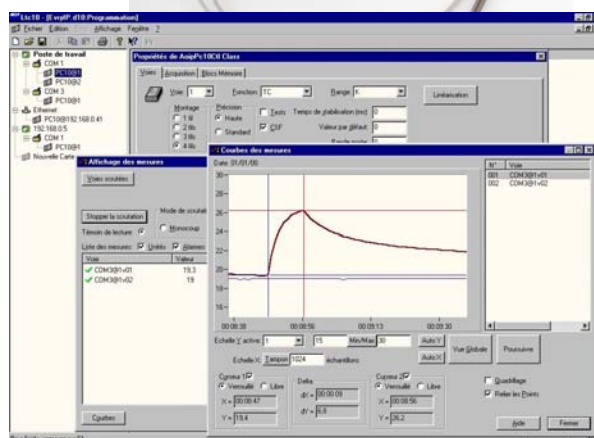


DATA ACQUISITION BOARD

PC10

The PC 10 is dedicated for measurement, monitoring and storage of digital and analogue signals issued from electrical and physical sensors. It is also a stand alone Module for Networks (Modbus, Ethernet, TCP/IP...)
 Configuration and use of the PC 10 are performed with 2 easy and user-friendly software, compliant to the latest Standards and Market's requirements (mapping, Validation, FDA...): the configuration and data processing software LTC10 and the real time monitoring software, VISULOG enable to the PC10 to perform the monitoring and the supervision of parameters such as temperature, voltage, current and resistance thanks to an automated management of the memory and e-mail generation in case of alarms.
 Offering accuracy and ease of use, PC10 is a real alternative to PC boards and acquisitions units.



- **10 to 30 universal inputs**
- **2 relay outputs**
- **Removable screwing connector**
- **Modbus, Ethernet Interfaces**
- **100 000 data memory**
- **generating e-mails when alarms appear**
- **Configuration and data processing software LTC10**
- **Real time monitoring and traceability software : VISULOG**

General specifications:

	PC10
Dimensions	330x170x38mm
Weight	950g
Power supply	9-48V
Communication	RS232, RS485, Ethernet,
Operating conditions	-10 to 50°C; 10 to 80% HR w/o condensation
Configuration et data processing software	LTC10
Real time monitoring and traceability software	VISULOG TM VISULOG

Supplied in standard:

Power supply adapter, removable screwing connector, RS232serial link, Configuration and data processing software LTC10,

Options:

- Real time monitoring and traceability software: VISULOG TM
- Built in radio modem for wireless applications

Measurement speed

Accuracy	Speed	Resolution
High	14meas/s	700 000 cts
medium	100meas/s	70 000 cts
Low	250meas/s	7 000cts

DATA ACQUISITION

TECHNICAL SPECIFICATIONS: (specifications given at 23°C +/-5°C)

DC VOLTAGE

Range	Accuracy					
	High		Medium		Low	
	90 days	1 yr	90 days	1 yr	90 days	1 yr
50 mV	0,010% + 5µV	0,02% + 7µV	0,050% + 20µV	0,10% + 22µV	0,10% + 40µV	0,2% + 45µV
500 mV	0,010% + 5µV	0,02% + 7µV	0,050% + 20µV	0,10% + 22µV	0,10% + 200µV	0,2% + 205µV
5 V	0,010% + 0,5mV	0,02% + 0,7mV	0,050% + 2mV	0,10% + 7mV	0,10% + 10mV	0,2% + 15mV
50 V	0,010% + 0,5mV	0,02% + 0,7mV	0,050% + 2mV	0,10% + 7mV	0,10% + 20mV	0,2% + 25mV
100 V	0,010% + 5mV	0,02% + 7mV	0,050% + 20mV	0,10% + 22mV	0,10% + 200mV	0,2% + 205mV

Max voltage between channels: 150V- or ~ p-p

DC CURRENT

Range	Accuracy					
	High		Medium		Low	
	90 days	1 yr	90 days	1 yr	90 days	1 yr
20mA	0,010% + 10µA	0,02% + 20µA	0,050% + 40µA	0,10% + 60µA	0,10% + 20µA	0,2% + 40µA

The use of a 50ohm(0,1%) shunt per channel is necessary

RESISTANCE

Range	Accuracy					
	High		Medium		Low	
	90 days	1 yr	90 days	1 yr	90 days	1 yr
100Ω	0,020% + 5mΩ	0,040% + 7mΩ	0,05% + 50mΩ	0,07% + 70mΩ	0,2% + 500mΩ	0,4% + 700mΩ
1KΩ	0,020% + 50mΩ	0,040% + 70mΩ	0,05% + 500mΩ	0,07% + 700mΩ	0,2% + 2Ω	0,4% + 5Ω
3KΩ	0,020% + 500mΩ	0,040% + 700mΩ	0,05% + 5Ω	0,07% + 7Ω	0,2% + 5Ω	0,4% + 7Ω
100KΩ	0,020% + 5Ω	0,040% + 7Ω	0,05% + 50Ω	0,07% + 70Ω	0,2% + 200Ω	0,4% + 500Ω
200KΩ	1 % + 10Ω	2 % + 50Ω	2 % + 100Ω	4 % + 200Ω	4 % + 1 KΩ	5 % + 1,5 KΩ

Add 5 mΩ for a 3 wires configuration and 50mΩ: for a 2 wires configuration

RTD's (specs are given for a 4 wires configuration)

Range	Accuracy					
	High		Medium		Low	
	90 days	1 yr	90 days	1 yr	90 days	1 yr
Pt 100	0,020%+ 0.03	0,040%+ 0.05°C	0,05%+ 0.1°C	0,07%+ 0.2°C	0,20%+ 1°C	0,40 %+ 1°C
Pt 1000	0,020%+ 0.3°C	0,040 %+ 0.5°C	0,05% + 0.5°C	0,07% + 1°C	0,20%+ 1°C	0,40 % + 1°
Ni 100	0,020%+ 0.03°C	0,040%+ 0.05°C	0,05% + 0.1°C	0,07% + 0.2°C	0,20%+ 1°C	0,40 % + 1°C
Cu 10	0,020%+ 0.3°C	0,040%+ 0.5°C	0,05% + 0.5°C	0,07% + 1°C	0,20%+ 1°C	0,40 % + 1°C

Other sensors : refer to the instruction manual (available on request)

THERMOCOUPLES

Type	Range	Resolution	High Accuracy	
			90 days	1 yr
K	-120°C to 1300°C	0,1	0,01% L+ 0,1°C	0,02% L+ 0,1°C
T	-100°C to 400°C	0,1	0,01% L+ 0,2°C	0,02% L+ 0,2°C
J	-120°C to 1100°C	0,1	0,01% L+ 0,1°C	0,02% L+ 0,1°C
S	550°C to 1768°C	0,5	0,01% L+ 0,5°C	0,2% L+ 0,5°C
B	900°C to 1820°C	0,5	0,01% L+ 0,5°C	0,2% L+ 0,5°C
N	0°C to 1300°C	0,1	0,01% L+ 0,2°C	0,2% L+ 0,2°C
E	-250°C to 1000°C	0,1	0,01% L+ 0,2°C	0,2% L+ 0,1°C
C	-20°C to 2320°C	0,2	0,01% L+ 0,4°C	0,2% L+ 0,4°C
R	550°C to 1768°C	0,5	0,01% L+ 0,5°C	0,2% L+ 0,5°C
L	-200°C to 900°C	0,1	0,01% L+ 0,2°C	0,2% L+ 0,2°C
PI	-100°C to 1400°C	0,1	0,01% L+ 0,3°C	0,2% L+ 0,3°C

With the built-in CJC, add 0,5°C uncertainty

PC10: Fell free to use it as you like!

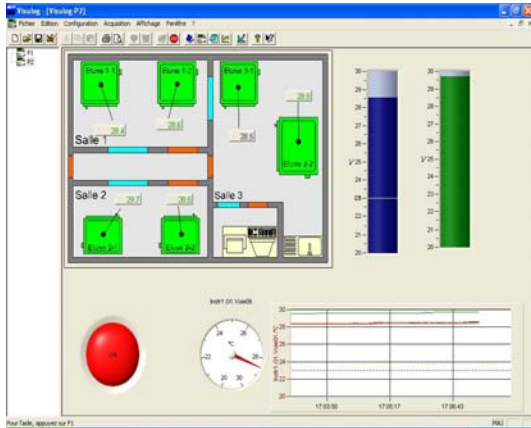
Standalone: PC 10 can be used as a standalone data logger and data can be downloaded to a computer from time to time.

Network: One or several PC10 can be connected to a LAN for real-time monitoring purposes, logging onto the internal memory or on the server.

DATA ACQUISITION

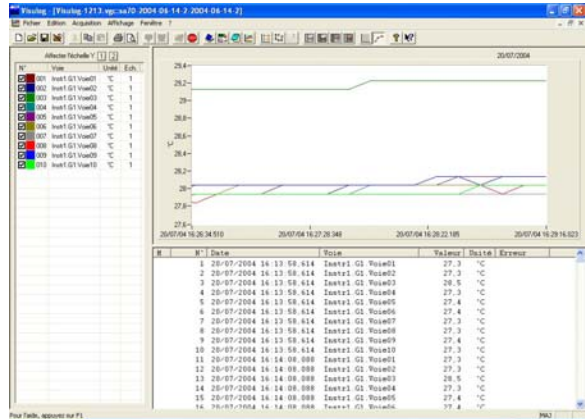
Applications: Monitoring

Temperature monitoring with take into account of door opening and closing.
 Display of average, minimum, maximum and standard deviation of each sensor.
 Numerical values, curves, bargraphes and installation synoptic are used for visualisation



Environmental control and monitoring system

Allows evolution and events to be supervised in real time thanks to VISULOG software, to save data on PC and then to insure data traceability.

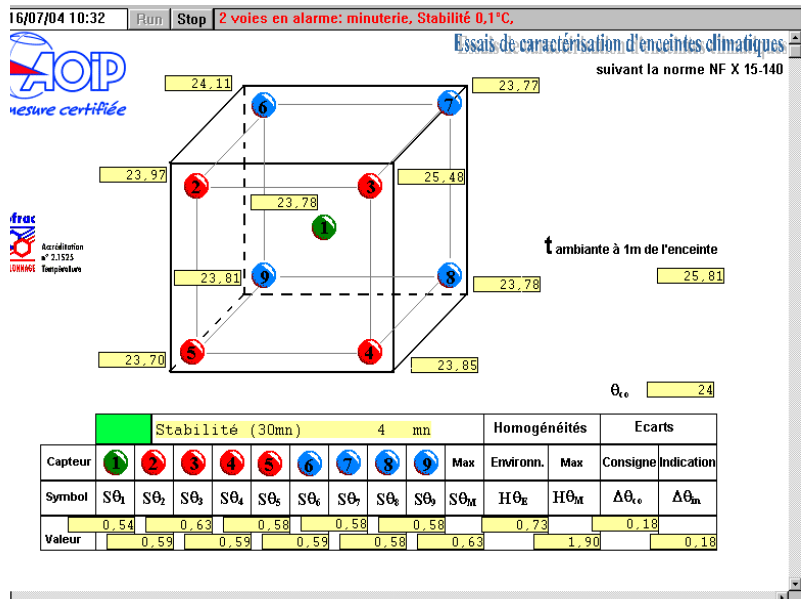


Mapping according to NFX 15-140 (using VISULOG REALTIME SOFTWARE)

PC10 with VISULOG Software is able to perform mapping, measuring several temperature and calculating average, standard deviations, stability, on each channel and between channels.

A report can be edited for traceability purposes.

Visulog is also compliant with standard 21 CFR PART 11 for pharmaceutical and food and beverages industries, with all the necessary audit trails, identification and login passwords with password ageing



PC10 WITH BUILT-IN RADIO MODEM

This functionality offers communication wireless and real-time monitoring even if the datalogger is far from the computer/ feel free to contact your sale agency for more details



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