





**USER MANUAL** 



# Table of contents

1 INTRODUCTION	
1.1 Presentation of Akivision CFR	
1.2 Explanation about 21 CFR part 11 regulation	
1.3 Vocabulary	7
2 USE OF DATA	7
3 AKIVISION APPLICATION INSTALLATION.	8
3.1 Software launching	
4 SETUP THE APPLICATION	9
4.1 Manage the wireless communication (BK-RF base)	
4.1.1 Attribute a number	
4.1.2 Manage the data acquisition service of the wireless datalogger	9
4.2 Manage the data	10
4.2.1 Adjust the export parameters of the data files	10
4.2.2 Delete the saved data	
4.2.3 Activate the data sampling	
4.3 Manage the alarms	
4.4 Manage the emails	
4.4.1 Configure the emails	
4.4.2 Manage the contacts	
4.5.1 Manage the users	
4.5.2 Manage the users groups	
4.5.3 Modification and deletion of users and users group	.15
4.5.4 Follow the acquisition	15
4.5.5 Restart the application	
4.6 Personalize the application	16
5 AKIVISION-A CFR	17
5.1 Activate the signatures	
5.2 Sign measurements	
5.3 Get to signed measurements	18
6 ADJUST THE DEVICE COMMUNICATION PARAMETERS	19
6.1 Adjust the communication parameters in modbus	
6.2 Adjust the communication parameters of a wireless datalogger	
6.3 Adjust the Ethernet communication parameters	20
7 CREATE A NEW VIEWING	
7.1 Integrate the sensors/transmitters and modules connected in modbus	
7.1.1 Configured channel list	
7.1.2 Configure the alarms	
7.1.3 Define some areas	
7.1.4 Configure the viewing pages	27
7.1.5 Setup the acquisition	
7.2 Save the viewing	
7.3 Integrate the wireless data logger	
7.3.1 Configure a wireless data logger	
7.3.2 Perform a multiple configuration	
7.3.3 Configurated channel list	
7.3.4 Configure the alarms 7.3.5 Define some areas	
7.3.6 Configure the viewing pages	
7.3.7 Setup the acquisition	
7.4 Save the viewing	

8 CONFIGURE A SENSOR	
8.1 Configure the display	
8.2 Configure the keypad	
8.2.1 Activate or deactivate the keypad	
8.2.2 Modify the password	
8.2.3 Activate or deactivate the key beep	
8.3 Modify the date and hour format	
8.4 Configure the modbus communication	
8.5 Configure the Ethernet communication	
8.6 Configure the channels and the measuring units	
<ul><li>8.7 Configure the alarms</li><li>8.8 Details of alarm modes</li></ul>	
8.9 Configure the input and output	
8.10 Test the analogue outputs	
8.11 Configure the measure in velocity and airflow	
8.11.1 Select the measuring mean (C310/CA310 with pressure module and SQR3 option)	
8.11.2 Adjust the compensation in temperature (C310 and CA310)	
8.11.3 Configure the section type (C310 and CA310)	
8.12 Configure the relays (C310 and CA310)	
8.13 Other adjustments	
8.13.1 Adjust the purging time	
8.13.2 Select a normative value	
8.13.3 Enter an integration	
8.13.4 Adjust the temporisation between two autozeros	
8.13.5 Enter a compensation	
9 CONFIGURE THE MODULES	19
9.1 Configure a temperature module	
9.2 Configure a module of current/voltage	
9.3 Configure a relay module	
9.4 Configure a dry/wet contact module	
10 ACQUISITION VIEWING.	
10.1 Graphic panel	
10.1.1 Devices list	
10.1.2 Value display: graphic, table and statistic	
10.2 Values display: synoptic representation	
11 ALARMS LIST	
11.1 Access to the alarms list	
11.2 Acknowledge the alarms	
12 ACCESS TO THE EVENT REPORT	53
13 AKIVISION-E APPLICATION INSTALLATION	54
13.1 Software launching	
-	
14 SETUP THE APPLICATION	
14.1 Manage the data	
14.1.1 Manage the users	
14.1.2 Manage the users groups	
14.1.3 Modification and deletion of users and users group	
14.2 Personalize the application	
15 AKIVISION-E CFR	
15.1 Activate the signatures	
15.2 Sign measurements	
15.3 Get to signed measurements	62
16 ACQUISITION VIEWING	63
16.1 Open the acquisition	

16.2 Viewing details	64
16.2 Viewing details 16.2.1 The devices list	64
16.2.2 Display values: graphic, table and statistic	64
16.3 Values display: synoptic representation	65
16.3.1 Open the synoptic representation	65
16.3.2 Modify the elements of the synoptic representation	65
17 EXPORT THE DATA	67
17.1 Create values, graphic, event or alarms report	67
17.2 Create a pdf report	67
18 ALARMS LIST	
18.1 Access to the alarms list	
18.2 Acknowledge the alarms	68
19 ACCESS TO THE EVENT REPORT	69

## 1.1 Presentation of Akivision CFR

The Akivision data acquisition system has been developed by Kimo and is dedicated to monitoring the proper functioning of air conditioning systems. It is suitable for every kind of process monitoring, including data recording, reading, and analysis. This CFR version has been designed to be compliant with 21 CFR part 11 of FDA regulations concerning electronics recording, combined with Kimo measurement devices.

Akivision CFR software relies on security functions of Windows<sup>®</sup> operating systems.

Akivision CFR software must be installed and configured by a system administrator having proper rights with the help of Windows<sup>®</sup> security parameters.

The original configuration of security parameters of the Akivision CFR software meets the requirements of 21 CFR part 11 regulations.

It is the responsibility of the company that has acquired the Akivision CFR software to give permission to the users corresponding to their software usage policies. In the case of violation of Kimo or 21 CFR Part 11 recommendations regarding access permissions on Akivision CFR software, Kimo can not be held liable for any consequences that will result.

21 CFR Part 11 regulations also require the planning of operational procedures including the coupling of two items, composed by the Akivision CFR software for the technical part and operational procedures for the procedural part.

Thus, companies that acquire Akivision CFR software should ensure their employee who develop, maintain and use electronic records and the electronic signature system have the suitable education levels, training and experience to perform their defined tasks.

Companies that acquire Akivision CFR software also need to keep measurement data according to the required timelines mandated in their jurisdiction.

As a consequence, the system must be taken into account as a whole in order to meet 21 CFR Part 11 requirements. Akivision CFR software is only a part of this system.

## 1.2 Explanation about 21 CFR part 11 regulation

## What is the 21 CFR part 11 regulation?

Enacted by the FDA (Food & Drug Administration) in 1997, the 21 CFR Part 11 regulation allows the use of electronic technology. It is divided into two main sections:

- Electronic recordings
- Electronic signatures

The 21 CFR Part 11 regulation defines requirements of electronic folders and electronic signatures equivalent to paper folders and handwritten signatures. The regulation is applied to electronic folders which will be created, analysed, maintained, archived, retrieved, or transmitted in the field of the requirements linked to every folder described in the FDA regulation.

## Who has to comply?

Companies that sell or want to launch one or several products within pharmaceutical sector in the USA must comply with this regulation.

## What is required to comply?

Complying with 21 CFR Part 11 regulation requires procedural and technical conformities.

- Procedural conformities: these are the policies and Standard Operating Procedures (SOP) created by pharmaceutical companies that define how the conformity will be realized.
- Technical conformity: the technical conformity is obtained by using products delivered by the supplier.

## 1.3 Vocabulary

- **Electronic recordings**: combination of text, graphs, data, sounds, pictures or other information interpreted as a digital way which is created, analysed, managed, archived, stored or spread by a computer system.
- **Electronic signature**: compilation of digital data of every symbol or series of symbols executed, approved or authorized by a person as his legal equivalent of his handwritten signature.



Kimo can not be held responsible for the use of data recorded with Akivision CFR software.

Kimo can not be held responsible either in case of computer equipment malfunction (computer or server) in which Akivision CFR software is installed if the installation is made in an environment not supported by the Akivision CFR software. For example:

- in case of a system update
- in case of a modification of the operating system

If the software is used in other conditions than the ones described in the user manual, Kimo cannot be held responsible for the consequences. For example:

- minimum configuration needs to be respected
- software must be installed by a system administrator

The company that acquires Akivision CFR software should agree to provide Kimo with access and use to Akivision CFR software if they need additional services, support or installation assistance. This commitment involves the provision of logins and passwords that would be required to allow this on-site or remote assistance.

# 3 AKIVISION APPLICATION INSTALLATION

For the installation and minimum requirements, please see the prerequisite document **"LR/03/BE"**. At the end of the installation, a user account is created. User name and password are:

- user name: admin
- password: admin

See page 13 for the user management.

## 3.1 Software launching

To launch the application, it is necessary to connect the security key on the computer's USB connection.



Security key or dongle

 $\wedge$ 

- Connect the security key only after the software installation.
- During the usage, the computer researches if the key is present every 5 minutes. If the key is not detected, it is no longer possible to make actions on the application.

# 4 SETUP THE APPLICATION

It is possible to adjust several general parameters of the application. It is recommended to adjust them before the first usage. These adjustments concern:

- The communication of a BK-RF base
- The data export
- The emails
- The users management
- Customizing of the application

To access to these adjustments:

- Click "Options" on the application main screen.
   The application requests the user to log in.
- Enter the following login: "admin" then the following password: "admin". See chapter 4.5 for the creation and management of users logins and passwords. The following window opens.

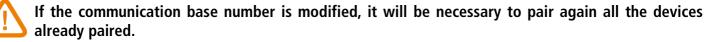
📌 Options configuration	on 🗖 🗖 📈
Copt	tions configuration
	Communication
$\widehat{}$	BK-RF communication base options
Communication	Communication base number : 230 🛓
	It will be necessary to pair spain all the devices already paired if the communication base number is changed.
Deta	Relay fonctionnality
<b>Ļ</b>	Management of the acquisition service
	Service state of data acquisition : Stated Update
$\bowtie$	Serial communication port options
Emoils	COM port number by default : 3 👘
Securities	
G/ =	
Personalization	l
	Cancel OK

## 4.1 Manage the wireless communication (BK-RF base)

This part allows to attribute a number to the communication base and to start or stop the data acquisition service.

#### 4.1.1 Attribute a number

> Select a number between 230 and 239 then press "Attribute the number".



#### 4.1.2 Manage the data acquisition service of the wireless datalogger

Management of the acquisition service	
Service state of data acquisition : Started	Update
Start acquisition service	Stop acquisition service

This part concern the program which allows to recover the datalogger data and is useful only in case of software dysfunction.

The state of data acquisition service must always be in mode "Started".

> Click **OK** at the bottom of the options window to validate the modifications.

## 4.2 Manage the data

This part allows to adjust the export parameters of the data files and delete the saved data.

- Click "Data" at the left of the options window.
  - The following window opens.

Options configuration	n	
Sop	ions configuration	
	Data	
(.	Management of the export files	
•	Data automatic export in CSV file	
Communication	Frequency of exportations activation :	All the 2 文 Hour(s)
	Location of the export files	
Data	C:\Users\Public\Documents\KIMO INSTRUMENTS\AKIVISION2\EXPORT	Browse _
	Location of PDF reports	
	C\Users\Public\Documents\KIMO INSTRUMENTS\AKIVISION2\PDF	Browse _
Alerns	Management of the data files	
	Saving files location	
$\ge$	C:\Users\Public:\Documents\KIMO INSTRUMENTS\AKIVISION2\BACKUPDATAS	Browse _
Emails		
Securities	Management of the database	
G/ =	Data deletion whose date is less than : 24/05/2018 14:34:15	Delete the data
	Enable sampling : 📝	
Personalization		
		Cancel OK

## 4.2.1 Adjust the export parameters of the data files

## In "Management of the export files":

- Tick the box "Automatic export of data in CSV files" to automatically export the data in CSV format, readable by spreadsheet software such as Excel.
- Select the triggering frequency of exports between 2 hours and 24 hours.
- > Select the file in which the export files will be saved: click **"Browse"**, then select the desired file.
- Select the file in which the PDF reports will be saved: click **"Browse"**, then select the desired file.

## 4.2.2 Delete the saved data

## In "Data base management" part:

> Define the date and hour from which the data will be deleted.

It is also possible to delete the data by clicking on "Delete the data".



## The data will be definitively deleted.

> Click **OK** at the bottom of the options window to validate the modification.

## 4.2.3 Activate the data sampling

This function allows to optimise the software performances if the data number or the acquisition frequency is very important. Therefore, the sampling allows to keep a defined number of values.

> To activate this function, tick the **"Activate sampling"** box.

## 4.3 Manage the alarms

 Click "Alarms" at the left of the options window. The following window opens.

of Options configuration	on	- 0 <mark>- X -</mark>
Q° Opt	tions configuration	
	Alarms	
((.	Management of the alarms	
Communication	Play a sound when an alarm is in progress	
	Stop the sound alert when alarms are acknowledged	
	Sound file : C:\Users\Public\Documents\KIMO INSTRUMENTS\AKIVISION2\Sounds\alarm1.wav	
Data	Browse	
	V Display an alert message when alarms aren't acknowledged	
÷	Stop the alarm relay when alarms are acknowledged	
Alarms		
$\bowtie$		
â		
Securities		
Personalization		
	Cancel	ок

- Tick the box "Play a sound when alarm is in progress" to be prevented when an alarm is triggered. If this last box is ticked:
- Tick the box "Stop the sound alarm when the alarms are acknowledged" to stop the alarm when the user triggers the alarm.

It is possible to select the sound that will be played when an alarm is in progress:

> Click "Browse" then select the desired sound. This sound file must be in .wav format.

It is also possible to display a message in case of unacknowledged alarm:

- > Tick the box "Display a message when alarms are not acknowledged".
- > Click **OK** at the bottom of the options window to validate the modifications.

## 4.4 Manage the emails

## 4.4.1 Configure the emails

This part allows to configure the emails sending parameters at the contacts saved in the application.

The emails concern the follow-up of an acquisition, it is thus possible to automatically send email when the acquisition starts and stops and to send an email at regular interval during an acquisition.

> Click "Emails" at the left of the options window.

The following window opens.

🗬 Options configuratio	on			_ 0 %
Opt	tions configuration			
	Emails			
(•				
Communication	Sender email address :	d.vignes@kimo.fr		
	Mail server for outgoing mail :	smtp.office365.com	n	
			Send a test message	Advanced options
Data				
<b>Ļ</b>	Location of the contacts file	C:\Users\Public\E	ocuments\KIMO INSTRUMENTS\AKI	VISION2\BASE
Alarma				Browse _
				Browse _
$\bowtie$	Contacts list	Name	email address	
		Fkoubaa	lkoubaa@laposte.net	
Emeils				
				Add contact
1				Add group
Securties				Modify
G* <b>—</b>				Delete
8 =				
Personalization	I			
				Cancel OK

- > In the field **"Sender email address"**, enter the email address used to send messages.
- > In the field "Email server for outgoing mail", enter the name of the SMTP server used to send messages.
- > Click "Send a test message" to test the email configuration by sending an email entered in the displayed dialog box.

D D

۲  Advanced options

Configure the options of the SMTP outgoing server:

- > Click "Advanced options". The window opposite opens.
- > Carry out the necessary adjustments according to the characte of the SMTP server.
- > Click **OK** to validate.

## 4.4.2 Manage the contacts

#### Add a contact:

- > Click "Add a contact".
- Enter the contact name and his email address.
- > Click **OK** to validate.

Create a contact group:

- ➢ Click "Add group".
- $\succ$  Enter a name for the contact group.
- Click a name in the contact list then "Add contact".
- Edit a new contact by clicking "New contact".

	Outgoing server por	t (SMTP) : 25	<u>.</u>	
teristics	Us Pr	t (SMTP) : 25 (SMTP) requires an au ser name d.vignes( assword exercise cation (name and pass tification (NTLM / SPA	@kimo.fr sword in clear)	
	☑ Outgoing server	(SMTP) needs an enci	ypted connection (SSL)	ОК
	💽 Contact pro	perties		×
		ontact name : John mail address : j.doe(		ОК
Distribution list				×
_	larm supervisor			
Contacts list :			Group members :	
Contact name	email address	Add contact ->	Group members .	
Fkoubaa	fkoubaa@laposte.net			
•	4			
New contact	Modify			
			Cancel	ОК

It is also possible to import an already existing contact list:

> Click **"Browse"** to select the file in which is located the contact file.

Modify a contact:

- Select a contact in the contact list.
- ➢ Click "Modify".
- > Carry out the modifications.

Delete a contact:

- $\succ$  Select a contact in the contact list.
- > Click "Delete".
- > Click **Yes** to confirm the deletion.

#### 4.5 Manage the security application

This part allows to manage the users and the follow-up of the acquisitions. It also allows to activate or not the restart of the application during a computer restart.

Click "Security" at the left of the options window. The following window opens.

Options configurati		
Opt	tions configuration	
	Securities	
((•	User management Access to the users management	
	Acquisition monitoring	
Dette	Email sensing during the start and sup of the acquisition is in progress     Al the      Hous	
Alerno	Follow-up emails recipients (use ';' to separate the adresses) Roubaa@laposte.net	
Emails	Restart option	
Securities		
		Cancel OK

#### 4.5.1 Manage the users

- Click "Access to the users management". The window opposite opens.
- > Tick the box "Activate the users management".
- Click "Browse" to modify if necessary the location of the users database.
- Then click "Users" at the left of the window. The following window opens.

	_		
1°	Login	Username	Users group
	admin	admin	Admins
General	user	user	Users
2	test	lest test	None
Users			
187			
Groups			

## Click "New user".

- The window opposite opens.
- > Enter the user name and first name in "User information".
- > Attribute a group to the user (see chapter 4.5.2 for groups creation).
- Create the user connection logins: enter a login in the field "Login" and a password in the field "Password" then confirm the password in the field "Confirm the password".



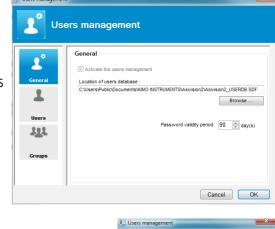
The password must be at least 6 characters long.

> Click **OK** to validate the user creation.



At the first connection, the user should change his password. The new password must be different from the old one.

The session will expire if it is not used for 10 minutes.





## 4.5.2 Manage the users groups

 Click "Group" on the window "Users management". The following window opens.

- 0	Groups	
1	Group name	Group description
General	Admins	
oonoru	Users groupe 1	
-	groupo i	
Users		
101		
775		
Groups		

➤ Click "New group".

The opposite window opens.

- Attribute a name to the group in the field "Group name", then a description of the group in the field "Group description".
- > Attribute the different authorisations that the group will have by ticking the desired boxes.
- Click **OK** to validate the users group creation.

There are three types of authorisations:

- **"Common":** concerns the usage of the Akivision-A and Akivision-E software.
- "Akivision-A": only concerns the Akivision-A software.
- **"Akivision-E":** only concerns the Akivision-E software.

Group parameters	X
Group management	
Group informations	
Group name ;	
· · · · · · · · · · · · · · · · · · ·	
Group description :	
Authorization from the group	
Common	
User management	
Change the password	
Display the event log	E
Tools: management of the export files	
Tools: management of the database	
Export the data	
V Print	
V Measure signature	
Akivision-A	
Create a new viewing	
Open an existing viewing	
Close the viewing	
Save the viewing	
Updating the viewing	-
Check / uncheck all.	ОК

#### Authorisations list:

Common	Akivisi	on-A CFR
Users management	Create a new viewing	Force wireless data logger unload
Change password	Open an existing viewing	Calculated channels management
Display the events report	Close a viewing	Alarms management
Tools: Export files management	Save the viewing	Alarm(s) report
Tools: Data base management	Updating viewing	Display/mask the alarms messages
Export the data	Delete viewing	Alarms acknowledgement
Print	Device addition	Tools: Stop/Start service
Measure signature	Device deletion	Tools: Graphic properties
Akivison-E CFR	Devices configuration	Addition of comments notes
Create a new viewing	Change the communication parameters	Modify the graphic parameters
Open an existing viewing	Change base number of wireless datalogger	Modify the synoptic in creation mode
Close the viewing	Place wireless datalogger	
Delete viewing	Stop the acquisition service	
Addition of comments	Interrupt the acquisition service	

## 4.5.3 Modification and deletion of users and users group

To modify a users group:

- > Select the group to modify by clicking on it.
- > Click "Modify".
- > Carry out the modifications by ticking or unticking the desired authorisations.
- > Click **OK** to validate the modifications.

To modify a user:

- $\succ$  Select the user to modify by clicking on it.
- Click "Modify".
- Carry out the desired modifications.
- Click **OK** to validate the modifications.

To delete a users group:

- Select the group to modify by clicking on it.
- Click "Delete".
- > Click **OK** to validate the deletion.

To delete a user:

- Select the user to delete by clicking on it.
- > Click "Delete".
- Click **OK** to validate the deletion.

#### 4.5.4 Follow the acquisition

It is possible to follow the acquisition in progress thanks to the sending of follow-up emails.

- Tick the box "Sending an email during the start and the stop of the acquisition". When this case is ticked, it is then possible to send an email at regular interval during the acquisition.
- Tick the box "Sending an email at regular interval when acquisition is in progress".
- $\succ$  Define the interval in hours.
- > Then indicate the emails recipients in the field "Recipients of follow-up emails".

uisition monitoring		
Email sending	during the start and stop of the acquisition	
🔽 Email sending	at regular interval when acquisition is in progress	
	All the 6 🔺 Hours	
Follow-up emails	recipients (use ';' to separate the adresses)	
	,	

## 4.5.5 Restart the application

It is possible to restart automatically the application after a reboot:

> Tick the box "Automatic launch of the application during a computer restart".

```
-Restart option
```

Automatic launch of the application when computer restart

> Click **OK** at the bottom of the options window to validate the modifications.

## 4.6 Personalize the application

This part allows to personalize the curves, the axis time, the background, the logo appearing on the printings and to display or not the MKT statistics.

- Click "Personalization" at the left of the options window.
  - The following window opens.

	Personalization		
(•	Default properties of curves Color : Curve 1	Printing logo personalization Preview Image file :	Browse
	Line thickness :	KIMO	
 	Shadow : 🗐	INSTRUMENTS	Delete
	Default properties of time axis	Printing options	
÷.	Color : Grid lines : 🛄	Print the graphic background (color gradient)	
*	Defaut properties of backgroung Degraded : Diagonal		
$\times$	Use axis colour for fulcrum : 📝 Predefined color for the fulcrum :		
	MKT option		
	Display the MKT statistics		
	Display alarm values in red		

## In "Default properties of curves" part:

- Click colour square then select the desired colour. Validate with **OK**.
- Select the lines thickness.
- > Tick the bow **"Shadow"** to make appear the curves shadow.

## In "Default properties of the time axis" part:

- Click the colour square then select the desired colour. Validate with **OK**.
- > Tick the box "Grid lines" to make appear the grid lines.

## In "Default properties of the background" part:

- Select the type of colour graduation: diagonal, horizontal or vertical.
- > Click the two squares colour then select the desired colours. Validate with **OK**.
- > Tick the box **"Use the axis colour for the grid lines"** if necessary.
- > Click the colour square to define a grid lines colour.

## In "MKT" part:

Tick the box "Display the MKT statistics" to display the MKT temperature. This temperature allows to express in a simplified way the global effect of the temperature variations during the storage or the transport of the perishable goods.

## In "Personalization of printings logo" part:

- > Click **"Browse"** and select the logo which will appear on the printings.
- > Click the image file then **"Delete"** to delete it.

## In "Printing options" part:

> Tick the box to print the graphic background.

Default properties of curves	
Color : Curve 1 🗸	
Line thickness :	
Shadow :	
Default properties of time axis	
Color :	Grid lines :

# 5 AKIVISION-A CFR

AKIVISION CFR meets the requirements of CFR21 standard. This standard is for users who want to control and secure their data acquisition system, its main functions being attributed by rights from groups management.

## 5.1 Activate the signatures

To activate the signature management:

- ▶ Go to the user group management (see page 14 to create groups).
- > Tick the box "Measure signature" in "Common" part of the authorization of the group.
- > Close all the windows of the groups management.

## 5.2 Sign measurements

Click "Tools" in the menu bar then "Sign measure". The following window opens:

CFR21 Managem	ent -							
Period	Starting 17/01/2019	V	End 18/01/2019		Validate			
Period list								
Number of points	Signed period		Signa	atory	Signature date	Signature reason	Comment	
4								ŀ
Select all								
🖉 Sign		Si	gn list					Close

- > Enter the date of the beginning and the date of the end of the required period concerned by the signatures.
- Click "Validate" button.
   The list of the possible period displays.
- $\succ$  Click the period(s) to sign.
- Click **"Sign"** button.

A message opens asking to confirm the action.

- ➤ Click OK.
- Enter a user name and the corresponding password then click OK. The following window opens.

Signature reaso	n	
01-Exam		•
Comment		
Comment		

Select a reason then enter a comment.



The comment is compulsory.

> Click **OK**.

	Measure treatment	Starting 17/01/2019	End 18/01/2019	Validate			
	Period list						
ianed	Number of points	Signed period 17/01/2019 00:00:00	Signatory	Signature date 24/01/2019	Signature reason	Comment	
igned ——— eriod	422616	18/01/2019 00:00:00	admin-	15:53:38	01-Examen	validation	
eriod	422421	18/01/2019 00:00:00 19/01/2019 00:00:00	admin-	24/01/2019 15:59:13	01-Examen	validation	
	•		III				Þ
	Select all						
	Sign Sign	4	Sign list				Close

## 5.3 Get to signed measurements

To get to signed measurements:

From the **"List of period"** window:

Click the button "List of signatures".

The list of signed measurements is about the period previously defined at the moment of the measurements signature step.

# 6 ADJUST THE DEVICE COMMUNICATION PARAMETERS

## For the adjustment of the communication parameters, none of acquisition must be in progress.

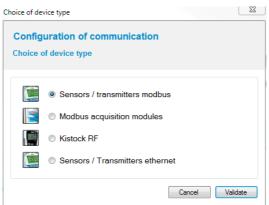
This part allows to adjust the communication parameters of his own devices to add in a network (for example in an already existing network).

## 6.1 Adjust the communication parameters in modbus

This part allows to setup the sensors/transmitters communication in modbus.

#### The user must be connected and have the necessary rights to modify these parameters.

Click "Tools" then "Communication parameters". The following window opens.



Click the "Sensors / Modbus transmitters" chip then click OK. The following window opens.

Sensor config	uration wizard				×
Ģ	Configurat			munication	
	ard will guide you throu essary to indicate the o	current commu	nicati		sensor.
	COM port :	β	-		
	Baud rate :	19200	•		
Moo	dbus slave number :	1	* *		
		Previous		Next	Cancel

- Select the actual COM port on which the sensor/transmitter is connected.
- Adjust the actual communication velocity: 2400, 4800, 9600, 19 200, 38 400 or 115200 bits per second.
- Enter the actual modbus slave number.
- Click **"Next"**.

The following window opens.



- > Carry out the desired modifications on the communication velocity and the modbus slave number.
- > Click "Validate".

A message displays indicating than the configuration has been successfully carried out.

## 6.2 Adjust the communication parameters of a wireless datalogger

The configuration window of the communication parameters is open.

- Click the chip "Kistock RF" then click OK. The setup wizard window of a wireless data logger opens.
- Click "Next".

A window opens indicating the data logger name, its serial number, its firmware versions and its wireless.

- > Select a wireless new number for the data logger.
- > Click "Validate".

A message displays indicating that the configuration has been successfully carried out.

## 6.3 Adjust the Ethernet communication parameters

The configuration window of the communication parameters is open.

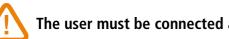
Click the "Ethernet sensors/transmitters" chip then click OK. The following window opens.

Sensor configu		ation of communication
	-	on Procedure
		rough the reconfiguration of a sensor. e current communication parameters of the sensor.
	IP adress :	192.168.1.1

- > Enter the sensor/transmitters IP address on which you want to connect.
- Click "Next".
- > Carry out the desired modifications:
  - Modbus slave n°
  - IP address
  - Subnet mask
  - Gateway
- Click "Validate".

A message displays indicating that the configuration has been successfully carried out.

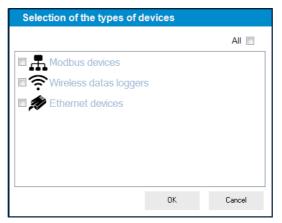
#### **CREATE A NEW VIEWING** 7



The user must be connected and have the necessary rights to modify the parameters.

The application is open and none of acquisition is in progress.

Click "Create" or go in the menu "File" then click "Create a new viewing". The following window opens.



> Tick the devices which must be considered for the acquisition then click **OK**. The following window opens.

Wiewing creation -			
	Stage 1710: Modbus devices research	Max, search : n*	Searching
z v			
		Previous	Net 🕪

If all the boxes have been ticked, the first step consists in researching the modbus devices connected to the computer, then the wireless data logger and finally the Ethernet devices. If, for example, any device is connected in modbus, the application directly passes to the wireless data logger research.

#### 7.1 Integrate the sensors/transmitters and modules connected in modbus

The modbus devices have been properly ticked.

- Click "Searching". The window of search options opens (see opposite).
- > Select the communication number port, the minimum and maximum slaves numbers.
- > Select the communication velocity in bits per second.
- Click OK to validate.

Search options			$\sim$
Communication port N*:	3	Speed (bits/second): 2400 4800 9600 V 19200 38400	*
Minimum slave N°:	30 🌲	115200	
Maximum slave N°:	40		~
		ОК	Cancel

When the research is ended, the list of found devices displays:

🖶 🧱 Kimo Transmitters	List of me	odbus and	ethernet de	vices				Click on the	checkbox 1	Description*to r
<ul> <li>Kino Harshillers</li> <li>n'30: CA310</li> </ul>	Slave N*	Type :	(	escription		LED alarm	Relay			
- 10 nº61 : CA310	43	MD160				0	0			
💟 n168: C310	1 44	MD100				0	0			
- 📜 Kimo large display	45	MD190				0	0			
Current/Voltage module	46	MD160				0	0			
n 44: MD100	47	MD100				0	0			
Temperature module	48	MR100				0	0			
- 🔊 n'42: MD140	49	MR100				0	0			
in "43 : MD160 in "46 : MD160	50	MD120				0	0			
n 46: MD160	51	MD120				0	0			
n 51 : MD120	52	MD180				0	0			
📲 Relay module	53	MD180				0	0			
In 148 : MR100 In 149 : MR100	<b>1 1 1 1 1 1 1 1 1 1</b>	CA310				3	0			
n'49: MR100     Dru/wet contact input module	<b>1 1 1 1 1 1 1 1 1 1</b>	C310				4	0			
n'45: MD190							2			
- 🗿 n*52: MD180		of the device								
Im n°53: MD180	Detail of the	e device			Detail of the					
Weather station			N* :	30	Channel	Name		Unit		
Calculated functions		The second	Type :	CA310	Channel:1 Channel:2			%RH		
	•		s/n :	3F 15.06.07627	Channel:2 Channel:3			g/kg Pa		
	888	1								
			Version:	1.21						
	<b>m</b>	Dalata							£.	Conferen
	W	Uniole							<i>.</i>	compute
	Ŵ	Delete							£	Configure

It is possible to give a name to a device:

- Click "Designation" line.
- > Enter a name then press **Enter**.

Then, it is possible to configure the sensor/transmitter and a module.

Click "Configure".

See page 38 for the sensors/transmitters configuration.

See page 48 for the modules configuration.

## 7.1.1 Configured channel list

When the devices have been configured, click "Next". The following window opens. This window lists the configured channels:

List of devices	Stage 3/8: Configurated channels list	
Let of devices Let of devices	Owned         Design         UM           Image: State Control (State Contro))))))))))))))  <	^ ·
n	5 mA 6 mA	

## ➤ Click "Next".

The following window opens.

Wiewing creation -		× -
List of devices	Stage 4/8: Calculated channels configuration	
*         Montoviewe           *         Montoviewe           *         750 CAR0           *         740 CAR0	Configuration of this calculated channel  Adds a collusted channel  Iuniter Function type Oterrain raine Unit	
	et Pre-	vious Next 🕪

This window allows to configure the calculated channels.

- Click "Add a calculated channel".
- Select the concerned device by the calculated channels then click **OK**. *The following window opens.*

√∆ <sup>°</sup> Cor	ifiguration o	of the calculate	ed channel	
Use a personaliz	ed function		Use a predefined	I calculation function
omula :		Check the syntax	Function :	Absolute humidity
			Calculation paramet	ter of the moist air
			Temperature :	42.0
Channel		Operations	Humidity :	30.1
# Channe	Unit 🔺	Opera Detail		
030.01	%RH	+ Addition	Black ball :	42.0
030.02 030.03 042.00	g∕kg Pa ℃	Subtraction     Multiplications     Division	Conversion paramet	ters
040.04		% Modulo	Channel :	44.0
			Input :	0-10V -
Mathematics functio Function	Detail		Min. :	0,00 (*) Max. : 100,00
abs( <expr>) acos(<expr>) asin(<expr>)</expr></expr></expr>	Absolute value of <exp Cosine arc of <expr> in Sine arc of <expr> in ra</expr></expr></exp 	radians	Channel properties	ł
asin( <expr>) atan(<expr>)</expr></expr>	Tangent arc of <expr> in ra</expr>		Channel name :	
ceiling( <expr>)</expr>	Integer higher or equal		Unit :	%RH 🔻
cosinus( <expr>)</expr>	Cosine of <expr> in rac</expr>	dians	Decimals nb :	2 •

It is possible to create two types of calculation functions:

- Personalized function.
- Predefined calculation function (absolute humidity, dew point, wet temperature, enthalpy and analogue conversion).

Some predefined functions can be blocked if the required channels for their calculations are not available.

The calculated channels can not be used in the calculation of others channels.

The calculation functions of the calculated and saved channels with AKIVISION-A can not be modified in AKIVISION-E.

The values of calculated channels can not be sent on the ATT-ATE displays in digital mode.

Only the channels of the displays ATT-ATE in analogue mode will be used in the channel calculation.

## <u>A – The operations</u>

## Procedure:

i.

Create the formula. Double click the concerned channel(s) and double click the operator (see below the operators table).

Ex : #001 - #008.

- > Verify the syntax. If the syntax is correct go on to the next step; if not, correct the formula.
- > Determine the channel properties (name, unit, decimals).
- Click **OK** to validate.

#### Operators table:

+, -, *, /	Addition, subtraction, multiplication and division.
%	Modulo (rest of whole division). Example: 13 % $3 = 1$

## **<u>B</u>** – The mathematics functions

#### Procedure:

- Create the formula. Double click the mathematics function (see below the mathematics functions table) then double click the concerned channel(s) or insert the appropriate number.
- Verify the syntax. If the syntax is correct go on to the next step; if not, correct the formula.
   Determine the channels properties (Name, unit, decimals).
- > Click **OK** to validate.

abs ( <expr>)</expr>	Gives the absolute value of the expression. ABSV( <i>NameChannel1</i> ) gives the channel value NameChannel1 if it is positive, if not the opposite of its value. ABS(V( <i>NameChannel1</i> )*10.3+V( <i>NameChannel2</i> )) evaluates the expression V(NameChannel1)*10.3+V(NameChannel2) and gives the absolute value.
acos ( <expr>)</expr>	Cosine arc of expression in radians acos (0) gives 1.5708 acos (-1) gives 3.1416
Asin ( <expr>)</expr>	Sine arc of expression in radians asin (1) gives 1.5708 asin (0) gives 3.1416
Atan ( <expr>)</expr>	Tangent arc of expression in radians atan (1) gives 0.7854 atan (0) gives 0
Ceiling ( <expr>)</expr>	Integer higher or equal to the expression CEIL (2.9) gives 3 CEIL (-2.9) gives -2
Cosinus ( <expr>)</expr>	Cosine of the expression in radians cos (1.5708) gives 0 cos (3.1416) gives -1
Exp ( <expr>)</expr>	Exponential of the expression
Floor ( <expr>)</expr>	Integer lower or equal to the expression Floor (2.9) gives 2 Floor (-2.9) gives -3
Ln ( <expr>)</expr>	Napierian logarithm of the expression (The expression must be positive)
Log10 ( <expr>)</expr>	Common logarithm of the expression Log 100 gives 2. Log(V(NameChannel1)*10.3+V(NameChannel2)) evaluates the expression V(NameChannel1)*10.3+V(NameChannel2) and gives the common logarithm. The expression must be positive.
Pow ( <expr> ; <pw>)</pw></expr>	Elevation to a power: <expr> elevated to a power <pw>. Ex: pow (5;3) = 125</pw></expr>
Round ( <expr>)</expr>	Rounded the operator value to a nearest integer. Round (2.4) gives 2 Round (2.6) gives 3
Sin ( <expr>)</expr>	Sine of the expression en radians Sin (1.5708) gives 1 Sin (3.1416) gives 0
Sqrt ( <expr>)</expr>	Square root of the expression
Tangent ( <expr>)</expr>	Tangent of the expression in radians Tan (0.7854) gives 1 Tan (3.1416) gives 0

## <u>C – The predefined functions</u>

#### Procedure:

- > Tick the **"Use a predefined calculation function"** box.
- > Select the function (see table below for details).
- > Select the channels corresponding to the parameters implicated in calculation.
- > Determine the channel properties (name and decimals, units are automatically selected).
- > Click **OK** to validate.

Absolute humidity	The amount of water vapor present in a unit volume of air, usually expressed in kilograms per cubic meter. g/Kg.
Dew point	The temperature to which a given air parcel must be cooled at constant pressure and constant water vapor content in order for saturation to occur. °C td.
Wet temperature	Temperature calculated with dry temperature and relative humidity in the air. °C tw.
Enthalpy	This is the heat change which occurs when 1 mol of a substance reacts completely with oxygen to form products at 298 K and 1 atm. Kj/Kg.

#### 7.1.2 Configure the alarms

- Click "Next" on the "Calculated channels configuration" window.
- The "Alarms configuration" window opens. → Click "Add an alarm".
- The following window opens.

List of devices	Stage 5/8: Alarms configuration
Modbus devices	Software and technical alarms Alarm reports
🖶 🧱 Kimo Transmitters	List of alarms
– 🔛 n'30: CA310	
- 🔛 n'61 : CA310	Active Alam Mode Add an alam
- 🔛 n'68 : C310	Aam Software
- 📜 Kimo large display	Delete an alarm
🖶 🙀 Current/Voltage module	
- 🔊 n'44 : MD100	
n'47: MD100	
Temperature module	
- 📰 n'42: MD140	
- 🗿 n°43: MD160	
- 🐖 n°46 : MD160	Configuration of the alarms
- 🐖 n'50 : MD120	Alarm mode:
- 🗐 n*51 : MD120	Threshold   Aam acknowledgement:
🖻 [ 💐 Relay module	Aam name :
- 📓 n'48 : MR100	Nam Nates - Nam
📓 n'49: MR100	
Is Dry/wet contact input module	Triggering conditions of the software alarm
n'45 : MD190	+ Add condition Madily condition m Delete condition
n'52: MD180	- 7 . 1
n'53: MD180	Active Slave Device Channel Unit Mode Threshold Threshold Time-de Time-de
Weather station	Active Slave Device Channel Unit Wode 1 2 1 2
Software alarm	
Calculated functions	
11	

Click "Add a condition" to configure the alarm. *The following window opens.* 

Alarms conditions
Choice of channel
Choice of channel Device selection
n*42 MD140
Channel selection
Channel 0 [°C]
Alarm configuration Triggering mode :
Rising edge
Threshold : 0.0 🚖 °C
Time-delay on triggering : 0 sec.
Time-delay on alam retum : 0 sec.
OK Cancel

## In "Channel choice" part:

- > Select the device concerned by the alarm in the list.
- Select the channel.

#### In "Alarm configuration" part:

- Select the triggering mode of the alarm between:
  - Rising edge
  - Falling edge
  - Hysteresis rising edge
  - Hysteresis falling edge
  - Threshold
- > Enter an alarm threshold for the **"Rising edge"** or **"Falling edge"** modes.
- > Enter in addition a hysteresis for the "Hysteresis rising edge" or "Hysteresis falling edge" modes.
- > Enter a threshold 1 and a threshold 2 for the "Monitoring" mode.
- > Then enter the delay-time on triggering and the delay-time on alarm return between 0 and 100 seconds.

## For the "Monitoring" mode, the threshold 1 must be higher than threshold 2.

Click **OK** to validate the alarm condition.

To modify an alarm condition:

- > Click the line of the alarm condition to modify in **"Triggering conditions of the software alarm"** part.
- Click "Modify condition".

To delete an alarm condition:

- > Click the line of the alarm condition to modify in "Triggering conditions of the software alarm" part.
- Click "Delete condition".

## 7.1.3 Define some areas

Click "Next" on the "Alarms configuration" window.
 The "Configuring zones / device groups" window opens.

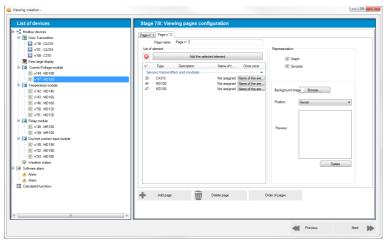
List of devices Step 6 / 8: Configuring zon	
otep 070. Configuring 201	es / device groups
Modbus devices	
🖻 🧱 Kino Transmitters	
- 💟 n'30: CA310	
- 🔛 n'61 : CA310	Add area
- 🔛 n'68 : C310	
- 📜 Kimo large display	Nodily area
Current/Voltage module	4
- 📓 n'44: MD100	TTTT Delete area
- 📓 n'47 : MD100	W Deste alca
Temperature module	
- M n'42: MD140	
- 🧾 n'43 : MD180	
- 📰 n'46 : MD160	
- 18 n'50: M0120	
Belay module	
n'48: MH100	
In 49: NHTUU	
n'45 : MD190	
- 1 n <sup>5</sup> 2 MD190	
In 153: MD180	
Weather station	
Software alarm	
Alam .	
Alam Alam	
Calculated functions	
H	
	Previous Next

- Click "Add area".
- Name it and click **OK**.
- Add other areas.
   The following window is displayed with the list of areas:

List of devices	Step 6 / 8: Configuring zones / de	evice groups
🗄 🚅 Modbus devices	List of zone	
😑 🇱 Kimo Transmitters	Labo 1	
- 🔛 n130 : CA310	Labo 2 Labo 3	
- 🔛 n'61 : CA310		Add area
_ 💟 n*68 : C310		
- Mino large display		Nodly area
Current/Voltage module		7
- 🧾 n'44 : MD100		Delete area
n'47 : MD100		w baabaa
n'42: ND140		
m n*42: MD140		
m 143: MD 160		
- 11 nº50 : M0120		
1 100 M0120		
Relay module		
1000 middle		
# n'49: MB100		
Dry/wet contact input module		
n'45 : MD190		
- 🗿 n*52: MD180		
m n"53: MD180		
Weather station		
🙀 Software alarm		
- 🔺 Alem		
🔺 🔺 Alam		
Calculated functions		
<		

## 7.1.4 Configure the viewing pages

Click "Next" on the "Alarms configuration" window.
 The "Viewing pages configuration" window opens.
 This window allows to select the elements which will be displayed on screen.



Double click an element in the devices list at the left of the window: a sensor, a module, a calculated function, a software alarm, ...

These elements appear in the elements list and are classified by type.

- In "Selection area" column, you can assign a device to an area previously created.
- > Tick **"Graphic"**, **"Synoptic"** or both according to the desired representation.
- > Click **"Browse"** to select a background image then select its position on the page.
- > If required, click "Add a page" to add a page.

## 7.1.5 Setup the acquisition

Click "Next" on the "Viewing pages configuration" window. The window "Parameters of the acquisition" opens.

List of devices	Stage 8/8: Parameters of the acquisition	
Modbus devices File Kimo Transmittes Vita v130: CA310	Display Last data represent : 1 💿 Hours	
-         G + 401 (2000)           -         G + 401 (2000)           -         G + 400 (2000)	Refere (notive device) Referent stored (started of opposition : 3 accord(s) Referent refered : 0 (started b) Rescaration (started b) Constraining of the device data (started b) Singelified ananagement of the device data (started b) Deviced of of the device of the device data (started b) Deviced of of the device of t	
Constant Constan	Detailed management of the downloads :     Eff n* Type : Send H* Deception Download	Fit eesten

- > Adjust the refresh interval of display in second or in minute.
- > Adjust the acquisition interval of measures in second or in minute.
- Adjust the duration display in hour: for example, if "3 hours" is selected, the application will be display the last three acquisition hours.

## 7.2 Save the viewing

- > Click "Save" on the "Parameters of the acquisition" window.
- Enter a name for the viewing then click **OK**. The software then asks to open the viewing.
- Click YES.

The viewing is open.

## 7.3 Integrate the wireless data logger

*The wireless data loggers have been properly ticked. The window below opens.* 

Wireless datas loggess	List of wire	eless devices				Glick on the	checkbox 7	Description" to m	mod
n'235: BK-RF B: P n'210: KPE-RF	Number	Name	Description	Serial N*	Mode	Signal	Battery		
B B n212: KPE-RF	210	KPE-RF		18.02.0499	Network	<b></b> 99%			
- 💭 n*100 : KTR310-RF	9 151	KAL-RF		16.02.0081	Network	<b>395</b>			
- 💭 n*101 : KTR310-RF	- 105	KT110-RF EQ		17.07.0709	Network	<b>39</b> %		8%	
- 😭 n°102 : KTR310/RF	106	KT110-RF ED		17.12.0760					
R <sup>2</sup> n'151 : KAL-RF R <sup>2</sup> n'105 : KT110 RF E0	- 107	KT110-RF ED		15.12.0541		Jan 99%			
* n'105: KT110 RF E0	- 107	KH210-RF AO		17.12.1440		and a second			
- C n'107: KT110BF E0						<b>39</b> %			
n1109 : KH210-RF AD	9 110	KH210-RF AO		17.12.1441		<b>all</b> 99%	1		
- 😭 n°110: KH210RF AD	9 111	KH210-RF AO		17.03.0014	Network	<b>all</b> 99%	<b>I</b> 1		
- 💕 n°111 : KH210/RF AD	9 118	KT110-RF EN		15.08.0549	Network	<b>39</b> %	- I I	.00%	
- 😭 n'118 : KT110-RF EN	9 120	KT150-RF ID		11.04.0001	Network	<b>afi</b> 99%	🔲 1	00%	
- 🛱 n°120: KT150-RF10 - 🛱 n°122: KTT310-RF	9 122	KTT310-RF		16.02.0572	Network	<b>39</b> %	🔳 s	6%	
n 122: KT 310 H									
n'126 : KP110 RF ID		ld device			Place a devic	•	By ⊳	elete device)	
- 🔐 n*125 : KP110-RF ID	Management	of the device			-#		- ^		
n'114: KTU210-RF ED	Detail of the			Detail of the chappe					
- 😭 n'115: KTU210-RF ED	Detail of the	dence		-					-
n'113: KTU210-RF ED		RE n*:	102	Chann Name	Unit	Conver	sion		
- 8' n'80 : KTU210-RF E0	. 34	Type :	KTR310-RF	Chann T-PT1 Chann VerifS					
Software alarm Calculated functions		s/n:	17.12.0365	Chann Veni S	Identiou C				
Cacuated random	97	Version:	3.34						
		,							
							<b>C</b>		
				Device configura	tion via the base		0;-	Configure	

## > Click "Add a device".

A message opens indicating that a wireless data logger must be placed on the BK-RF communication base.

Place a wireless data logger on the BK-RF communication base.

> Click **OK**.

The software researches the device then places it in the wireless data loggers list when it has properly detected it.

Carry out the same operation if several wireless data loggers must be taken into account. At the end of this operation, the following window is displayed:

Wreless datas logges We or 235 : BK-BF	List of wire	less devices				Click on the cl	heckbox "Description" t	o mod
8 P n'210: KPE-RF	Number	Name	Description	Serial N*	Mode	Signal	Battery	
🖻 😭 n*212 : KPE-RF	210	KPE-RF		18.02.0499	Network	<b>399</b> %		
- 😭 n*100 : KTR310-RF	9 151	KAL-RF		16.02.0081	Network	<b>399</b> %		
- 🖨 n*101 : KTR310-RF	9 105	KT110-RF ED		17.07.0709	Network	<b>39</b> %	99%	
- @' n'102; KTR310-RF - @' n'151; KAL-RF	06	KT110-RF EO		17.12.0760	Network	<b>99%</b>	94%	
R n'105: KT110BF E0	- 107	KT110-RF EO		15.12.0541	Network	J 99%	<b>95%</b>	
P n106 : KT110 RF E0	<u> </u>	KH210-BE AO		17 12 1440	Network	<b></b>	1002	
n'107: KT110-RF E0	- 110	KH210-RE AO		17 12 1441	Network	<b>399</b> %	100%	
n*109 : KH210 RF AD	<u> </u>	KH210-RF AQ		17.03.0014	Network	A 99%	1003	
* n*110: KH210/RF AD * n*111: KH210/RF AD	118	KT110-RF EN		15.08.0549	Network	all 99%	100%	
n'118: KT110-RF EN	- 120	KT150-RF IO		11.04.0001	Network	aff 99%	100%	
n'120 : KT150-RF10	- 122	KTT310-BF		16.02.0572	Network	J 99%	B 96%	
n'122: KTT310/RF		ATT STOLE		10.02.0072	The more	1000	- CON	
n 123: KTT310-RF n 126: KP110-RF ID	<b>□ □ □ ↓</b> •*	Idevice		(in)	Place a device	5	Delete device	
n 126: KP110-RF10	Management of			10 to 10		6	× ×	
n'114: KTU210RF ED	Detail of the c			Detail of the chappels				
n*115 : KTU210-RF ED	Detail of the o	sevice		1	Unit			
n'113 : KTU210-RF E0 n'80 : KTU210-RF E0		RE n*:	102	Chann Name Chann T-PT100 D	Unit 'C	Conversio	on	
n'80 : KTU210-RFEO a alam	218	Type :	KTR310-RF	Chann 1-PT100D Chann Verif Snd PT1				
anami ed functiona	100000 T	sin :	17.12.0365	Gildint Veni Gild P II	00 0			
	90	Version:	3.34					
		2						
						C	Configure	
	10			Device configuration via	he base	10	Compute	

#### 7.3.1 Configure a wireless data logger

 Click "Configure" on the bottom right. The following window opens.

		Instrument	Device s	tate			
- 41- 12 - 14-		Type : KTR310 RF Serial : 17.12.0365 Version : 3.34		Mode Display LED On LED Alarm	: ON		Battery 71 Z Signal 99 Z
Can	npaign						
	Name : Comment :	C KTR310 RF					
	State :	In progress Start Stop			date: 25/0 date:	6/2018 09:45:05	
R	cording mode :	Instant	Re		erval: 00:0	0:30	
,	Type of start : Stop condition :	By PC			erval: 00:0 punt: 5749		
	Stop by button :			ecording c	June . 374.		
Chann	Name	Probes	Unit	Conver	Range	Low thresh	High thresh
		Remote PT100 Tempera	ature °C		-100/400	20 19	26 30

Click "Configure" at the bottom left of the window. The following window opens.

Akivision			
•	Instrument		
	KTR310 Software version 3.34 Serial : 17.12.0365	) RF	
Channels	General		
Saving	LEDa	Display © OFF © Protected	
	Load configuration	Exit	Summary

On the **"Generality"** tab:

- > Tick the **"LED ON"** box, it will blink every 15 seconds during the entire duration of the recording.
- > Tick the **"LED Alarm"** box, it will have 3 states:
  - Always OFF: no threshold has been exceeded.
  - Fast blinking (5 seconds): a threshold is currently exceeded on at least one channel.
  - Slow blinking (15 seconds): at least one alarm threshold has been exceeded during the campaign.

On the "Channels" tab:

- > Tick the **"Save channel"** box to save the channel.
- Select the measuring probe and its unit.
- > Activate the alarm thresholds by ticking the box then indicate the desired high and low thresholds.

On the **"Save"** tab:

- > Indicate a dataset name and eventual comments.
- Select the type of departure between:
  - "Date": indicate a date from which the recording will be begin.
  - "Button": press OK on the device at the moment of the desired departure of the recording.
  - **"PC":** start the recording via a computer.
- Select the interval time between 2 recordings in minute, second or hour.

The **"Recap"** tab displays the selected recording parameters. This tab also allows to record the configuration.

To open a configuration, click "Load configuration" then select the desired configuration to send at the wireless data logger.

> Click "Validate" to send the modifications to the wireless data logger.

## 7.3.2 Perform a multiple configuration

For data loggers in Network Data logger Mode only, it is possible to send the configuration to other identical data loggers.

## Multiple configuration via the base:

- > Put a data logger on the base.
- Set the data logger as explained on chapter 7.3.1. At the end of the configuration window (after clicking "Validate" to send the configuration to the data logger), a message asks to configure other identical data loggers.
- Click Yes.
- Put a data logger of the same type (for example, if the 1<sup>st</sup> data logger configured is a KT 110 EO, put an other KT 110 EO on the base then click **OK**). The configuration is sent.

## Multiple configuration via wireless network:

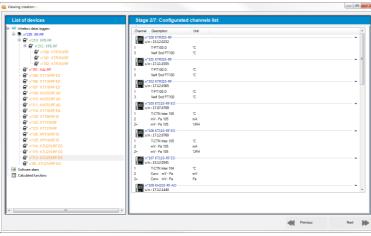
- Set the data logger as explained on chapter 7.3.1
   At the end of the configuration window (after clicking "Validate" button to send the configuration to the data logger), a message asks to configure other identical data loggers.
- Click Yes.

A window opens allowing to select the data loggers to set.

- Tick the data loggers to set.
- Click "Continue".
   The configuration is sent to the selected data loggers.

## 7.3.3 Configurated channel list

When the devices have been properly configured, click **"Next"**. *The following window opens. This window lists the configured channels:* 



 Click "Next". The following window opens.

iewing creation -		
List of devices	Stage 3/7: Calculated channels configuration	
44 Wieless datas loggers	Configuration of the calculated channels	
<ul> <li>m 225 : BK.RF</li> <li>m 210 : KPE.RF</li> </ul>		
B P n'212: KPE-RF	Add a calculated channel	
- 😭 n'100 : KTR310-RF	Number Function type Channel name Unit	
- 101 : KTR310-RF		
- 💭* n*102 : KTR310-RF		
🖶 n'151 : KAL-RE		
- 🖨 w105 : KT110-RF ED - 🖨 w106 : KT110-RF ED		
M 106: KT110HF ED		
************************************		
- P n*110: KH210RF A0		
- P n*111 : KH210-RF A0		
************************************		
- 🛱 n'120 : KT150-RF IO		
- 🖨 n'122 : KTT310/RF		
- 😭 n*123 : KTT310/RF		
- 🖨 nº126 : KP110-RF IO		
- 💭 n*125 : KP110AF10		
- 😭 n*114 : KTU210-RFE0 - 😭 n*115 : KTU210-RFE0		
- 2 M113: KTU2104FE0		
- P n'80: KTU210RF E0		
Software alarm		
Calculated functions		
II		
	44 -	vevious Next

This window allows to configure the calculated channels.

- Click "Add a calculated channel".
- Select the device concerned by the calculated channels then click **OK**. *The following window opens.*

lated functions				
Cor	nfiguration of	the calculated	l channel	
Use a personaliz	ed function		O Use a predefined	d calculation function
omula :		Check the syntax	Function :	Absolute humidity
		A	Calculation paramet	ter of the moist air
		~	Temperature :	42.0
Channel		Operations	Humidity :	30.1
# Channe		Opera Detail		
030.01 030.02 030.03	%RH g/kg Pa	+ Addition - Subtraction • Multiplications	Black ball : Conversion paramet	42.0
042.00	+ <sup>3</sup>	/ Division % Modulo	Channel :	44.0
Mathematics functio			Input :	0-10V -
Function	Detail	*	Min. :	0,00 🔶 Max. : 100,00
abs( <expr>) acos(<expr>) asin(<expr>)</expr></expr></expr>	Absolute value of <expr> Cosine arc of <expr> in ra Sine arc of <expr> in radi</expr></expr></expr>	adians	Channel properties	3
atan( <expr>) ceiling(<expr>) cosinus(<expr>)</expr></expr></expr>	Tangent arc of <expr> in Integer higher or equal to Cosine of <expr> in radia</expr></expr>	radians <expr></expr>	Channel name : Unit :	%RH ▼
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			Decimals nb :	2  Cancel OK

It is possible to create 2 types of calculation functions:

- Personalized function
- Function of predefined calculation (absolute humidity, dew point, wet temperature, enthalpy and analogue conversion)

Some predefined functions can be blocked if the required channels for their calculation are not available.



The calculated channels can not be reused in the calculation of others calculated channels.

The calculation functions of calculated and saves channels with AKIVISION-A can not be modified in AKIVISION-E. The values of calculated channels can be sent on the ATT300, ATE300, CA310 and CPE310S in digital mode. Only the channels ATT300, ATE300 and CA310 in analogue mode can be used in the channel calculation.

## <u>A – The operations</u>

## Procedure:

Create the formula. Double click the concerned channel(s) and double click the operator (see below the operators table).

Ex: #001 - #008.

- > Verify the syntax. If the syntax is correct go to the next step, if not correct the formula.
- > Determine the channel properties (Name, unit, decimals).
- Click **OK** to validate.

## Operators table:

+, -, *, /	Addition, subtraction, multiplication and division.
	Modulo (rest of the whole division). Example: 13 % $3 = 1$

## **B** – The mathematics functions

## Procedure:

- Create the formula. Double click the mathematics function (see below the table of mathematics functions) then double click the concerned channels(s) or insert the appropriate number.
- > Verify the syntax. If the syntax is correct go the next step; if not, correct the formula.
- > Determine the channel properties (name, unit, decimals).
- Click **OK** to validate.

abs ( <expr>)</expr>	Gives the absolute value of the expression. ABSV( <i>NameChannel1</i> ) gives the channel value NameChannel1 if it is positive, otherwise the opposite of its value. ABS(V( <i>NameChannel1</i> )*10.3+V( <i>NameChannel2</i> )) evaluates the expression V(NameChannel1)*10.3+V(NameChannel2) and gives the absolute value.
acos ( <expr>)</expr>	Cosine arc of the expression in radians acos (0) gives 1.5708 acos (-1) gives 3.1416
Asin ( <expr>)</expr>	Sine arc of the expression in radians asin (1) gives 1.5708 asin (0) gives 3.1416
Atan ( <expr>)</expr>	Tangent arc of the expression in radians atan (1) gives 0.7854 atan (0) gives 0
Ceiling ( <expr>)</expr>	Integer higher or equal to the expression. CEIL (2.9) gives 3 CEIL (-2.9) gives -2
Cosinus ( <expr>)</expr>	Cosine of the expression in radians. cos (1.5708) gives 0 cos (3.1416) gives -1
Exp ( <expr>)</expr>	Exponential of the expression.
Floor ( <expr>)</expr>	Integer lower or equal to the expression. Floor (2.9) gives 2 Floor (-2.9) gives -3
Ln ( <expr>)</expr>	Napierian logarithm of the expression. (Expression must be positive)

Log10 ( <expr>)</expr>	Common logarithm of the expression. Log 100 gives 2. Log(V(NameChannel1)*10.3+V(NameChannel2)) evaluates the expression V(NameChannel1)*10.3+V(NameChannel2) and gives the common logarithm. The expression must be positive.
Pow ( <expr> ; <pw>)</pw></expr>	Elevation to a power: <expr> elevated to a power <pw>. Ex: pow (5;3) = 125</pw></expr>
Round ( <expr>)</expr>	Rounded the operator value to a nearest integer. Round (2.4) gives 2 Round (2.6) gives 3
Sin ( <expr>)</expr>	Sine of the expression in radians. Sin (1.5708) gives 1 Sin (3.1416) gives 0
Sqrt ( <expr>)</expr>	Square root of the expression.
Tangent ( <expr>)</expr>	Tangent of the expression in radians. Tan (0.7854) gives 1 Tan (3.1416) gives 0

## **C** – The predefined functions

## Procedure:

- > Tick the box **"Use a predefined calculation function"**.
- > Select the function (See table below for details).
- > Select the channels corresponding to the parameters implicated in the calculation.
- > Determine the channel properties. Name and decimals, the units are automatically selected.
- > Click **OK** to validate.

Absolute humidity	The amount of water vapor present in a unit volume of air, usually expressed in kilograms per cubic meter. g/Kg.
Dew point	The temperature to which a given air parcel must be cooled at constant pressure and constant water vapor content in order for saturation to occur. °C td.
Wet temperature	Temperature calculated with dry temperature and relative humidity in the air. °C tw.
Enthalpy	This is the heat change which occurs when 1 mol of a substance reacts completely with oxygen to form products at 298 K and 1 atm. Kj/Kg.

## 7.3.4 Configure the alarms

#### > Click "Next" on the "Configuration of calculated channels" window.

The "Alarms configuration" window opens.

This window allows to add technical and software alarms (for example when there is a communication error between a wireless data logger and the BK-RF base communication) or a battery percentage alarm.

List of devices	Stage 4/7: Alarms confi	gurauon		
Webset data togon:         Image: Second data togon:           Image: Second datatogon:	Software and technical dams Atam Lot of alarms Atawa Atam I Atawa Atawa Atawa Atawa	Node Mode Comunication error Batterie percentage	Add an alarm.	
- © A102 - K1106F E0 - © A102 - K106F A0 - © A102 - KK106F A0 - © A112 - K1106F A0 - © A122 - K1106F A0 - © A122 - K1106F - © A122 - K1106F - © A123 - K1106F - © A125 - K1106F 0 - © A125 - K1106F 0 - © A155 - K1106F 0	Configuration of the alams Alem mode Bettery percentage Alem name : Alem Togger condition	Pecontage less than:		
All Antis KU20AFE0     Antis KU20AFE0     Antis KU20AFE0     Antis KU20AFE0     Antis KU20AFE0     Columnation     Columnation		recontage less man. 11		
	,			

- > Click "Add an alarm" in "Alarms list" part.
- ➢ Select the type of alarm.
- > Enter a name for the alarm.
- > Select the communication fail number of the communication base with a device before alarm triggering.
- > Select the downloading error number of a wireless data logger before alarm triggering.

In case of battery alarm:

> Select the percentage of battery from which an alarm will be triggered.

*This window also allows to configure the deported alarms either to the alarms devices of KAL-RF or BK-RF type or by email. For this second option, it is necessary to inform the messaging parameters.* 

It is possible to select an alarm named "**technical**", which will prevent when the data logger has a communication failure, an alarm named "**of threshold**", which will prevent when one threshold or both will be exceeded (threshold previously defined during the data logger configuration).

- Click "Alarms report" tab.
- Click "Add report".

The following window opens.

🛃 Alarms reports configuration	- C -X
Alarm report configuration	
Alam reports configuration	
Active report	
Name :	
Report mode :	
KAL-RF or BK-RF alarm	•
Nam type :	
All the alams	
Device(s) :	
All the devices	
Channel(s) :	
All the channels v	
Activation planning	
0h 2h 4h 6h 8h 10h 12h 14h 16h 18h 20h 22h	24h
Mon.	
Tue.	
Wed.	
Thu. Thus and a second se	
Fri.	
Sot.	
Sun.	
Activation period	
☑ Activate all	
OK	Cancel
UN	Ganod

- > Tick the **"Active report"** box to activate the alarm report.
- ➢ Name the report.
- Select the report mode: KAL-RF or BK-RF alarm or by email.
  - If KAL-RF or BK-RF is selected: then select the device.
  - If email is selected: click "Email configuration" then fill out the different fields.
- Select the alarms type:
  - All the alarms
    - Alarms of threshold
    - Technical alarms
- > Select the concerned device(s) by the alarm reports.
- Select the activation periods.
- Click **OK** to validate.

#### 7.3.5 Define some areas

Click "Next" on the "Alarms configuration" window.
 The "Configuring zones / device groups" window opens.

Wiewing creation -				8 22
List of devices		Step 5 / 7: Configuring zones / device groups		_
Image: Section 2016         Image: Section 2016           Image: Section 2016         Image: Section 2016 <th>3</th> <th>List diver</th> <th></th> <th></th>	3	List diver		
		Previous	Next	₽

- > Click "Add area".
- > Name it and click **OK**.
- Add other areas.

The following window is displayed with the list of areas:

Viewing creation -		
List of devices \$\vert \u00e9 Weeken des kopen \$\vert \u00e9 \u00e9 725 ISKRF \$\vert \u00e9 \u00e9 125 ISKRF \$\vert \u00e9 \u00e9 125 ISKRF	Step 6 / 7: Configuring zones / device groups	
	🐐 Mody ana	
S (M Schweiden A Mann B Calculated function (		
	Phenicus	Nex 📦

## 7.3.6 Configure the viewing pages

Click "Next" on the "Alarms configuration" window.
 The "Viewing pages configuration" window opens.

List of devices	-		ng pages con	nguruuon		
🖻 🐘 n'235 : BK-RF	Page n'					
🖶 🖨 n*210 : KPE-RF		Page name :	age n° 1			
🖻 🎒 n*212 : KPE-RF		element		Representation		
- 😭 n*100: KTR310-RF	0		Add the sele	Graph		
- 🖓 n°101 : KTR310-RF		Type	Description	Name of t	Choix zone	Synoptic
- 🖓* n*102 : KTR310-RF		eless datalogger		reame or t	Chook zone	Synoptic
- 🖨 witst : KAL-RE		KTR310-RF	5	Labo 1	Name of the are	
- 😭 n'105 : KT110-RF ED	100	KT110-RF EQ		Labo 1 Labo 2	Name of the are	
🖨 n'106 : KT110-RF ED	107	KT110-RF EO			Name of the are	Background image : Browse
🖨 n'107 : KT110-RF ED	118	KT110-RF EN		Labo 3	Name of the are	background mage. Browse
- 🖨 n'109 : KH210 RF A0						Position : Normal *
- 🖨 n110: KH210-RFA0 - 🛱 n111: KH210-RFA0						roman *
- 😸 M111 : KH210HFA0 - 😭 M118 : KT110RFEN						
- 61 M110 K 1110 H F EN						
- 6' n'120 : KT 1508F10 - 6' n'122 : KT 13108F						
n'122: K11310HF n'123: K11310HF						Preview:
P n125: K115104P						
- P n'125: KP110AF10						
- P n*114: KTU210-RFE0						
- P n'115: KTU210AFE0						
- B' n'113: KTU210-RFE0						Delete
* v'80: KTU210/8E EQ						Delete
Software alarm						
Alam						
🔺 Alam						
Calculated functions			and			
	1 <b>*</b> 1	Add page	W	Delete page	0	ider of pages

This window allows to select the elements will be displayed on screen.

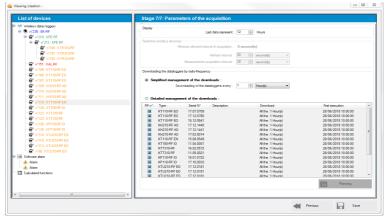
Double click an element in the devices list at the left of the window: a wireless data logger, an alarm or a calculated function.

These elements appear in the events list and are classified by type.

- > In **"Selection area"** column, you can assign a device to an area previously created.
- > Tick **"Graphic"**, **"Synoptic"** or both according to the desired representation.
- > Click **"Browse"** to select a background image then select its position on the page.
- > If necessary, click "Add a page" to add a page.

## 7.3.7 Setup the acquisition

#### Click "Next" on the window "Viewing pages configuration". The window "Acquisition parameters" opens. This window allows to configure the data loggers unloading.



There are two ways to unload it:

- First way:
  - > Tick the chip "Simplified management of unloading".
  - > Select the interval between two unloading in hour.
- Second way:
  - > Tick the chip **"Detailed management of unloading"**.
  - Click once on the line of the desired data logger then click "Planning" or double-click the required data logger.

The following window opens.

Planning_Form	-		internal of parameters of the	X
List of devices	nload so	che	dule	
KT110-RF EO [17.12.076	50]			
Task configuration				
Type of task:	Download			
Active task:				
Starting:	28/06/2018 0	9:56		
Frequency:	All the	1	Hour(s)	•
			Cancel	Ж

- > Tick the **"Active task"** box.
- Select the start date of the download.
- Select the periodicity in hour.
- Click **OK** to validate.

## 7.4 Save the viewing

- Click "Save" on the "Acquisition parameters" window.
  Enter a name for the viewing then click OK.
- The software then requests to open the viewing.
- ➤ Click YES.
  - The viewing is open.

#### **CONFIGURE A SENSOR** 8

Click the line of the device to configure in the window "Transmitters, sensors and modules". The main characteristics of the device displays in "Device management" part.

### > Click "Configure".

## The window below opens.

This window presents the type of connected device, the device version, its eventual options, its display if it has one, the keypad adjustments, date and hour.

Akivision		
	Instrument	
General Communication	C310 Software version 1.20 (0) Serial 3F 13.08.09999 Calibration date 20/04/2016	
L 🛛	General	
Analog I/O	Display Backlight Permanent • Brightness 5 <u>*</u> Contrast 3 <u>*</u> Options Modbus Relay	Keypad     ON     OFF       Password     Change       Keybeep     ON     OFF       Date     Ormat     JJ-MM-YYYY       Time format     Time format
-or o- Relay Air velocity and air flow Settings	Probe 1 Designation : SHSI Serial : 4F 18.01.20771 Software version : 2,00 Module Designation : SPI2-10000 Serial : 4F 14.12.03622 Software version : 2,14	Probe 2 Designation : STD-13 Serial : 4F 18.01.20690 Software version : 2,14
		figuration

#### 8.1 Configure the display

On the "Generalities" panel, for the sensors 310 with display, it is possible to adjust the backlight time, the brightness and the screen contrast.

- > Adjust the backlight: select the desired duration between Off, 10 seconds, 30 seconds, 60 seconds, and Permanent.
- > Adjust the brightness between 0 and 10.
- $\succ$  Adjust the contrast between 0 and 3.
- > Click "Write configuration" at the bottom of the window to send the modifications to the sensor.

#### 8.2 Configure the keypad

### 8.2.1 Activate or deactivate the keypad

- > For more safety and to avoid any manipulation errors, it is possible to block the sensor keys.
- > Select "ON" to block the keys activation or "OFF" to allow the keys activation on the sensor.
- > Click "Write configuration" at the bottom of the window to send the modifications to the sensor.



## When the keypad is activated, it is then possible to change the transmitter configuration. If some modifications are done with the keypad, Akivision software will not take into account the transmitter modifications.

Backlight:	Off	•
Brightness:	0 ≑	
Contrast:	4	

Keypad

Keypad lock

Password

Key beep

ON OFF

Change

OFF

O ON

Backlight:	Off	•
Brightness:	0 🚔	
Contrast:	4	

#### 8.2.2 Modify the password

- > For more safety, the keypad of the sensors class 310 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 sensor.

#### 8.2.3 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 sensor. Note: the key beep is unavailable on the CPE310-S sensors.

## 8.3 Modify the date and hour format

- Select the date and hour format.
- > Click "Write configuration" at the bottom of the window.



The date and hour automatically synchronizes with the computer.

## 8.4 Configure the modbus communication

Modbus is a RTU digital protocol with a communication speed configurable from 2400 to 115200 Bauds.

Click "Communication". The following window opens.

General         Software version 1.20 (0)         Serial 3F 13.08.09999           Calibration date 20/04/2016         Communication           Channels         RS-232 / ModBus           Modbus slave number         86 ±           Baud rate         19200 Bps           Ethernet         19200 Bps           Instrument Adresse MAC         00:1E:00:88:3F:B5           Address         192:168:8:16           Mask         255:255:252:0           Gateway         192:168:8:2           Port         502 ±	Ĭ		C310	
Calibration date 20/04/2016  Calibration date 20/04/2016  Communication  RS-232 / ModBus  Modbus slave number 86  Baud rate 19200 Bps  Ethernet Instrument Adresse MAC 00.1E:C0.8B:3F:B5 Address 192.168.8.16 Mask 255.255.252.0 Gateway 192.168.8.2	General	Software version 1.	20 (0)	180
Communication     RS-232 / ModBus     Modbus slave number     86     Baud rate     19200 Bps     Ethernet     Instrument Adresse MAC     00:1E:C0:8B:3F:85     Address     192.168.8.16   Mask   255.255.252.0   Gateway     192.168.8.2				
RS-232 / ModBus       Modbus slave number       Modbus slave number       Baud rate       19200 Bps       Ethernet       Instrument Adresse MAC       00.1E:C0:8B:3F:B5       Address       192.168.8       16       Mask       255.255.252.0       Gateway       192.168.8	mmunication	Calibration date 20	/04/2016	
HS-232 / ModBus       Modbus slave number       86 ±       Baud rate       19200 Bps *       Ethernet       Instrument Adresse MAC       00:1E:C0:8B:3F:85       Address       192.168.8.16       Mask       255.255.252.0       Gateway       192.168.8.2	L 🛛	Communication		
Modbus slave number 86 Baud rate 19200 Bps Ethernet Instrument Adresse MAC 00.1E:C0:8B:3F:B5 Address 192.168.8.16 Mask 255.255.252.0 Gateway 192.168.8.2	1 a l	RS-232 / ModBus		
Ethernet         Instrument         Adresse         MAC         00:1E:C0:8B:3F:B5           Adarms         Address         192.168.8.16           Mask         255.255.255.252.0           Gateway         192.168.8.2	hannels	Modbus slave number	86	
Align IIO         Ethernet           Instrument Adresse MAC         00:1E:C0:8B:3F:B5           Address         192.168.8.16           Mask         255.255.252.0           Gateway         192.168.8.2	★			
Instrument         Addresse         MAC         O0:1E:C0:8B:3F:B5           Address         192.168.8.16           Mask         255.255.252.0           Gateway         192.168.8.2	alog I/O	Baud rate 192	200 Bps *	
Address 192.168.8.16 Mask 255.255.252.0 Gateway 192.168.8.2		Ethernet		
Mask 255.252.0 Gateway 192.168.8.2		Instrument Adresse MAC	00:1E:C0:8B:3F:B5	
Gateway 192.168.8.2	ms			
	<b>-</b>			
Port	·			
		Port	502	
	air flow			
air flow	-			
air flow	Settings			
¢°				
¢°				
0 <sup>40</sup>				

#### In "RS485 / ModBus" part:

- Select the modbus slave number.
- > Adjust the communication speed from 19200 to 115200 bauds.
- > Click "Write configuration" at the bottom of the window to send the modifications to the sensor.

## 8.5 Configure the Ethernet communication

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

#### In "Ethernet" part:

- Enter the address, the mask, the gateway and the port.
   These informations are contained in the network characteristics to which the sensor will be connected.
- > Click **"Write configuration"** at the bottom of the window to send the modifications to the sensor.

The Ethernet communication is available on the CPE310-S.

## 8.6 Configure the channels and the measuring units

> Click "Channels".

The following window opens.

Akivision		
•	Instrument	
Communication	C310 Software version 1.20 (0) Serial 3F 13.08.09999 Calibration date 20/04/2016	
Channels	Channels Configuration Channel 1 probe Probe 1 Channel 1 unit g/kg	
Analog I/O Alarms	Name channel 1 : Channel 2 probe Probe 1 Channel 2 unit *C Name channel 2 :	
Relay	Channel 3 probe Probe 1  Channel 3 unit %RH Name channel 3 :	
Settings	Channel 4 probe Module  Channel 4 unit Pa Name channel 4 :	
	Write configuration	

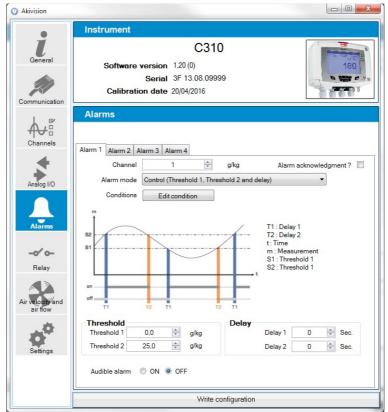
This part includes two tabs:

- > The tab **"Configuration"**.
- > The tab **"Measure"**.
- > Click tab "Configuration".
- > Attribute **"Module"**, **"Probe 1"** or **"Probe 2"** for each available channel.
  - Select "None", to attribute nothing to the channel.
- > Click "Write configuration" at the bottom of the window to sent the sensor modifications.

## 8.7 Configure the alarms

#### > Click "Alarms".

The following window opens.



- $\succ$  Click the tab of the desired alarm.
- > Select in the drop-down list the alarm mode between:
  - No alarm
  - Rising edge triggering and temporisation
  - Falling edge triggering and temporisation
  - Monitoring (Threshold 1, Threshold 2 and temporisation)
  - Sensor state

If the mode "Rising edge triggering and temporisation", "Falling edge triggering and temporisation" or "Monitoring (Threshold 1, Threshold 2 and temporisation)" is selected:

- Select the channel on which the alarm will be active.
- Adjust the values of the threshold 1, of the hysteresis and temporisations 1 and 2 for the "Rising edge triggering and temporisation" and "Falling edge triggering and temporisation" modes. OR
- Adjust the threshold 1 and 2 and the temporisations 1 and 2 for the "Regulation (Threshold 1, Threshold 2 and temporisation)" mode.
- > Select "ON" to activate the sound alarm or "OFF" to deactivate it.
- > Click "Write configuration" to send the modifications to the sensor.

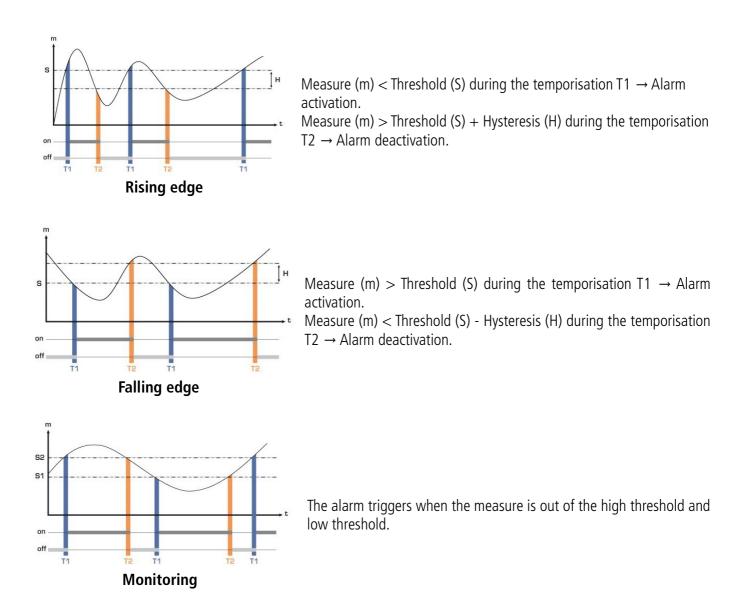
#### If "Sensor state" mode is selected:

- > Select the alarm on which the alarm will be active.
- Click "Modify conditions". The window of alarm conditions opens.
- Tick the desired conditions then click "Validate".

It is possible to tick several alarm conditions.

> Click **"Write configuration"** to send the modifications to the sensor.





## 8.9 Configure the input and output

With this function, you can modify the outputs ranges of your sensor. You enter the outputs scales on which you want the sensor transmits the measures.

- Click "Analog I/O".
  - The following window opens.

	Instrument					
<b>Č</b> General	Software ve	C rsion 1,20(0)	310			180
2	5	Serial 3F 13.08 date 20/04/201			4	
ommunication	Analog I/O				·	
A -	Analog output cha Type :	4 - 20 mA -	Minimum	0	4	None
	1900.	Test	Maximum	0		None
	Analog output cha	annel 2	0.00		1.00	
Analog I/O	Type :	4 - 20 mA 🔻	Minimum	0,0		m/s m/s
<b>–</b>	Analog output cha			0,0		111/3
Alarms	Type :	4 - 20 mA 🔻	Minimum	0,0	×	m3/h
-0'0-		Test	Maximum	0,0	×	m3/h
Relay	Analog output cha Type :	4 - 20 mA 🔻	Minimum	0.0	×	°C
		Test		0,0		°C
ir velocity and air flow Settings						

- Select the output type: 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 sensor.

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

## 8.10 Test the analogue outputs

Once the inputs and outputs configuration carried out, it is possible to test them with an external measurement device. This test allows to check on a multimeter, a regulator or an automaton, the proper functioning of the outputs. The sensor will generate a voltage (between 0 and 10 V) or a current (between 0 and 20 mA) depending on the switch adjustment of the sensor card.

- For an output signal in 0-10 V, the sensor will generate 0 5 or 10 V.
- For an output signal in 0-5 V, the sensor will generate 0 2.5 or 5 V.
- For an output signal in 4-20 mA, the sensor will generate 4 12 or 20 mA.
- For an output signal in 0-20 mA, The sensor will generate 0 10 or 20 mA.



# Before any diagnosis attempts of the outputs, check that the sensor connections and configurations are operational to avoid damaging the sensor and multimeter!

- > Choose the channel for the outputs diagnosis.
- Connect a measuring device on the channel 1, channel 2, channel 3 or channel 4 (depending on sensor).

Once the connection of the measuring device to the sensor is carried out, you can diagnose the analogues outputs on several check points:

- Click "Test" of the analogue E/S window. The following window opens.
- Click 0%, 50%, 100% or Reset.

Diagnostic			×
0%	50%	100%	Reset

Diagnosis hutton		Generation dep	ending in output sig	ınal
Diagnosis button	0-10 V	0-5 V	0-20 mA	4-20 mA
Reset		Return to t	he measuring 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

## 8.11 Configure the measure in velocity and airflow

This adjustment only concerns the CP210, CTV210 sensors and the sensors class 310 with a pressure module or a velocity probe available in option.

## 8.11.1 Select the measuring mean (C310/CA310 with pressure module and SQR3 option)

The velocity calculation is calculated from the pressure and the differential pressure element, therefore it is necessary to select the differential pressure element used to realize the measures. You must then adjust the differential pressure coefficient then the velocity correction factor.

Press "Velocity and airflow".

The following window opens.

Akivision	
•	Instrument
l	C310
General	Software version 1.20 (0)
	Serial 3F 13.08.09999
Communication	Calibration date 20/04/2016
	Air velocity and air flow
₽₩₽	Appareil / Module Sonde 1 Sonde 2
Channels	Measurement Measuring means
	Pitot L • 2 \Delta P
Analog I/O	$\begin{array}{c c} \hline \text{Ptot L} & & & \\ \hline \text{Air velocity correction coefficient (Cc)} & V = C_M \\ \hline 1,000 & \\ \hline \end{array} & V = C_M \\ \hline \end{array}$
	Differential pressure coefficient (Cm) $\left(\frac{287,1\times(\Theta+273,15)}{287,1\times(\Theta+273,15)}\right)$
Alarms	1,0000
	Dimensions
-0′0-	Section type Rectangular   Temperature compensation
Relay	Unit: Value   Fixed temperature compensation (T comp)
	Length 1 mm 15 m °C v
Air velocitiand air flow	Width 1 🚔 mm
. 15	Diameter 1 🔄 mm
•	Pressure unit for Cd calculation
Settings	Air flow coefficient (Cd)
	0,1000
	Write configuration
	white conligation

#### In "Measures" part:

- Select the measure means between:
  - L Pitot tube
  - S Pitot tube
  - Debimo

- Differential pressure coefficient
- Enter the correction coefficient of the velocity measurement (Cc) if necessary. This coefficient must be including between 0.0000 and 9.9999.
- > If "Differential pressure coefficient (Cm)" is selected as measurement, enter its coefficient.

D According to the type of selected section, the formula for velocity calculation is indicated in the **"Measures"** part. Pass your mouse above to have more information on the formula.

### 8.11.2 Adjust the compensation in temperature (C310 and CA310)

It is possible to modify the compensation value in temperature. Indeed, the velocity and the airflow measured with a Pitot tube and or Debimo blades (or others differential pressure element) are function of the using temperature. It is necessary to enter the using temperature in order to obtain more coherent results.

#### In "Compensation" part:

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

### 8.11.3 Configure the section type (C310 and CA310)

#### In "Dimensions" part of the "Velocity and airflow" panel:

- > Select the section type: circular, rectangular or airflow coefficient.
- > Select the unit for a rectangular or circular section: mm or inch
- > Enter the dimensions:
  - Width and length for a rectangular section.
  - Diameter for a circular section.

#### OR

- > Enter the Cd value for an airflow coefficient.
- > Click "Write configuration" at the bottom of the window to send the sensor modifications.

## 8.12 Configure the relays (C310 and CA310)

Akivision		
•	Instrument	
Communication	C310 Software version 1.20 (0) Serial 3F 13.08.09999 Celibration date 20/04/2016	
	Relay Relay 1 OFF   Security  Negative  Positive	
Analog I/O	Relay 2     OFF     Security <ul> <li>Negative</li> <li>Positive</li> </ul> <li>Relay 3</li> <li>OFF</li> <li>Security</li> <li>Negative</li> <li>Positive</li>	
Alarms	Relay 4 OFF Security   Negative   Positive	
-o' o- Relay		
Air velocity and air flow		
Settings		
	Write configuration	

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

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

To activate the relays according to the alarms, these latter must be fully configured.

To make a relays test:

> Click "Relay test 1, 2, 3 or 4": The relay switches, then returns to its normal state after 1 second.

## 8.13 Other adjustments

### 8.13.1 Adjust the purging time

The purging mode allows to freeze the measure in the display, block the analogues outputs and active the relay 1 in order to command a collection system of an aeraulic network and activate the relay 2 in order to isolate the sensor.

Click "Adjustments".

The following window opens.

Akivision	
•	Instrument
Ĩ	C310
General	Software version 1.20 (0)
1 m	Serial 3F 13.08.09999
Communication	Calibration date 20/04/2016
	Settings
Av∄	Autocalibration delay in minute(s) (0 (off) -> 60 min) 10 (m)
Channels	Integration Module pressure integration coefficient (0 to 9)
	Probe 1 air velocity integration coefficient (0 to 9) 0
Analog I/O	Probe 2 air velocity integration coefficient (0 to 9) 0
Alarms	Normative values
	Normative values: None
-0'0-	Activate O ON OFF Purge time 1 Sec.
Relay	Interval between two purges 1 👘 Min.
	Delay 1 🛓 Sec.
Air velocity and air flow	Instrument compensation         Probe 1 compensation           Altitude / Atmospheric pressure         Altitude / Atmospheric pressure
. 15	hPa   1013,3  hPa hPa hPa hPa hPa
	Probe 2 compensation Correction
Settings	Altitude / Atmospheric pressure
	hPa
	Write configuration
	while configuration

#### In "Purge" part:

- Select **"ON"** to activate the purging mode.
- > Adjust the purging time between 0 and 100 seconds.
- Adjust the interval between 2 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 sensor.

Activate	ON	OFF	Purge time	10	*	Sec.
			Interval between two purges	1	* *	Min.
			Delay	1	* *	Sec.

#### 8.13.2 Select a normative value

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

### In "Normative values" part:

- Select in the drop-down list:
  - DIN13423
  - ISO2533
- > Click "Write configuration" at the bottom of the window to send the modifications to the sensor.

Normative values		_
Normative values:	DIN1343	,

#### 8.13.3 Enter an integration

It is possible to enter an integration coefficient allowing to smooth the measure and also to avoid the untimely variations. The concerned parameters are the pressure and 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 "Integration" part:

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



**Coefficient 0:** no integration.

**Coefficient 9:** maximals integration, reading more stable.

#### 8.13.4 Adjust the temporisation between two autozeros

- Enter a value between 0 and 60 minutes on the line "Temporisation between 2 autozeros in minute(s) from 0 to 60 min)".
- > Click "Write configuration" at the bottom of the window to send the modifications to the sensor.



Temporisation 0: no auto-calibration.

**Temporisation 60:** maximum gap between 2 auto-calibrations (60 minutes).

#### 8.13.5 Enter a compensation

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

In "Device compensation" and/or "Probe 1 compensation" and/or "Probe 2 compensation" part:

- Select the pressure unit (hPa, mbar or mmHg) or in altitude (m).
- > Enter an atmospheric pressure or altitude value.
- > Click "Write configuration" at the bottom of the window to send the modifications to the sensor.

# 9 CONFIGURE THE MODULES

## 9.1 Configure a temperature module

For the temperature modules, all the channels are configurable.

- > Click the module line to configure in the window "Transmitters, sensors and modules".
- Click "Configure".
   The window below opens.

rision	100 mm - 1	-			
	Configur	ation of t	he MD120		
V0 V1	V2 V3	V4 V5			
Save ch	annel				
Input Type :	PT100	EC -50 150 °C	•	Unit :	•°C
Description					© *F
Setting	5				
Offset :	0,0	°C			
Integratio					
	0				

- Click the tab of the channel to configure.
- > Tick the box **"Save this channel"** to save data.
- Select the input type in the list and its unit.
- > Apply an offset (in order to compensate an eventual drift of the sensor, it is possible to insert an offset which can be a maximum of  $\pm 10$ ).
- Adjust the integration of the measure (the integration coefficient allows to smooth the measure, to avoid the untimely variations. New displayed value = [((10 Coef.) x New Value) + (Coef. x Hold value)] /10).
- > Click "Validate" to save the modifications.

## 9.2 Configure a module of current/voltage

For the current/voltage modules, all the channels are configurable.

- > Click the module line to configure in the window "Transmitters, sensors and modules".
- Click "Configure".

The window below opens.

rision	Configur	ation of	the MD1	00	
Input Typ Descripti		-	V6 V7		
Conv Unit : Decima Minimu Maximu	m: 0 V			Settings Offset : 0,00 Integration :	0 r
				Cancel	Validate

- Click the tab of the channel to configure.
- > Tick the box "Save this channel" to save data.
- Select the input type in the list.

- Enter a description.
- Tick the box "Do you want to convert this input" to convert the input. The "Conversion" part becomes accessible.
- Select the conversion unit in the list.
- Select the number of decimal.
- > Select the minimum and the maximum of the scale.
- > Apply an offset (In order to compensate an eventual drift of the sensor, it is possible to insert an offset which can be a maximum of  $\pm 10$ ).
- Adjust the measure integration (the integration coefficient allows to smooth the measure, to avoid the untimely variations. New displayed value = [((10 Coef.) x New Value) + (Coef. x Hold value)] /10).
- > Click "Validate" to save the modifications.

## 9.3 Configure a relay module

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

- > To be in negative alarm condition, click the box "Negative" of the sidebar "Security of relay alarms".
- > To be in positive alarm condition, click the box **"Positive"**.
- Click "Validate" to save the modifications.

Each of the 8 relays is configurable and each relay can have several added alarm conditions. In order to create an alarm condition, click **"Add a condition".** 

It is possible to choose the alarm emails sending for each relay.

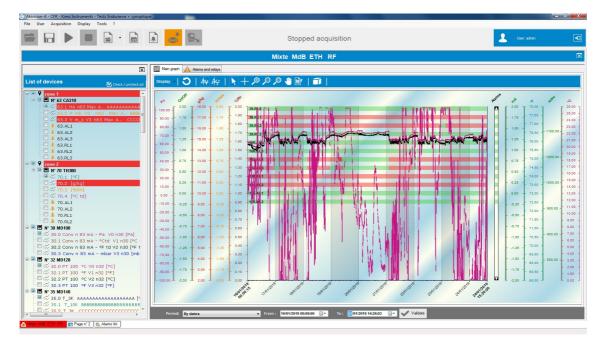
## 9.4 Configure a dry/wet contact module

All the channels are configurable. It is possible to:

- Choose to save channel.
- > Name the channel by filling the field **"Description"**.
- > Define the functioning mode "Normal" or "Inverted".
- > Click **"Validate"** to save the modifications.

# **10 ACQUISITION VIEWING**

## 10.1 Graphic panel



#### 10.1.1 Devices list

All the viewing devices are listed in this panel. The boxes to tick allow to choose the channels to display on the graphic and in the table.

#### 10.1.2 Value display: graphic, table and statistic

It is possible to have different values displays.

- > Click **"Display"** then select the desired display type among:
  - Graphic and table
  - Graphic and statistics
  - Graphic
  - Synoptic
  - Statistics
  - Table

For the **"Graphic and table"**, **"Graphic and statistics"** and **"Graphic"** displays, a toolbar with different buttons listed below allows to:

0	Update or reset the zooms	<b>,</b> ⊕	Zoom in
4₩	Display the curves	Ģ	Zoom out
$A_{V}$	Display the points	$\sim$	Dynamic zoom
×	Selection pointer	-	Move the displayed area
+	Cursor to browse the points		Add a note
	3D display		

- If the "Graphic and table" display is selected: the software displays the values in the form of curves and in a table.
- If the "Graphic and statistics" display is selected: the software displays the values in the form of curves and the remarkable values (min, max, number of points,...) in the form of table.
- If the "Graphic" display is selected: the software solely displays the value in the form of curve.

## 10.2 Values display: synoptic representation



The synoptic representation gathers the slaves and the alarms on the same viewing in the form of **customizable sketch.** It is thus possible to locate in real time the measured values and the alarms.

It is possible to modify the elements of the synoptic representation:

Right click an element then click "Properties". The following window opens.

Label properties			Label properties	
Label pro	operties		Label properties	
Appearance Alarms			Appearance Alarms	
General appearance Style : Direction : Pattem : Outline style: Draw borders: Transparent background : Background color :	Simple    Angle	Tile         Unitled           ④ Automatic tile :         126.1           ⑤ Customized tile :         126.1           Tile fort :         Arial 10 Regular           Fort color of the tile :         Background color of the tile :	Threaholds Use the threahold 1 : Display the threahold 1 : Draw the threahold 1 : Threahold 1 value : 20 * Use the threahold 2 : Draw the threahold 2 : Draw the threahold 2 :	Active light : Daplay the light : Plasting warning light : Alarm color : Inactive color: Normal color :
Background image : Value and marking Display value: Display unit:	Browse _ Delete	- Preview Value : 20.0 👘	Threshold 2 value : 70 * 2 Color : : Draw the normal area : 2 Draw the alarm area : 2	Preview
Range: Number of marking : Number of sub-divisions : Draw line :	Min. Max. 0 ** 10 ** 5 ** 7	126.1 20 Pa		[126.1] <b>20</b> Pa
Draw marking :		Validate Cancel		Validate Cancel

The **"Appearance"** tab allows to modify the element appearance.

The **"Alarm"** tab allows to modify the alarm appearance on the element. It is also possible to display or not the threshold, to modify their values, ...

> Carry out the desired modifications then click "Validate".



**○** 20,00 °C

These representations can then be modified: orientation, colours, title,...

## 11 ALARMS LIST

## 11.1 Access to the alarms list

Click "Access to the alarms list".

## 11.2 Acknowledge the alarms

If the alarms haven't been acknowledged, it is possible to make it from the software:

> Click "Display the unacknowledged alarms".

The following window opens.

c	Select/deselect all	or unac	knowledg	ged alarm:	5						Today
3	Date	Alam name	Device	Device	Channel	Value	Unit	State	Alarm type	Mode	Today
1	27/06/2018 08:48	105.AL2	105				°C td	ON	Relay & Active light	Rising edge	
4	27/06/2018 04:35	105.AL1	105				<b>°</b> C	ON	Relay & Active light	Falling edge	
4	27/06/2018 03:41	109.AL2	109				%RH	ON	Relay & Active light	Rising edge	
1	27/06/2018 03:15	113.AL3	113				°C	OFF	Relay & Active light	Rising edge	
1	27/06/2018 01:14	105.AL1	105				°C	OFF	Relay & Active light	Rising edge	
1	27/06/2018 01:13	105.AL1	105				°C	ON	Relay & Active light	Rising edge	
1	27/06/2018 01:11	105.AL1	105				'C	OFF	Relay & Active light	Rising edge	
1	27/06/2018 01:10	105.AL1	105				°C	ON	Relay & Active light	Rising edge	
	27/06/2018 01:10	105.AL1	105				°C	OFF	Relay & Active light	Rising edge	
1	26/06/2018 20:10	105.AL1	105				°C	ON	Relay & Active light	Rising edge	
	26/06/2018 20:07	105.AL1	105				°C	OFF	Relay & Active light	Rising edge	
4	26/06/2018 20:06	105.AL1	105				°C	ON	Relay & Active light	Rising edge	
4	26/06/2018 18:57	113.AL3	113				°C	ON	Relay & Active light	Rising edge	
	26/06/2018 18:56	113.AL3	113				°C	OFF	Relay & Active light	Rising edge	

- > Tick the alarms to acknowledge.
- Click "Acknowledge the selected alarms".
- > Add a comment.



This comment is compulsory.





# 12 ACCESS TO THE EVENT REPORT

The log is a report which gathers the events intervened during the acquisition:

- Date
- Source (slave / software)
- Name
- Category (suppression / launch acquisition, configuration modification, etc...)
- Alarms description (alarm, relay...)
- Acknowledgement
- Comment
- Connected user (if the user management is active)
- Click "Access to the events report". The following window opens.

					Events report		
ftware	Level	Category	Message	User			
I	▼ AII	✓ All	•				
lod	Starting	End		_			
ne last events	21/06/2018 10:0	06:45 🛛 🗸 28/06/201	8 10:07:06	Validate	V Automatic update of the table		
Date	- Level	Application	Message			Category	Comment
27/06/2018 19:14:22	Information		Appareil reconfiguré			Configuration	n*113 KTU210-RF EO [17.12.0]
27/06/2018 19:12:31	Information		Appareil reconfiguré			Configuration	nº113 KTU210-RF EO [17.12.0]
27/06/2018 19:11:25	Information		Appairage d'un appareil radio fréqu	ience		Enregistreurs radio fréque	n*113 KTU210-RF EO [17.12.0]
27/06/2018 19:11:25	Information		Placement d'un appareil radio fréqu	Jence		Enregistreurs radio fréque	n°113 KTU210-RF EO [17.12.0
27/06/2018 19:10:32	Error		Echec identification backgroundW	lorker1_DoWork			
27/06/2018 19:10:09	Information		Suppression d'un appareil radio fre	-		Enregistreurs radio fréque	n'113 KTU210-RF EO (17.12.01
27/06/2018 19:10:00	Information		Appareil reconfiguré				n*113 KTU210-RF EO [17.12.01
27/06/2018 19:09:41	Information		Appareil reconfiguré				n'113 KTU210-RF EO [17.12.0
27/06/2018 19:09:25	Information		Appareil reconfiguré				n*113 KTU210-RF EO [17.12.0
27/06/2018 19:09:12	Information		Appareil reconfiguré				n'113 KTU210-RF EO [17.12.0
27/06/2018 19:07:47	Information		Appareil reconfiguré				n*114 KTU210-RF EO [17.12.0
27/06/2018 19:07:03	Information		Appareil reconfiguré				n'114 KTU210-RF EO [17.12.0
27/06/2018 19:04:48	Information		Appareil reconfiguré				n*114 KTU210-RF EO [17.12.0
27/06/2018 19:03:49	Information		Appareil reconfiguré				n*114 KTU210-RF EO [17.12.0 n*115 KTU210-RF EO [17.12.0
27/06/2018 19:01:47	Information		Appareil reconfiguré	pparel recordiguré			
27/06/2018 19:00:29	Information		Appareil reconfiguré				n°114 KTU210-RF EO [17.12.0
27/06/2018 18:59:11	Information		Appareil reconfiguré			Configuration	n*113 KTU210-RF EO [17.12.0
27/06/2018 18:58:23	Information		Appareil reconfiguré			Configuration	n°113 KTU210-RF EO [17.12.0
27/06/2018 18:57:19	Information		Appareil reconfiguré			Configuration	n*113 KTU210-RF EO [17.12.0
27/06/2018 18:54:02	Information		Appareil reconfiguré			Configuration	n°114 KTU210-RF EO [17.12.0
27/06/2018 18:53:47	Error		InvalidArgument=La valeur '4' n'es	pas valide pour 'index'.	Nom du paramètre : index 📑 à System: Windows: Forms: List View Rem: List View Subitem Collection get_item (Int 32 index) 📑 interfaceConfigurateur: FRM_config Kistock: BTN_valider_Click (		
27/06/2018 18:53:45	Error		InvalidArgument=La valeur '4' n'est	pas valide pour 'index'.	Nom du paramètre : index 🛛 à System.Windows.Forms.List.View.Iter.List.View.Subitem.Collection.get_item(Int32 index) à InterfaceConfigurateur.FRM_configKistock.BTN_valider_Click(		
27/06/2018 18:53:45	Error		InvalidArgument=La valeur '4' n'est	pas valide pour 'index'.	Nom du paramètre : index - à System Windows Forms List Viewitem.List View Subitem Collection get_tem(Int32 index) à InterfaceConfigurateur FRM_configKistock.BTN_valider_Click(		
27/06/2018 18:53:45	Error		InvalidArgument=La valeur '4' n'est	pas valide pour 'index'.	Vom du paramètre : index à System.Windows.Forms.List.Viewitem.List.View.Subitem.Collection.get_tem(Int32 index) à InterfaceConfigurateur.FRM_config.Kistock.BTN_valider_Citek(		
27/06/2018 18:53:45	Error		InvalidArgument=La valeur '4' n'est	pas valide pour index'.	Vom du paramètre index à System Windows Forms List Wewitem List View Subtem Collection get tem (Int 32 index) à InterfaceConfigurateur FRM config Kistock BTN valider Click (		
27/06/2018 18:53:44	Error		-		Vom du paramètre : index à System Windows Forms List Viewktem List ViewSubitemCollection.get. tem/int32 index) à InterfaceConfigurateur FRM configKistock. BTN valider Cick(		
27/06/2018 18:53:44	Error		-		Nom du paramètre : Index à System Windows Forms List Wewkern List WewSubitemCollection get _ceminted rated, b refraceConfigurateur, FRM, configNatock, BTN, valider, Cilck(		
27/06/2018 18:53:44	Error		-		Nom du paramètre : index à System Windows Forms List View Rem. List View Subitem Collection, get_tem(int 32 index) à InterfaceConfigurateur, FRM_configViatock, BTN_valider_Citck(		
27/06/2018 18:53:00	Error				Nom du paramètre : Index à System Windows Forms List Wewkern List WewSubitemCollection get _ceminted rated, b refraceConfigurateur, FRM, configNatock, BTN, valider, Cilck(		
27/06/2018 18:52:55	Error		-		Nom du paramètre : index à System Windows Forms List Wewkern List View Subitem Collection get Leminites index) à InterfaceConfigurateur, FRM, config/rated et Pri-Cable Collection, get terminites index à System Windows Forms List View Subitem Collection, get terminites index) à InterfaceConfigurateur, FRM, config/rated et Pri-Cable Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index) à InterfaceConfigurateur, FRM, config/rated et Pri-Cable Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System Windows Forms List View Subitem Collection, get terminites index a System View Subitem Collection, g		
27/06/2018 18:52:55	Error		-		vam au paramètre : maex à system Windows Forms List View Subitem Collection get_tem (misz index) à interfaceConfigurateur FRM, config Vistock, BTN, valider_Citck( Nom du paramètre : index à System Windows Forms List View Subitem Collection get_tem (misz index) à interfaceConfigurateur FRM, config Vistock, BTN, valider Citck(		
27/06/2018 18:52:55	Error		-		vom ou parametre :index = a system. windows roms. List viewitem. List viewitem List view subitem Collection, get_tem (int 32 index) = a interace configurateur. FHM_configVistock, b in _valider_Click( Nom du paramètre :index = à System. Windows. Forms. List Viewitem. List View Subitem Collection, get_tem (int 32 index) = à Interace Configurateur. FHM_configVistock, b in _valider_Click(		
27/06/2018 18:52:53							
	Error		-	pas valide pour index'.	Nom du paramètre : index à System Windows Forms List Wewitem List Wew Subitem Collection get_tem(Int 32 index) à InterfaceConfigurateur.FRM_configKistock.BTN_valider_Click(	0.0	
27/06/2018 18:50:49	Information		Appareil reconfiguré				n'113 KTU210-RF EO [17.12.0
27/06/2018 18:50:26	Information		Appareil reconfiguré		m	Configuration	n*113 KTU210-RF EO [17.12.0

31

> It is possible to export the event report in table form (.csv), pdf or directly print it.

## **13 AKIVISION-E APPLICATION INSTALLATION**

For the installation and minimum requirements, please see the prerequisite document "LR/03/BE".

## 13.1 Software launching

To launch the application, it is necessary to connect the security key on the computer's USB connection.



Security key or dongle

- Connect the security key only after the software installation.
- During the usage, the computer researches if the key is present every 5 minutes. If the key is not detected, it is no longer possible to make actions on the application.

## 14 SETUP THE APPLICATION

It is possible to adjust several general parameters of the application. It is advised to adjust them before the first usage. These adjustments concern:

- The database access
- The users management
- The application personalization

To access to these adjustments:

- Click "Options" on the main screen of the application.
   The application requires the user to log in.
- Enter the following login: "admin" then the following password: "admin". See page 56 for creation and management of users login and passwords. The following window opens.

Options configuration	on		
Copt	tions configuration		
	Data		
<u></u>			1
Data			
Ē			
Securites			
Personalization			
	Management of the database		
		Enable sampling : 📝	
	Access to database		
	Local	<u>A</u>	All database changes which require an application restart
	Remote	Database address :	
			Cancel OK

## 14.1 Manage the data

This window allows to optimise the software performances if the data number or the acquisition frequency is very important. Therefore, the sampling allows to keep a defined number of values.

> To activate this function, tick the **"Activate sampling"** box.

This window also allows to select the access type to the database:

- Local: access to the Akivision-A database installed on the computer
- Remote: access to the Akivision-A database installed on an another computer

In the last case, it is necessary to indicate the database address of the computer on which AKIVISION-A is installed. This address is composed of the computer name and the listening IP port of the SQL server. For example: ORDINATEUR\_PAUL:24700

Contact your network administrator to know the exact address of the computer.

#### 14.1.1 Manage the users

#### > Click "Safeties".

The following window opens.

of Options configuration			s
Options configura	ation		
	luon		
Securities			
User management			Ī
Alarms	Access to the users management		
	-		J
n			
Securities			
-			
F			
		Cancel OK	5

#### Click "Access to the users management". The following window opens.

🕄 Users management	
L° Use	ers management
General Users	General Activate the users management Location of users database : C:\Users\Public\Documents\KIMO INSTRUMENTS\Akivision2\Akivision2_USERDB.SDF Browse
Groups	
I	Cancel

- > Tick the box "Activate the users management".
- > Click **"Browse"** to modify if necessary the location of the users database.

**i** For the first application, the indicated path is the default path of the users database.

> Then click **"Users"** on the left side of the window.

	Groups
	,
l	
SETUP THE APPLICATION	

General       admin       admin       Admins         User       user       Users       I         Users       itest       itest test       None         SSS       itest       itest       itest       itest         Groups       itest       itest       itest       itest         New user       Modify       Delete		1	user	user	Users
Lest Lest Lest Mone	1				
Lisers Lisers Groups	1				
		777	New us	ser Moo	dify Delete

- cannot be deleted.
  A "Users" user, which has restricted rights, and which can be modified and deleted.
- Click "New user". The opposite window opens.
- Enter the user's first and last name in the "Users informations".

Users management

Users management

- Assign a group to the user (see chapter 4.5.2 for the groups creation).
- Create the connection logins of the user: enter a login in the field "Login" and a password in the field "Password" then confirm the password in the field "Confirm the password".
- > Click **OK** to validate the user creation.

### 14.1.2 Manage the users groups

 Click "Group" on the window "Users management". The following window opens.

•	Groups	
<b>–</b>	Group name	Group description
eneral	Admins	
neral	Users	
	groupe 1	
ers		
4		
ups		

💽 Users management	
User she	et
User informations	
Name :	
Surname :	
Connection logins	
Login :	
Users group :	None
Password :	
Confirm password :	
	Cancel OK

This window contains two groups created during the Akivision-E installation:

- An "Admin" group, which has all the rights, which can be modified but which can not be deleted.
- A "Users" group, which has restricted rights and which can be modified and deleted.
- Click "New group".
   The following window opens.

Group parameters	×
Group manage	ement
Group informations	
Group name : Group description :	
Authorization from the group	
Common User management Change the password Display the event log Tools: management of the export files Tools: management of the database Export the data Print	E
Akivision-A Create a new viewing Open an existing viewing Close the viewing Save the viewing Updating the viewing	
Check / uncheck all.	Cancel OK

- Assign a name to the group in the field "Group name" then a description of the group in the field "Group description".
- > Assign the various authorisations that the group will have by ticking the desired boxes.
- > Click **OK** to validate the users group creation.

There are three types of authorisations:

- "Common": concern the using of Akivision-A and Akivision-E software.
- "Akivision-A": solely concern the Akivision-A software.
- "Akivision-E": solely concern the Akivision-E software.

Common	Akivi	sion-A CFR
Users management	Create a new viewing	Alarms management
Change the password	Open an existing viewing	Alarm(s) report
Display the events report	Close the viewing	Display/Mask alarms messages
Tools: management of the export files	Save a viewing	Alarms acknowledgement
Tools: database management	Updating the viewing	Tools: Stop/Start service
Export the data	Delete viewing	Tools: service properties
Print	Add device	Comments notes addition
Measure signature	Deletion device	Modify the graphic parameters
Akivison-E CFR	Devices configuration	Modify the synoptics in creation mode
Create a new viewing	Change the communication parameters	
Open an existing viewing	Change base number of data logger	
Close a viewing	Place data logger	
Delete viewing	Stop the acquisition service	
Comments notes addition	Interrupt the acquisition service	
Print	Force wireless data logger unload	
Modify the graphic parameters	Calculated channels management	

### 14.1.3 Modification and deletion of users and users group

To modify a users group:

- Select the group to modify by clicking on it.
- > Click "Modify".
- Carry out the modifications by ticking or unticking the desired authorisations.
- > Click **OK** to validate the modifications.

To modify a user:

- Select the user to modify by clicking on it.
- Click "Modify".
- > Carry out the desired modifications.
- > Click **OK** to validate the modifications.

To delete a users group:

- Select the group to delete by clicking on it.
- Click "Delete".
- > Click **OK** to validate the deletion.

To delete a user:

- Select the user to delete by clicking on it.
- > Click "Delete".
- Click **OK** to validate the deletion.

## 14.2 Personalize the application

This part allows to personalize the curves, the time axis, the background, the logo appearing on the prints and display or not the MKT statistics.



The MKT statistics allow to express in a simplified way the global effect of the temperature variations during the storage or the transport of the perishable goods.

Click "Personalization" on the left side of the options window. The following window opens.

 Personalization		
Default properties of time axis Color - Grid lines : Grid lines : Default properties of backgroung Degreded : Degrend Use axis colour for fulcrum : Predefined color for the fulcrum : MKT option Doping the IMCT statistics	Printing lago personalization Preview image file : EXECUTION INFORMATION INFORMATIONI INFORMATICO IN	Browse Delete

#### In the "Default properties of time axis" part:

- > Click the colour square then select the desired colour.
- > Validate with **OK**.
- > Tick the box "Grid lines" to make appear the grid lines.

#### In the "Default properties of background" part:

- > Select the degraded type of colour: diagonal, horizontal or vertical.
- > Click the two colour squares then select the desired colours.
- > Validate with **OK**.
- > Tick the box **"Use the axis colour for the grid lines"** if needed.
- > Click the colour square to define a grid lines colour.

#### In the "MKT" part:

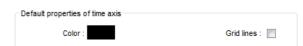
Tick the box "Display the MKT statistics" to display the MKT temperature. This temperature allows to express in a simplified way the global effect of the temperature variations during the storage or the transport of the perishable goods.

#### In the "Printing logo personalization" part:

- > Click "Browse" and select the logo which will appear on the printings.
- > Click the image file then on "Delete" to delete it.

#### In the "Printing options" part:

> Tick the box to print the graphic background.



## 15 AKIVISION-E CFR

AKIVISION CFR meets the requirements of CFR21 standard. This standard is for users who want to control and secure their data acquisition system, its main functions being attributed by rights from groups management.

## 15.1 Activate the signatures

To activate the signature management:

- ▶ Go to the user group management (see page 57 to create groups).
- > Tick the **"Measure signature"** box in **"Common"** part of the authorization of the group.
- > Close all the windows of the groups management.

#### 15.2 Sign measurements

Click "Tools" in the menu bar then on "Sign measure". The following window opens:

CFR21 Managem	ient -							-	
Period	Starting 17/01/2019		End 18/01/2019		Validate				
Period list									
Number of points	Signed period		Signat	ory	Signature date	Signature reason	Comment		
4									
Select all									
🖉 Sign	1	Si	gn list						Close

- > Enter the date of the beginning and the date of the end of the required period concerned by the signatures.
- Click "Validate".
  - The list of the possible period displays.
- Click the period(s) to sign.
- Click "Sign" button.

A message opens asking to confirm the action.

- > Click **OK**.
- Enter a user name and the corresponding password then click OK. The following window opens.

ign Circuit an anna	and the case of	
Signature reaso	on	]
01-Exam		•
Comment		

Select a reason then enter a comment.



> Click **OK**.

The list of period displays with the signed period.

	Measure treatment	Starting 17/01/2019	End 18/01/2019	Validate				
	Period list							
	Number of points	Signed period	Signatory	Signature date	Signature reason	Comment		
signed	422616	17/01/2019 00:00:00 18/01/2019 00:00:00	admin-	24/01/2019 15:53:38	01-Examen	validation		
Signed Deriod	422421	18/01/2019 00:00:00 19/01/2019 00:00:00	admin-	24/01/2019 15:59:13	01-Examen	validation		
	4							
	Select all							
	Sign Sign	7	Sign list				Clos	se

#### 15.3 Get to signed measurements

To get to signed measurements:

From the **"List of period"** window: Click **"List of signatures"** button.

The list of signed measurements is about the period previously defined at the moment of the measurements signature step.

# **16 ACQUISITION VIEWING**

## 16.1 Open the acquisition

To open an acquisition in progress with AKIVISION-E, you must beforehand dispose of the acquisition configuration file launched with the AKIVISION-A.

This file is a **Config.AkiA** file and is present on the computer where AKIVISION-A is installed.



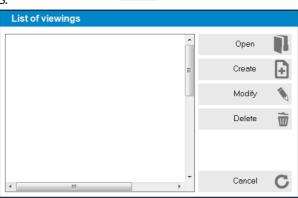
Default location of the file under: C:\Users\Public\Public Documents\KIMO Instruments\AKIVISION3\BASE

▶ Go to search this config.AkiA file then paste it in a computer location where AKIVISON-E is installed.



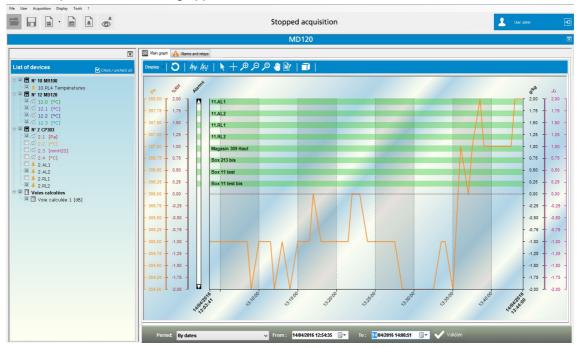
It is recommended to paste the Config.AkiA file at the following location: C:\Users\Public\Public Documents\KIMO Instruments\AKIVISION3\BASE

 Click "Open" on the AKIVISION-E homepage. The following window opens.



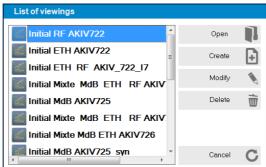
For the first usage, the viewing list is empty.

- Click "Browse".
- ➢ Go to the config.AkiA file location.
- Click it then click "Open".
  - The window opens and the viewing appears:





Once the viewing is opened, it will appear in the viewing list. To open, double click on it.



## 16.2 Viewing details

#### 16.2.1 The devices list

All the viewing devices are listed in this panel. The tick boxes allow to choose the channels to display on the graphic and in the table.

### 16.2.2 Display values: graphic, table and statistic

It is possible to have different displays of values.

- > Click "**Display**" then select the type of desired display among:
  - Graphic and table
  - Graphic and statistics
  - Graphic
  - Synoptic
  - Statistics
  - Table

## To display the synoptic representation, the Synoptic.SAkiA file must be installed. See page 65.

For the "Graphic and table", "Graphic and statistics" and "Graphic" displays, a toolbar with different buttons listed below allows to:

C	Update or reset the zooms	Æ	To zoom in
4₩	Display the curves	P	To zoom out
Av	Display the points	×	Make a dynamic zoom
×	Selection pointer	-	Move the display area
+	Cursor of points path		Add a note
Ĩ	3D display		

- If the "Graphic and table" display is selected: the software displays the values in the form of curves and in a table.
- If the **"Graphic and statistics"** display is selected: the software displays the values in the form of curves and the remarkable values (min, max, number of points,...) in the form of tables.
- If the "Graphic" display is selected: the software displays solely the values in the form of curve.

## 16.3 Values display: synoptic representation



The synoptic representation gathers the slaves and the alarms on the same viewing in the form of **customizable sketch.** Thus, it is possible to locate in real time the measured values and the alarms.

#### 16.3.1 Open the synoptic representation

To open a synoptic representation corresponding to the viewing, it is necessary to dispose beforehand of a synoptic representation file.

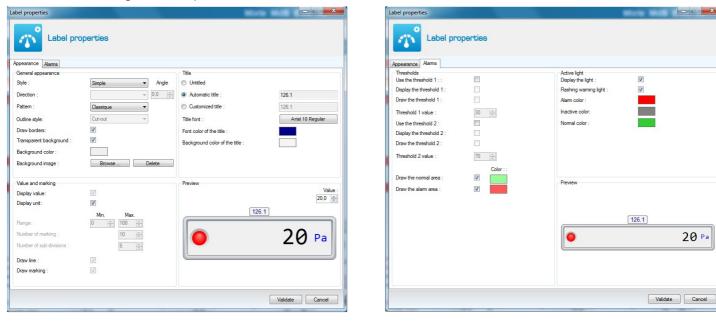
This file is a Synoptic.SakiA file.

- Default location: C:\Users\Public\Documents Public\KIMO Instruments\AKIVISION3\BASE
- Copy this Synoptic.SAkiA file to the place in which the acquisition configuration file is located (file of Config.AkiA type) on the computer where AKIVISION-E is installed.

#### 16.3.2 Modify the elements of the synoptic representation

It is possible to modify the elements of the synoptic representation:

Click right on an element then click "Properties". The following window opens.



The **"Appearance"** tab allows to modify the element appearance.

The **"Alarm"** tab allows to modify the alarm appearance on the element. It is also possible to display or not the threshold, to modify their values, ...

> Carry out the desired modifications then click "Validate".

## Example of representation:



These representations can then be modified: orientation, colours, title,...

## 17 EXPORT THE DATA

## 17.1 Create values, graphic, event or alarms report

During the acquisition viewing, it is possible to export:

- The values in the form of table
- The graphic in the form of image
- The events in the form of spreadsheet
- The alarms list in the form of spreadsheet
- The alarms table in the form of spreadsheet
- ➢ Click "File" menu.
- ➢ Click "Export".
- Select the desired export.
  - For the export of values, events, alarms list and alarms table, the application exports the values then display a message asking to open or not the created file.
  - For the graphics export, the application opens a window allowing to select the saving type of the graphic: jpeg, .bmp, .png or .gif.
- Select the image format then click **"Save"**.

## 17.2 Create a pdf report

- Click "File" then "Print".
- Select "**Print**" or "**Pdf**".

The following window opens.

General informatio	n	Measurement reports	Group measurements by unit
Name of the report : Location :		Summary report Detailed report	
Start of the report :	28/01/2019 11:53:43	Graph report	Include statistics with legend
End of the report :	28/01/2019 13:53:43	Graph report	
Comments		Title :	
		One chart by unit	
		One chart by device	
		One single chart for all series	
		Logs reports	
		Alarm log report	
		Sign list	

- > Give a name, enter a location and possible comments.
- > Select the type of measurements report: summary and/or detailed report:
  - "Summary report": list of measures and statistics
  - "Detailed report": list of measures and detailed statistics with table
- Tick the "Graph report" box and select items to include into the report. This allows to group information on the graph by unit, devices or to export a single graph for all series.
- > Tick "Alarm log report" and/or "Event log report" to include it/them into the report.
- > Click **OK** to generate the pdf file.



All the created exports are saved in the following folder:

C:\Users\Public\Documents Publics\KIMO Instruments\AKIVISION3\EXPORT

# 18 ALARMS LIST

## 18.1 Access to the alarms list

#### Click "Access to the alarms list".



From this window, it is possible to display:

- The alarms by date
- The last alarms
- The alarms of the last day
- The alarms of the last week
- The alarms of the last month
- > Click in the "Period" list then select the desired alarms period.
- > Define the date if the alarms by date has been selected then click "Validate".

Colour code of the alarms:

- When the line is red: the alarm is triggered, the device corresponding is in alarm state.
- When the line is green: the alarm is triggered, but the device is no longer in alarm state.

## 18.2 Acknowledge the alarms

If the alarm hasn't been acknowledged, it is possible to do it from the software:

- > Click "Display the unacknowledged alarms".
  - The following window opens.

-	t of unac	knowledg	ged alarm	S						
Select/deselect all										Today
Date	Alarm name	Device number	Device	Channel	Value	Unit	State	Alarm type	Mode	
27/06/2018 08:48	105.AL2	105				°C td	ON	Relay & Active light R	lising edge	
27/06/2018 04:35	105.AL1	105				°C	ON	Relay & Active light F	aling edge	
27/06/2018 03:41	109.AL2	109				%RH	ON	Relay & Active light R	lising edge	
27/06/2018 03:15	113.AL3	113				°C	OFF	Relay & Active light R	lising edge	
27/06/2018 01:14	105.AL1	105				°C	OFF	Relay & Active light R	lising edge	
27/06/2018 01:13	105.AL1	105				°C	ON	Relay & Active light R	lising edge	
27/06/2018 01:11	105.AL1	105				°C	OFF	Relay & Active light R	lising edge	
27/06/2018 01:10	105.AL1	105				°C	ON	Relay & Active light R	lising edge	
27/06/2018 01:10	105.AL1	105				°C	OFF	Relay & Active light R	lising edge	
26/06/2018 20:10	105.AL1	105				°C	ON	Relay & Active light R	lising edge	
26/06/2018 20:07	105.AL1	105				°C	OFF	Relay & Active light R	lising edge	
26/06/2018 20:06	105.AL1	105				°C	ON	Relay & Active light R	lising edge	
26/06/2018 18:57	113.AL3	113				°C	ON	Relay & Active light R	lising edge	
26/06/2018 18:56	113.AL3	113				°C	OFF	Relay & Active light R	lising edge	
0 element(s)										-

- $\succ$  Tick the alarms to acknowledge.
- > Click "Acknowledge the selected alarms".

# 19 ACCESS TO THE EVENT REPORT

The report is a report which gathers the intervened events during the acquisition:

- Date
- Name
- Category (deletion / launch acquisition, configuration modification...)
- Alarms description (alarm, relay...)
- Acknowledgement
- Comment
- Connected user (if the users management is active)
- Click "Access to the events report". The following window opens:

				Events report		
oftware	Level	Category	Message	User		
NI	→ All	▼ AII	•			
'eriod	Starting					
The last events	• 21/06/2018 10:06	5:45 🔲 - 28/06/2018 1	0:07:06	Validate Validate Validate of the table		
Date	- Level	Application	Message		Category	Comment
27/06/2018 19:14:22	Information		Appareil reconfiguré	c	Configuration	n*113 KTU210-RF EO [17.12.01
27/06/2018 19:12:31	Information		Appareil reconfiguré	c	Configuration	n°113 KTU210-RF EO [17.12.01
27/06/2018 19:11:25	Information		Appairage d'un appareil radio fréquen	e E	inregistreurs radio fréque	n*113 KTU210-RF EO [17.12.01
27/06/2018 19:11:25	Information		Placement d'un appareil radio fréquen	09 E	inregistreurs radio fréque	n°113 KTU210-RF EO [17.12.01
27/06/2018 19:10:32	Error		Echec identification backgroundWork	er1_DoWork		
27/06/2018 19:10:09	Information		Suppression d'un appareil radio fréqu	ence E	inregistreurs radio fréque	n°113 KTU210-RF EO [17.12.01
27/06/2018 19:10:00	Information		Appareil reconfiguré	c	Configuration	n*113 KTU210-RF EO [17.12.01
27/06/2018 19:09:41	Information		Appareil reconfiguré	c	Configuration	n°113 KTU210-RF EO [17.12.0
27/06/2018 19:09:25	Information		Appareil reconfiguré	c	Configuration	n*113 KTU210-RF EO [17.12.0
27/06/2018 19:09:12	Information		Appareil reconfiguré	c	Configuration	n°113 KTU210-RF EO [17.12.0
27/06/2018 19:07:47	Information		Appareil reconfiguré	c	Configuration	n*114 KTU210-RF EO [17.12.0
27/06/2018 19:07:03	Information		Appareil reconfiguré	c	Configuration	n°114 KTU210-RF EO [17.12.0
27/06/2018 19:04:48	Information		Appareil reconfiguré	c	Configuration	n*114 KTU210-RF EO [17.12.0
27/06/2018 19:03:49	Information		Appareil reconfiguré	c	Configuration	n'114 KTU210-RF EO [17.12.0
27/06/2018 19:01:47	Information		Appareil reconfiguré	c	Configuration	n*115 KTU210-RF EO [17.12.0
27/06/2018 19:00:29	Information		Appareil reconfiguré	c	Configuration	n°114 KTU210-RF EO [17.12.0
27/06/2018 18:59:11	Information		Appareil reconfiguré	c	Configuration	n*113 KTU210-RF EO [17.12.0
27/06/2018 18:58:23	Information		Appareil reconfiguré	c	Configuration	n°113 KTU210-RF EO [17.12.0
27/06/2018 18:57:19	Information		Appareil reconfiguré	c	Configuration	n*113 KTU210-RF EO [17.12.0
27/06/2018 18:54:02	Information		Appareil reconfiguré	c	Configuration	n°114 KTU210-RF EO [17.12.0
27/06/2018 18:53:47	Error		InvalidArgument=La valeur '4' n'est pa	s valide pour index'Nom du paramètre : index : à System Windows Forms List View tem List View Subitem Collection get_tem (Int 32 index) à InterfaceConfigurateur FRM_configKatock BTN_valider_Click (		
27/06/2018 18:53:45	Error		InvalidArgument=La valeur '4' n'est pa	s valide pour index. Nom du paramètre : index. à System. Windows.Forms. List View Lub Item Collection.get_tem(Int32 index) à InterfaceConfigurateur.FRM_config Kistock.BTN_valider_Cick(		
27/06/2018 18:53:45	Error		InvalidArgument=La valeur '4' n'est pa	s valide pour Index'Nom du paramètre : index : à System Windows Forms ListViewRem ListViewSubitemCollection get_tem(int32 index) à InterfaceConfigurateur FRM_configKatock BTN_valider_Click( =		
27/06/2018 18:53:45	Error		InvalidArgument=La valeur '4' n'est pa	s valide pour index'.Nom du paramètre : index à System.Windows.Forms.ListView.tem.ListView.SubitemCollection.get_tem(Int32 index) à InterfaceConfigurateur.FRM_configRistock.BTN_valider_Click(		
27/06/2018 18:53:45	Error		InvalidArgument=La valeur '4' n'est pa	s valide pour index'.Nom du paramètre : index : à System :Windows Forms List Viewkem:List ViewSubitemCollection get_tem(Int32 index) à InterfaceConfigurateur.FRM_configRistock BTN_valider_Click( =		
27/06/2018 18:53:44	Error		InvalidArgument=La valeur '4' n'est pa	e valide pour index. Nom du paramètre : index. à System. Windows. Forms. List View Subitem Collection.get_tem(Int32 index) à InterfaceConfigurateur. FRM_configRistock.BTN_valider_Click(		
27/06/2018 18:53:44	Error		InvalidArgument=La valeur '4' n'est pa	s valide pour index'.Nom du paramètre : index : à System :Windows Forms List Viewkem:List ViewSubitemCollection get_tem(Int32 index) à InterfaceConfigurateur.FRM_configRistock BTN_valider_Click( =		
27/06/2018 18:53:44	Error		InvalidArgument=La valeur '4' n'est pa	e valide pour index'.Nom du paramètre : index à System.Windows.Forme.List/Vew.Kem.List/Vew.SubitemCollection.get_tem(Int32 index) à InterfaceConfigurateur.FRM_config/Ristock.BTN_valider_Click(		
27/06/2018 18:53:00	Error		InvalidArgument=La valeur '4' n'est pa	s valide pour Index Nom du paramètre : index à System Windows Forms. List View Rub Item Collection get_tem [Int32 index) à InterfaceConfigurateur FRM_config Vistock BTN_valider_Click (		
27/06/2018 18:52:55	Error		InvalidArgument=La valeur '4' n'est pa	e valde pour 'index'.Nom du paramètre : index à System.Windows.Forms.List View.tem.List View.Subitem.Collection.get_tem(Int32 index) à Interface.Configurateur.FRM_configWistock.BTN_valder_Click(		
27/06/2018 18:52:55	Error		InvalidArgument=La valeur '4' n'est pa	s valide pour 'index' Nom du paramètre : index à System. Windows Forms List View Sub Item Collection get_Item (Int 32 index) à Interface Configurateur FRM_config Kistock. BTN_valider_Click (		
27/06/2018 18:52:53	Error		InvalidArgument=La valeur '4' n'est pa	e valde pour 'index'.Nom du paramètre : index à System.Windows.Forms.List View.tem.List View.Subitem.Collection.get_tem(Int32 index) à Interface.Configurateur.FRM_config.Kistock.BTN_valider_Click(		
27/06/2018 18:52:52	Error		InvalidArgument=La valeur '4' n'est pa	s valide pour 'index'. Nom du paramètre : index à System. Windows Forms List View. Sub Item Collection get_tem (Int 32 index) à Interface Configurateur. FRM_config Kistock. BTN_valider_Click (		
27/06/2018 18:50:49	Information		Appareil reconfiguré	c	-	n°113 KTU210-RF EO [17.12.0
27/06/2018 18:50:26	Information		Appareil reconfiguré		Configuration	n*113 KTU210-RF EO [17.12.0]

31

It is possible to filter the events to display by:

- Software: events only concerning the Akivision-A, Akivision-E, the Data base or all 3
- Level: event type: All, Main events, Informations, System, Error, Error of level 1, Fatal error
- Period: day, week, month or date
- Category: application Event, Start/Stop application, Application configuration, Identifications, Options, Mails, Motor download, Alarms, Communication
- Message
- User

Software	Level	Category	Message	User	
All	All	All			
Period	Starting	End			
The last events	14/10/2016 11:26:08	□▼ 21/10/2016 11:26:58		Validate	Automatic update of the tab

To add a comment to an event:

- > Double-click in **"Comment"** column to the line of the desired event.
- > Enter the comment then press **Enter**.
- > It is possible to export the event report in table form (.csv), pdf or directly print it.



www.kimo-instruments.com