Security level of alarms" zone.
To select the positive alarm condition, click on "Positive".

III5c - Tags for alarms/relays and LED color control :

Visual and audible alarms :

Transmitters from class 200 and 300 (except the displays) have 2 visual /audible alarms located on the front of the transmitter. In case of alarm, they give an immediate visual and audible signal.

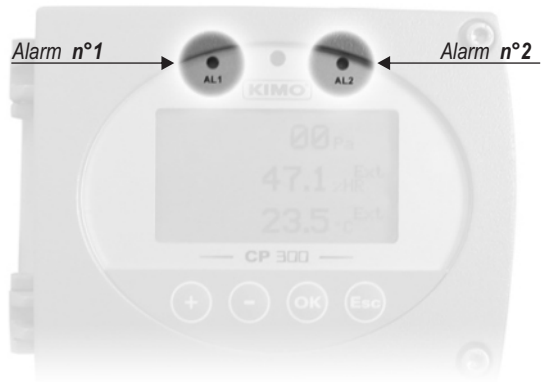### LED color control for alarms

Green The alarm is activated, but there is no alarm condition.

Red The alarm is activated and the transmitter is in alarm condition.

None The alarm **is not activated**.

NOTE *When the LED turns red, it means that not only the setpoints but also the time-delay and the edge were taken into account. See page 10 for more information.*

Beep

***Once the alarm is activated**, the beep remains on as long as the condition is respected.*

NOTE *The buzzer must be activated to get the beep.* **See page 7.**

Alarm n°1 ← AL1   AL2 → *Alarm n°2*

Relays :

Transmitters from class 200 and 300 (except the displays) have 2 visible relays on their electronic card . Each one of these 2 relays have a LED for an immediate visualization in case of test.

Relay n°1 → ← *Relay n°2*

LED of relay n°1 → REL1   REL2 ← *LED of relay n°2*
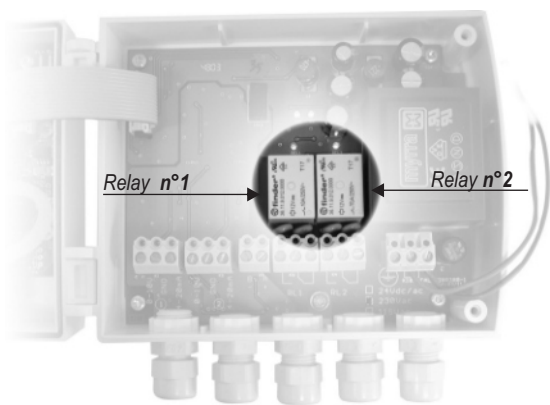
LED color control for relays

Red The relay **is activated**

None The relay **is not activated or was not configured**

When the light turns red, it means that not only the setting of the set points but also the setting of the time-delay, of the edge and most particularly of the level of alarm security were taken into account.
Set points, time-delay and edge : **see page 10**
Secure the alarms : **see page 7**

III5d - Selecting the channel for visual alarms and relays :

Transmitters from class 200 and 300 (except displays) have 4 alarms :

- 2 visual and audible alarms *(LED 1 and LED 2)*
- 2 relay alarms *(Relay 1 and Relay 2)*.

BEEP alarme

| Relay 1 | Relay 2 | LED 1 | LED 2 |
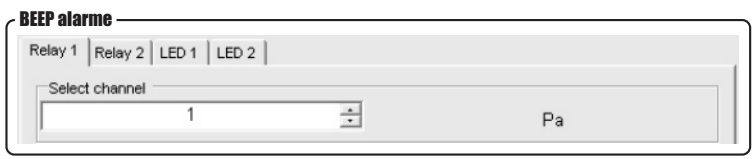
Select channel
1   Pa

Therefore, the transmitter can be configured according to **4 different types of security instructions**.
To select the channel to which you want to send the instruction, use the arrows located on the right side of the zone "Select channel", or directly enter the value (from 1 to 4).

III5e - Explainations of available alarm modes :

Description :

Set point
The set point is a limit that, once exceeded, will activate an alarm or a relay (for more information on negative security, see page 7).

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.

Available configurations :

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

Set point 1 > Set point 2

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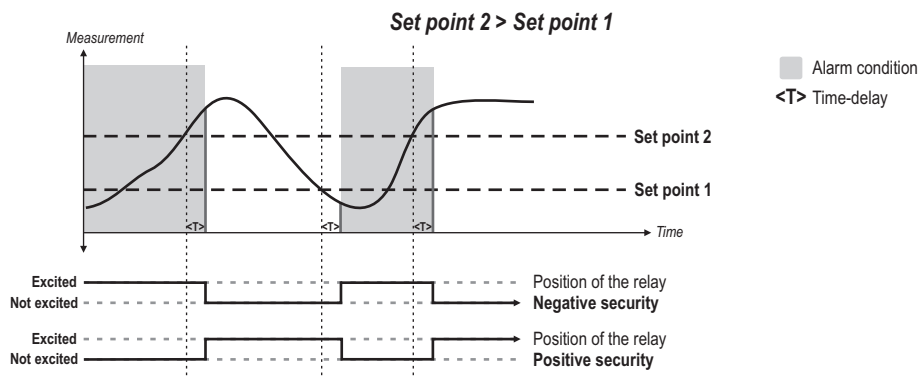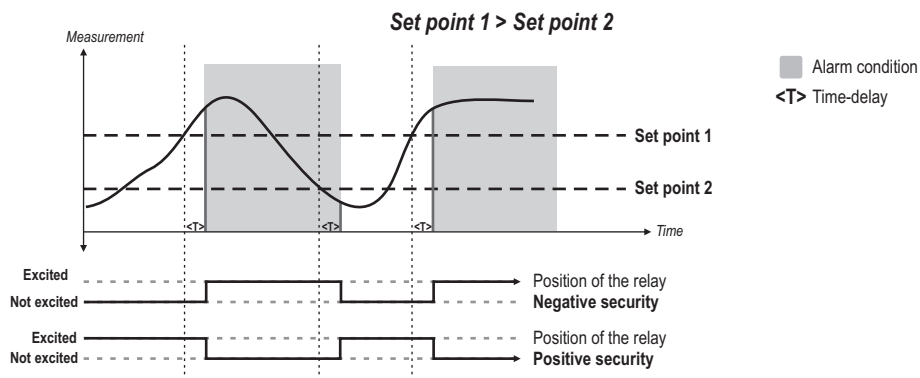
Configuration N°2 : 1 set point, time-delay and rising edge

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

Measurement

■ Alarm condition
<T> Time-delay

Set Point 1

Time

Excited ──────
Not excited ┄┄┄┄ Position of the relay
Negative security

Excited ┄┄┄┄
Not excited ────── Position of the relay
Positive security

III5f - Alarm selection : `300` `200`

Alarm selection

Alarm selection

Rising edge mode and delay ▼

No alarm
Control mode (Setpoint1 , Setpoint2 and delay)
Rising edge mode and delay
Falling edge mode and delay

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 :
- No alarm.
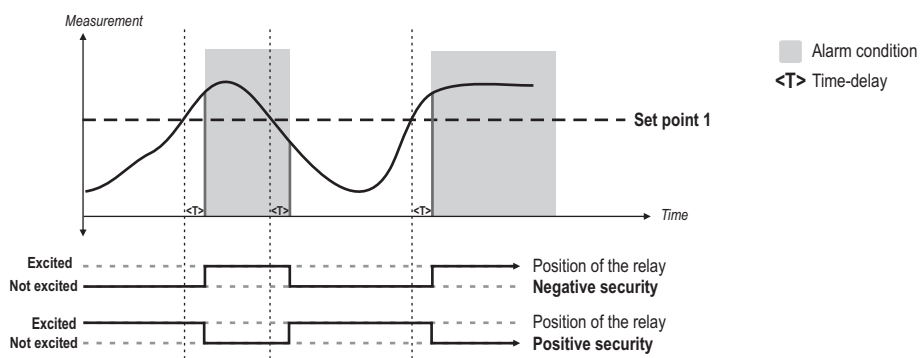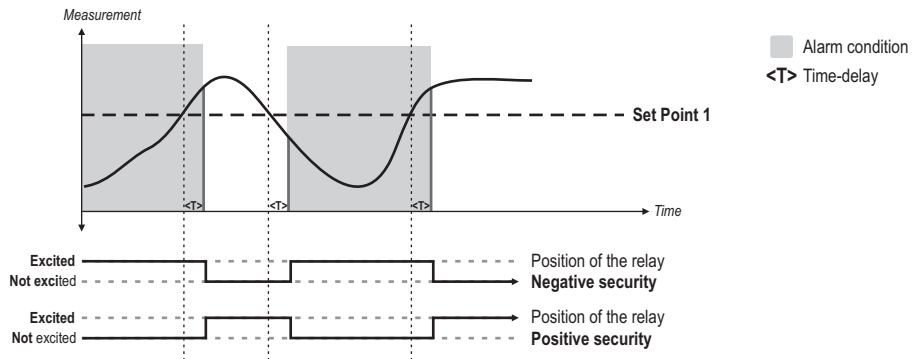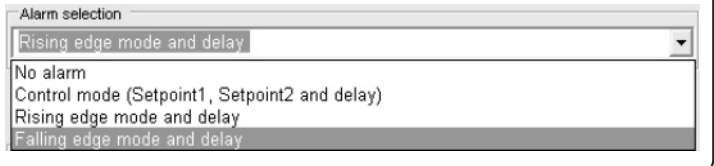- Control mode (Set point 1, Set point 2 and delay) (N° 1 see page 9).
- Rising edge mode and delay (N°2 see page 9).
- Falling edge mode and delay (N° 3 see figure above).

⚠ ***It is possible to select 1 different mode of alarm for each relay (Relay 1 and 2) and for each visual alarm (LED 1 and 2).***

III5g - Setting the set points and time-delay : `300` `200`

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.

Set points

Setpoint 1 of the alarm
`10,00` ⬦ inWg

Setpoint 2 of the alarm
`20,00` ⬦ inWg

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

*Ex. For a pressure transmitter type CP303 (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 7.***

NOTE • If, after setting the set points, the measurement unit has changed (see page 5), then you must re-configure 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
`0` ⬦ Sec.
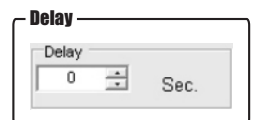
III 6 - Configuration of pressure measurement :

III6a - Pressure integration coefficient : 300(CP) 300(CPE) 200(CP)

The integration factor allows to smooth the measurement to avoid inadvertent fluctuations.
New value displayed =
[((10 - factor) x New value) + (Factor x Old value)] /10
This formula can be applied when the fluctuation is **lower than +/- (Factor** *x 10 Pa)*

Example : CP303 (0-1000 Pa) - Previous measurement : 120 Pa - New measurement : 125 Pa
The pressure source being stable, the user chooses a low integration. Integration : **1**, maximum fluctuation authorised **+/-10 Pa**. The fluctuation is inferior to 10 Pa, therefore we can use the formula to calculate the integration.
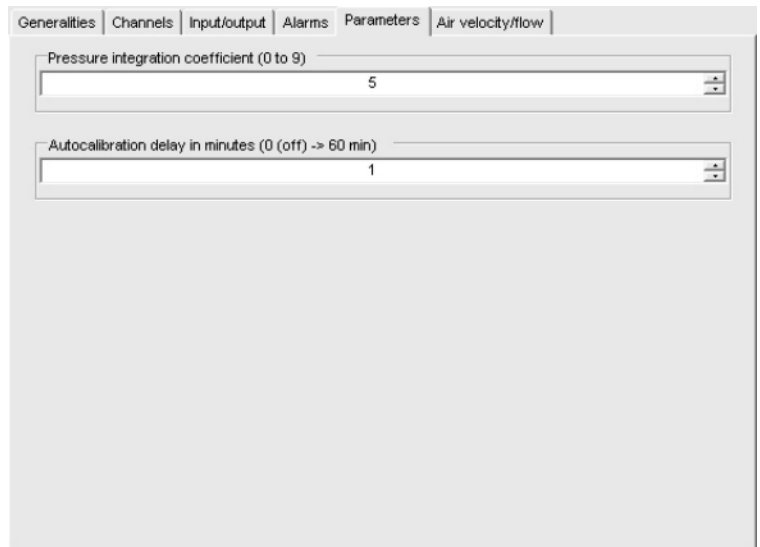Next measurement displayed : ((9 * 125) + (1 *120))/10 = 124.5 that is 124 Pa. If the new value had been 131 Pa, the next value showed would have been 100% of the new value, that is to say 131 Pa.

| Generalities | Channels | Input/output | Alarms | Parameters | Air velocity/flow |

Pressure integration coefficient (0 to 9)
5

Autocalibration delay in minutes (0 (off) -> 60 min)
1

To set the integration value, click on tab "Parameters" and use the arrows located on the right side of the zone "Pressure integration coefficient", or directly enter the value (from 0 to 9).
Factor 0 : no integration.
Factor 9 : maximum integration, reading more stable.

III6b - Time-delay between 2 self-calibration : 300(CP) 300(CPE)

To set the time-delay between 2 self-calibration, click on tab "Settings" and use the arrows located on the right side of the zone "Time-delay between 2 self-calibration", or directly enter the value (from 0 to 60 min).
Time-delay 0 : no self-calibration.
Time-delay 60 : maximum delay between 2 self-calibration (60 min).

III 7 - Humidity measurement configuration:

III7a - Setting of offset in humidity and temperature: 300(TH) 200(TH)

In order to avoid any drift of the measurement, you can add an offset to the value displayed by the TH 200 / 300 via our reference portable instrument EHK 500 or via the LCC 300 software.

⚠ Function only available on humidity transmitters **TH 200 / 300**

The EHK 500 is a reference portable instrument (optional) which enables you to adjust in humidity and temperature, via the RS232 connection cable. This new system is time-saving: no need to return the transmitter to our factory., you can carry out on-site adjusting.
Your transmitter is always available. *See technical datasheet and user manual of EHK 500.*

III7b - Resetting of offset: 300(TH) 200(TH)

For transmitters with version <= 1.6

If your transmitter is adjusted in humidity and temperature with the EHK 500, you can reset the offset whenever you want.
Click on the tab "Settings" then on the box "Initialzsation" of the window "Offsets of humidity and temperaturee".

| Generalities | Channels | Input/output | Alarms | Parameters |

Temperature and humidity offsets
☐ Initialisation

For transmitters with version => 1.6

LCC 300 KIMO Constructeur
Controls Parameters ?

Write configuration

Generalities | Channels | Input/output | Alarms | Parameters
Temperature Offset
1,0 °C   1,0 °F

300(TH) 200(TH)
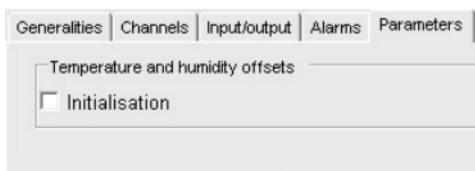
In the tab "Settings", you can enter the offset in humidity and temperature.
Nota : the offset in temperature can be entered either in °C or in °F (automatic conversion).

Offset ranges	
%RH	-50,0 to +50,0
°C	-50,0 to +50,0
°F	-90,0 to +90,0

III 8 - Configuration of air velocity measurement :

The tab "Air velocity / flow" gives access to all the information about air velocity and air flow measurement :
- Temperature compensation mode.
- Select air velocity probe.
- Select air velocity correction coefficient.
- Select duct type or flow coefficient.

III8a - Type of temperature compensation : 300ᶜᴾ 200ᶜᴾ

It is possible to **modify the temperature compensation value**. Indeed, the air velocity and the airflow measured with a Pitot tube and/or Debimo (or with any other differential probe) depends on the working temperature.
Therefore, it is necessary to enter **the working temperature** in order to get more coherent results.
This value can be either entered manually or with the help of a thermocouple K probe for an automatic temperature compensation.
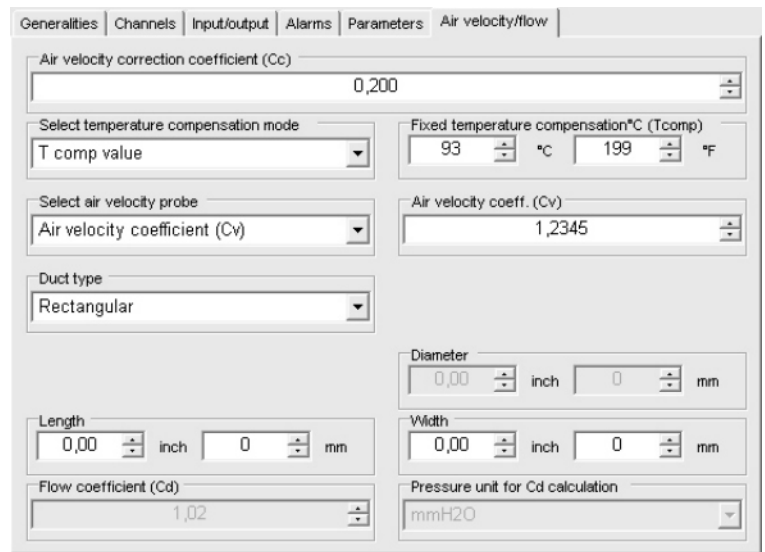
Automatic compensation : 300ᶜᴾ

For automatic setting of the temperature compensation, select "External probe temperature" in zone "Select temperature compensation mode".

Automatic compensation
Select temperature compensation mode
External probe temperature

⚠ Once the configuration process of the temperature compensation is over, **make sure the connection of the thermocouple K probe** is OK.

Manual compensation :

For manual setting of the temperature compensation, select "Temperature compensation Value" in the zone "Select temperature compensation mode".
The zone "Fixed temperature compensation °C" is activated. Then you can enter the working temperature in °C or °F. Use the arrows located on the right side of the zone or directly enter the value.

Manual compensation
Select temperature compensation mode
T comp value
Fixed temperature compensation°C (Tcomp)
93 °C   199 °F
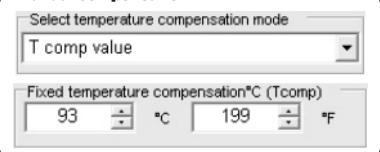
NOTE If you compensate the temperature in Celsius degrees, the software will automatically make the conversion into Farenheit and vice versa.

III8b - Selecting the air velocity coefficient :   300 CP / 200 CP

Since pressure and differential probe are used to calculate the air velocity, you must **enter the differential probe coefficient value**. The coefficient of the Pitot tube and of the Debimo are both integrated in the transmitter.

⚠ This function is only available on pressure transmitters type **CP 200 / 300 + optional SQR**

Automatic input of coefficient :

For automatic setting of the air velocity coefficient, select "Debimo" or "Pitot" in the zone "Select air velocity probe" according to the differential probe to be used.

Automatic input of coefficient
Select air velocity probe
Air velocity coefficient (Cv) ▼
Pitot
Debimo
Air velocity coefficient (Cv)

Manual input of coefficient :

For manual setting of the air velocity coefficient, select "Air velocity coefficient (Cv)" in the zone "Select air velocity probe".
The zone "Air velocity coeff. (Cv)" is activated. Use the arrows located on the right side of the zone or directly enter the value required.
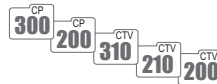
Manual input of coefficient
Select air velocity probe
Air velocity coefficient (Cv) ▼
Air velocity coeff. (Cv)
1,2345

III8c - Input of air velocity correction coefficient :   300 CP / 200 CP / 310 CTV / 210 CTV / 200 CTV

With this correction coefficient, you may adjust the transmitter according to the air velocity data of your installation.

⚠ This function is only available on transmitters type **CP 200 / 300 + optional SQR and CTV 200 / 210 / 310**

How to calculate the coefficient :
For example, you know that the air velocity in your duct is equal to **17 m/s** and that the transmitter shows **16.6 m/s**. Then the coefficient to be applied is **17 / 16,6** that is to say **1.024**

Input of coefficient :
Use the arrows located on the right side of the zone or directly enter the value requested (from 0,200 to 2,000).

Air velocity correction coefficient
Air velocity correction coefficient (Cc)
0,200

III8d - Selecting the duct type and the flow coefficient :   300 CP / 200 CP / 310 CTV / 210 CTV / 200 CTV

Duct type
Duct type
Rectangular ▼
Rectangular
Circular
Flow coefficient

It is possible to work from a type of section (rectangular or circular) or from flow coefficient for airflow measurement.

Rectangular duct :

⚠ This function is only available on transmitters type **CP 200 / 300 + SQR and CTV 200 / 210 / 310**

For rectangular duct, select "Rectangular" in the zone "Duct type ".
The zones "Length" and "Width" are activated. You can then enter the rectangular duct length and width (in inch or mm). Use the arrows on the right side of the zones or directly enter the required value.

Rectangular duct
Duct type
Rectangular ▼
Length
3,94   inch   100   mm
Width
1,97   inch   50   mm

NOTE   If you enter the length and width in "inch", then the software will automatically make the conversion into "mm" and vice versa.

Circular duct :

> ⚠ This function is only available on transmitters type **CP 200 / 300 + SQR and CTV 200 / 210 / 310**

For circular duct, select "Circular" in the zone "Duct type".
The zone "Diameter" is activated. You can then enter the circular duct diameter (in inch and mm). Use the arrows located on the right side of the zones or directly enter the required value.

> 📝 *NOTE*   If you enter the diameter in "inch", then the software will automatically make the conversion into "mm" and vice versa.

Circular duct

Duct type
Circular ▼

Diameter
0,39 ⬍ inch   10 ⬍ mm

Flow coefficient :

This coefficient allows to calculate airflow using pressure. It is indicated by the manufacturer who supplies the system equiped with pressure intakes (+ et -). The square root of the measured pressure (Delta P) and the factor will enable you to get the airflow.

$$\text{Airflow} = C_D \times \sqrt{\triangle \text{ Pressure}}$$

> ⚠
> 📟 CP 300
> This function is only available on transmitters type **CP 200 / 300 + SQR**.
> With this calculating process, you will **not be able to read air velocity anymore**. If you activate this calculating process and a velocity channel, then the transmitter will show an **error type 4.**
> **To avoid this situation :**
>   • Select an airflow unit for channel 1, 2, 3 or 4
>   • Instead, select the airflow factor, a circular or rectangular duct in the zone "Duct type"

For airflow coefficient, select "Flow coefficient" in the zone "Duct type".
The zones "Flow coefficient (Cd)" and "Pressure unit for Cd calculation" are activated. You can then enter an airflow factor and a pressure unit. Use the arrows located on the right side of the first zone or directly enter the airflow factor value required (from 0,01 to 999,99).
Click on the arrow on the right side of the second zone to display the list of the pre-set-units, according to the transmitter used.

Rectangular duct

Duct type
Flow coefficient ▼

Flow coefficient (Cd)
1,02 ⬍

Pressure unit for Cd calculation
mmH2O ▼

CP201 and 202	*CP203 and 204*
Pa	-
-	Kpa
inWg	inWg
mbar	mbar
mmHg	mmHg
-	PSI
mmH$_2$O	-

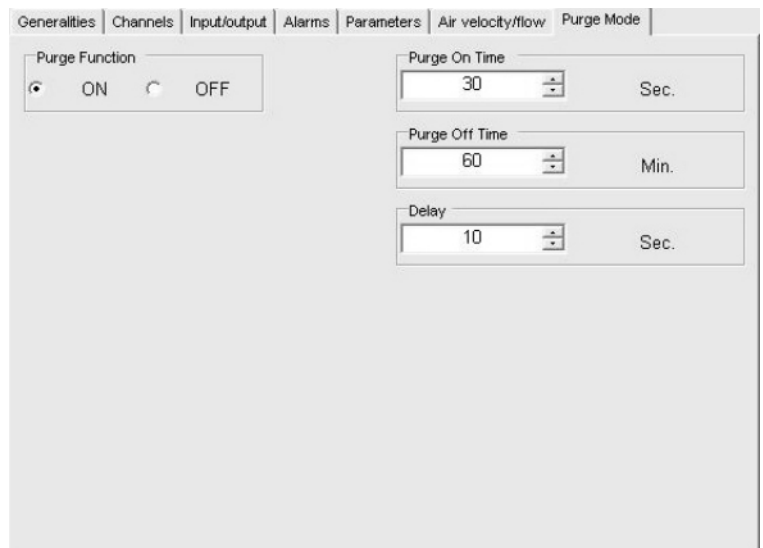| *CP301/302/303*	*CP304*
Pa	Pa
mmH$_2$O	mmH$_2$O
inWg	inWg
mbar	mbar
-	mmHg

III 9 - Purge Mode :

The purge mode enables to freeze the measurement when being displayed, enables to lock the analogue outputs, and to activate the relay 1, in order to actuate a de-dust system of an air movement conditions system and to activate the relay 2 in order to isolate the transmitter.

| Generalities | Channels | Input/output | Alarms | Parameters | Air velocity/flow | Purge Mode |

Purge Function
(ON   (OFF

Purge On Time
30   Sec.

Purge Off Time
60   Min.

Delay
10   Sec.

III9a - Activation / deactivation of purge mode :

300 CP / 300 CPE / 200 CP / 300 CPA

To activate the purge mode, select "ON" in "Fonction Purge" zone. To deactivate the purge mode, select "OFF".

Purge fonction
Purge Function
(ON   (OFF

III9b - Working duration of purge mode :

300 CP / 300 CPE / 200 CP / 300 CPA

For manual setting of working duration of purge mode, use the arrows located on the right side of the "Purge on time" zone or enter the value directly (from 1 to 60 sec).

Purge on time
Purge On Time
30   Sec.

III9c - Frequency :

300 CP / 300 CPE / 200 CP / 300 CPA

For manual setting of frequency, use the arrows located on the right side of the "Purge off time" zone or enter the value directly (from 1 to 9999 min).

Purge off time
Purge Off Time
60   Min.

III9d - Time-delay :

300 CP / 300 CPE / 200 CP / 300 CPA

Once the purge is finished, time-delay is a time period before the transmitter returns to measurement mode and before the analogue outputs are reactivated.

Delay
Delay
10   Sec.

For manual setting of time-delay, use the arrows located on the right side of the "Delay" zone or enter the value directly (from 0 to 60 sec).

III 9 - Error codes :

Code	Problem	Solutions
01	Configuration conflict between the alarms setting and the displayed (activated) channels.	• Check the condition of the 4 alarms and of the 4 channels. Ex. : If an alarm is configured on an inactive channel (1,2,3 or 4), the error mode is activated. You must deactivate the channel on which you want to set an alarm condition. **Activating a channel** : see page 5 **Configuration of alarms and relays** : see page 8
02	No activated channel.	• You must at least activate 1 channel to avoid this error code. **Activating a channel** : see page 5
03	Humidity probe (TH 200 / 300) or SPI (CP 200 / 300 / CPE 300) not connected Temperature probe (TT300) not connected	• Connect the probe / SPI (see SPI user manual)
04	Only for CP 200 / 300. One channel is configured for velocity (see page 5) and the function to calculate airflow (page 14) is on position 02 (airflow factor). This combination is not allowed.	• Select an airflow unit for channel 1, 2, 3 or 4 (see configuration of the channels, page 5) • Instead of the airflow factor, select a circular or rectangular duct. (see page 13)
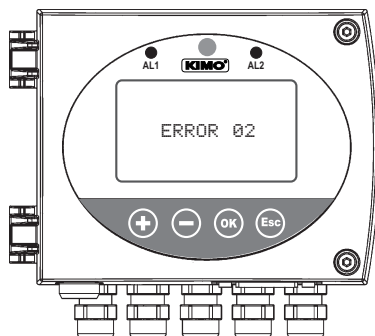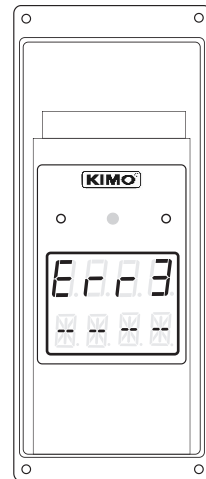
IV - Transfering a configuration to the transmitter

There is a writing bar above the configuration tabs.
When the configuration of the connected transmitter is displayed or when you open a pre-set configuration, the writing bar is shaded.

When you modify a parameter, the writing bar turns red. It means that the configuration displayed on the software screen is not the same anymore than the one of the transmitter. Once all the required modifications were made (generalities, channels, inputs/outputs, alarms, parameters, air velocity/flow), click on the writing bar to transfer the new data to the transmitter.

Writing the configuration

Writing bar when opening a configuration

Write configuration

Generalities | Channels | Input/output | Alarms | Parameters | Air velocity/flow |

Designation	Serial N°	Software version
CP304	03.12.0012	1.0

Writing bar after modification and before transfer to the transmitter.

Write configuration

⚠ If you transfer a configuration that does not correspond to the type of the connected transmitter (class and/or parameter) the message beside will appear.

LCC 300 ✕

Incompatible transmitter

OK
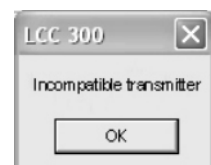
V - Saving a configuration

V1 - Principle :
Using the function "Save configuration", you can record different configurations in a database, and also the modifications.

V2 - Saving a configuration :
Please follow carefully the different steps as below :
- Using the "Read configuration" function, read the parameters of the transmitter.
- Make some modifications if required
- Write the new configuration after having modified
- In the menu "Commands" click on "Save configuration".

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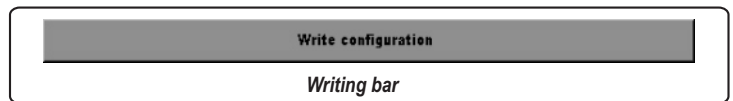
> ⚠ The first step is to transfer the new configuration to the transmitter (by clicking on the writing bar).
> Then, you can save it in the database.

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 save will be displayed.
Note : the names of the configuration re preceded by the name of the transmitter which is connected.

Save configuration

> ⬛ Confirm   ⊠
>
> Save configuration | Ok |
>
> |02/09/2004 18:06:58| | Cancel |
>
> *Data field :*
> *enbales to give a name any configuration saved.*

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

Save correctly done

> ⬜ Confirm   ⊠
>
> Configuration saved !!!
>
> | OK |

> ⚠ 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 configuration name already exists !!!
>
> | OK |

VI - Opening a configuration

Function : OPENING A CONFIGURATION

When launching the LCC-300 software, two buttons are displayed :

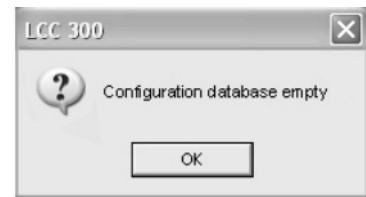- **Read configuration**
- **Open configuration from database**

> Read configuration
>
> Open configuration from database

VI 1 - 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.

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

⚠ 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 300

❓ Configuration database empty
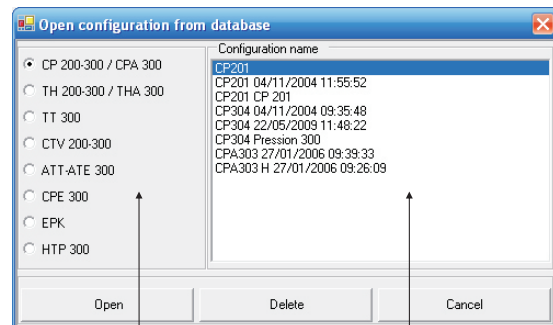
OK

VI 2 - Opening a configuration :

To open a configuration, click on "Open configuration from database" or go into "Commands", and then click on "Open configuration from database" (see page 18). The window shown beside will be displayed.

To choose a configuration :

- First select the type of transmitter that you want to configurate (first box).
  The configurations saved are displayed in the second box.
- Then select the configuration required.

ex : to choose a configuration for a CP300 pressure transmitter, select CP 200-300 in the first box. The list of the configurations saved for CP 300 is then displayed in the second box.

Open a configuration

Open configuration from database

Configuration name

- ⦿ CP 200-300 / CPA 300
- ○ TH 200-300 / THA 300
- ○ TT 300
- ○ CTV 200-300
- ○ ATT-ATE 300
- ○ CPE 300
- ○ EPK
- ○ HTP 300

CP201
CP201 04/11/2004 11:55:52
CP201 CP 201
CP304 04/11/2004 09:35:48
CP304 22/05/2009 11:48:22
CP304 Pression 300
CPA303 27/01/2006 09:39:33
CPA303 H 27/01/2006 09:26:09

Open   Delete   Cancel

First box
TRANSMITTER TYPES

Second box
CONFIGURATIONS

NOTE If you choose a transmitter type for which no configuration was done, the message "No configuration" will be displayed in the second box.
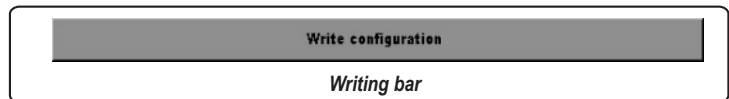
Configuration name

No configuration

To open a configuration, click on the name of the configuration required (as explained page 17).
The name chosen is then displayed in a coloured zone. Click on   "Open". The window 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 into
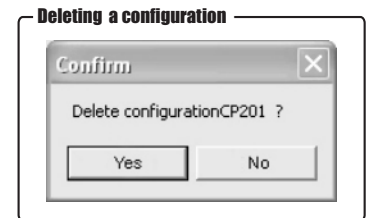"Commands" and click on "Write configuration" (see page 18).

Open a configuration

Confirm   ☒

Open configuration :
CP304 Pression 300 ?

| Yes | | No |
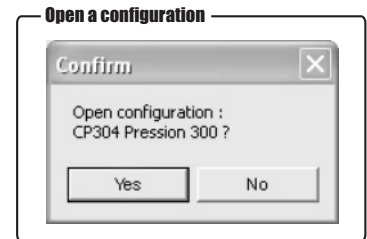
VI 3 - Transfering a configuration :
To transfer the configuration parameters to a transmitter, please
open the configuration required (see page 15). Click on the
writing bar or go into menu "Commands", then "Write
configuration" (see page 18).

Write configuration

Writing bar

VI 4 - Deleting a configuration :
To cancel a configuration, click on the name of the configuration required (as explained page 17). The
name is then displayed on a blue blackground. Click on "Cancel". The window shown beside appears to
ask you to confirm. Then click on "Yes".

Deleting a configuration

Confirm   ☒

Delete configurationCP201 ?

| Yes | | No |

VII - Main menu

"Commands" Menu

"Read configuration" • see page 3
"Save configuration" • see page 16
"Open configuration from database" • see page 17
"Write configuration" • see page 15
"Quit" • to quit the LCC 300 software

"Parameters" Menu

"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 Aftersales Service.

"Help" Menu

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

About   ☒
LCC 300
Application   - Ver. : 2.3.0.0

http://www.kimo.fr

www.kimo.fr

A F
A Q
ISO 9001